

Economics and the Marriage Wars

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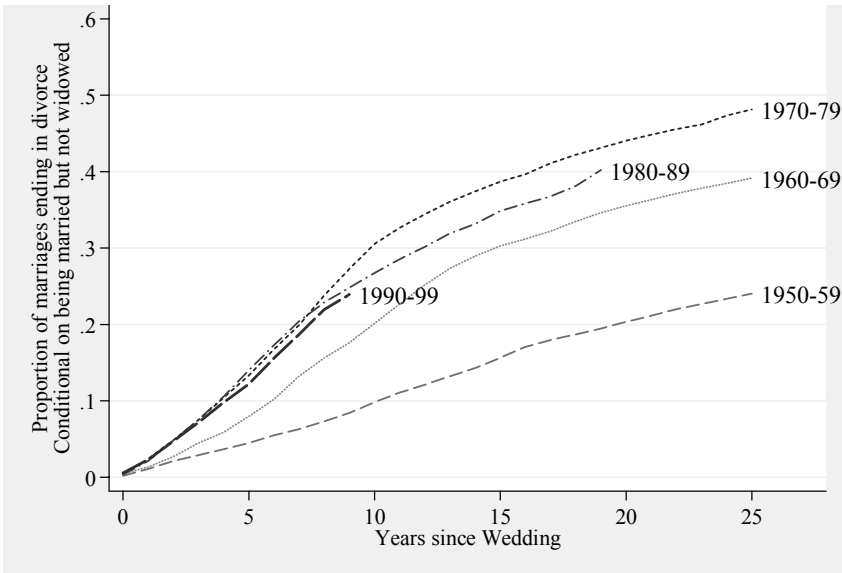
Abstract: *We critique the economic analysis of marriage and divorce descending from Becker (1981): we call this the “economic” approach. Marriage is based on the “productive” gains available from specialization in market production and household production, and on the production of children. In the more recent development of the theory, the husband and wife bargain over the gains. This analysis contrasts with the “covenant” view of marriage which is based on the Judeo-Christian tradition. The ethical focus of the covenant view is self-giving love, which is not dependent on economic efficiency. We suggest that the changing attitudes to marriage and divorce in the West may reflect “motivation crowding out,” as the economic approach erodes the values underpinning the covenant view. Marriage, like the monarchy over the last three centuries, remains popular in many quarters. But the mere existence of an institution can mask its wholesale transformation.*

In a social environment where a significant degree of social mobility, economic empowerment, and sexual freedom is available, marriages are maintained increasingly as a result of personal choice rather than external compulsion. Reflecting these choices, the number of first marriages that ended in divorce climbed rapidly during the second half of the twentieth century, though it may have peaked in the 1970s.

In such an environment the “vision” of marriage that is adopted—both social and private—is paramount. Since the early 1980s, the vision of economists has been placed alongside other visions in what we might call the “Marriage Wars”—an often acrimonious debate about the fundamental nature of marriage.

These ideas, which we call the “economic approach,” descend from the path-breaking (and indeed Nobel prize-winning) analysis of Becker (1981) and his successors. It is based on the “productive” gains that are available from specialization in market production and household production, and

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Figure 1: First Marriages Ending in Divorce, by Year of Marriage

(from Stevenson and Wolfers 2007)

on the production of children. In more recent development of the theory, though not in Becker’s canonical analysis, the gains are then shared on the basis of an implicit contract between the husband and wife.¹

We contend that the approach by Becker, and others who have contributed to the literature subsequently, is based on a particular vision of what a “marriage” is. This vision is certainly not the only possibility, as centuries of uttered Christian marriage vows in the West testify.² We therefore contrast the economic approach to the view of marriage in the Judeo-Christian tradition, which we describe as the “covenant” approach: the ethical focus is on self-giving love in the marriage relationship, which is in no way dependent on the economic efficiency or otherwise of the marriage.

Lest we be misunderstood, we do not wish to argue that Western societies have just exited from a “golden age” of marriage, associated with the mid-twentieth century American single-income male-provider model.³ Rather, we are comparing two visions of marriage—neither of which exist perfectly—in the same way that an economist might compare societies dominated by, say, Rawlsian or Benthamite utility functions.⁴

Our paper has two basic aims, which determine its structure. The first aim is to outline the economic approach and the Judeo-Christian approach

which is the substance of Sections 1 and 2. We compare and contrast these two approaches in Section 3, by focussing on their ethical underpinnings. To flag the results of our comparison, the ethical underpinnings of the two visions of marriage are indeed profoundly different. Yet marriages with these different visions may sometimes be close together in practice. Those embracing variants of the economic approach may at times find themselves feeling and acting as though their marriage is more than an economic choice problem. And those aspiring to the covenant approach may find their self-interest getting in the way of their ideals.

A second aim is to model marital effort in a scenario where the economic approach of marriage is “crowding out” the “covenant” approach. This notion of motivation crowding may be important for the analysis of contemporary marriage. In particular, the late-twentieth century Western adoption of Free Market Liberalism—symbolized powerfully by the ethos of the Reagan/Thatcher administrations, and the end of the Cold War—may have changed the way that people view intimate relationships.

In Section 4 we briefly review the work of Bruno Frey and his associates on motivation crowding out, and then build a model of marital effort which incorporates preferences based on the economic and covenant approaches. To flag the main result of this section, we find that a shift towards the economic approach may not imply a fall in marital effort, and therefore it will not necessarily lead to high divorce rates (even though it did in the late twentieth century). Having said that, such a shift certainly transforms what marriage is. Given the views outlined in Section 3, we do not necessarily regard this as a favorable development. Section 5 concludes.

1 The Economic Analysis of Marriage

In 1981 Gary Becker published *A Treatise on the Family*. His work meant that cost benefit analysis for family decisions was placed firmly into the economic mainstream. There are a number of famous insights in this book, which ultimately won Becker the Nobel Prize.

He saw the family as a kind of firm engaged in various market and non-market activities. He described many possible goals for married partners, the most obvious of which was the “production” of children. He made a distinction between “quality” and “quantity” of children, and said that the former was a major goal of household production in rich economies, while the latter was the goal in poor economies.

A key concept was the idea of “human capital,” an example of which would be skill acquired by repeating tasks. He showed that specialization in the household made sense because each partner could get better at operating in their spheres as a result of acquiring human capital. Thus,

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as well as producing children, a marriage allows efficiency gains from specialization.

To use economic analysis, Becker had to have agents respond to price signals, but how could prices be measured in non-market activities? His innovative use of shadow prices dealt with this issue in a highly effective way. He argued that much household production is motivated by implicit, rather than explicit, prices. Importantly, he argued that the female wage rate available outside the home was a key determinant of the allocation of time within the household. By recognizing this wage as an implicit price of the wife's time, Becker was able to introduce price theory extensively into his analysis of the family.

Becker argued that when wage rates rise, married women who had been employed in unpaid "household production" (including child bearing and rearing) switch their labor into the market sector and have fewer children. As they do so, the benefits of specialization in marriage become less pronounced. With fewer benefits on offer in marriage, divorce can potentially become more attractive. Becker placed a great emphasis on this mechanism. Writing of the post-war US (and worldwide) phenomena of high divorce rates, more cohabitation (living together), and declining fertility:⁵

I believe the major cause of these changes is the growth in the earning power of women as the American economy developed.... A growth in the earning power of women raises the labor force participation of married women by raising the foregone value of time spent at non-market activities. It also raises the relative cost of children and thereby reduces the demand for children.... The gain from marriage is reduced by a rise in the earnings and labor force participation of women and by a fall in fertility because a sexual division of labor becomes less advantageous. And divorce is more attractive when the gain from marriage is reduced (Becker 1981, pp. 351–353).

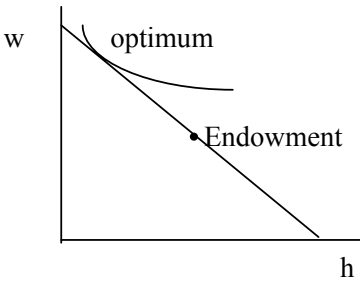
Since we will later compare Becker's vision of marriage to another vision (drawn from Judeo-Christian ethics), it is important to be clear about Becker's attitude to altruism. In contrast to later theorists, as we shall see, he took altruism very seriously. He argued that non-market production in the home should be treated as economic activity, in which case roughly half of all economic activity would occur in the home, where altruism was the dominant motivator.

If I am correct that altruism dominates family behavior perhaps to the same extent that selfishness dominates market transactions, then altruism is much more important in economic life than is

commonly understood. The pervasiveness of selfish behavior has been greatly exaggerated by the identification of economic activity by market transactions (Becker 1981, p. 303).

Furthermore, if an altruist in the family is able to give gifts, and all income is pooled, any selfish family members internalize externalities because total family income is the resource pool that is split between the members. It therefore pays selfish members of the household—the proverbial “rotten kids”—to act in an altruistic way.⁶ To follow his argument as he made it, we repeat below a diagram from his chapter 8. The husband has altruistic preferences over his own, and his wife’s, consumption (seen in the relatively flat slope of the husband’s drawn indifference curve). The wife is assumed to be only concerned about her own consumption—she is a proverbial “rotten kid.”⁷

Figure 2: A Rotten-kid Equilibrium



The budget line represents the allocation of a marital good, say the combined earnings of the household, so the slope is minus one. At the endowment point shown, the husband will make a transfer to his wife to take him to his optimum. Since the wife is selfish, in the sense that she only cares about her own consumption, such a move is agreeable to her. Becker made the point that such a wife may act in an unselfish way, in spite of her preferences. For example, if taking a particular job increases her income, but decreases his by more, she will refrain. Why? It is obvious from the diagram that such a choice will reduce total family income, and shift in the budget constraint. She will not bear the full brunt of the net decline in income—her husband will share that with her—but she would none-the-less be worse off. Interestingly, Becker does not at this point consider outside options (taking the better job and leaving the marriage) though sometimes that course of action is discussed in the *Treatise*.

On reading this, one might think that the Becker’s analysis was a force for the maintenance of “traditional” (mid-twentieth century) marriage.⁸

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His analytic tools imply that a “stay at home and have children” strategy for women keeps divorce rates low, yet this implication is rarely pursued by economists. This is part of a general pattern that can be observed about Becker’s profound influence. His *vision* of marriage as an instrumental utility-maximizing arrangement and his related use of shadow prices have had more enduring significance on the economics profession than his genuine respect for altruism. As is often the case, when a bold thinker introduces a new style of analysis, it is left to his followers to take the analysis to its logical endpoint.

To see how later thinkers carried forward Becker’s vision, consider how altruism has fared in the work of subsequent theorists.⁹ Becker assumed a self-interested view of relationships in the marriage market, where people search for partners (or their parents search, in the case of arranged marriages). Then, he assumed a degree of altruism for married people. However, when modelling divorce, Becker’s agents compared their utility in marriage with that available in the re-marriage market, eschewing altruism. This made later theorists uneasy. Economic theorists do not like inconsistency in economic actors’ motives (identified as their preferences). It seemed unacceptably untidy to have people being selfish in the marriage market, only to turn into altruists after the wedding day. Indeed, Becker had himself strongly advocated the theoretical stance of “stable preferences.” His vision of economic methodology consisted of “maximizing behavior, market equilibrium, *stable preferences*, used relentlessly and unflinchingly...” (Becker 1976, our italics).

Theorists after Becker may have had other reasons to think about marriage in new ways. Perhaps influenced by increased prevalence of divorce or cohabitation, it may have seemed more and more compelling to model people acting in an instrumental way. That is, more weight was given to the notion that people’s behavior within marriage was influenced by the outside options (either divorce, or low-commitment marriage). All this is just to say that theory is not created in isolation from the social milieu of the theorists.

A number of different directions have been explored since Becker. These are very clearly outlined in Lundberg and Pollak (1996). Becker had analysed “family demands” (the demands of family members for goods and services) using a common preference approach, where the family is treated as a single decision maker with a single utility function. By contrast, later work emphasized the bargaining game that takes place between the husband and wife (children are usually ignored), each seeking to maximize their own utility.

Lundberg and Pollak claim that dissatisfaction with the common preference approach stemmed from economic analysis of decisions to marry and to divorce. The comparison of “unmarried” preferences implicit in these decisions sat oddly with the assumption of altruism within marriage required by the common preference approach.

Furthermore, evidence began to mount that income and resources are not completely pooled in families. The pooling assumption seems to be subject to a simple test; an increase the income of one family member should not increase his or her consumption, providing total family income is unchanged. But the test does not prove to be so simple in reality. For example, suppose that a wife’s wage increases at the expense of some other family member (leaving family income unchanged), and that the consumption of restaurant meals increases as a result. At first glance, this counts against the income pooling assumption. An advocate of a bargaining model would say that as the wife’s income rises, she gains more influence over household spending, and the increase in spending on restaurant meals reflects her preferences. However, it is also possible to interpret this in a way consistent with income pooling because the hours worked by the wife are a standard choice variable in a time allocation model. A defender of income pooling could claim that restaurant expenditures depend upon the cost of substitutes, and the wife’s wage is an important component of the cost of home-prepared meals. As this rises, the family decides it is optimal to buy restaurant meals, since they have become relatively cheap.

Nevertheless, there have been “natural experiments” where exogenous changes in incomes unrelated to time allocation choices have occurred, and income pooling has not been supported. Drawing on some of their own work over the years, Lundberg and Pollak (1996) conclude against income pooling using this evidence. For example, in the late 1970s a change in the universal child payment scheme in the UK saw the same amount of money paid to mothers, rather than fathers. For an average two-child family, changing the recipient of a £500 per annum allowance from the father to the mother resulted in an increase in the expenditure on children’s clothing of £50 and an increase in spending on women’s clothing of £40.¹⁰

The theorists who abandoned income sharing as an assumption went down the path of exploring Nash bargaining within marriage. The solution to Nash bargaining depends upon the outside option, which is the threat point defaulted to in the event of disagreement. To quote Lundberg and Pollak (1996):

The utility received by husband or wife in the Nash bargaining solution depends upon the threat point; the higher one’s utility

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at the threat point, the higher one's utility in the Nash bargaining solution. This dependence is the critical empirical implication of Nash bargaining models; family demands depend not only on prices and the total family income, but also on determinants of the threat point (p. 146).

The threat point need not be based on divorce payoffs. Lundberg and Pollak developed a "separate spheres" model, where the threat point is internal to the marriage. The husband and wife settle their difference by Nash bargaining, but the alternative to agreement is an inefficient non-cooperative equilibrium within marriage. In this non-cooperative equilibrium each spouse voluntarily provides household public goods, choosing actions that are utility maximizing, given the actions of their partners.

To sum up developments since Becker, the use of bargaining models has contributed to a sea-change in economic analysis of marriage. While the common preference model still has influence, marriage is increasingly seen as an ongoing bargain in the literature. The key feature of a bargain is that one is *always* looking at the options outside, ready to act, or threaten, if it is in one's interests to do so. The assumption of income pooling, at least in an absolute form, has been challenged empirically, and bargaining has the supposed virtue of giving a couple the same underlying preferences on their honeymoon, that they have when they are courting or in court.

Bargaining models place distribution within marriage¹¹ in a theoretical framework that is *consistent* with existing analyses of *marriage* and of *divorce*: two decision makers with well-defined preferences¹² choosing an action or strategy from a well-specified set of alternatives (Lundberg and Pollak 1996, p. 156, our footnotes and italics).

Yet this is not the end of the story; there is a surprising twist to this stream of research. When the marital bargaining game is repeated, non-cooperative multiple equilibria are possible. At this point, Lundberg and Pollak introduce a range of factors outside the conventional scope of economic analysis, such as culture, gender conflicts and power relations to determine *which* multiple equilibria are, in fact, chosen.

We are thoroughly persuaded that these phenomena can be important for marriages, but there is an implication for the discipline of economics which should not be passed over lightly. When economists draw on non-economic factors to explain the choice among multiple equilibria, one suspects it is really an admission of the limits of economic analysis. For if both an economist and a non-economist can agree on the relevance of,

say, power in male-female relationships, the non-economist is surely at liberty to ask why the economist believes that the discipline of economics provides the *ultimate* perspective. Or for that matter, could not a Christian claim that love and relationship valued for their own sake (not for their instrumental value in increasing utility) is the main business of marriage, yet allow a secondary role for economic analysis?

It is this last alternative which we shall explore in section 4: but first we need to unpack the Christian understanding of marriage.

2 The Christian Understanding: Marriage as Covenant¹³

Core to the Christian understanding of marriage is the notion that humanity is the result of God's creative activity (irrespective of how the physical science of this is understood). Thus, O'Donovan (1994, p. 69) describes marriage as an inbuilt goal of male/female relationship: "... a fact of creation, and therefore not negotiable."¹⁴ This underlies the analysis of biblical materials which follows. The biblical understanding of marriage as an ideal social institution identifies five separate "goods" that it promotes—relationship (Gen. 2:18), procreation (Gen. 4), social order (Gen. 2:24), sexual intimacy (1 Cor. 7:3–7) and the provision of material goods that meet the needs of the spouse (see Ash 2003, chap. 7, on Gen. 1 and 2).

Marriage is identified in the scriptures as a covenant relationship, where the covenant reflects the "inner" being of the couple. One difference between a covenant and a commercial contract is that the former espouses unqualified commitment through all circumstances of life ("for better, for worse"), while the latter is more easily voided by one side failing to fulfil its obligations.¹⁵ This view of marriage-as-covenant emerges from the use of marriage as an analogy for the relationship between God and his people (Exod. 20: 2–6, where God is described as "jealous" in language generally applied to marriage, Hos. 1–3, Ezek. 16 and 23, and Jer. 3:1–5 in the Old Testament, and Christ and the church in Eph. 5:29–32). The implication is that the marriage covenant demands complete faithfulness of the man and the woman. The depth of the covenant relationship is indicated in the phrases "naked and not ashamed" and "know." These are more than just a description of sexual relations: Hill (2002) notes that they imply deep openness of one to another within marriage, emotionally, psychologically, physically, and spiritually, without feeling threatened in any way.

This ideal pattern for marriage has been seriously damaged and distorted by the Fall, and the provisions of the Old Testament Law address this unsatisfactory situation.¹⁶ One effect is on the nature of the relationship

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between the man and the woman, notably in their sexual relationship. In Gen. 3, “they realized they were naked.” In part this is a realization of their general vulnerability, to God and to each other, but specifically of a new element in their sexual relationship. Part of the “curse” is that “desire” (perhaps “lust”) enters, and threatens to displace mutual love, with satisfaction of one’s own desires rather than satisfying the sexual needs of the other. In this context, marriage becomes a defensive social institution by regulating sexual activity, and protecting the targets of desire from predation. Hence the Christian scriptures proscribe detailed regulations on sexual relationships and marriage in Old Testament Law, for example Lev. 18 and Deut. 22. A new, and confusing, element is that covenant marriage starts to take on some features of a contract. The ancient Near Eastern parallels include mutually binding agreements, stipulations and sanctions, and payments (dowry). The Pentateuch adopts many of these elements, but adds others: for example, a woman is granted the right to remain married if she has remarried after divorce (her first husband could not claim her back). These contractual provisions are consonant with the concept of marriage as a “public institution” as noted by O’Donovan (1978). Society/law sets the rules, and marriage has to be contracted within that given framework. The couple cannot write a bespoke marriage contract. Marriage as a public and social institution plays an important educative role, providing a template or set of expectations within which the couple can commit to each other and develop their relationship.

A consideration of the biblical material on divorce confirms the very “high” concept of marriage outlined above. The concept of divorce is very clearly present in the Old Testament. Moses permitted divorce (Deut. 24:1, Exod. 21:10–11), formalized in a written certificate of divorce, and Jesus notes that this was because of their “hardness of heart” (Matt. 19:8). Deut. 24:1 permits divorce on grounds of an “indecent” matter, which must include marital unfaithfulness: Exod. 21:10–11 permits divorce where the husband fails to provide “food, clothing, and marital rights.”

In the New Testament, divorce is addressed in the teaching of Jesus, and in the Pauline epistles. The context of Jesus’ teaching is rabbinic Judaism. By the first century AD, there was some common ground among the rabbis concerning divorce: valid grounds were childlessness, material neglect, emotional neglect (especially refusal to have sexual relations), and unfaithfulness. Divorce was undesirable but sometimes unavoidable. It could only be enacted by a man, but courts could persuade a man to provide a certificate if the woman could show good grounds for wanting a divorce. Remarriage was accepted as the norm, but remarriage after an “invalid” divorce was regarded as adultery. But there were disagreements

over the interpretation of Deut. 24:1. The School of Hillel claimed that this text permitted divorce “for any matter;” the School of Shammai said that the text required “for he found in her an indecent matter.” Not surprisingly, the more liberal interpretation of the School of Hillel had become the popular norm. In Matt. 19:1–11, Jesus first affirms lifelong monogamy, and warns that it is contrary to God’s will to break up a marriage (“Therefore what God has joined together, let no man put asunder”). He confirms that divorce is allowed for “a matter of indecency” because of “hardness of heart,” interpreted as a stubborn refusal to repent: but it is not compulsory, in contrast with rabbinic teaching which asserted that divorce was “commanded” in cases of adultery. But divorce “for any matter” is invalid, and hence remarriage after such a divorce is adultery. In the context of interpreting Deut. 24:1 only “a matter of indecency” or “marital unfaithfulness” is a valid ground for divorce.

A key Pauline text is 1 Cor. 7:1–16, which is written to a largely non-Jewish audience. By way of background, in the Greco-Roman world, men and women could divorce their partners simply by separating from them (sending them away, or just leaving). Marriage was expected to end in divorce rather than the death of one of the partners, and divorce was on the basis of “no fault” (Instone-Brewer 2003). Paul states that this kind of divorce is unacceptable for Christians: in particular a believer should not separate from (divorce) an unbelieving spouse (1 Cor. 7:12–14) simply because the spouse is an unbeliever. Paul seems to say that an abandoned spouse has the right to remarry (they are “not bound” in 7:15) but, in contrast to the culture, he commands a leaving spouse must remain unmarried, or be reconciled (7:11).¹⁷

The conclusion is that divorce is not to be undertaken without good cause, and the range of “good causes” is very restricted. “No fault” divorce is unequivocally ruled out. In a negative sense this confirms the covenant view of marriage outlined in the previous paragraphs.

The very limited acceptance of divorce does bring the covenant and economic views closer to each other behaviorally, but significant differences remain. Within the covenant view divorce is always regarded as a second-best outcome, while in the economic view it need be no more than a re-casting of an otherwise inefficient arrangement—without any sense of moral compromise. In a comment prescient of the economic approach to family, the writer C. S. Lewis noted in 1953 that Christians were in disagreement over divorce, but they shared the view that it is more like amputating a leg than dissolving a business partnership (Lewis 1953).

3 The Economic View Versus the Covenant View: What Are the Issues?

A comparison of the economic and covenant descriptions of what marriage is or should be identifies the following issues:

3.1 *The Characterization of Marriage*

There is a key difference in the characterization of marriage. The economic analysis of marriage begins with a discussion of the gains from marriage compared to remaining single: these gains, identified first by Becker, arise from specialization in household and market production, including learning by doing and investment in sector specific human capital, and secondarily from economies of scale in household production and consumption. The marriage contract is concerned with the division of these gains between the partners.

By contrast, the starting point for the covenant understanding of marriage is not the gains from marriage, but the relationship between man and wife, the “inner commitment” of the couple to each other in self giving love (Greek *agape*), involving openness to each other—emotionally, psychologically, sexually, and spiritually. This is a relationship for life: as the Anglican marriage service puts it: “for better for worse, for richer for poorer, in sickness and in health, until death do us part.” An exclusive sexual relation is central to this relationship, primarily as an outward expression of the inner commitment of the couple. In this understanding, any productive “gains” from marriage, and even procreation, are marital “goods,” by-products of the relationship, and are shared by the couple on the basis of their love one for the other. Bargaining over the gains is completely alien to this model. Moreover, the marriage would still be valid if there were no productive gains (or even losses), or if one of the partners experiences a net loss of real income through the marriage. The marriage is defined solely in terms of the relationship between the partners, and not at all in terms of the “gains” and how they are shared.

3.2 *A Mixed Model of Marriage?*

One way of looking at the contrast between the economic and covenant understandings of marriage is to identify the covenant relationship as an ideal which is compromised by the flawed nature or “fallenness” of human beings. Fallenness taken to its logical extreme results in marriages that are based on an implicit contract between partners whose relationship is characterized by self seeking behavior rather than love, and whose motivation in marriage is to increase their shares of the “gains” of marital goods and services that a particular marriage can provide. The “gains”

will include sexual satisfaction, greater production of goods and services, greater access to market goods, and even the satisfaction of being parents. In practice this view of marriage is probably too cynical. Human beings are a curious mixture and their motivations are often quite mixed. The partners may genuinely love each other, and will be prepared to sacrifice themselves to each other as the covenant model requires. However, the default position may be the economic model, and many marriages may revert to that once the initial glow of romantic love has worn off. If this evaluation of the state of marriage in the economically advanced North American and European societies is accurate, it explains why the economics of the family can point to empirical successes in explaining marriage and divorce behavior. In other words, the “reality” of marriage in the West is often close to the economic models developed by Becker and his successors.

3.3 How Are Attitudes to Marriage Formed?

If the description of ambiguous attitudes to marriage described in the previous section is correct, it prompts the question of how attitudes in a particular society are formed. In a society that gives weight to a Judeo-Christian understanding of marriage, one might expect social mores and institutions to reflect the covenant ideal while making due allowance for human fallenness. A society that has abandoned such values will naturally drift towards an economic view of marriage, though many marriages may still be characterized, for all or part of their duration, by the covenant understanding of marriage, even though the partners would not identify with the Christian faith. The mechanisms by which social attitudes are formed are normally regarded as beyond the scope of economic analysis (indeed Becker makes it an article of faith that preferences are “stable”). However the educative effect of institutional norms and expectations is certainly important: in this case, the identification of marriage as a public institution with clearly defined legal expectations and procedures for making and unmaking marriages may be very significant.¹⁸ Couples wishing to be recognized as married have to conform to the norms of marriage as specified by the law and the procedures, and cannot negotiate bespoke “marriage contracts.” The issue about such institutions is whether they simply reflect the norms and expectations of society at large, or whether they have some independent effect in securing old norms or establishing new ones.

This discussion raises the question as to whether the development of the economic analysis of marriage has itself had an effect on the understanding

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of marriage in the Western economies. The covenant model of marriage is peculiarly susceptible to the “corrosive” effect of economic analysis, because marriage itself can very easily be characterized as an institutional barrier to more efficient arrangements and therefore ripe for deregulation. For example, the covenant norms of “permanence” and “monogamy” clearly stand in the way of divorce, remarriage, and polygamy, all of which Becker shows to be economically desirable in a variety of situations. Similarly, one partner abandoning the covenant commitment and deciding to pursue self interest within the marriage can quickly erode the trust on which the marriage has been constructed. Unless the conditions are met for Becker’s altruism model to hold, the other partner will need to revert to a noncooperative equilibrium if he or she is not to lose out from the selfish behavior of their spouse.

4 Motivation Crowding Out and Marital Effort

In this section, we outline a stylized preference function which has the economic and covenant approaches as sub-cases. We do so because we want to be explicit about how marital effort could change if agents incrementally switch from one approach to the other. We find that while a switch from a covenant to an economic approach implies a redefinition of what a marriage is, it need not be associated with lower effort. Thus, if the economic approach to marriage is increasingly adopted across a whole society, it need not spell the end of marriage as an institution. Indeed, the West has seen many explorations of different marriage models in the closing decades of the twentieth century, but marriage remains popular (Stevenson and Wolfers 2007).

Our thought experiment about switching builds on the work by Bruno Frey and his co-researchers on “motivation crowding theory.” Drawing on psychological research, Frey argues that behavior depends on “framing” effects. That is, the way in which economic actors behave depends on whether the situation is understood in terms of a market or not. This has been confirmed in a number of empirical studies surveyed in Frey and Jegen (2001). For example, a study by Gneezy and Rustichini (2000) noted that when a crèche in Israel introduced a “fine” for parents who were late in collecting their children, the number of late collections increased markedly. The interpretation was that the institution of a payment for late collection changed the attitudes of the parents. Previously late collection had been understood to be bad behavior, but once there was a price the parents worked to a different calculus. Another study, Frey and Oberholzer-Gee (1997), found that the willingness of Swiss citizens to accept the location

of a nuclear facility in their neighborhood fell sharply once compensation was offered.

The point of these studies is that introducing a “market”—or at least prices—changes the frame of reference by which behavior is determined. The “post-Becker programme” (Becker’s analysis without altruism) seeks to make people believe that marriage is best thought of in a quasi-commercial framework. Applying this to societal understandings of marriage, it is possible that an increasing emphasis on marriage as a contract between the partners based on sharing productive gains will effectively displace the view of marriage as covenant as individuals evaluate their own marriages. In the analysis that follows, we replace the notion of an “approach” with a “frame” to emphasize the links with this literature. We will examine the effect on marital motivation of a shift from the covenant frame to the economic frame.¹⁹

In our modelling, we pick up the comment in the introduction that marriages in the West are increasingly maintained by personal choice rather than social compulsion or limited sexual options. To that end, we model marital effort as a personal choice problem.²⁰ A representative agent chooses how much effort s to expend on their marriage. With probability $p(s)$ the marriage is a success and with probability $1-p(s)$ it fails. Effort only increases the probability of success—rather than guaranteeing it—because the spouse of the representative agent and the “better or worse” circumstances of life are a source of uncertainty. Furthermore, for analytic simplicity we treat both divorces and ongoing arrangements of “separate spheres” as failed marriages.²¹

Formally, there is a draw of payoffs for a marriage. With probability $p(s)$ the marriage works and provides economic payoffs E . With probability $1-p(s)$ the marriage does not work, giving payoff X (the outside option, either divorce or a separate spheres marriage). Greater marital effort increases the chance of marital success (albeit at a decreasing rate) so that $p' > 0$ and $p'' < 0$.

An agent who accepts the economic frame is distinguished from an agent holding the covenant frame by her adherence to consequentialism, the mainstay of utilitarian analysis. Consequentialism says that the merits or otherwise of an act are to be found *solely* in its consequences, where the latter is usually defined to be observable to a third party (such as a social scientist). The expected utility function for this agent is none other than a classic expected utility function where the agent chooses marital effort s to maximize a probability weighted combination of the payoffs $E(\text{payoff}) = p(s) E + (1-p(s)) X$.

The spouse with this utility function is thoroughly committed to the economic frame. If the expected payoff from a successful marriage is low she has less incentive to put in marital effort, and the marriage is less likely to survive. If the outside option X —which is always registered in the payoff, and never ruled out *a priori*—becomes more attractive, less effort is forthcoming.

One way to model the difference between the economic and covenant frame is to assert that agents in the covenant frame are sympathetic to so-called deontological ethics. These ethics posit the existence of *a priori* moral obligations, implying that decisions should be made solely or primarily by considering one's duties to other people and/or to God.²² From a Christian viewpoint, the relevant duty here is to live a life of obedience to Christ in the context of marriage. This is described in Christian scriptures in a number of ways, but two important considerations are that Christians must in some sense imitate Christ, and that their obedience will be evaluated according to the faithful use of their gifts, rather than outcomes, since the latter are in God's hands.²³

We model this by agents who value their own contributed effort in a marriage, regardless of the outcome.²⁴ They value effort by the function $L(s)$, where s represents marital effort and $L' > 0$, $L'' < 0$. The function $L(s)$ yields value regardless of the impact of marital effort on the probability of success.²⁵ We borrow $L(s)$ from Frey and Oberholzer-Gee (1997), who call it *intrinsic* motivation, because it is independent of outcomes. But it is also possible to call it deontological motivation, as we do here.²⁶

We now form a general preference function which is a weighted average of these two types of agents, minus a cost-of-effort function $C(s)$ where $C' > 0$ and $C'' > 0$. We allow the agent to mix across the two "visions" of marriage, so that we can make statements about a movement towards the economic frame.²⁷ Clearly if θ is unity, the agent adopts the economic frame, and if θ is zero, the agent adopts the covenant frame.

$$(1) \quad Z = \theta[p(s)E(\cdot) + (1-p(s))X] + (1-\theta)L(s) - C(s)$$

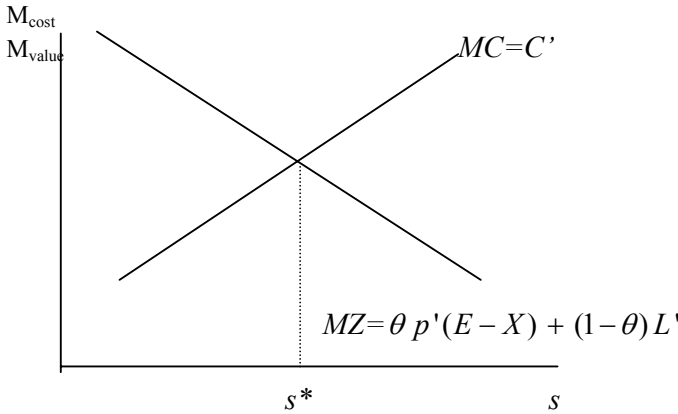
At the risk of oversimplification, we can now redefine Becker's contribution. In *A Treatise of the Family*, θ took different values in different situations.²⁸ When agents are courting or in court (in the marriage and re-marriage market), $\theta = 1$. For *altruists within* marriage, however, he allowed $\theta < 1$. As we have argued in section 1, later theorists tightened the analysis up by setting $\theta = 1$ and by making outside options very prominent. The function collapsed to $p(s)E(\cdot) + (1-p(s))X - C(s)$.

It will be useful in subsequent analysis to find an expression for the optimal level of effort. This in turn either predicts $p(s)$ the probability that an individual marriage succeeds, or the proportion of marriages that succeed in a population of marriages. We differentiate the Z function to obtain an implicit formula for optimal s .

$$(2) \quad \frac{\partial Z}{\partial s} = \theta p'(E-X) + (1-\theta)L' - C' = 0$$

The second derivative $Z_{ss} = \theta p''(E-X) + (1-\theta)L'' - C''$ is most likely negative, satisfying the second order condition for a maximum. This can even be true if $E-X$ is negative, because of the assumed signs of p'' , L'' and C'' . Choosing optimal s involves balancing the marginal cost of effort C' with the marginal value of effort $\theta p'(E-X) + (1-\theta)L'$. The latter is a weighted average of the value of effort under the economic frame $p'(E-X)$ and under the covenant frame L' .

Figure 3: Optimal Effort



We now consider how optimal effort is affected by changes to key parameters in the model. Consider first the impact of an increase in the benefits of marriage. Totally differentiating the first order condition (2), we find the relationship between E and optimal s . (We assume the second order condition $Z_{ss} < 0$ holds.)

$$\frac{ds^*}{dE} = \frac{\theta p'}{-Z_{ss}}, \quad \theta > 0$$

$$= 0, \quad \theta = 0$$

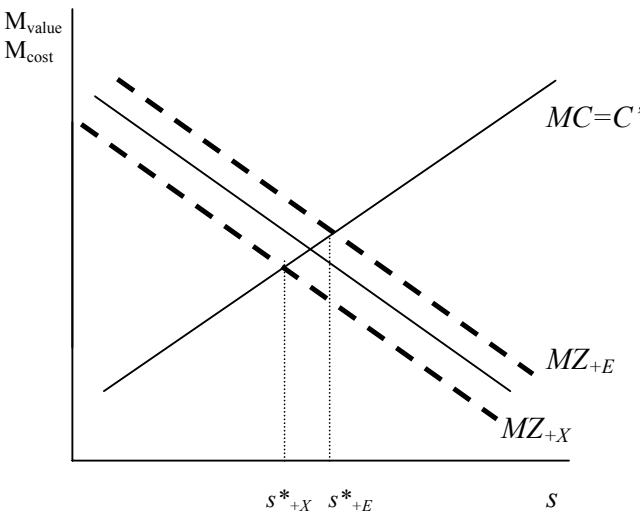
$\frac{\theta p'}{-Z_{ss}} > 0$. Thus, to the extent that one puts any weight on outcomes in the economic frame ($\theta > 0$), more marital benefit motivates effort. This is clear from an inspection of the equation for MZ in the above diagram. For any value of s , an increase in E shifts up the MZ curve, leading to higher equilibrium effort. Higher equilibrium effort translates into either a higher probability an individual marriage will succeed, or a higher proportion of marriages that succeed in a population of marriages.

Exactly the opposite is true when the benefits to the outside option (or, equivalently, the cost of remaining in a functioning marriage) rise.

$$\begin{aligned} \frac{ds^*}{dX} &= \frac{-\theta p'}{-Z_{ss}}, & \theta > 0 \\ &= 0, & \theta = 0 \end{aligned}$$

For any value of s , an increase in X shifts down the MZ curve, leading to lower equilibrium effort. Lower equilibrium effort translates into either a lower probability an individual marriage will succeed, or a lower proportion of marriages that succeed in a population of marriages.²⁹ The shifts in E and X are shown in figure 4.

Figure 4: Changing Marital Payoffs in the Economic Approach



We can make the central claim of the paper with reference to equation 1 and our diagram. We assert that θ may indeed change through time,

possibly under the influence of an increased prominence of Free Market Liberalism. The impact of a rise in θ on the effort that people expend on marriage can then be derived. As before, we find the relationship between θ and optimal s by totally differentiating the first-order condition.

$$(3) \quad \frac{ds^*}{d\theta} = \frac{p'(E-X) - L'}{-Z_{ss}}$$

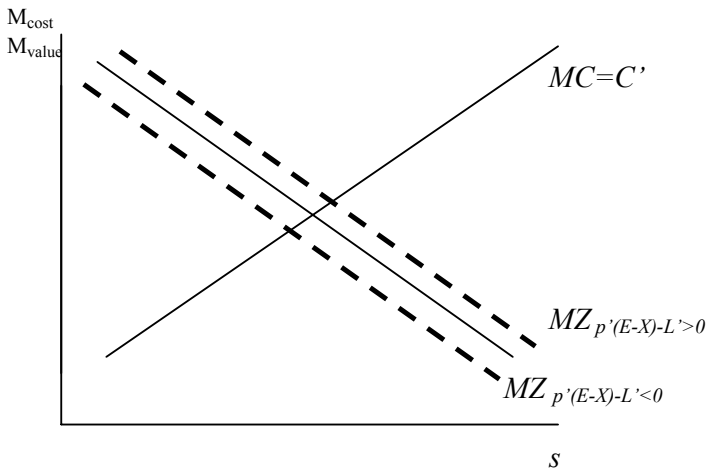
Thus a shift towards the economic frame (an increase in θ) will increase effort if $p'(E-X) - L'$ is positive. The first numerator term $p'(E-X)$ is the marginal benefit of effort under the economic frame. The second term L' is the marginal benefit of effort under the covenant frame.

The total marginal benefit, MZ in figure 5 and the first two terms in equation 2, is a weighted average of these two marginal benefits. An increase in θ changes MZ by shifting more weight onto $p'(E-X)$, from L' . If the former is greater than the latter at the equilibrium, MZ will shift up in the neighborhood of equilibrium effort. That is, if extra effort “makes more sense” under an economic frame than under a covenant frame—say because it is realized that a spouse is, on balance, a very “rewarding” person to live with—then a shift towards an economic frame will increase motivation for marital effort. Thus the MZ schedule in the diagram rises, and with it the equilibrium s .³⁰ The chance that the individual marriage will work is higher, and so is the proportion of marriages (with these characteristics) that work. Note, however, that “marriage” has changed its meaning at the margin. It has moved in the direction of a “business partnership” away from a commitment of covenant love.

On the other hand, a spouse could be so difficult as to be “unrewarding” to live with, if $E-X$ is small (or even negative). If the net benefits of marriage are so small at equilibrium that $p'(E-X) - L' < 0$, then marital motivation is weakened by a shift to the economic frame. It is not hard to imagine a marriage maintained for ethical reasons deteriorating as the forbearing party shifts from the covenant to the economic frame. That is, if $p'(E-X) - L'$ is negative, an increase in θ will result in less effort.

In both cases it is the comparison between the marginal effects of effort under both frames that matter. This is because an increase in θ represents an increased reliance on one kind of motivation—economic motivation—as opposed to another kind of motivation—covenant motivation. Extra effort is forthcoming if the motivation that is increasingly relied upon is, in fact, the stronger motivation, where “strong” is measured by the marginal valuation of effort.³¹

Figure 5: Increasing θ : A Shift towards the Economics Approach



The model provides an interesting analysis of the effects on marital effort (and hence the proportion of failed marriages) if there were a simultaneous increase in L' (a greater motivation to act without reward) and a switch away from the economic approach (a fall in θ). As the model makes clear, the sign of $p'(E-X)-L'$ is crucial in determining the effects of a fall in θ . Clearly, if L' rises by enough to make $p'(E-X)-L'$ negative, then equation 3 assures us that a fall in θ will translate into greater marital effort. This possibility for the simultaneous increase in marital effort, and a more covenantal understanding of marriage, inspires many Christian critics of current attitudes.

However, the possibility exists for a mismatch between the increased reliance on covenantal motivation (the reduction in θ) and the actual prevalence of that motivation (the size of L'). That is, if L' increases, but not by enough to exceed $p'(E-X)$, then the reduction in θ will result in lower marital effort and hence more failures.

There are a number of messages here about Christian social action. First, to be effective the public promotion of Christian norms must be accompanied by genuine *and sufficiently strong* changes in motivation on the part of the target audience. In other words, the links between social action and the promotion of the Christian gospel cannot be ignored.³² Secondly, if covenantal motivation is not sufficiently substantial, then Christian policy makers need to think in terms of utilitarian costs and benefits when seeking Christian ethical outcomes. This is not surprising for any Christian who takes the Fall seriously. Finally, the analysis distinguishes effort and

outcomes. It implies that someone may genuinely seek to make their vision more covenantal, and may improve in their capacity to love without reward—both of which would, in the Christian worldview, be associated with conversion—yet nonetheless see their marriage fail.

5 Conclusion

We began this paper by noting that modern marriages are maintained increasingly as a result of personal choice, rather than external compulsion. With this in mind, we noted that the contribution of Becker (1981) may have gone beyond explaining developments in society to promoting a certain vision of marriage based on productive gains. Furthermore, later models that sought to explain how to share these gains between the husband and wife made much of so-called threat points in bargaining models.

If the advanced industrialized world were a place where the ties of tradition were stronger, this change of vision might not have mattered very much. But in the contemporary Western cultural milieu, vision is especially important, as evidenced by the depth of feeling generated in the Marriage Wars. Evidence for the importance of vision is found in the literature on “motivation crowding.”

It is therefore important to seek out and articulate those visions of marriage that have held some sway historically, and participate in the Marriage Wars discourse. It is natural to focus on the Judaeo-Christian tradition. Articulating the so-called covenant approach and contrasting it with the economic approach is central to the purposes of this paper.

First, as we noted in section 3, there is a case for a “mixed” model of marriage, where the economic approach is a default for the disillusioned. Indeed, in Section 4 we chose to model agents as being on a continuum between a purely economic approach and a covenantal approach. Focussing on the disillusioned, an advocate of the economic approach can always claim that the self interest implicit in the economic approach is in fact the *deus ex machina*, and that the covenant approach is based on the illusion of altruism. Although Becker’s intellectual heirs implicitly took this approach, we noted that it was not true of Becker himself: “If I am correct that altruism dominates family behavior perhaps to the same extent that selfishness dominates market transactions, then altruism is much more important in economic life than is commonly understood” (Becker 1981, p. 303).

Becker’s observation is important, but the ideal of covenantal marriage has never existed in a pure form, making it hard to discern empirically. Nor can we identify a “golden age” of marriage in the mid-twentieth century. But our comparison of two visions of marriage—*neither* of which

has existed perfectly—is analogous to comparing societies dominated by Rawlsian or Benthamite utility functions.³³ No society has ever been identified totally with either, but that does not mean that these are useless categories for discussing actual societies.

Comparing the economic approach with the Judaeo-Christian vision, we can identify a contrast. A single marriage contract—based on notions of covenant—had an educative role in society, though less so now with the widespread uptake of cohabitation. The economic approach calls for some deregulation of marriage, perhaps by allowing a plurality of publicly supported contracts, or perhaps by allowing laissez faire private arrangements (though the latter does not generally find support among the advocates of children’s welfare).³⁴

In section 4 we briefly reviewed the work of Bruno Frey and his associates on motivation crowding out, and then built a model of marital effort which incorporates preferences based on the economic and covenant approaches. This analysis allows us to combine external influences and internal motivation together in a richer theoretical story of late-twentieth century marriages. Becker argued that the net benefit to marriage ($E-X$ in our model) fell in the late-twentieth century partly due to increases in the female wage rate (reducing E). For those already seeing marriage in the economic frame the changes would have eroded marital effort.³⁵ Naturally enough, these were the only actors Becker considered in *A Treatise of the Family*.

However, for those with more mixed motivation—perhaps the majority—a key question is whether their “vision” of marriage altered at the same time as the external circumstances did. Initially, a change in vision might have been caused by the Sexual Revolution, which tended to question the validity of the institution of marriage (and, to give Becker his due, the pill reduced the “price” of extra-marital sex by lowering the probability of unwanted pregnancy). But the Reagan/Thatcher revolution of the 1980s, and perhaps even the *Treatise* itself, may have added credibility to a more utilitarian view of relationships.

If they did, and if the change in $E-X$ was large enough to make $p'(E-X)-L'$ negative, then the observed decline in marital effort in the late twentieth century ought to be seen, in the light of equation 3, as a coming together of external forces and internal motivation. At the time when covenantal marriage was beset by external criticisms, the corrosion of effort was reinforced by the increasing application of utilitarian cost-benefit analysis to intimate relationships.

What does the future hold for marriage? It is hard to say, but if an increased uptake of the economic approach coincides with more incentives

to marital effort being put in place, or these incentives arise naturally as a reaction to the high divorce rates of the 1970s, then a *greater* marital effort may result. Thus, social planners who accept a shift towards the economic frame have some scope for interventions. If marriage is valued, and a “stay at home strategy” for women allows greater specialization in home production (increasing E), then tax breaks can be arranged. Or, if greater provision of childcare removes pressures on dual income families that might lead to divorce, then this policy can be pursued. Finally, if greater provision of counselling services makes marital effort more effective for “worthwhile” marriages (increasing p' when $E-X$ is positive) then that is an option too.³⁶ Indeed, policy discussion along these lines might even “spread the word” of the desirability of cost-benefit analysis for those in the process of switching to the economic frame, thus confirming them in their choice.

But it is important to remember that the mere existence of an institution can mask its wholesale transformation, as is the case for the monarchy over the last three centuries. Arguably, if marriage becomes just another business partnership, this will be a transformation that social scientists will not want to have missed—while they pored over divorce rates, fertility statistics, national accounts, and *A Treatise on the Family*.

Endnotes

- 1 Another perspective is Brinig (2000), who appeals to feminist ideas to apply the metaphors of covenant and contract to marriage. In some respects her perspective is quasi-economic in the sense that a family is viewed as a “franchise,” but she is sometimes critical of the explanatory power of Free Market Liberalism.
- 2 Naturally, people can act contrary to their words, or even their intentions, but we believe that statements should stand as evidence in the social sciences until they are proven hollow. In contrast, we know of no marriage ceremony anywhere, at any time in history, where the parties have promised to maximize utility “relentlessly and unflinchingly” (Becker 1976).
- 3 See Coontz (2005) for a negative critique of this “golden age” hypothesis.
- 4 A classical utilitarian social welfare function adds up individual utilities, and a Rawlsian welfare function says that social welfare is equal to the welfare of the worst-off member (Varian 1987). No society has ever been marked totally by Rawlsian or Benthamite ethics, but that does not mean that these are useless categories for discussing actual societies.

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- 5 Fertility here refers to the actual bearing of children, rather than the ability to do so. The latter is called fecundity by demographers.
- 6 Becker (1981) notes that this insight was first spelled out with regards to children, but that it applies to the interactions between all altruists and beneficiaries.
- 7 Becker's analytic point could have been made with the roles reversed —an altruist wife and a selfish husband. This is not true in general of the *Treatise*, which gives significant credence to natural specialization within the household (women rearing children and men engaging in market production). This is discussed below.
- 8 We will discuss the validity of a “marriage norm” later, which is not necessarily to be identified with the mid-twentieth century American single-income male-provider model. Briefly, despite the diversity of marriage practices across times and cultures (Coontz 2005), we discern a thread of common ideas in the Judeo-Christian vows which make a coherent ideal (with varying degrees of practical success).
- 9 Another post-Becker development, which is not central to the argument of this paper, is the stronger emphasis on consumption complementarities in marriage (see Stevenson and Wolfers 2007).
- 10 The common preference model still attracts support within the profession since it remains an open question of whether income pooling is a reasonable approximation. Enough altruistic sharing might occur in families to justify it as an assumption in some modelling environments.
- 11 That is, who gets what in the marriage.
- 12 That is, not suddenly switching to being an altruist on the wedding day.
- 13 The theological literature on marriage and divorce (especially the latter) is voluminous: the focus here is restricted to recent works which seek to interpret the biblical evidence. The scope of the wider theological debate, both historically and currently, has been expertly surveyed by Witte (1997), summarized in Witte (2002).
- 14 Ash (2003) notes that this understanding is based on five key assertions. First, the creation order is *moral* and not just material. Second, it is indeed *created*, not constructed by us, whether as individuals or societies. So the ethics of marriage are an exposition of an order placed in creation by God, and not an imposition of human or social will. Marriage is a *status*, not a project in developing a relationship which may or may not succeed, nor a humanly constructed contract subject to renegotiation. Third, the creation order is *universal*, not limited to

particular localities, cultures or time periods. Fourth, the creation order is revealed in Scripture, and a study of Scripture in its entirety enables us to understand that order. Finally, it is *significant*, an objective reality. Conforming to it brings blessing, and living otherwise invites curse.

- 15 Instone-Brewer (2002) notes that the term for covenant in the Old Testament is also widely used for other kinds of contracts in the ancient Near East, and he therefore cautions against regarding a “covenant” as more than a contract. However, the concept of covenant does develop in the theology of the Old Testament, in particular the use of the marriage analogy for the relationship of God to his people, making it more than just a contract for services.
- 16 In Christian theology, the key empirical prediction of “the Fall” is that people are in a state of alienation from God, implying an anthropocentric (rather than theocentric) ethical orientation.
- 17 The application of this biblical teaching on divorce remains contentious. The debate is between those who argue for an “indissolubilist” position (e.g., Wenham and Heth 2002), and those who infer that divorce is permissible in quite strictly defined circumstances (O’Donovan 1978). Furthermore, a distinction is sometimes made between the rules on divorce for members of the Christian community, and those applicable to society in general. For example, the Roman Catholic church generally holds to an “indissolubilist” position for marriages between Catholics, which is consistent with Paul’s position in 1 Cor. 7:11.
- 18 This implies that changes in a legal regime, such as the introduction of no-fault divorce, may have an independent impact on marriage as an institution, working through changing the understanding of marriage.
- 19 Unlike Frey and his associates, we allow for incremental shifts between frames.
- 20 If this does not strike the reader as remarkable, it may reflect the extent to which we are all acculturated to our own time and place.
- 21 This is not to cast judgment on the personal choices of the people involved. Rather, it is simply recognizing the gap between both these arrangements and the ideals to which most newlyweds aspire.
- 22 The term “deontology” is not nearly as well known as the dictum that it implies, namely that “the ends do not justify the means.”
- 23 On imitating Christ, 1 John 2:6: “whoever claims to live in him [Jesus] must walk as Jesus did.” On God bearing responsibility for outcomes, 1 Cor. 3:5–6: “[Paul and Apollos are only] ...servants, through whom you came to believe—as the Lord has assigned to each his task. I planted the seed, Apollos watered it, but God made it grow.”

- 24 A caveat here is that the covenant frame would not condone situations of persistent emotional, physical, or sexual cruelty. Under such circumstances an overriding ethical imperative exists to cease living with the perpetrator.
- 25 We call this “value” rather than “utility” to avoid potential misunderstandings. Although it is in principle possible to define utility very broadly, so that it could encompass spiritual experiences and outlooks that motivate action, it is rarely done so. More common is the identification of utility with monetary benefit, usually one’s own. Or, picking up on the connection between economics and behaviorist psychology, utility is sometimes cast in terms of the satisfaction of “basic” drives, such as the desire for food, shelter, or sex (as in Becker’s writings on the family). We prefer the term “value” since it forms a bridge between economics and ethics. It sounds like something that can be maximized, which pleases economists, yet it is also used to describe the ethical outworking of a religion. Finally, as we shall explore presently, utility is usually described as arising from *consequences* to actions, but the consequences are not defined broadly enough for our purposes. A satisfactory definition would have to include a religious consequence like “a consequence of this action is that I am conforming to God’s will.”
- 26 Another way to model covenant preferences would be to say that religious values decide on preferences at a meta-level, and then classic utility maximization occurs. For example, someone might rule out divorce or separate spheres as an option for them, no matter what the relative payoffs. In other words, they could be blind to X in their utilitarian calculus. We experimented with this, but opted for the notion of $L(s)$ since it attempts to be more different in kind to classic utilitarianism.
- 27 In order to be able to add the two functions, we are implicitly assuming that classic “utils” can be traded off against the value function $L(s)$. There is nothing controversial about this in principle: economists have been known to trade off the different kinds of satisfaction available from apples and oranges. As noted above, we could say that $L(s)$ produced “utils” but it would have to be clear that these utils were freed from their self-interested, behaviorist, and consequentialist connotations. If the reader finds this cumbersome, they should just consider (1) to be a utility function.
- 28 Consider his claim that the economic payoff to marriage E has the female wage as an argument $E=E(w)$, and that $E' < 0$. In a quote

reproduced earlier, he argued that a higher female wage reduces the advantages to specialization, and hence the economic benefits to marriage. Then, implicitly recognizing the outside option X , he said that marriages became less stable because there was less incentive to put effort into them. However, he ignored outside options in his discussion of the rotten kid theorems. Any “rotten-kid” wives remained committed to marriage—they did not consider leaving the family.

- 29 Since X is the payoff from divorce or a “separate spheres” marriage, a higher proportion of failed marriages does not necessarily imply a higher proportion of divorces.
- 30 It is shown as a parallel shift on figure 5. But all that is required is that the MZ curve rises in the neighborhood of the equilibrium (the line could in principle twist).
- 31 This definition of motivation implies that if the same unit of effort (measured, say, by the sweat on the brow) is expended on playing squash or digging a garden, the motivation is stronger for gardening if the satisfaction obtained is greater.
- 32 Christians, and others who believe in covenant marriage, would also be well-advised to foster symmetric expectations in marriage: that is, to avoid appealing to covenant love when excusing one’s own shortcomings, while using covenant ideals of marriage as a basis for attacks upon one’s spouse. The perceived costs and benefits $E-X$ can also presumably be influenced by education, so there is a role for the church to guide people who notice $E-X$ (which includes everyone, to some degree) towards realistic expectations of their spouse.
- 33 The search for purely economic marriages might be more fruitful if more couples wrote pre-nuptial agreements. In fact, such agreements are not particularly common (Brinig 2000).
- 34 Even if the two visions of marriage are hard to observe in a pure form, their policy implications are starkly different. In particular, the attitude to divorce under the economic approach is very distinctive. Divorce is no more socially corrosive than dissolving a business partnership, and the forces of “competition” unleashed by the threat of dissolution allow aggrieved parties to bargain hard, on the basis of their threat points. It would be simplistic to charge the covenant view with a total disregard for the chronically aggrieved—even Roman Catholic “indissolubilists” recognized certain tragic situations where people ought not to live together—yet the promoters of covenant really are a long way away from the economic approach on this issue. They do not see marriage as fundamentally driven by threat points. A marriage

so driven is seen as a *possibility* in the covenant view—“tough love” in tragic circumstances sometimes requires it—but it is far from the *norm*, and we dare to think it is too cynical a description for a significant number of marriages.

- 35 For those agents completely in the economic frame ($\theta=1$) all that is relevant is the difference $E-X$, since $L(s)$ never enters their thinking.
- 36 For positive $E-X$, the impact of an increase in p' on $ds^*/d\theta = (p'(E-X)-L')/-Z_{ss}$ is positive. Conversely, the model suggests that effective counseling will negatively effect effort if $E-X$ is negative. In the latter case counseling, in conjunction with a switch to an economic frame, allows agents to see that their marriages are not “worthwhile,” in the sense that it is not in their own interests to invest effort according to utilitarian calculus.

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