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Property Rights and the Economics of Divorce

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ABSTRACT: With examples drawn from English and Scots law, this paper sets up a simple framework to analyse the role of property and dissolution rights in determining divorce decisions. Although firmly based on the economic analysis of choice and bargaining, the discussion is relatively non-technical and directed at drawing out implications for public policy. In particular the paper emphasises the importance of the laws on alimony and property division after divorce in affecting not only divorce decisions but also the allocation of resources within surviving marriages.

1. INTRODUCTION

To many people it may seem obvious that changes in divorce law that make divorce easier will have the effect of increasing the incidence of divorce, especially if they allow one partner unilaterally to seek a marital dissolution without the consent of the other partner. A casual glance at figures showing the dramatic increase in divorce during this century appears to confirm this. Figure 1 shows the divorce rate in England and Wales since 1900. Figure 2 compares divorce rates since 1950 in England and Wales with those in Scotland. If we take the Second World War to be an exceptional period, the figures appear to show an explosion in divorce rates, starting in the 1960s. This was an era of divorce reform, not only in Britain, but in many parts of Europe and North America; hence the inference that divorce reform was responsible for the increase in divorce, with the implication that continued liberalisation of divorce law will further increase the divorce rate.

In this article I discuss how economists have approached this question. The orthodox view, associated mainly with the work of Gary Becker, is that legal rules have little effect, and that the explanation for the rise in divorce rates lies elsewhere, principally in the labour market (for example: Becker, 1991; Becker, Landes and Michael, 1977). I argue that Becker's approach rules out a wide range of interesting and important situations, and that when we include these cases we expand the potential role that legal rules can play. In particular, it is not just the law on marital dissolution that is important, but also the law on property, both within marriage and after divorce.

One of the reasons that Figure 2 is so instructive is that it shows broadly the same trend in divorce rates in both England and Wales and in Scotland. Yet divorce reform occurred at different times in the two jurisdictions. In England and Wales the Divorce Reform Act of 1969 came into operation in 1971. In Scotland the Divorce (Scotland) Act was passed in 1976 and came into effect in 1977. Figure 2 shows that divorce rates started to increase from about the beginning of the 1960s. On grounds of timing, then, it is difficult to support a simple link from divorce law to divorce incidence. Indeed, Becker and others have argued that the legal changes have been a response to pressure for simpler divorce procedures, the increase in divorce having its origins outside the legal system.

This raises two issues. Firstly, legal rules can impose (or reduce) considerable transactions costs. For example: the provision of legal aid, available in divorce cases since the Legal Aid and Advice Act, 1949; the Special Procedure, introduced in England and Wales in 1973 to permit affidavit evidence in undefended cases; divorce by post, allowed by the Court of Session in Scotland since 1978; the extension in 1984 of jurisdiction in Scotland from the Court of Session (in Edinburgh) to Sheriff Courts (throughout Scotland); the relaxation, in England and Wales, of the three year bar from the date of marriage to divorce following the Matrimonial and Family Proceedings Act 1984. All of these make divorce less costly. If a divorce is going to happen anyway, then one might argue that it should do so at minimum cost. The orthodox position is that the change from fault to no-fault divorce can also be seen as reducing costs and simplifying procedures.

However, it is not denied that at the margin there will be some divorces that would not otherwise have occurred (for empirical evidence on this see Smith, 1997).

The second issue lies at the heart of Becker's approach: in the absence of transaction costs, what is the mechanism by which major changes in the grounds for divorce are neutralised? Why should a change from fault to no-fault, or a change in the rules of consent to divorce, not have an effect on divorce incidence? The answer turns on the rights of partners to dissolve a marriage, or to prevent a dissolution. Divorce law confers certain rights regarding marital dissolution, and these can be seen as property rights in the marriage. Such rights can be traded, or in some way included as part of an agreement. A law that allows unilateral divorce thus has a very different disposition of rights than one requiring mutual consent. Suppose it is the husband who wishes to divorce; if his gain from divorce is large then under a mutual consent law he may be able to compensate his wife so that after a divorce they would both be better off. In effect the wife has sold her right to the marriage. Thus divorce occurs under mutual consent if there is a potential for both partners to be better off, perhaps after a suitable transfer that would form part of the divorce settlement. Under a unilateral law, if the husband's gain from divorce is small and the wife's loss is great, then she may be able to compensate her husband for not seeking a divorce. They would then both be better off than had they divorced. In effect the husband has sold his right to divorce, his compensation being some change in the way the marriage is conducted. The conclusion is that whether divorce occurs or not depends not on the law, but on the relative magnitude of the gains and losses of divorce.

This line of reasoning can be seen as an application of the Coase Theorem, which asserts that under certain conditions economic outcomes are unaffected by the distribution of rights (Coase, 1960). The outcome in this instance is marriage or divorce, and the relevant rights are the right to bring about or to prevent a divorce. One important assumption in the argument is the absence of costs or impediments to the disposition, enforcement, or transfer of property rights. This allows the costless bargaining described above. If bargaining is costless, it is difficult to see why a couple should ignore deals or agreements by which both could be made better off (so called *Pareto improvements*). If we are willing to accept that a couple considering divorce come to an *efficient* agreement (one which does not leave unexploited a Pareto improvement), then the argument boils down to asking what is efficient: divorce, or a continued marriage? The orthodox position is that the answer does not depend on dissolution rights. I want to argue that both might be efficient, and that which occurs may depend on both dissolution rights and property law. Property played a role in the Coasian argument above in that it is a possible vehicle by which compensation can be paid. For example, implicit in that argument was the assumption that after a divorce, in the absence of any compensation or agreed transfer from one partner to the other, there was a well defined allocation of the couple's resources. We might imagine it to be the result of a judicial ruling when the couple have agreed to separate but cannot agree on a settlement of property. Thus it is in large part determined by legal rules on the post-divorce division of property. But for a

husband to persuade his wife to agree to a divorce when mutual consent is required may mean giving up such legally determined entitlements i.e. agreeing on a privately ordered divorce settlement that makes her better off than were the marriage to continue, but makes him worse off than had they agreed to divorce but not agreed a property settlement, accepting instead a judicial ruling.

However, in the Coase/Becker argument, just as there is no role for dissolution law in affecting the divorce decision, nor is there a role for property law; it only affects the extent and direction of any compensation payments. Since it is the contention of this article that both branches of the law are important in determining divorce incidence, even in the absence of transaction costs, in the next section I discuss briefly how family law defines some of the rights referred to above, with examples drawn from English and Scots law. In particular, I examine the relationship between consent (a central concept in the Coasian argument above) and fault (a term much used to describe actual dissolution laws). I then set up a simple framework in which to analyse the divorce decision. This allows us to examine the basis of Becker's argument on the irrelevance of dissolution law. I then go on to consider more structured and stylised models. I conclude with a discussion of some policy implications.

2. PROPERTY RIGHTS AND FAMILY LAW

Dissolution Rights

Scots law has allowed divorce since the Reformation, but until 1976, it was based almost exclusively on some idea of fault: adultery, desertion, or, since 1938, cruelty, sodomy, or bestiality (a further ground was incurable insanity, but this could not be described as a fault). Since the Divorce (Scotland) Act of 1976, the only ground for divorce has been the irretrievable breakdown of the marriage, which must be proved by at least one of five "facts": adultery; unreasonable behaviour; desertion; two years separation if both partners consent to divorce; five years separation if one partner wishes to divorce. This is similar to English law since the Divorce Reform Act of 1969. The last fact allows for unilateral divorce, and is a central innovation of the 1976 act.

Fault-based divorce is often held to be identical with divorce requiring mutual consent. This is justified on the grounds that in a fault-based system divorce can only happen if one spouse commits a fault (presumably in full knowledge of the possible legal consequences), and the other brings an action at law. This certainly implies that a fault based law must be one of mutual consent, since it is difficult to see how unilateral divorce (i.e. where mutual consent may be absent) can be embodied in a law based only on fault: one partner can always refuse to commit a fault or to start divorce proceedings. But this argument loses power if we admit that the definition of fault could in principle be very wide: for example, if "unreasonable behaviour" were to include anything that one spouse found even mildly irritating in the other, then each spouse in a marriage would surely have occasional episodes of unreasonableness, thereby exposing themselves to the risk of divorce

should the other spouse desire it; in effect, either spouse could easily establish that unreasonable behaviour had occurred. Furthermore, just as the idea of fault is ambiguous, so is the idea of mutual consent. One spouse, wanting a divorce, could behave so cruelly that he or she makes the other want a divorce too. We might label this "constructive" consent.

Even if we ignore these misgivings about the concepts of fault and mutual consent, and accept that a fault based law must be one of mutual consent, it does not follow that a law based on mutual consent must require one partner to commit a fault. A law could specify that a couple merely had to agree to divorce. In Scots law the fourth fact referred to above, two years of separation plus mutual consent, falls into this category. Even if the law states that it requires proof of fault, this is no guarantee that in practice a fault must be committed before a divorce is granted. If both spouses want a divorce, and neither is prepared to commit a fault, the only way to procure a divorce is to connive. In England from 1857 until 1937, adultery was the only ground for divorce, so that, as Gibson has written: "Divorce by mutual consent was possible if one were wealthy enough to pay the costs of hotel rooms, private detectives, witnesses, corroborative evidence, and legal and court fees" (Gibson, 1994, p97). Further costs were the distaste felt by some in having to resort to such sordid deception, and the risk of being prosecuted for conspiring to manufacture false evidence.

If fault-based divorce is not identical to divorce requiring mutual consent, then no-fault divorce is not the same as unilateral divorce. But the intention of the divorce reforms of the 1960s was that if a marriage was dead then "the object of the law should be to afford it a decent burial" (Law Commission, 1966, quoted in Gibson, 1994, p.104). A law based on this reasoning therefore requires evidence not of fault but of marital breakdown, and on the ancient maxim that it takes two to tango, if the couple have been separated for some time (e.g. five years) and one partner wants a divorce, then the marriage is *de facto* dead. Hence unilateral divorce without fault.

Nevertheless it should not be presumed that no-fault legislation automatically allows a quick or costless divorce. As noted above, in the United Kingdom, there is currently a qualifying period of five years if one partner withholds consent. It should be noted that the Coase theorem assumes the absence of transaction costs, so that insofar as the enforcement or transfer of dissolution rights is costly, then strictly speaking the theorem does not apply. Nevertheless, the vast majority of writers on divorce and the Coase theorem have ignored transaction costs. They have also equated mutual consent with fault-based law, and unilateral divorce with no fault law.¹ I have argued in this section that both in practice and in principle matters are more complicated. Historically there has been a movement away both from fault and from the requirement of mutual consent, but there is no logical necessity for future reforms to continue this trend. For our purposes the important issue is whether one partner can withhold consent to a divorce or not, and this is the

¹ A recent exception is Friedberg (1998). Table 1 of her paper shows that while all US states allow some form of no-fault divorce, not all allow unilateral divorce.

criterion by which I assess past and prospective legal reforms, even if they are couched in the language of fault.

Resource Rights Within Marriage

The title to a physical or financial asset may belong to one or both partners, and it can be transferred from one partner to another. Who has the right to such property when a couple disagree on how it should be used depends on the current state of the law relating to marital property. This law differs between countries, and has changed over time. In Scotland, for example, before the Married Women's Property (Scotland) Act of 1881, a wife had no right to her own moveable property, such as money or furniture, even if she had earned it or inherited it (an exception was so-called *paraphernalia* such as dresses and jewellery). Similarly, until the passing of the Married Women's Property (Scotland) Act of 1920, heritable property such as land or a house, even though owned by the wife, was controlled by the husband. Broadly speaking, Scots law now applies the same property law to spouses as to any two people, so that a wife's earnings are her own property. There are certain exceptions to this principle: for example, household goods are presumed to be jointly owned. But if the title to the matrimonial home is in one spouse's name, then that spouse owns the home, and can sell it. The other spouse cannot prevent the sale, although he/she may have a claim on the proceeds and may still have a right to occupy the house. It is only since the Matrimonial Homes (Family Protection) (Scotland) Act of 1981 that a spouse who is not an owner or tenant title has a right of occupancy of the matrimonial home, although either spouse can be excluded if there is a risk of danger to the other spouse or a child of the family.

These examples of property law show dramatic changes in the disposition of property rights within marriage over the course of a century: from having virtually absolute control over family resources, a husband can now be excluded from his own house. Similar changes have occurred in English law, starting with the Married Women's Property Act of 1870.

Resource Rights at Divorce

Property and Financial Assets

How property, financial assets, and income are divided up at a divorce is a large and complex part of the law. In Scotland, the Family Law (Scotland) Act of 1985 sets out the principles by which this should be done. Before 1985, financial provision at divorce was left mainly to the judges' discretion. My intention here is not to give an account of the history of the law, but to identify some important issues which have a bearing on the approach set out in this paper.

(i) Will a spouse's behaviour during the marriage be reflected in any settlement i.e. will any fault be punished? In Scotland, prior to the 1985 Act,

matrimonial misconduct could reduce a spouse's settlement, but, as Thomson (1986) has pointed out, this is clearly at variance with a law based on irretrievable breakdown of marriage. Since 1985, matrimonial misconduct has played no role in determining settlements, although destruction or dissipation of property can enable a court to depart from the general principle that marital property should be equally shared at divorce.

(ii) Will one partner be compensated for any economic sacrifices they have made during a marriage? An affirmative answer to this is one of the central principles of the 1985 Act, the intention being to protect women who have devoted time and effort to housekeeping and rearing children, and in doing so have possibly given up a well paid job as well as damaged their future career prospects.

(iii) Who will bear the cost of caring for dependent children of a marriage? The 1985 Act lays down that this is to be shared equally between the husband and wife, although the courts' jurisdiction has largely been superseded by the Child Support Act of 1991, which gives powers to officers of the Child Support Agency to make maintenance assessments. Such assessments are according to a complex formula, whose main purpose is to ensure that absent fathers meet their financial responsibilities towards their children, rather than impose a burden on the taxpayer.

(iv) What means are at a court's disposal for reallocating property and income? In Scotland, a court can make awards of a capital sum, of periodical allowances, and the transfer of property. It can set aside or vary the terms of prenuptial settlements, transfer property or money to trustees, and make orders regarding the division of benefits from life policies and pensions. In short, Scottish courts currently have a very wide range of powers, so that, as Thomson has remarked, "[a] court can make orders for financial provision which can be tailor-made for the particular couple concerned" (1996, p126).

Custody of Children

The law concerning child custody defines another forms of right, which might not fall within a narrow definition of property rights but which is certainly important in determining the division of the pie at divorce, both because resources have to be devoted to children, and because children can be considered as 'assets' of the marriage i.e. as part of the pie itself. In England, for example, before the Child Custody Act of 1839 a wife, even if separated, had no custody or visiting rights. Since then the law has changed significantly. Both in England and Scotland, custody law is now theoretically neutral between husband and wife, there being no automatic presumption in favour of either spouse.

Property Rights and Family Law

In this section I have given a very brief and inevitably imperfect outline of some of the salient issues regarding property rights and family law. Clearly these rights have changed dramatically in the United Kingdom over the last

150 years. Broadly speaking, property rights have been transferred from men to women. Historically this legal emancipation has been accompanied by profound changes in the political and economic status of women. In order to isolate the effect of legal changes on the incidence of divorce, I now set up a simple framework to look at property rights and marital dissolution.

3. CUTTING THE CAKE: MADEIRA AND DUNDEE

Consider the economic resources of a married couple, possibly with children. Between them, they may have assets (land, a house, savings, stocks and shares, pension rights) and liabilities (a mortgage, loans and overdrafts). Amongst their assets we should include human capital, which may have been augmented through education and experience. Thus each partner has an earning capacity, as well as an aptitude for economic activity within the household.

The combined resources of the couple can be deployed or allocated in an infinite number of ways, each specifying who works, who looks after the children, who does the housework, what goods are bought, who consumes what. An *allocation* is a complete description of economic activity and to each allocation we can assign two utility levels, one for each partner. Note that we attach utility to allocations, so this framework allows for a spouse to be affected by his or her partner's consumption, work etc. Adopting a utilitarian framework does not necessarily imply that husband and wife are presumed to be wholly selfish. Different allocations generate different utility pairs, and the set of all possible allocations generates the set of all possible utility pairs. Let us call this the marital utility possibility set, labelled M . It gives all the utility levels that can be achieved through marriage. An example is shown in Figure 3, which shows M with a downward sloping outer frontier (allocations beyond which are not possible), and a lower limit of zero to each spouse's utility (utility is here only ordinal, not cardinal, and the zeroes of the utility axes have no special significance).

The set M is a collection of possibilities. It does not depend on the disposition of marital resource rights, but it does depend on the precise specification of household members' tastes, resources, assets, and employment opportunities. To achieve some points in M may mean that one partner has to give up rights, or at least not to enforce them, and perhaps to transfer resources. For example, a partner may have the right of complete control over the family's finances, but elects, out of generosity, love, or perhaps as the result of social pressures, to share them equitably.

The set M describes what is achievable through marriage. Suppose the couple divorce. This opens up new opportunities, and closes off others. Spouses who detest each other can live apart; they can work in different locations; they can remarry, possibly finding happiness and wealth with another partner and thereby having access to an alternative set of marital possibilities. Divorce also means that the benefits of living together are lost: economies resulting from specialisation (for example, one partner going out to work, another staying at home to look after the house and children) are no

longer available, at least not with the original partners. Children can no longer live with both parents all the time, so access to offspring is severely reduced. The children of a particular marriage may be psychologically or educationally damaged by a divorce; on the other hand, they may be better off after a divorce. In any event, to the extent that parents care about their children this is a further avenue by which divorce affects parents' utility. Note that at this point in the argument I am not directly concerned with children's welfare; this is because it is the parents not the children who decide whether to divorce or not.

Analogous to the marital possibility set M , the combined resources of the couple define a divorce utility possibility set, labelled D , giving the feasible levels of utility that can be achieved if the couple divorce. Again, the position of D does not depend on resource rights on divorce: it is a collection of possibilities, affected by any opportunities that follow from divorce, as well as the losses that follow from the splitting of the household.

To understand the importance of the relative positions of M and D , let us approach in a series of steps the question of whether divorce occurs or not. I begin with the simple but far-reaching assumption that any outcome will be *efficient* in the sense described earlier. To any outcome corresponds some point either in M or in D or in both. Efficiency means that this point has the property that there is no other point at which both partners are better off: whatever the mechanism by which an outcome is determined, however much the couple love or hate each other, they do not willingly leave mutual gain unexploited. Now, suppose that M is contained entirely within D , as in Figure 4. Then the efficiency criterion by itself says that divorce will occur, because all efficient outcomes involve divorce. Similarly, if D is contained entirely within M then all efficient outcomes involve marriage.

If M and D do not overlap then the efficiency criterion tells us whether the marriage remains intact or not, but it does not actually tell us what the outcome is, nor how it is affected by legal rules on property and dissolution. For example in Figure 4 both points a and b are efficient. To resolve this indeterminacy we need more detail on how outcomes are decided. There is a host of difficult issues here: how do spouses bargain and negotiate, how are agreements monitored and enforced, how are dissolution and rights property "traded" in return for a more favourable deal? I shall cut through this Gordian Knot by assuming that neither marriage nor divorce require cooperation in order to be efficient. This is admittedly unrealistic, and the assumption is made only temporarily, but it has the great advantage of throwing into sharp relief the role of dissolution and property rights. If there are no gains to cooperation marriage and divorce are both effectively constant-sum games. Put crudely, it means that marriage is a cake (Madeira), and divorce is another cake (Dundee); an outcome specifies a cake, and how it is divided, but there is no opportunity to increase the size of either cake by cooperation.

We can now characterise the role of property law. The law on marital property specifies a division of the marital cake: the husband has a right to a certain share, the wife to the remainder. We can think of such rights as taking the form: "you have the right to your own earned income"; or "you have a duty to maintain your spouse at a certain standard of living"; or "all assets and

income are to be shared equally". The resulting utilities identify a point m on the frontier of the set M . The law on the division of property when the couple divorce (which I shall refer to as the law on alimony, although I realise that this is not completely accurate) specifies what rights each spouse has over the cake available at divorce. The law on alimony might specify that each partner has the right to their own earned income, or that a partner who has given up employment opportunities to care for children should be compensated for reduced earnings prospects, or that the wife has a right to half of her husband's occupational pension. The law identifies a point d on the frontier of D . Unless they have been voluntarily surrendered, I assume these rights are enforceable.

Let us now see how property law interacts with dissolution law. Under a dissolution law requiring both parties to agree to divorce, consent can always be withheld. In that case, the couple remain married and the outcome is m (given by the law on property rights within marriage). Divorce will therefore only occur if both partners are better off divorced than at m . A spouse who wishes to divorce can secure the consent of the other partner by voluntarily giving up post-divorce property rights (given by d) and agreeing to some other point, call it d^* , on the frontier of D . Such a point must make both partners better off than at m , otherwise either it is not worth proposing such a deal, or it is not worth accepting it; formally, d^* must *dominate* m . Suppose that m lies within D i.e. the frontier of D passes above and to the right of m . Then there is a range of points on the frontier of D that dominate m . This is illustrated in Figure 5. The requirement of efficiency implies that the opportunity for both partners to be better off than at m will not be spurned i.e. divorce will occur, with both partners agreeing to a property settlement, d^* which makes both of them better off than at m . On the other hand, if m lies outside D , so that the frontier of D lies below and to the left of m , then no point in D dominates m and it is not possible for either partner to secure the consent of the other for a divorce by proposing a settlement that leaves them both better off. In these circumstances the marriage remains intact with the outcome at m . To summarise, under a mutual consent law, divorce occurs if and only if m lies within D . The position of d plays no role.

Under a unilateral divorce law, a similar argument applies, but now it is the relative positions of d and M that are important. If d lies outside M then there is no marital outcome, even on the frontier of M , that can give both partners at least as much as at d . Consequently, there is no way to persuade a partner not to divorce by promising a more generous share of the marital cake, and yet remain better off oneself than at d . But if d lies within M , even though d might make one partner better off compared to the existing division of the marital cake, that partner can be dissuaded from unilaterally divorcing by the promise of a point m^* which makes both of them better off than at d . Thus under a unilateral law, divorce occurs if and only if d lies outside (above and to the right of) M . The position of m plays no role.

If M is contained wholly within D , as in Figure 4, then m must lie within D and d must lie outside M . Hence the marriage will survive whatever the law on dissolution, and whatever the laws on marital property and alimony (which specify the positions of m and d). Similarly, if D is contained wholly within M ,

then d must lie within M and m must lie outside D . Hence divorce will occur whatever the law on dissolution, marital property and alimony. We can now interpret the claim of Becker and others that legal rules make no difference to divorce rates. A result of Becker's model of the household is that each partner's utility ultimately depends only on their share of "commodity wealth", an aggregate, conceptually similar to money, which may increase or decrease when the couple divorce. Because commodity wealth is transferable between spouses at a rate of one-for-one whether they are married or divorced, the two frontiers in utility space cannot cross.

What if the sets M and D overlap, so that their frontiers intersect? Then the law will matter. Consider Figure 6. Here, d lies outside M , so under a unilateral dissolution law divorce will occur; and m lies outside D , so under mutual consent the marriage survives. In this case, given the law on marital property and alimony (and hence the positions of m and d), a move from mutual consent to unilateral divorce causes the marriage to break up. But in Figure 7, d lies within M , so under a unilateral dissolution law the marriage survives; and m lies within D , so under mutual consent divorce will occur. In this case, given the law on marital property and alimony, a move from mutual consent to unilateral divorce saves the marriage.

Just as changes in divorce law can cause or prevent a marriage from breaking up, so too can changes in property law. For example in Figure 8 if divorce is unilateral, then the marriage survives if alimony law cuts the divorce cake at d_1 , but not at d_2 . The change from d_1 to d_2 might be interpreted as a reform that favours divorced women (e.g. by giving them a share of their husbands' occupational pensions). But it should be noted that if the frontier of M is not as steep as that of D then the change from d_1 to d_2 may reduce divorce under a unilateral law, as in Figure 9.

It might be concluded from all this that anything is possible: the law may have an effect on divorce incidence, or it may not; and if it does, the effect could be in any direction. This is hardly helpful either to social scientists or to policy makers. Such despair is premature, but in order to make progress we need to impose more structure on the problem; in particular we need to be more precise about the relative positions of the sets M and D .

4. TWO MODELS OF MARRIAGE

In this section I set out two heavily stylised models of marriage. In the first, the gains from marriage are the resources saved when two people live under the same roof. In the second model, children take centre stage: divorce means that one parent has custody of a child, and the other loses access and control over the child's upbringing; marriage is about sharing this control. Of course, actual marriages are based on both of these motives and many more, but isolating some of the more important motives for marriage will help us analyse and design policies aimed at reducing marital breakdown.

The two models are described with a minimum of formal detail. A fuller and more technical analysis can be found in Clark (1998, 1999).

Living together

There are some activities, such as housework and shopping, that are subject to a certain type of economy of scale: an increase in the number of people in the household requires a much less than proportionate increase in the effort devoted to these activities. Shopping or cooking for two does not take twice as long as shopping or cooking for one. The most extreme case occurs when no increase in effort is required; in effect the activity is (or produces) a local public good. A clean window, a well weeded garden, a pleasant and well decorated drawingroom, these benefit everyone in the household; there is no extra cost incurred if the household has two members rather than one. Nevertheless, these tasks take time, and therefore the question arises: who should do the housework, and how much should be done? The answer depends on the opportunity cost of time. Suppose the alternative to housework is paid employment at a certain wage; then from a purely economic point of view, it is efficient for the partner with the lower wage to do the housework, and for the higher-waged partner to take paid employment. If the couple have broadly similar tastes, and get utility from the public good (the benefits of housework) and a private good bought out of earned income, then the marriage cake can be cut in different ways by allocating varying amounts of this earned income to each partner's private consumption. For example, this income could be shared equally, so that each has the same private consumption; then they will get the same utility. But one partner could be allocated all the earned income, and the other none. Then the utilities would be very unequal. In this way we can trace out the frontier of the marriage utility possibility set M . It is important to note that the assumption of similar tastes implies that the set M is symmetric around the 45° line through the origin, even if one partner's wage (or potential wage) is less than the other's. Property rights within marriage isolate a point m on the frontier of M .²

If the couple divorce there are two effects. Firstly there are the opportunities opened up by living apart, both financial and emotional. It would be absurd to attempt to list these, or to try to incorporate them all explicitly in a simple model, so I shall summarise this first effect by assuming that divorce affects utility directly. If we wanted a literal interpretation, we might argue that a couple who hate each other have their utility doubled, say, by separating, holding all other things (consumption, labour supply etc.) constant. Alternatively, a couple who loved each other have utility reduced by separating. This multiplicative effect on utility can be taken as a measure of the couple's mismatch, which might only be revealed some time after

² At this point there is a slight departure from the extremely simple framework set out in the previous section. The existence of public goods implies that efficiency generally requires cooperation. In the absence of cooperation, a free rider problem emerges, typically resulting in an under supply of the public good. Marital property rights define entitlements even in the absence of cooperation. In Clark (1998) I set out a model of bargaining in which a non-cooperative outcome (typically inefficient) is determined by legal rights, and serves as a *disagreement point* that in turn determines a cooperative (and efficient) point, m , on the frontier of M .

marriage (seven years seems to be a critical time). The consequent divorce possibility set D depends on the extent of this mismatch: the greater it is, the larger is D compared to the set M .

Secondly, if the couple live apart there is a loss of the public good aspects of housework. One partner's cleaning no longer benefits the other. The loss of public good benefits obviously has a contractionary effect on D , counteracting the mismatch effect, but in addition it will also in general change the slope of the frontier of D . The explanation for this is that typically the wages of the two partners will differ. The wage is the opportunity cost of time spent doing housework, and if the couple live separately after a divorce, one partner will now have to do some house work themselves. Realistically, we would expect the husband's wage to be greater than the wife's, and so his loss from divorce is potentially greater. This will bias the set D towards the wife, as shown in Figure 10. But of course the couple may end up anywhere on the frontier of D , depending on whether and how alimony payments are made. A given set of rights, and duties, isolates a point d on the frontier of D , and we can trace out this frontier by varying the law on alimony that defines these rights. At each extreme of the frontier of D , one partner e.g. the husband, is obliged to pay the other a very large amount. He therefore works extensive hours, leaving little time for production (and therefore consumption) of the local public good. After alimony payments he has little to spend on the private consumption good, so he ends up leading a pretty miserable life.³

Suppose that the wife's wage is less than the husband's, and the mismatch effect is strong but not overwhelming. Then M and D will overlap, as in Figure 11. Following our previous analysis, this implies that dissolution law can have an effect on whether the couple divorce, and a critical role is played by the law on marital property and alimony. But we can now be more precise about what kinds of legal changes will make a couple facing the situation embodied in Figure 11 more or less likely to divorce. Under a law of mutual consent, divorce occurs if m lies within D ; changes in the law on property within marriage that favour the wife will move m down and to the right and perhaps and into the set D , hence increasing the chances of a mutually agreed divorce (on terms that make them both better off than at m). Such a south-westerly movement might be the result of legal reforms allowing the wife control over her own assets, or her own earnings, or giving her a right to a particular standard of living, even though her earning capacity is low. Under a unilateral law, divorce occurs if d lies outside M . Again, this is more likely if alimony law favours the wife. A south-westerly movement in d might come about in a number of ways, but two seem particularly important. If the wife's

³ Comparing the two extremes, we see that that the wife's maximum utility in Figure 10 is greater than the husband's. This reflects two assumptions: (i) identical post-divorce utility functions; (ii) more importantly, a lower wage for the wife. At the extremes, one partner is getting the maximum earned income of the other, to which is added his or her own earning capacity. For example if the husband's hourly wage is 4, and the wife's is 2, and each can work a maximum of 12 hours a day, then we can think of a pot worth 72 to be divided up. But if the wife gets this, she can 'buy' the public good more cheaply, by working less than 12 hours a day in paid employment, and doing some housework. More generally, the lower is the wife's wage, the more the frontier of D rotates anti-clockwise, with the maximum utility for the wife staying constant, and that for the husband falling.

wage is low because early in the marriage she took time out of the labour market to contribute to the family by staying at home (to look after children, to look after the house, to support her husband's career by constantly entertaining his colleagues or clients) then the law may recognise this by stating that she is due a return on what has effectively been an investment in a husband/wife partnership. The more fully she is compensated for the deterioration in her outside earning capacity, the more the point d moves down and to the right, and the less likely is the marriage to survive. A second possibility that brings about the same result is that the law includes more assets and sources of income in the cake to be divided up at divorce. A topical example is occupational pensions. Typically, men have better pension rights than women, mostly because they have worked longer and for higher wages. Pension splitting can be seen as favouring women and moving the point d in Figure 11 south-west along the frontier of D . If this takes d out of M then the marriage is doomed.

Looking after children

The first model of marriage emphasised housework and the opportunity cost of time spent at home. Some might argue that this characterises marriage as just a form of convenient living arrangement, and the analysis could equally apply to, say, two students (perhaps of the same sex) sharing a flat; in such a model divorce is not particularly serious. The main reason why we should be concerned about marital breakdown is because of the effect it has on children; consequently, any sensible model of marriage should include children explicitly.

There are many ways in which children can enter economic models. Here I want to highlight their role as objects of affection, whose happiness is of concern to parents (this is not to deny that others, including policy makers, are concerned for children, but it is the parents who decide whether to get divorced). If the child is healthy or doing well at school, both parents are better off. For one parent to get more satisfaction from their child it is not necessary for the other to get less. For this reason, some economists have characterised children as public goods: just as a clean house benefits all who live in it, so does a happy child.

Taking the earlier model as a starting point, let us amend the assumption of a variable division of labour between housework and paid employment; rather we take hours worked by each partner to be the maximum possible. This leaves no time for housework, which we now drop from the model. As before, earned income can be spent on private consumption goods for each parent, and also on consumption for a single child. Each parent derives utility from his or her private consumption, and also from the child's welfare, which I take to depend only and directly on its private consumption. Thus the child's consumption benefits both parents. This is so whether the parents live together or not, so that in this respect this model differs crucially from the model involving housework. After a divorce, one parent has custody, but the non-custodial parent still cares about the child. Expenditure on the

child by the custodial parent still has the qualities of a public good - it is not necessary for the non-custodial parent to be physically present in the child's household in order to benefit from expenditure on the child.

Turning now to the utility possibility sets, the set M is very similar to that in the previous model (for details, see the Appendix in Clark, 1998). Along the frontier of M , expenditure on the child remains constant, but one parent's private consumption falls and the other's rises. If the couple divorce, the issue of custody of the child arises. Suppose the mother has custody. Given a certain income, which may include maintenance payments from the husband, the mother has to allocate her limited resources between herself and the child, and the greater her income the more she will spend on these two categories of expenditure. The father, on the other hand, spends only on himself. In deciding on how to spend her budget, the mother's concern is for herself and for her child, and not for her estranged husband. However, the husband benefits from her expenditure on the child. If the mother does not take into account this extreme form of externality arising from the publicness of child expenditure, then there will typically be an inefficiently low level of expenditure on the child. Within a marriage, this problem can be avoided by proximity and the development of mutual trust, but after a divorce it is almost impossible for one parent to monitor accurately how the other's income is spent. Maintenance payments may be made to help support the child, but there is no way that an outsider, such as a court or the non-custodial parent, can enforce a detailed agreement specifying the allocation of the custodian's income between different categories of expenditure. In other words, there is no mechanism to internalise the externality.

What are the implications of this for the utility frontier after divorce? If the mother has custody, the relationship between the two parent's utilities is as shown in Figure 12. Note that it has an upward sloping section. In this region, the wife's income is very low, and husband's very high. Thus she spends little on herself and on the child. As we transfer money from husband to wife (e.g. by a change in alimony law), so her expenditure on the child rises, and his expenditure on himself falls. At very low levels of the mother's income (and hence of expenditure on the child) the principle of diminishing marginal utility suggests that the former effect will dominate, producing a rise in his utility, even though his income has fallen. At high levels of the mother's income and low levels of the father's, further falls in the father's income cause him to reduce his consumption to very low levels, and even though the mother will further increase her expenditure on the child, the father's utility will fall.

If the father has custody, he controls expenditure and we get a similar relationship between the two parent's utilities, *mutatis mutandis*. Figure 13 brings the two relationships together. Notice that the two curves intersect in the middle of the diagram, and that there are sections of each that lie within the other. This implies that some custody and alimony decisions can make both spouses better off than others. For example, if the mother has custody, has an equal wage to the father's, and receives no maintenance or alimony, then she will be worse off than the father; this is because she bears the responsibility of paying for the child's expenditure, but both get the benefit. Such an arrangement would be given by point a in Figure 13. This is

dominated by point b , in which the husband has custody, and receives maintenance or alimony from the wife. Our assumption of collective rationality (that potential Pareto improvements are not willingly ignored) implies that points such as a will not occur after divorce. It is possible that the law states that the mother has the right to custody after a divorce, but no alimony or custody, i.e. after divorce she has a right to point a . There is a range of points that are preferred by both to a , for example point b , and in an efficient divorce it is only transaction or negotiation costs that would prevent a movement from a to a point like b . The exact point on which they agree would depend on their bargaining abilities and negotiating skills, but would in large part be determined by the location of a . In other words, the final agreement is largely determined by their legal rights. On the other hand if rights were given directly by point b then, given that divorce occurs, there is no other point at which both are better off.

More generally, we can restrict ourselves to divorce outcomes that lie on the outer envelope of the two curves in Figure 13. Thus the set D has the shape shown in Figure 14. Legal rights either isolate a point directly on the frontier of D , or indirectly (in which case we rely on collective rationality to get us to the frontier). Figure 14 brings together the sets D and M , and their relative position is determined, as before, by two factors. Firstly, divorce creates an inefficiency, described above, in which the custodial parent does not take into account the effect on the other parent's utility of expenditure on the child. By itself this effect would mean that D lies completely within M . Secondly, there is the mismatch effect, which I take to be a direct effect on each partner's utility. The stronger this second effect is, the greater the opportunities for health, wealth, and happiness opened up by divorce, and the larger the set D .

Figure 14 shows a mismatch effect that is strong but not overwhelming, so that the two sets overlap. This means that dissolution and property law is now important in determining whether divorce occurs. It would be tedious to go over all the possibilities, so I shall focus on the ways in which this model differs from the first one. The sets M and D are both symmetric around the 45° line through the origin, and in the region of the 45° line (i.e. in the middle of the diagram) it is the set M that is outermost, whereas nearer one axis or the other points on the frontier of M lie within the set D . This implies that the marriage can be saved by property laws that promote equality, either between husband and wife, or between ex-husband and ex-wife. In Figure 11 by contrast, marital dissolution was less likely under property laws that favoured the higher earner. To see how the argument works in the present case, suppose the law allows unilateral divorce; then it is the position of d that is crucial. If it lies near the 45° line, then the couple will realise that by remaining married they can both be better off. To put d near the 45° line requires alimony and maintenance laws that try to give the two partners an equal share of the divorce cake. This means that (a) the custodial partner has to have adequate resources to pay for the child's consumption and (b) the partner with the lower wage should be granted a share of the other's income. These two considerations may work in the same direction e.g. if the parent with custody

has the lower earning capacity.⁴ The law can put d well away from the 45° line, and hence increase the likelihood of divorce, if it grossly favours one partner. This might be because the partner with the lower wage is insufficiently or excessively compensated. Alternatively, the custodial parent might receive excessive or insufficient child maintenance. If, for whatever reason, d lies outside M , then the favoured partner cannot be dissuaded from seeking a divorce, and in an efficient divorce settlement will retain or gain custody.

Similar arguments apply if divorce requires mutual consent, but now it is the position of m that matters. If the law allows one spouse an unequal share of the marriage cake, this puts m well away from the 45° line, and both partners may be better off agreeing to a divorce, with the favoured partner gaining custody.

To summarise, this model suggests that laws that promote economic equality between partners reduce the extent of marital dissolution.

5. CONCLUDING DISCUSSION

The framework set out in this paper is very simple and the two models analysed very stylised, emphasising some aspects of marriage and divorce and ignoring others. Beyond the immediate lesson that there is no basis for the general assertion that even in the absence of transaction costs legal rules are not important in determining divorce incidence, what conclusions can we draw?

Firstly, if dissolution law is important in determining divorce incidence, so is property law. This follows from the general framework outlined in Section 3. For example, it is possible that changes in alimony law can, under a unilateral divorce law, affect the decision to divorce. For the policy maker concerned about divorce incidence, this means that reform of alimony law can be used to reinforce or offset a change from a mutual consent to a unilateral dissolution law. However, the two models also show how difficult it is to generalise about the effect of any particular legal reform. For example, consider the effects of fuller compensation for divorcing women who when married took time out of the labour market to care for children, thereby damaging their earning prospects on re-entry; the first model suggests this will increase the likelihood of divorce; the second suggests the opposite. Unless we have a lot of detail on a particular couple, or on the distribution of characteristics amongst the married population, it is difficult to predict the exact effects of reform.

Secondly, property law has important consequences for the distribution of economic welfare between partners, or ex-partners. This may seem obvious, but both dissolution and property reform can have unintended distributional consequences. For example, alimony reform that improves the lot of divorced women may also increase the economic position of women

⁴ Custody is here assumed not take to time that could otherwise be spent working. This is clearly unrealistic. To the extent that it does, we move closer to the earlier model.

who stay married. Under unilateral dissolution law, alimony law defines the woman's outside option, improvements in which strengthen her bargaining position, and give her more leverage during marital negotiations. More generally, property reform must also be considered at the same time as dissolution reform. For example, a move from a mutual consent to a unilateral dissolution law means that the relevant property law, in determining both whether the couple divorce and who gets what, changes from the law on marital property to the law on alimony. If legislators neglect to address this issue, then not only might the unreformed alimony law frustrate their intentions (as mentioned in the previous paragraph) but they may find that those who have been divorced against their will are left seriously disadvantaged (this is the central theme of Weitzman, 1985).

Finally, let me discuss some incentive issues raised by property law reform. This takes us beyond the immediate scope of this paper, which is essentially static in its analysis, taking a couple's circumstances as given, particularly their labour market history. But this labour market history may well depend on property law. To fix ideas, consider the first model, in which the relative wage of the wife played an important role. If women are not protected by alimony law from the damaging effect on future (post-divorce) labour market opportunities of staying at home in early marriage, then a woman who considers that at some time in the future she might get divorced may well feel that it is wise to effectively insure against divorce by maintaining some participation in the labour market. Alimony reform that compensates women for staying at home will then provide an incentive to do so, since the need for insurance is then redundant. The static analysis of the first model, taking the wife's wage as given, suggests that such reform would tend to increase divorce incidence. But the effect of the fall in the wife's outside wage, brought about by staying at home rather than working in the labour market, is to reduce the probability of divorce (see footnote 2; this is consistent with the well established empirical finding that divorce incidence is positively related to the wife's relative wage). This conclusion might come as a relief to policy makers trying to balance a concern to reduce divorce incidence with a desire to see more equitable alimony laws. Of course, such relief is secured by strengthening the domestic division of labour. In an economic sense this might be considered efficient, although a policy which achieves lower divorce rates by encouraging women to stay at home is likely to have less than universal appeal.

More generally, there is anxiety that unilateral divorce encourages opportunistic behaviour, which in turn reduces the incentive to make investments and commitments which are specific to the marriage (see, for example, Rowthorn, 1998). Hence the assertion that unilateral divorce is responsible for the decline of marriage, and the conclusion that if marriage as an institution is to be rescued we must revert to divorce only by mutual consent⁵. But an alternative is to reform alimony law so that post-divorce

⁵ Some U.S. states (e.g. Louisiana) have introduced "covenant" marriages, which are harder to dissolve than "normal" marriages allowing for speedy no-fault or unilateral divorce. But as Rowthorn (1998) points out, covenant marriages are still relatively easy to dissolve: for example, in Louisiana either spouse can petition for divorce after two years separation.

transfers depend closely on, and compensate for, marriage specific investments. This will discourage opportunistic behaviour and encourage trust and commitment. Thus the potential for unilateral divorce to be dynamically inefficient can be reduced by a careful design of alimony law, although it remains an open question whether such a property reform can fully substitute for the abolition of unilateral divorce.

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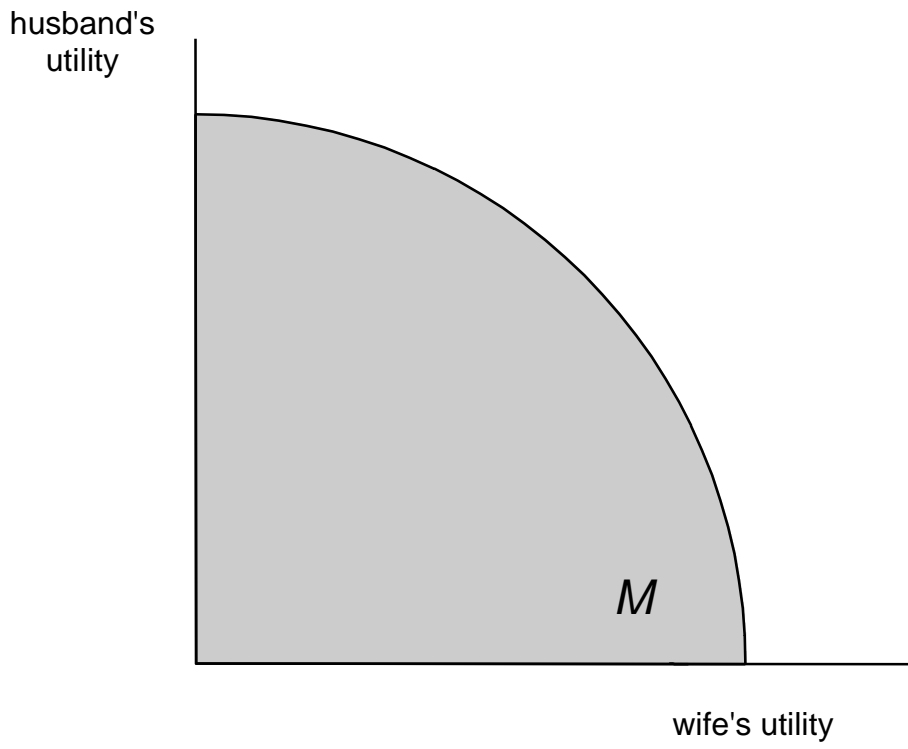


FIGURE 3

A marital possibility set M

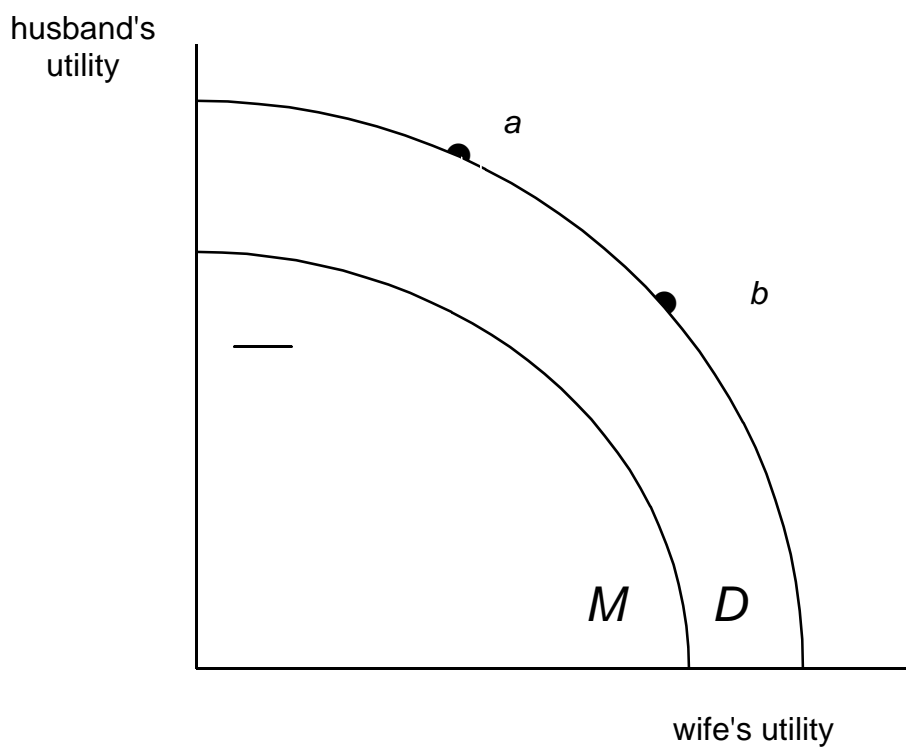


FIGURE 4

The marital possibility set M is contained within the divorce possibility set D

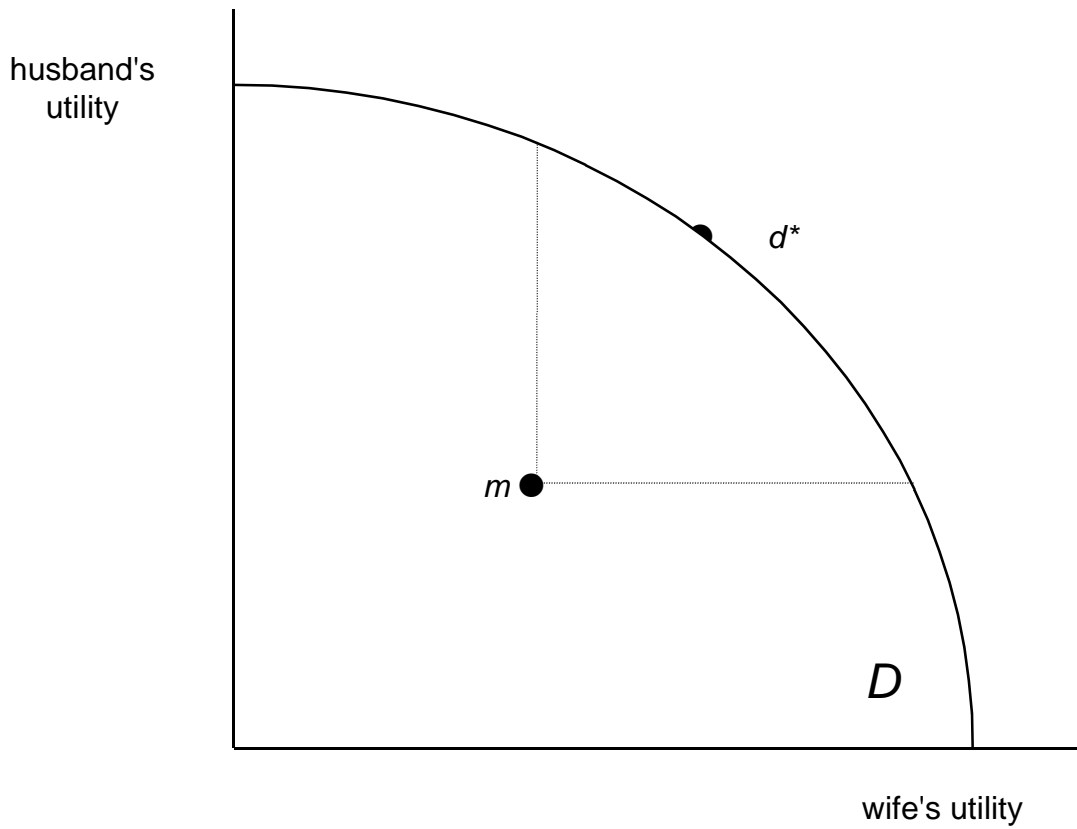


FIGURE 5

The point m lies within D and is dominated by d^*

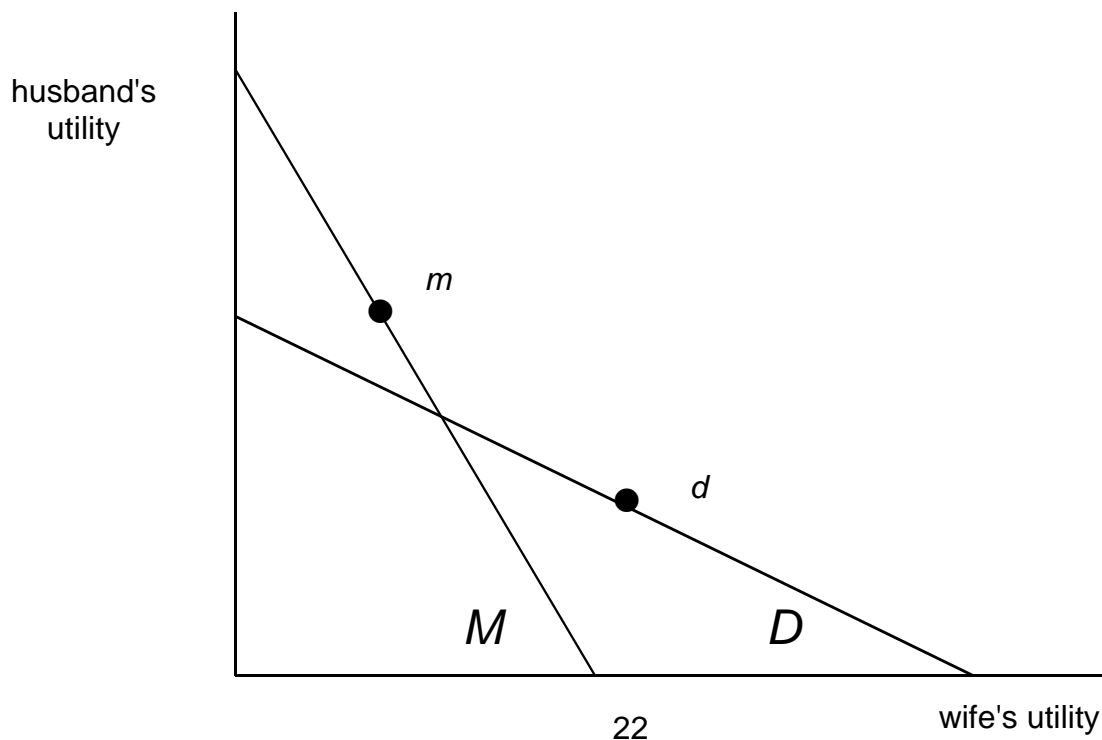


FIGURE 6

The sets M and D overlap; m lies outside D and d lies outside M

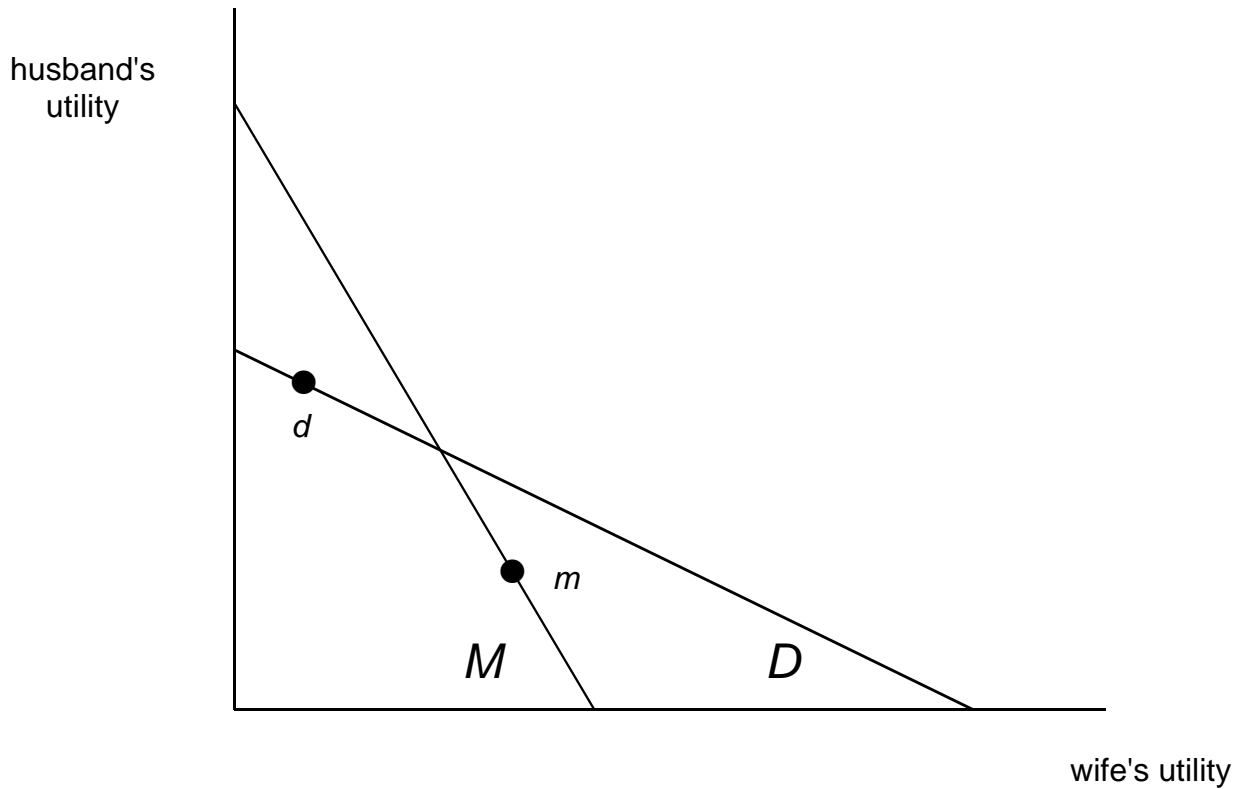


FIGURE 7

The sets M and D overlap; m lies within D and d lies outside M

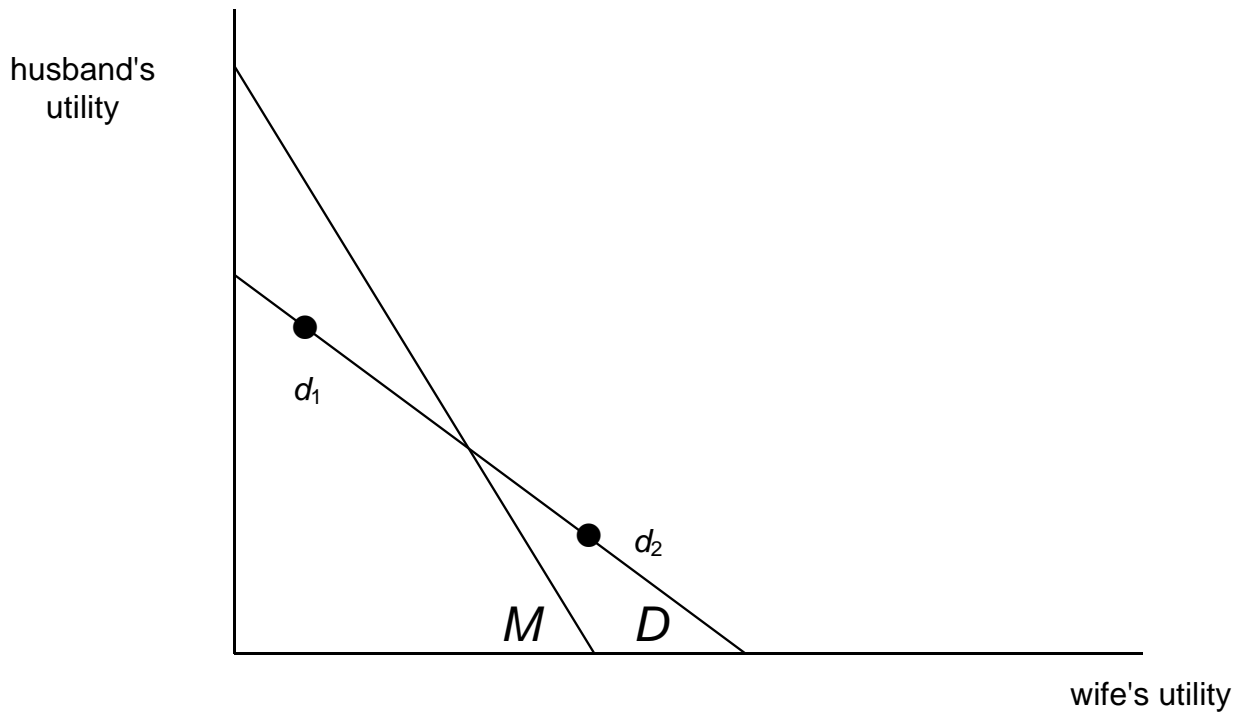


FIGURE 8

The sets M and D overlap; d_1 lies within M and d_2 lies outside M

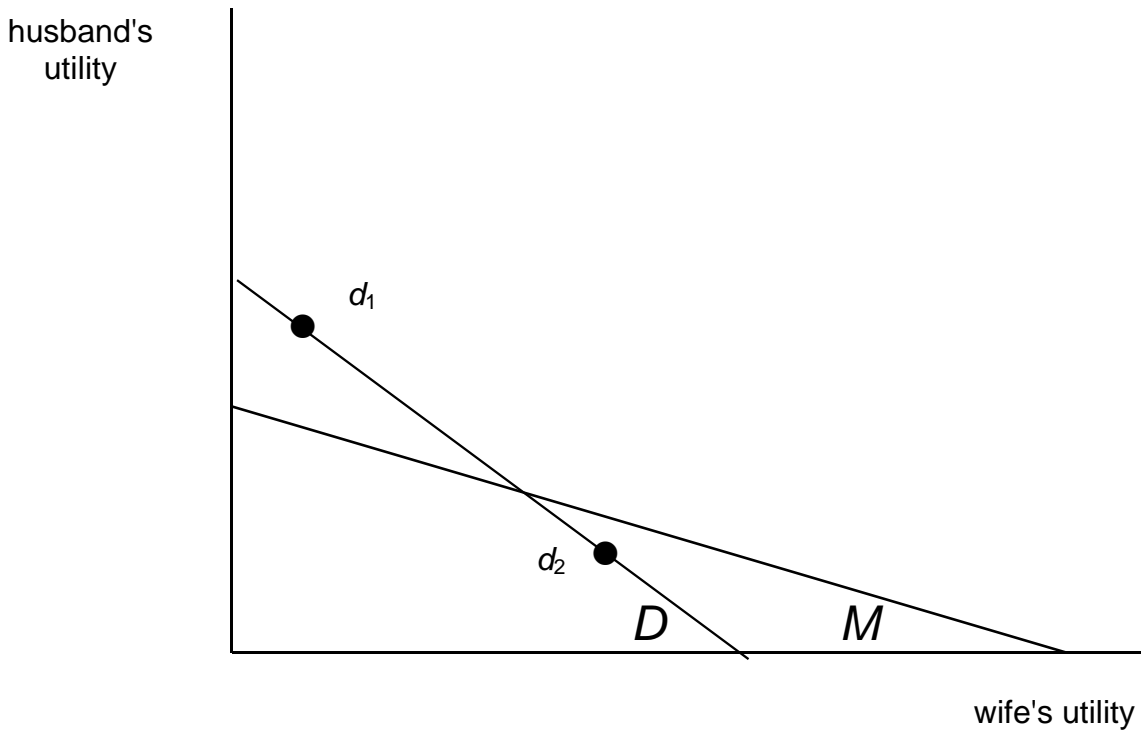


FIGURE 9

The sets M and D overlap; d_1 lies outside M and d_2 lies within M

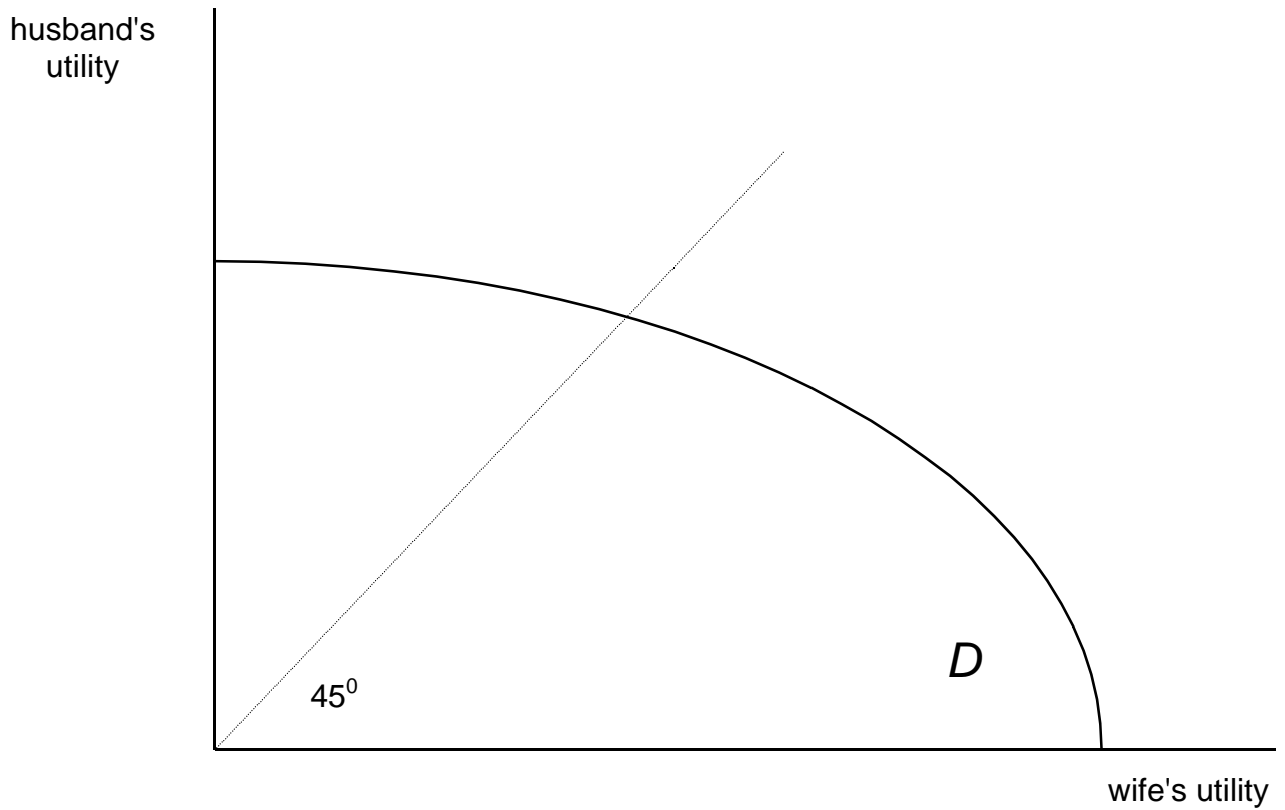


FIGURE 10

Model 1 (living together): the wife's wage is less than the husband's and hence the set D favours the wife

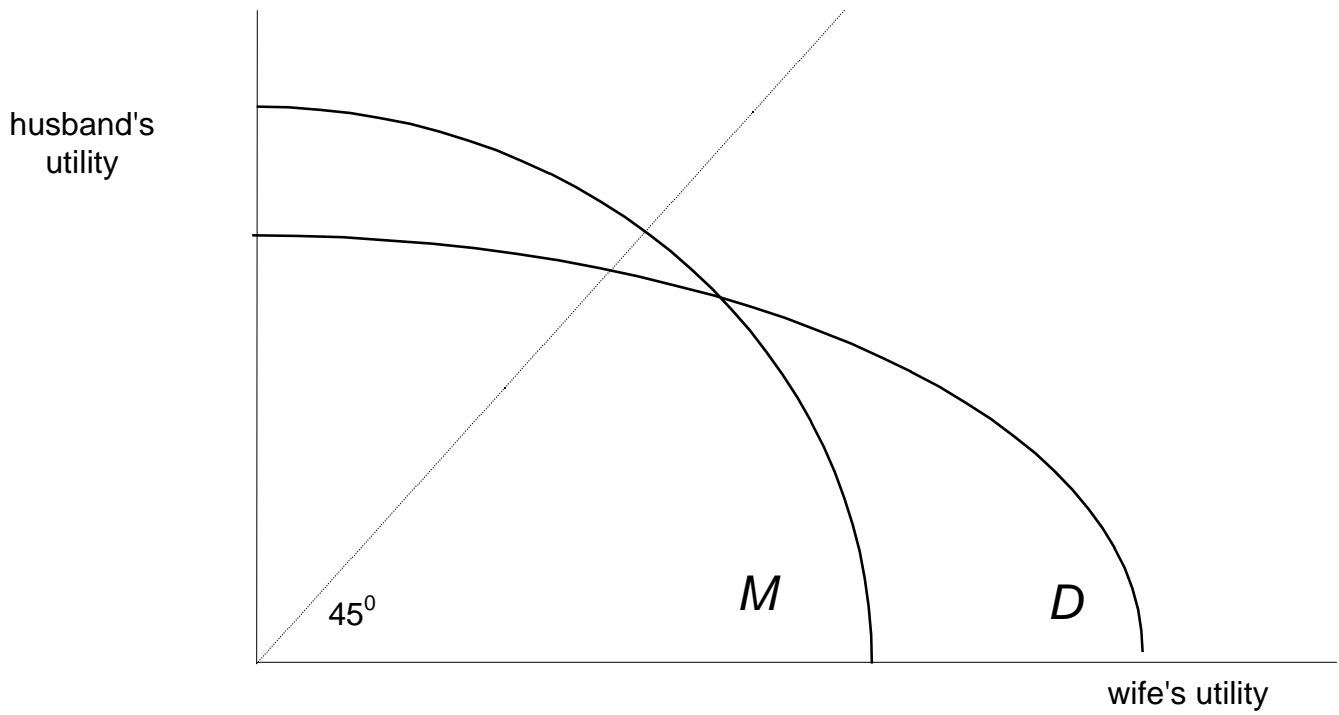


FIGURE 11

Model 1 (living together): the sets M and D when the wife's wage is less than the husband's and mismatch is low

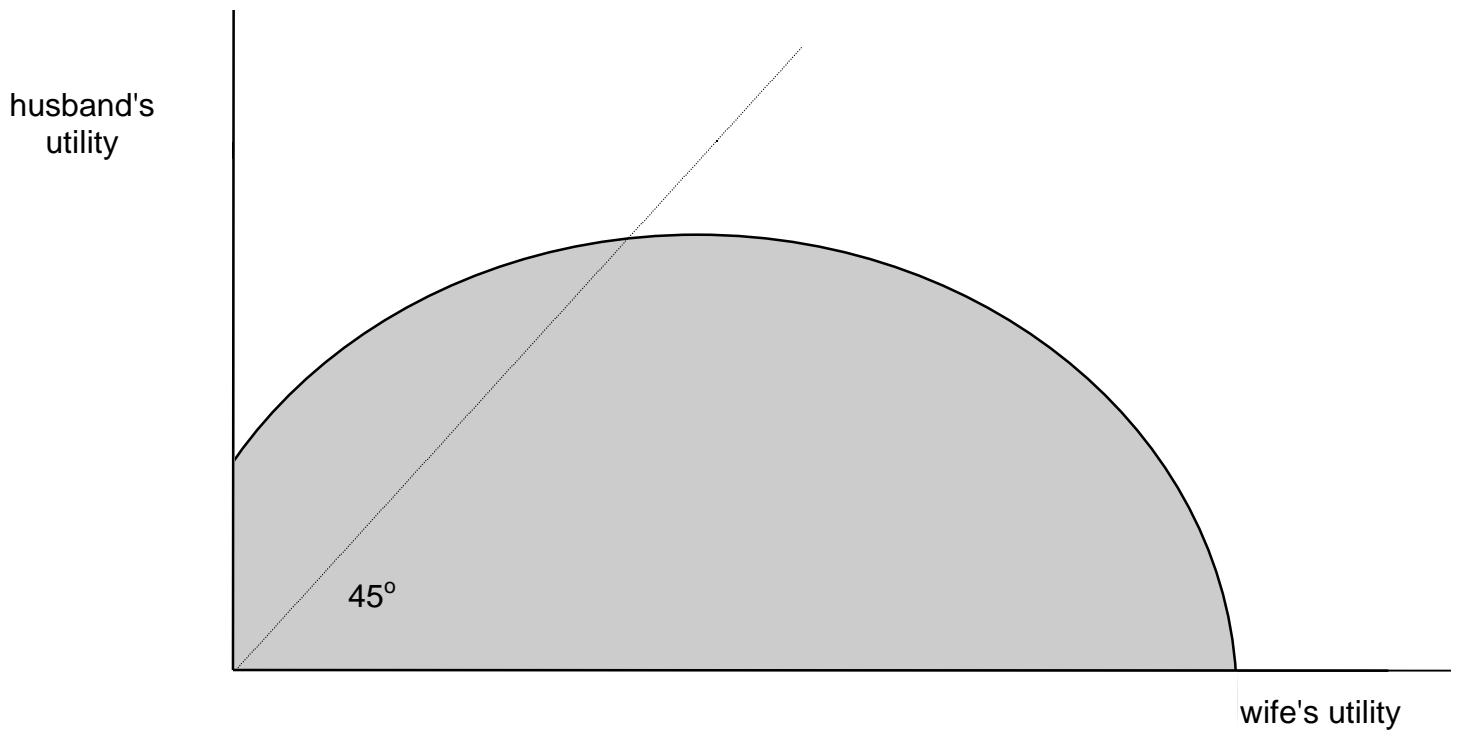


Figure 12

Model 2 (looking after children): the utility possibility set when the couple are divorced and the wife has custody

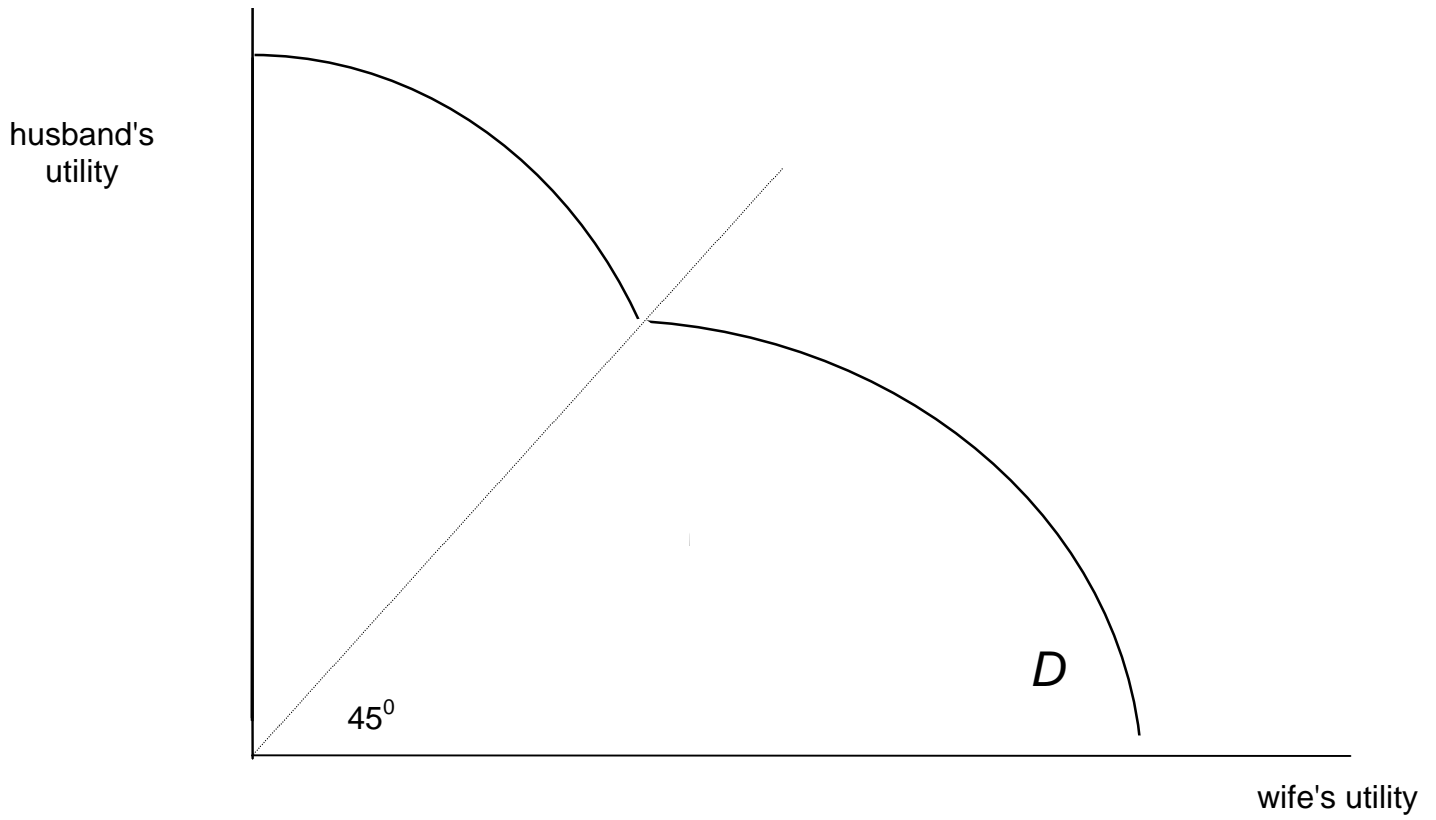


Figure 13

Model 2 (looking after children): the divorce utility possibility set

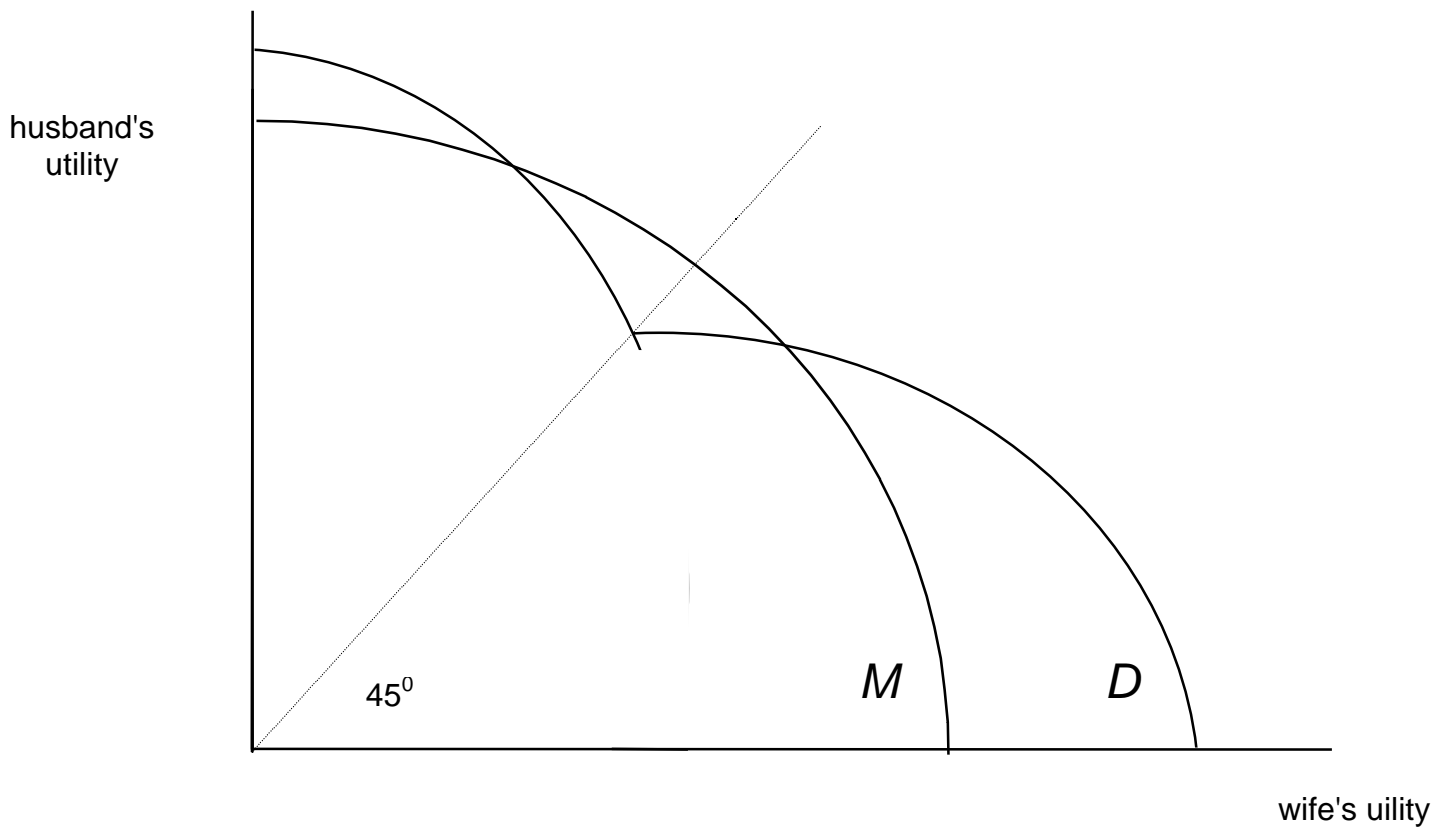


Figure 14

Model 2 (looking after children): the marriage and divorce utility possibility sets when mismatch is low