

THE IMPORTANCE OF GIFTS IN MARRIAGE

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In this article, a new element is introduced into the household production function: gifts. Gifts occur when spouses use their time and/or incomes to produce commodities that usually only have value to their spouse, such as empathy and understanding. The difficulty of identifying a potential mate's capacity to produce gifts prior to marriage and of negotiating for them during marriage is argued as having contributed to the increase in the divorce rate. Evidence is provided that women are the spouses most likely to seek a divorce and part of their motivation is an inadequate receipt of gifts during marriage. (JEL J12)

I. INTRODUCTION

The basic nature of marriage has changed as it has shifted from being an institution primarily based on increasing the family members' material well-being to one based increasingly on improving the spouses' psychological welfare.¹ Women in particular when considering marriage place an important emphasis on psychological goals, such as empathy and understanding.² Problems associated with identifying key attributes in potential mates and negotiating efficient outcomes in this new environment have reduced the likelihood

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1. The common preference model is usually associated with the work of Gary Becker, which is summarized in Becker (1991). Other authors, such as Manser and Brown (1980) and McElroy and Horney (1981), have expanded on that work using cooperative bargaining models. The most recent developments have been with noncooperative game models, such as the separate spheres bargaining model developed by Lundberg and Pollak (1993).

2. "The meaning of togetherness for men was expressed more in terms of sharing space (the home), while by women it was put in terms of shared experience" (McAllister et al. 1991, 186). Also see Eells and O'Flaherty (1996). Women tend to be more sensitive to the quality of their marriage than do their husbands (Sayer and Bianchi 2000). Braver et al. (1993) observe that the frustrations of wives with their marriages cause them to be the spouse who is most likely to initiate a divorce. Brinig and Allen (2000) consider filing for divorce by wives as rational behavior based on spouses' relative power, their opportunities following divorce, and their anticipation of custody.

that people will be successful in obtaining the potential benefits of marriage, thereby contributing to the increase in the divorce rate since World War II.³

In this article, a model of the family is developed that expands household production to include gifts, which are goods that are produced by one spouse but generally only have direct value to the other spouse. Initially, the economic models of the family are reviewed that assume that the utilities of family members are based on their access to private and shared (public) goods, which generate some utility for their producer. Gifts are also an important component of domestic production. Although gifts can be tangible, such as flowers or jewelry, many of them are psychological, such as empathy, affection, and understanding. Because gifts can be intangible, it is more difficult to determine a potential mate's productivity prior to marriage and to negotiate welfare-enhancing production and distribution during marriage. The result could be a divorce. The importance of psychological gifts in the decision to dissolve a marriage is tested using data from the National Survey of Families and Households.

II. THE ECONOMIC ANALYSIS OF THE FAMILY

Initially, the economic models of the family emphasized the material gains from marriage. Gary Becker (1965, 1991) presented the first

3. The divorce rate peaked at 5.3 per 1000 people in 1979 before declining to 4.2 in 2000. Still, both these figures are substantially higher than the 2.0 that the United States experienced in 1940 (U.S. National Center for Health Statistics 2001).

systematic analysis of the family as he extended his earlier work on consumptive behavior in which people use their time and income to produce commodities to maximize their utility. Through marriage people can increase their access to commodities relative to those available to them when single. The production of these commodities benefits from increased specialization by the family members, which traditionally meant that women specialized in domestic activities, especially childbearing, while men worked outside the home. The common preference or unitary model associated with Becker uses altruism as a central force within the family as the allocation of the gains from marriage is based on maximizing the household head's utility. This model assumes that a benevolent or altruistic decision maker has incentives to maximize the family's welfare.

Modifications to this model occurred as it was recognized that it was not consistent with the neoclassical model to attribute a utility function to a family that did not address the potentially conflicting utility preferences of the spouses. The recognition that altruism may not be a strong enough force to overcome the individual preferences within a family, along with the need to consider public goods explicitly within the analysis of the family, lead to new bargaining models. Manser and Brown (1980) and McElroy and Horney (1981) applied the Nash cooperative bargaining model to marriage. These authors model marriage as a static bilateral monopoly in which a married couple can either remain married or divorce. Manser and Brown, for example, identify the gains from marriage that result from the presence of shared goods and from love and companionship.⁴ Household public goods were introduced as an integral part of these models of family behavior as they emphasize the benefits of shared public goods as a reason that marriage yields a utility surplus over living separately. These authors propose that the symmetric Nash bargaining model determines the division of potential gains from marriage with the threat point being the dissolution of the marriage.

Marriage as a Noncooperative Game

If it is recognized that outcomes during marriage are the result of a bargaining process, then

4. More recently, Allen and Brinig (1998) have explored bargaining by couples over the sexual aspects of their marriage.

the issue becomes whether this process is best viewed as a cooperative or noncooperative game. The fundamental difference between the two lies in the contracting possibilities. In cooperative games, binding contracts are possible, whereas in noncooperative games they are not. Initially, researchers considered cooperative games that assumed efficient outcomes. An efficiency model is attractive when considering the family because families are long-run relationships and the members hopefully tend to be sympathetic toward each other. Most of the authors who use a cooperative game framework to analyze the family ignore the legal limitations on and practical problems associated with binding contracts that control exchanges during marriage. Although it has become easier for spouses to draft these contracts, most couples have not attempted to draft them, and the courts continue to be reluctant to enforce agreements dealing with ongoing marital relations.⁵ Moreover, even if the courts would enforce these agreements, they are far too complicated to be defined with legal precision.⁶

Recognizing these limitations on binding contracts has led to marriage being modeled as a noncooperative game. Woolley (1988) and Konrad and Lommerud (1995) have modeled the allocation within a family based on a threat point as a noncooperative Nash equilibrium. Lundberg and Pollak (1993, 1996) extend the bargaining model by arguing that marriage is a noncooperative game in which spouses revert to socially sanctioned gender roles—their separate spheres. Models of noncooperative behavior draw heavily on the assumption that individuals are rational even in an environment requiring complicated strategies. Within these models, there can be conflicting objectives or situations in which goals do not necessarily

5. Couples do have more flexibility to contract about aspects of their marriage under the Uniform Premarital Agreement Act. It permits parties to contract with respect to "any other matter, including their personal rights and obligations, not in violation of public policy or a statute imposing a criminal penalty" (9B U.L.A. 369 [West 1987 & Supp. 2000]). The annotations to the act note that an agreement may provide for the choice of abode, career opportunities, and upbringing of children.

6. Although it is difficult for a couple to contract for most aspects of married life, they are subject to a contract-like relationship imposed on them by law. This relationship is essentially a relational contract that is vague as to specific rights and obligations relying on the default rules to create desirable incentives. A complex network of social and relational norms reinforces the parties' efforts to achieve their mutual goals during the relationship (Scott and Scott 1998).

conflict, but where the parties operating non-cooperatively have problems in coordinating their actions. The noncooperative equilibrium, although it is not pareto optimal, may be the final equilibrium because of the presence of transaction costs. Though Lundberg and Pollak (1996) and Chen and Woolley (2001) have attempted to model noncooperative games within a Cournot framework that assumes that each spouse accepts his or her spouse's production of public (shared) goods as given, the strategies and payoffs available to the spouses are usually so numerous as to make that assumption unrealistic with regard to most marriages.

The Decision to Divorce

Economic models of the family deal with the allocation within families with only minor references to processes that ultimately result in the dissolution of marriage. The fundamental analysis of divorce is still the one formulated by Becker et al. (1977) in which they conclude that people marry when they expect to be better off in that state and they divorce when they conclude that that is no longer true. In their work, the commodities available to a married couple were assumed to be divisible in a way that a divorce would only occur if there were no reallocation of the gains from marriage that left both spouses better off. Divorce is based on the couple's expectations about their marriage not being realized. The probability of these expectations not being realized and the couple divorcing is a function of two factors: the expected gain from marriage and the distribution of the expected outcomes. Although the cooperative game theoretic models such as Manser and Brown (1980) and McElroy and Horney (1981) consider divorce as a threat point, they add little to why so many marriages that are entered into optimistically fail.

III. THE CHANGING NATURE OF MARRIAGE

As these economic models were being developed, the basic nature of marriage was changing as psychological gains were increasing relative to material ones. The material gains are primarily based on increased specialization by the spouses during marriage. Specialization presented opportunities for material gains to parties when the abilities and opportunities of men and women were substantially different. For much of American history, women

emphasized childrearing and other domestic activities, whereas men specialized in activities that required strength, often outside the home either on a farm or at a job.⁷ This specialization often required marriage-specific investments that had been protected by making the dissolution of marriage difficult. Overall, their specializations lead to more commodities for the family members.

Over the last century there has seen a convergence in the opportunities available to men and women, thereby reducing their gains from specialization during marriage.⁸ The improved employment opportunities of women increased the cost of domestic work, thereby increasing the incentive for women to enter the labor force. This in turn reduced the demand for children, the rearing of whom had been a primary incentive for specialization by spouses, especially women, during marriage. Meanwhile, technological innovations and new products reduced men's need for domestic labor supplied by a partner.

Another factor discouraging specialization during marriage was the shift from fault to no-fault divorce grounds in the United States, which in most states permitted a spouse to dissolve his or her marriage unilaterally.⁹ Parkman (1992) argues that the accompanying financial and custodial arrangements often did not provide adequate compensation for marriage-specific investments.

Accompanying the decline in the gains from spousal specialization was a change in assortative mating. Though adults had been attracted to members of the opposite sex from similar backgrounds and with similar interests, their employment opportunities still were different, encouraging the traditional income earning-domestic labor roles of spouses during marriage. As women became better educated and more attached to the labor force, the likelihood increased that couples with similar socioeconomic backgrounds would also have

7. "The choosing of a mate on the frontier was a matter of economic necessity far and above whim. Good health and perseverance were premium assets while the charms and ability to entertain that one values highly in a society of mechanization and leisure time are only of tangential significance. . . the woman who could not sew nor cook had no place on the frontier" (Martin 1975, 100).

8. With less specialization within marriage, the likelihood of divorce tends to increase. Nock (2001) has described these marriages as "marriages of equally dependent spouses."

9. For discussions of the effects of unilateral divorce, see Brinig and Buckley (1998) and Parkman (2000).

similar employment opportunities (Nakosteen and Zimmer 2001). Therefore, assortative mating contributed to the reduction in the comparative advantage of spouses.

Data confirms the decline in the emphasis on domestic labor by spouses as both men and women have made a major commitment to market labor over recent decades. Between 1960 and 1999, the labor force participation rate of women increased from 38% to 60% with the trend being particularly pronounced for married women, for whom it increased from 32% to 61% (U.S. Census Bureau 2000). In part, this trend was driven by the increase in women's wages. Between 1978 and 1999, the weekly earnings of women full-time workers increased from 61% to 76.5% of men's earnings (Blau and Kahn 2000). This pattern was particularly pronounced for younger women, rising from 82% to 94% for those 18–24 years old and from 70% to 85% for those 25–34 years old.

If there are fewer gains from specialization, one might expect fewer people to marry. Moreover, the stigma associated with cohabitation also has been reduced, increasing the number of couples living together without marrying. Between 1970 and 2000, the percentage of people never married at all age groups under 65 increased (U.S. Census Bureau 2000). For example, among people aged 35–44 the percentage that was never married increased from 6% to 15% over that period. Still, in 2000 among people aged 45–64, less than 10% of people have never married.

The Desire for a Successful Marriage

Even with this increase in people delaying marriage, marriage is still a major goal for most adults. Not only do people indicate in polls that a successful marriage is one of their most important goals (Glenn 1996), the data confirm that they act on those opinions. If the gains from specialization during marriage are declining, then why are people continuing to marry and, more important, why are so many making poor decisions ultimately resulting in divorce? The answer suggested here is a combination of what they are looking for in marriage and the problems associated with obtaining it.

Increasingly, people are looking for an increase in their psychological rather than material welfare in marriage. Reflecting this trend during the last century, Matthaei (1980) and Wallerstein and Blakelee (1995) describe these relationships as companionate

marriages. Within a traditional marriage, even a companionate one, there was a clear division of roles and responsibilities as reflected in Lundberg and Pollak's separate spheres model. With contemporary companionate marriage, there is a breakdown in the separate roles for men and women with an emphasis being placed on both spouses actively participating in employment and domestic life.

Although this shift has placed pressure on both men and women to reevaluate their roles during marriage, for a successful marriage, the main pressure for change appears to have been placed on men. Women have to face different expectations when they shift from domestic work to employment, but these new expectations usually occur outside the presence of their spouse.¹⁰ Alternatively, the new expectations for men occur in the home in which there is a direct interaction with their spouse. The adaptability of men is, therefore, subjected to closer scrutiny by their spouse. Not only are men expected to assume some of the domestic chores traditionally undertaken by women, they are also expected to accommodate the values associated with women.¹¹ Especially important has been an increase in the emphasis on empathy and communication within marriage. Therefore, the biggest change in factors determining whether a marriage will be successful appears to be in wives' expectations about their husbands. With the emergence of companionate marriage, it has become more difficult to determine if a potential mate can or will fulfill these new expectations.

IV. GIFTS IN MARRIAGE

The traditional economic models of the family have considered too limited an array of commodities produced in families. These models have only considered two commodities:

10. There are other potential explanations for this shift. Nock (1998) argues that broadening of the role of married women to include work outside the home has led them to reevaluate their expectations of their husbands in the home. Because men still view their primary role as breadwinners, they have been exposed to less pressure to change. Feminists have argued that women have just become more aware of the need to increase their options and to break out of the present dichotomized system of women being viewed as housewives and men as breadwinners. Again, a conclusion is that men are reluctant to adapt to these changes (Olsen 1983).

11. Compared with men, women tend to place a higher value on collectivist values, such as nurturing and caring for others (Ryckman and Houston 2003).

private goods and public goods, which often would be more appropriately called shared goods.¹² The shared goods can be public goods with nonexcludable and nonrival characteristics, for which children would be an example; but they can also not have those characteristics, as with the example of a television set. More than one person more efficiently consumes shared goods.

Family members have always produced a third commodity, gifts, and its importance appears to have increased.¹³ A gift is produced when one spouse incurs a cost—but does not necessarily receive any direct benefits—confering benefits on the other family members, especially the other spouse. Spouses benefit from clothes (a private good) and meals (a shared good), but they also benefit from the financial transfer from, love of, and empathy from a partner (gifts). To the extent that the benefit of a gift exceeds its cost, family welfare is increased.

Gifts take many forms that combine financial, time, and emotional costs. Gifts can be primarily financial, such as traditional interspousal presents at birthdays and holidays. They can also reflect time and emotions. In the new environment of dual-income households, an important type of gift occurs when spouses limit their careers to facilitate their spouse's career mobility. With a greater emphasis on friendship and equality within companionate marriages, the spouses are more likely to participate in communal activities. Often these activities will require compromises that essentially are gifts. For the sake of the relationship, one spouse will accompany the other to a classical music concert that produces no—or potentially negative—utility for that person. Some gifts are subtle, such as just listening to a spouse's concerns or showing support for his or her frustrations.¹⁴ The production of gifts can be based on altruism,

but it is also influenced by the anticipated reaction of the beneficiaries. Gifts are more likely to occur if reciprocal acts conferring benefits on the donor have been made in the past or are anticipated in the future.¹⁵

Obtaining the optimal level of gifts during marriage faces two problems. First, it is difficult to determine the ability of a potential mate to produce gifts prior to marriage. The attributes that evidence the ability to produce private and shared goods, such as income earning and domestic habits and skills, can be observed with some confidence before marriage. In choosing a mate, a person can have some faith in the durability of these attributes because they usually reflect prior investments or entrenched values. A potential mate's educational level or culinary skills are usually obvious. Alternatively, the potential to produce gifts cannot be established with the same confidence. Being "nice" does not necessarily require any investment or a commitment to particular values. Moreover, during courting a couple may not be exposed to situations similar to those that they will experience during marriage. Even if a couple is living together, their time together may not accurately reflect their interaction if they were married. Although intimate, they may not be required to confront the more serious issues, such as decisions about children, jobs, and residence that become integral parts of marriage life and in which personal sacrifices commonly occur that frequently are gifts. Therefore, people can enter marriage with more comfort about the private and shared goods that their marriage will produce than they can about the gifts that they will receive.

Second, it is difficult to bargain for welfare-enhancing exchanges involving gifts during marriage because some gifts, such as empathy and understanding, can be difficult to define and there may be concerns about the timing and nature of responses. It is probably easier for a couple to agree to mutually advantageous production and exchange of the more tangible private and shared goods. Initially, the production of these private and shared goods still tends to conform to traditional norms of what men and women are expected to do in marriage. Men still tend to assume primary responsibility for income earning, whereas

12. Allen (1992, 60) calls these marital goods.

13. Though gifts have not been introduced into the household production model, they have been a topic of interest to economists, especially with respect to whether they are motivated by altruism or exchange. This literature has focused primarily on gifts of money or noncash items between generations rather than between spouses (Cox and Rank 1992; Stark and Falk 1998; Waldfogel 2002).

14. Psychological aspects of relationships such as empathy have not been incorporated into the household production model, but they have been discussed within other areas of economics dating back to Adam Smith. Smith emphasized self-interest in the *Wealth of Nations*, but he also discusses a concern for others' welfare in his *Theory of Moral Sentiments* (Smith 1998).

15. Nock (1998) describes the intertemporal nature of these exchanges as turn-taking.

women tend to assume primary responsibility for household tasks. Similar norms have not developed for psychological exchanges involving gifts. A spouse wants to receive understanding from his or her spouse and is willing to give understanding or something else valued by the other spouse in return. But what exactly is the understanding that they expect? Is listening enough? What type of response indicates that adequate understanding has been attained?

An additional problem for bargaining during marriage occurs because producers of gifts incur a cost but do not receive any direct benefits. Then reciprocity becomes very important. What will they receive in return? When will it occur? The more vague and remote the anticipated response, the smaller the incentive to produce gifts. Moreover, because the reciprocal acts are vagueness and remote, bargaining about gifts becomes more difficult.

V. INTRODUCING GIFTS INTO FAMILY DECISION MAKING

The major innovation in the model of the family used here is that spouses use their incomes and time to produce three types of commodities: private goods, shared goods, and gifts that are the elements of the spouses' utility functions. All these goods are produced in an environment experiencing diminishing returns.¹⁶ Efficiency is improved as output shifts toward a level at which the ratios of the collective marginal utilities of the family members to the incremental costs are similar. In a noncooperative bargaining environment, the outcome is unlikely to be efficient. Private goods only provide utility to their producer, and shared goods provide utility to the producer as well as the other family members. Gifts only have direct value to the party receiving them, not to the party producing them.

Of particular concern here is each spouse's reaction to his or her partner's activities. Initially, the common preference or unitary model placed a strong emphasis on altruism as a basis for the spouses' concern for each other. The bonds between spouses certainly result in their utility functions being interrelated, so the happiness of one can be their happiness.

Still, the neoclassical model that accepts rational self-interest as a key motivating force suggests that another important link is reciprocity (Nock 1998; Smith 1998). There is evidence that in nonmarket settings people respond kindly to gifts and retaliate if they have been hurt. Fehr and Gächter (1998) note that reciprocation occurs even among strangers in one-shot encounters and when it is costly for the responder.¹⁷ Therefore, it is reasonable to assume reciprocity will be important among family members.

A bargaining perspective suggests the people are concerned about the net benefits that their actions will generate. Some of the benefits come from their own actions and some from the actions of others. The production of shared goods and gifts within families are particularly important for increasing family welfare, because both provide external benefits to the other family members, especially the other spouse. Ideally, family members would consider all the costs and benefits of their decisions. That is unlikely. Still, family welfare is improved as the incentives increase for them to address the welfare of others.

Consider the effect of the production of the various commodities by one spouse on the behavior of the other spouse. All of the benefits of private goods flow to the person producing them. Examples are eating alone, playing golf, and so on. Because a family's full income is fixed at any time, the use of it by one spouse for the production of private goods reduces the resources available for the production of private goods by the other spouse and for the production of shared goods and gifts by both of them. A variety of responses by the other spouse are possible, but a concern has to be that an increase in the production of private goods by one spouse will result in a reduction in the production of shared goods and gifts by his or her spouse. Certainly, the range of potential responses is too complicated to be modeled systematically.

The production of shared goods creates externalities for other family members. Examples are meals, child care, a smooth-running car, and so forth. Reciprocal acts by the beneficiaries may be an important incentive for the production of these goods. The durability of

16. Goods that are addictive can have increasing returns with current consumption increasing future consumption. Becker and Murphy (1988) and Becker (1991) use this characteristic to analyze altruism and drug use.

17. Thaler (1988) summarizes the ultimate game literature noting that people are also concerned about fairness in reciprocal arrangements.

the marriage is particularly important because many of the reciprocal acts will happen later. A positive response to an increase in the production of shared goods by one spouse would be fewer private goods and more shared goods and gifts by the other. Because the producers of shared goods only receive a share of the direct benefits, the decision to produce shared goods is going to be dependent on the anticipated reaction of the spouse. If they are less likely to reciprocate, the incentives to produce these goods are reduced.

A particular problem with shared goods—and gifts—is that the producer does not have firsthand knowledge of the utility that will be received by the other spouse. A standard caveat of economics is the inability to make interpersonal comparisons of utility. Still, within a family the potential for more effective communication will also lead to the more efficient production of shared goods—and gifts—if the spouses communicate the utility received from actions of their spouse.

Gifts are the components of domestic production that are the most vulnerable to concerns about reciprocity because the producer receives no direct benefits. Examples are noncash presents, a career restriction to facilitate his or her spouse's employability, empathy, and so on. As with shared goods, the producers of gifts have only indirect information about the utility their actions will produce. If only limited reciprocity is anticipated for the provision of these goods, spouses have incentives to focus their production on private goods and shared goods for which they receive some direct returns. Therefore, effective communication and confidence about future reciprocity are important incentives for the production of gifts.

The Decision to Divorce

With unilateral divorce, the decision to divorce is fairly straight forward: at least one spouse has decided that there is no redistribution of the output of the marriage that is an improvement over that person's alternatives outside the marriage. Baker and Emery (1993) note that most people marry with the expectation that this will not be the result, so my concern here is with why so many people eventually conclude that their initial optimism about their marriage has not been fulfilled. Certainly, in

some cases poor health or financial reversals will alter expectations. Even so, that cannot explain the large number of divorces that currently occur.

The explanation provided here is that it is due to a change in what people are looking for in marriage, the difficulty of obtaining it, and the ease with which a marriage can be dissolved. People are looking for psychological gains that often come in the form of gifts. It is difficult to determine the ability of potential mates to produce those gifts prior to marriage and to negotiate for them during marriage. The frustration of spouses with their marital outcomes is compounded by unilateral divorce. It discourages gifts during marriage because future reciprocity is uncertain; then, when the gifts are not forthcoming, it increases the likelihood of divorce by lowering the transaction costs.

VI. THE MODEL

More formally, marriage is a noncooperative game because the negotiation and enforcement of binding contracts about the ongoing marriage are difficult.¹⁸ Consider two decision makers, m (man) and w (woman). Throughout subscripts and superscripts i for m and w are used to refer to each one of the two and j to refer to a mate. People potentially receive utility from consuming private goods, x_i ; shared goods produced by him or her, y_i ; shared goods produced by his or her mate, y_j ; and gifts from his or her mate, z_j . When goods are shared, the total utility associated with them can increase, but their production also benefits from increased specialization. These goods experience diminishing marginal utility in consumption. Because the production of these commodities occurs over time, decisions are based on present values. The utility functions of m and w are

$$(1) \quad u^i(x_i, y_i, y_j, z_j)$$

18. Parkman (2000) notes that with unilateral divorce and potentially limited compensation for divorced spouses, the distinction between marriage and cohabitation is weaker than it was when divorce was more difficult. The model used here could also be applied to long-term cohabitation between different-sex and same-sex couples.

subject to a family budget constraint of

$$(2) \quad tx_m + ty_m + tz_m + tx_w + ty_w + tz_w \\ = T_m + T_w,$$

which consists of the time required by a man and a woman to produce private goods, shared goods, and gifts subject to their time constraints. This constraint consists of the time required to produce the different commodities because the production of the commodities require income and time inputs, but the income in turn requires time if we ignore unearned income. Therefore, the ultimate constraint is the parties' time. Through their income earning capacities and other competences, people will have different abilities to convert time into commodities. I am not concerned with their relative productivities here.

Only private goods can be produced when one is living alone, so the decision to marry is based on

$$(3) \quad u^i(tx_i, ty_i, tz_j) > u^i(tx_i),$$

because people expect their utility to increase due to the commodities that they will receive if they marry.

A primary motivation for marriage beyond love and physical attraction is the additional private goods, shared goods, and gifts that the person expects to receive due to the marriage. The parties can feel more comfortable with the potential private and shared goods than with the gifts. Evidence of shared goods, in particular, will already be available in the mate's production of private goods. Many of the income-intensive commodities that were private goods when that person was single become shared goods with marriage. Examples would be a car, a home, and furnishings. Meanwhile, many time-intensive commodities that are private goods prior to marriage give evidence of the shared goods that that mate will produce when married. Examples would be a clean house and well-prepared meals. Meanwhile, evidence of future production of gifts such as empathy and affection is less reliable.

The couple will stay married so long as the utility in this marriage exceeds that associated with being single or in a different relationship. The utilities, of course, are based on the commodities available in the different settings.

Though the production of shared goods and gifts are important in increasing the utility within a relationship, there may be inadequate incentives to stimulate that production. The production of private goods has the most immediate and predictable utility for the producer. Communication problems may limit spouses' understanding of the value that their spouse places on shared goods and gifts. A reduction in the production of these commodities by one spouse can easily deteriorate into a reduction in their production by the other spouse if the couple is unable to communicate their frustration.

An inadequate supply of shared goods and gifts by their spouse can lead some people to reject their marriage for the alternatives outside it. I would expect this failure to be particularly noticeable in divorced women's dissatisfaction with their husband's provision of psychological gifts. Next, I investigate which spouses are mostly likely to initiate a divorce and how married and divorced spouses viewed their marriage.

VII. EMPIRICAL ANALYSIS

The data used in this study come from the two waves of the National Survey of Families and Households (NSFH), a sample of 13,017 adults initially interviewed in 1987–98 with follow-up interviews in 1992–94 (Sweet and Bumpass 1996). During Wave 1, a questionnaire was also administered to respondents and their spouses or partners, if that was appropriate. During the follow-up interviews in Wave 2, questionnaires were again given to the respondents, their current spouses, and—when it was appropriate—their ex-spouses. The current spouse could be the same one as at Wave 1 or a new one, if they had remarried.

The initial concern was with the respondents and spouses who had divorced during the period between the interviews. Insights about the communication problems facing these couples are reflected in the spouses who initiated the divorce and the response of their spouse.¹⁹ Table 1 presents the responses of the 340 divorced couples that answered a question about which spouse initiated the divorce. The question provided five responses: (1) I wanted the marriage to end *but* my husband/wife did

19. Braver et al. (1993) and Brinig and Allen (2000) discuss the spouses who initiated a divorce.

TABLE 1
Responses to Who Wanted the Divorce
($N = 340$)

Husband	Wife				
	1	2	3	4	5
1	3	1	8	17	17
2	7	5	11	15	12
3	24	26	32	7	3
4	29	16	4	2	2
5	61	27	7	3	1

not; (2) I wanted it to end *more* than my husband/wife did; (3) we both wanted it to end; (4) my husband/wife wanted it to end *more than* I did; and (5) my husband/wife wanted it to end *but* I did not. The couples' responses had a Pearson correlation coefficient of -0.624 that was statistically significant at the 0.01 level.

The wives indicated that they more strongly wanted the divorce than did their husbands. Fifty-nine percent of wives answered 1 or 2, and only 28 percent of husbands made those responses. Moreover, within marriages the spouses reached similar conclusions. The responses on the diagonal reflect agreement between the spouses as to how strongly they wanted the divorce. Forty-two percent of the spouses agreed to their spouse's assessment of the feeling about the dissolution. If one considers the adjacent cells that reflect only a minor disagreement as to their assessments, the agreement is over 80%. These results can be interpreted as reflecting the communication problems between spouses. Almost half of the husbands (45%) responded that they either did not want the divorce or they did not want it as much as their wives, and yet they were incapable of adjusting the output of the marriage in a way that the wives' expected utility within the marriage exceeded their expected utility outside the marriage.

The next concern is why women, in contrast to men, were the ones who most strongly wanted a divorce. The analysis suggests that it is because they were looking for psychological gains from marriage that often would have been in the form of gifts.²⁰ Their spouse did not provide an adequate amount of those gifts.

20. Although the psychological literature suggests that women have a stronger preference for the intangible attributes of relationships (such as empathy and affection) than do men, the same literature does not identify a difference in preference between the sexes for private or shared goods.

Still, essentially all spouses enter marriage with the expectation that it will increase their welfare. That being the case, the husbands had incentives to attempt to meet the expectations of their wives. It is argued here that because what they wanted to exchange was intangible and agreements are difficult to obtain, the gains from marriage were reduced with a corresponding increase in the potential for divorce.

One would expect to observe that women would find psychological gifts such as empathy and communication to be particularly important relative to their husbands, those who divorce would identify a lower level of these attributes in their marriages than would couples who continued to be married, and divorced women would find their marriages particularly deficient in the provision of those attributes. To test to see if these factors are relevant, the responses to eight questions asked during Wave 2 of the NSFH were investigated.²¹ These questions consisted of:

How happy were you with each of the following aspects of your marriage?

- a. the understanding you received from your spouse,
- b. the love and affection you got from your spouse,
- c. the amount of time you spent with your spouse,
- d. the demands your spouse place on you,
- e. your sexual relationship,
- f. the way your spouse spent money,
- g. the work your spouse did around the house, and
- h. your spouse as a parent?

For each of these questions, the respondents were given seven responses from 1 (very unhappy) to 7 (very happy). Regression equations were estimated using these responses as the dependent variable. The independent variables included whether the respondent was a woman and whether he or she was divorced as well as control variables for the person's education, race, age, total annual earnings,

The source of income has been shown to effect the allocation of family income on private goods. Lundberg et al. (1997) note that a shift from a child benefit in the United Kingdom that went to fathers to one that went to mothers resulted in a relative increase in expenditures on women's and children's clothing.

21. Married couples were asked about different aspects of their marriage at time of their interview. Divorced couples were asked to describe their relationship in the months prior to their separation.

TABLE 2
Variable Definitions and Mean Values of the Variables From the National Survey of Families and Households

Variable	Definition	Mean
Dependent variables		
How happy were you with each of the following aspects of your marriage?		
Understanding	The understanding you received from your spouse (1 = very unhappy, 7 = Very Happy)	5.11
Love	The love and affection you got from your spouse (1 = very unhappy, 7 = Very Happy)	5.36
Time	The amount of time you spent with your spouse (1 = very unhappy, 7 = Very Happy)	4.84
Demands	The demands your spouse placed on you (1 = very unhappy, 7 = Very Happy)	4.96
Sex	Your sexual relationship (1 = very unhappy, 7 = Very Happy)	4.98
Money	The way your spouse spent money (1 = very unhappy, 7 = Very Happy)	5.09
House	The work your spouse did around the house (1 = very unhappy, 7 = Very Happy)	5.17
Parent	Your spouse as a parent (1 = very unhappy, 7 = Very Happy)	5.80
Independent variables		
Woman (percentage)	1 if woman	56.5
Divorced (percentage)	1 if the person was divorced	4.8
Black (percentage)	1 if black	9.3
Age	Age at Wave 2	46.2
Education	Years of education completed at Wave 2	12.7
Earnings	Total annual earnings at Wave 2 in ten thousands of dollars	2.7
Household Income	Total household income at Wave 2 in ten thousands of dollars	4.5
Children	Children in the household under age 18 at Wave 2	1.0

Note: Sample size: 7310.

Source: National Survey of Families and Households.

household income, and children. An additional variable was introduced to capture the effects of the interaction between being a woman and being divorced. The definitions of the variables and their mean values are presented in Table 2. The expectation was that there is a negative relationship between the responses to these questions and whether the respondent is a woman and is divorced. The coefficient of the interaction variable was also expected to be negative.

VIII. EMPIRICAL RESULTS

The empirical results are reported in Table 3. The signs of the regression coefficients for woman are all negative and statistically significant at the 0.01 level in seven equations and at the 0.05 level in the other equation. This tends to confirm the conclusion of other studies that women are more sensitive to the psychological aspects of marriage than are their husbands. For the divorced term, the coefficients are all negative and statistically significant at the 0.01 level. The results of these equations are no surprise, because divorced people would be expected to be less happy with these aspects

of their marriages than were people who continued to be married.

My primary concern is with the interaction term that attempts to capture the effect of being a woman who is divorced. The coefficients of the interaction term are all negative and significant at least at the 0.05 level in seven of the eight equations. Divorced women tend to be less happy about these aspects of their marriages than are their ex-husbands. The only coefficient that was not significant was for the variable that reflected the amount of time that individuals were spending with their spouse. If they were disappointed with other aspects of their marriage, they may not have been systematically unhappy with the amount of time with their spouse.

The control variables also produce interesting results. Blacks generally have more negative opinions about these aspects of their marriages. Older people tend to view their marriages more favorably than do younger people. Among the coefficients that are statistically significant at least at the 0.05 level, the values are positive. This could to some extent reflect that older people who were dissatisfied with their marriage had dissolved it. Only two of the

TABLE 3
Marriage Quality Equations

Variables	Understanding	Love	Time	Demands	Sex	Money	House	Parent
Intercept	5.007*** (0.144)	5.437*** (0.147)	4.229*** (0.145)	4.751*** (0.141)	5.793*** (0.158)	4.331*** (0.148)	5.302*** (0.151)	6.173*** (0.146)
Woman	-0.368*** (0.044)	-0.232*** (0.045)	-0.166*** (0.044)	-0.191*** (0.043)	-0.104** (0.048)	-0.139*** (0.045)	-0.871*** (0.046)	-0.552*** (0.043)
Divorced	-2.844*** (0.126)	-3.056*** (0.129)	-1.977*** (0.127)	-2.498*** (0.123)	-2.572*** (0.138)	-2.262*** (0.129)	-2.104*** (0.132)	-1.794*** (0.127)
Divorced x woman	-0.479*** (0.171)	-0.394** (0.175)	-0.503*** (0.172)	-0.248 (0.167)	-0.441** (0.187)	-0.438** (0.176)	-0.408** (0.180)	-0.954*** (0.170)
Black	-0.149* (0.082)	-0.227*** (0.084)	-0.085 (0.083)	-0.297*** (0.080)	-0.024 (0.090)	-0.446*** (0.085)	-0.244*** (0.086)	-0.136* (0.077)
Age	0.008*** (0.002)	0.004** (0.002)	0.025*** (0.002)	0.009*** (0.002)	-0.004* (0.002)	0.014*** (0.002)	0.009*** (0.002)	-0.001 (0.002)
Education	0.014* (0.008)	0.010 (0.008)	-0.015* (0.008)	0.009 (0.008)	-0.027*** (0.009)	0.029*** (0.008)	0.009 (0.008)	0.003 (0.008)
Earnings	-0.043*** (0.011)	-0.060*** (0.011)	-0.052*** (0.011)	-0.047*** (0.011)	-0.062*** (0.012)	-0.054*** (0.011)	-0.042*** (0.011)	-0.032*** (0.010)
Household income	0.026*** (0.064)	0.028*** (0.007)	0.027*** (0.006)	0.033*** (0.006)	0.027*** (0.007)	0.039*** (0.007)	0.029*** (0.007)	0.027*** (0.006)
Children	-0.083*** (0.017)	-0.083*** (0.018)	-0.145*** (0.017)	-0.093*** (0.017)	-0.024 (0.019)	-0.070*** (0.018)	-0.080*** (0.018)	-0.053*** (0.018)
Adjusted R-squared	0.179	0.179	0.143	0.146	0.121	0.135	0.152	0.149
Sample size	7310	7307	7304	7290	7274	7300	7298	6350

Notes: Standard errors are in parentheses.
 ***Significantly different from zero at the 0.01 level.
 **Significantly different from zero at the 0.05 level.
 *Significantly different from zero at the 0.1 level.

coefficients of the education variable are significant at least at the 0.05 level with a negative relationship with the quality of their sexual relations and a positive one with money. The coefficients of the individual earnings and household income variables are interesting as they are all significant at the 0.01 level with those for earnings being negative and those for income being positive. Higher earnings by individuals reduce the perceived quality of their relationship with their spouse, whereas a higher household income increases it. Last, the children term produces results that have been confirmed in other studies such as Cowan and Cowan (1992). The coefficients of this variable are negative in all the equations and significant at the 0.01 level in seven of the eight equations. Though most married people want children, children tend to reduce the enjoyment from other aspects of marriage.

IX. SUMMARY AND CONCLUSION

This article discusses two parallel processes that have affected marriage. First, marriages have become less stable as evidenced by the increase in the divorce rate over the last half century. The divorce rate peaked around 1980, but it continues to be substantially higher than it was 50 years ago. Second, the importance of material gains has been reduced relative to psychological ones. This article links these two by arguing that many of the psychological gains are based on gifts that the spouses produce for each other. Problems associated with the efficient production of gifts have contributed to some spouses' dissatisfaction with their marriage. It is difficult to determine whether potential mates have the ability to produce these psychological gains prior to marriage. Moreover, these gifts can be intangible, and the parties usually find it difficult to negotiate effective agreements controlling their ongoing marriage. The result can be inefficient outcomes that reduce the gains from marriage, thereby increasing the potential for divorce. Evidence is provided from the National Survey of Families and Households that wives are the spouses most likely to seek a divorce and their motivation is in part based on an inadequate access to critical psychological gifts such as affection and understanding from their husbands during marriage.

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