

THE PENSION CONSEQUENCES OF DIVORCE

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ABSTRACT

The Pension Consequences of Divorce*

Women's disadvantages on the labour market leave them financially vulnerable when divorced. The number of elderly divorced women is growing, but their pension prospects are poor. The paper outlines current British arrangements for pensions and their treatment in divorce, and explains the case for new law on pension splitting. Men's and women's lifetime earnings are simulated on the basis of econometric estimates, as are their pension entitlements under SERPS, Money Purchase and Final Salary Schemes. Pension splitting after divorce is also simulated. It does not invariably guarantee pension adequacy, nor necessarily compensate for the pension mothers forgo to rear children. Better Basic Pension would do better.

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NON-TECHNICAL SUMMARY

- The proportion of women over 60 who are divorced is expected to increase from 3% in 1985 to 13% in 2025.
- Divorced women seldom earn themselves as much pension as they could have shared had they remained married, and inherited as widows.
- Risk of inadequate pensions is high for divorced mothers relying on SERPS, with low to medium earning power, and disrupted employment. The poverty trap facing lone mothers had pension consequences.
- Splitting at divorce of rights accumulated during the marriage may achieve a just settlement of a joint asset but only eliminates 'hardship' cases where the higher pension is better than SERPS. The transfer is only substantial where there is a substantial pension to be split.
- Effective pension coverage for those whose work is unpaid is ideally afforded by pensions not linked to earnings (such as a better Basic Pension). Splitting earnings-linked pensions between divorcing parties, though overdue, is not a panacea.

Few of the growing numbers of divorced women expected to be entering old age over the next decades will, on current practice in divorce, have access to pensions linked to their ex-husbands' earnings. Since pension rights cannot at present be cashed in or assigned to anyone other than the scheme member, they cannot be divided in a divorce settlement. In practice they are only sometimes taken into account where there are sufficient other assets to offset. Pension rights are usually a major asset (along with the house) but it is often not possible to share out the benefit.

This is a cause for concern, since, though most wives and ex-wives now go out to work, they earn much less than their husbands. Our simulations of lifetime earnings, derived from econometric analyses of the Women and Employment Survey, suggest that the earnings up to pensionable age of a mother of two who remains married may be little more than a quarter of those of her similarly qualified husband. As shown in the report, this fraction varies with the number of children, the woman's earning power and the matching of the partners' qualifications.

Gaps between couples' earnings reflect both the domestic division of labour and unequal opportunities in employment. Roughly half the gap cited above is due to motherhood – a break in employment followed by lower hours and pay – but childless wives' and unmarried women's earnings also fall short of those of a similar male. Unless trapped by the rules of the benefit system, divorced women

tend to earn more than the married. The following example is just one of the many possible earnings profiles we have constructed for divorced women: this one is divorced after a marriage lasting 12 years, when the younger of her two children is 6, and does not remarry. She drops out of employment and draws Income Support until the child is 16. Then she earns full-time until retirement. Her lifetime earnings are close to those of her never-divorced counterpart.

Wives' own Basic State pensions are, eventually, likely to be close to their husbands', except for the diminishing numbers of 'career housewives', and there are provisions already giving ex-wives access to husband's Basic Pension. Earnings-linked pensions of various types reflect the earnings gap between spouses, in varying proportions. We project men's and women's pensions on the basis of their earnings and find that the contrast between the different pension types is as striking as the difference between the man's and woman's pension is.

The SERPS pension is worth much less than a good final salary pension generated by the same earnings with one employer, while the simulated Money Purchase pension, with the maximum contributions, is in between. To reap the advantages of the two private schemes more contributions would be required than for SERPS. Home Responsibility Protection in SERPS for time spent caring for children is also allocated for such time for people who are contracted out when in full-time work. It does not amount to a great deal. Neither does covering part-time employment in private pensions make much difference to women's pensions. Part-time earnings are low and partially covered by SERPS.

The best pension prospects are for couples who are both well-qualified and both in final salary occupational schemes. The worst are for divorced women of low earning power who have been out of employment a lot, 'career housewives' or divorced mothers with large families, longer marriages, or those who are kept out of employment by the lack of childcare facilities and the structure of the benefit system.

New provisions in both pension and tax law would be needed to divide pensions at divorce. One possible arrangement splits rights accumulated during the marriage only. A transfer is paid, from pension age, to the spouse with less entitlement, by the other's scheme. The beneficiary is usually, but not necessarily, the wife. We show that the scheme does not equalize the ex partners' eventual pensions, but closes the gap somewhat. If both parties are in SERPS, a transfer of £4 per week only brings her earnings-linked pension up to £18, still below the £25 or so needed to keep her out of means-tested assistance where she has no other income. If both these middle-skill partners are in the Final Salary Scheme, a transfer of £15 brings her pension up to £83 per week. The limited size of most of the transfers mean that the gains to divorced women are not always enough to guarantee freedom from hardship; they also

mean that the 'losses' to be faced by husbands and any subsequent wife are limited. The simulations suggest that second wives earning normal pension rights for themselves could accommodate the splitting of the husband's and widow's pension.

The loss of pension due to childrearing has been put forward as another basis for compensation in divorce. Such losses may be difficult to establish in practice but are clearly identified in our examples, and are not eliminated by Home Responsibility Protection. Much of the loss happens after the divorce. Nevertheless it is not usually as much as the lifetime pension gap between partners. Only by coincidence would the difference between pensions earned during marriage equal the pension losses due to responsibility for children.

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CHAPTER 1 INTRODUCTION

1.1 The issue

This report is concerned with the adequacy of divorced women's income in old age. The family, as well as public and private institutions, transfers purchasing power from those with paid work to those whose work is unpaid and those who have retired from work. Women depend on such transfers to a greater extent than men because they usually have lower earnings than their husbands, and outlive them in old age.

Divorce disrupts, among other things, the redistribution of money between spouses. In some cases, child support and occasionally alimony, are paid, but usually the end of a marriage ends spouses' pooling of resources. After retirement, divorced partners do not usually share in each others' pension entitlement. Divorced women who do not remarry will usually receive less pension than they would have shared in had they remained married and inherited had they become widows.

The adequacy of divorced women's pensions is relevant to policy affecting law on divorce and on pensions. It is also relevant to means-tested income maintenance for future pensioners, and for the current generation of lone parents; and to policy affecting the female labour market and child-care. Better facilities for sharing maternal responsibilities could give women better opportunities to earn pensions in their own right. Despite the emphasis in current divorce law on divorcing parties aiming to achieve financial independence, changes in women's participation in paid work have not, so far, amounted to the elimination of wives' financial dependency in marriage. One reason why it is important to consider pension rights on divorce is the unequal earning power of most couples. Another is that they are a major asset, for many couples, the only asset other than the home. This position is emphasized by the favourable tax treatment of

savings channelled through Pension Schemes. However they are not assets which a court can direct to be divided up and transferred. This report is about how much redistribution of pension income there might be if the law were changed to permit pension splitting.

1.2 Overview of the Report

Chapter 1 reviews the present position in pension institutions and divorce law, and discusses various issues and principles involved. Chapter 2 reviews economic and demographic evidence on the situation of the elderly and their projected marital status. Growth in divorce means a growing population of divorced elderly women. The divorce boom of the 1970s and 1980s may be creating a new source of pensioner poverty for the future. State and, increasingly, private pensions are the major source of income for the majority of elderly people. Few earn on the labour market and only a minority have substantial income from investments. Divorce is likely to reduce the pension income of increasing numbers of elderly women (and perhaps a few men). Despite growth in women's earnings, many divorced elderly women may not have much in the way of pension over and above the state minimum, and therefore risk being in or close to poverty and dependence on state means tested benefits.

Chapter 3 reports our research bringing econometric analysis of men's and women's earnings to bear by constructing illustrative hypothetical cases of couples' lifetime earnings and pensions. These can show how far women's low earnings are attributable to responsibility for children and are also used to compute the outcome of alternative treatments of pension rights after divorce. The simulations show that divorcees who return to the labour market after divorce have varying opportunities to make up the pension entitlement they could have had had they never married, depending on their age at divorce, qualifications, number of children and whether

they are caught in a poverty trap as lone mothers. Even if they never marry, however, few women earn as much as equivalently qualified men, and of course, like divorcees, they do not have access to survivors' pensions. Women who stay married tend to earn less pension in their own right than they would have had they never acquired or parted company with husbands, but in most cases their pooling pensions with a spouse gives wives the highest pension income among elderly women.

Splitting pensions after divorce transfers to the divorced woman a fraction of the old age income that could have been anticipated in an unbroken marriage. It may be accepted as an equitable way to divide matrimonial property, but it would not invariably eliminate cases of hardship nor would it necessarily coincide with splitting the pension foregone in childrearing.

1.3 Types of pension

With increasing longevity, pensions are becoming less an insurance against the risk of surviving into old age than a form of investment which almost everyone expects to cash in. The acquisition of pension rights is the major way in which people make provision for income in old age.

State Pensions

In Britain, most people (virtually everybody after the Married Women's Option is completely phased out) contribute, or are credited with contributions, to a State Basic pension, which is a flat-rate benefit, currently of the value of £46.90 per week for a single person. Wives permanently out of the labour market, or still covered by the Married Women's Option not to pay contributions while employed, qualify for a spouses's pension worth 60% of the full Basic ('Category B' now £28.20), and a widow's pension at the full rate, by virtue of their

husband's insurance. In addition, National Insurance contributions go towards an earnings-linked pension (SERPS, the State Earnings-Related Pension Scheme) for those who are not contracted out into occupational pension schemes, or since 1988 into approved personal pension schemes. SERPS was set up by the Social Security Act 1975 and amended in 1988. The amendments included a downward revision of the pension formula to one fifth of lifetime average earnings within a band bounded below by a value close to that of the Basic Pension. Hence someone whose gross weekly earnings averaged £146 would qualify for £20 per week SERPS. Any surviving spouse would inherit a pension, normally worth half the SERPS, in this example, £10.

Private Pensions

Occupational or company pensions vary greatly. The majority of the better ones give a pension on the final salary formula, 'defined benefit', based, for example, on one sixtieth of the final salary per year of service, which amounts to two thirds of final salary, the maximum compatible with exemption of the funds from Income Tax, where there are forty years of service in the scheme. In this case, someone with a constant and therefore final earning level of £146 would receive a final salary pension of £97 per week, nearly five times what they would get in SERPS.

There are also company money purchase schemes, 'defined contribution', more common amongst lower paid employees, where the value of the pension depends upon the size of the contributions from employer and employee and the return earned by the fund's investments. Many of the schemes in the public sector, such as that of the Civil Service, are not funded, in some cases also non-contributory, but some public and all private sector schemes are funded and usually collect contributions from employees. The 1975 legislation improved the extent to which private funds covered survivors and that

of 1988 improved the preservation or transferability of rights for those who change employer. Personal Pensions, suitable for the self-employed, particularly, and job changers are also money purchase arrangements. They are managed mainly by insurance companies, as are the funds of smaller firms.

The majority of the full-time labour force is in occupational pension schemes. This is about two-thirds of men and just over half of women employed full-time. This represents only about a fifth of all adult women, less among older married women. Very few part-time employees are at present members of occupational pension schemes. The number of people enrolling in personal pension schemes has gone up since 1988 but they are still a minority especially amongst women.

The benefits provided by the private pension sector are regulated by various sorts of legislation. There are the provisions under the Social Security Act which define a minimum standard of benefit without which members cannot contract out. They would have to pay contributions to SERPS as well as to the scheme if the minimum requirements were not met. At the other end of the scale, there are limits to the generosity that schemes can provide, laid down by the Inland Revenue as conditions for the funds' exemption from tax.

Home Responsibility

People who fail to make any contributions during a given year because of domestic responsibilities, that is, caring for a child, or an invalid (normally) receive Home Responsibility credits in the State system. This will mean that (after a transitional period of perhaps 30 years) almost all women will earn a full Basic entitlement in their own right (Joshi and Owen 1983). Since the revisions effective from 1988 there is also home responsibility protection in SERPS, because years of Home Responsibility Credits can be dropped from the denominator when banded earnings are averaged over the

'working life'. People who have been contracted out of SERPS into occupational pensions or money purchase schemes, company or private, benefit from the Home Responsibility provisions of SERPS, on our interpretation. This comes about through the mechanisms primarily intended for State topping-up of indexation of benefits. In years when they are out of the labour force they are not contracted out, and if drawing the right benefit for child or invalid care, they will acquire Home Responsibility Credits. A notional amount of SERPS is calculated for all the contracted-out. For those with credits this notional SERPS will exceed their Contracted-out Deduction (DSS 1990), and hence the difference between the two will actually be paid. Many people will in fact be entitled to a mixture of pensions in any case.

Indexation

Since 1979 the Basic State Pension has been indexed only to the increase in prices, not to the higher of earnings or prices as was intended in the 1975 legislation. This reduces the growth of pensions relative to earnings if earnings experience real growth. It also has the effect of restricting the amount expended on SERPS payments because it is only awarded on earnings between the lower and upper band. With this band indexed to prices rather than earnings, a progressively smaller tranche of earnings will become covered by the State earnings-related pension (Fry et al 1990, Tomkins 1989). The private sector pensions, which anyway offer much higher pension income than the SERPS cut down in the 1988 Act, will diverge further from SERPS pensions if current indexation policy continues and if there is real growth in earnings.

The pension schemes modelled

In Chapter 3 we build a model in which individuals spend their entire lifetimes in one of three simplified pension schemes: a final salary scheme; a contracted-out money purchase scheme;

and the state earnings-related pension (which is also shadowing the first two schemes). The final salary scheme is based on sixtieths of final salary, with no commutation to a lump sum. Rights are frozen at current salary for those who interrupt employment but by assumption, there is no freezing of rights when changing employer. The money purchase scheme might be a personal pension or might be provided by a company. It is assumed that the joint contribution of employee and employer amounts to 17.5% of earnings and that the real interest rate on the fund (net of administration) is zero. Unisex actuarial annuity rates are used to calculate the whole benefit as they have to be for the Protected Rights. This level of contribution is the maximum permitted and would be unusually high for a personal pension. We also show the 'Protected Rights' in this pension, the minimum provision for which contracting out would be permitted, roughly equal to SERPS for a man with an uninterrupted record. The version of SERPS simulated assumes that it is in force over an entire lifetime, ie it ignores generations only partially covered and the transitional arrangements in both pieces of legislation. In each case there is also the State Basic pension, which we have also calculated. In the simulations presented in this paper, we have initially simplified the question of inflation by holding both prices and earnings at their current level. We indicate in Section 3.5 the directions in which the relative size of different benefits would change were either prices or earnings to grow.

Pensions in the case of divorce

There are already provisions to handle the State Basic Pension in the case of divorce. Divorcees can benefit from the contributions of their ex-partners during the years of marriage, if need be. Rather than just split existing rights this measure creates extra ones. This is an automatic procedure, outside the jurisdiction of the courts. The State Earnings Related retirement and survivors benefits cannot be

split, either administratively or in the courts. As explained below, the courts' powers to deal with private pensions are also very limited.

Groves (1983, 1987), Land (1983) and Abel-Smith (1983) provide excellent discussions of the place of women in pension schemes, pointing to the poor pension position of divorced women. In general, books on pensions say little about divorce. Among five handbooks on pensions we consulted (Matthewman 1989, Reardon 1990, Benjamin et al, 1987, Oldfield, 1988 and Stillerman, 1987), only one, the first one (Dealing with National Insurance), mentions divorce in its index.

Pension Age and other issues

Writers on pensions have had number of other concerns, such as portable personal pensions, indexation and the equalisation of pension ages for men and women. The latter issue is set aside in this report, we proceed on the somewhat dubious simplifying assumption that pension age will remain at 60 for women and 65 for men in perpetuity. In view of recent developments in the European Community, it in fact seems increasingly unlikely that unequal pension ages will persist, but pension ages have already been the subject of another research project (Tomkins 1989).

1.4 Divorce law on financial settlement

The Divorce Reform Act 1969 for England and Wales introduced the irretrievable breakdown of marriage as the sole ground for divorce, 'no fault divorce'. The associated Matrimonial Proceedings and Property Act 1970 and the Matrimonial Causes Act 1973 held that either party was entitled to support which would restore their financial position to what it would have been if the marriage had survived. This was criticized as providing 'a meal ticket for life', though not realistically feasible in most cases. Maintenance for wives, as opposed to

children, was not generally awarded and still less frequently actually paid. Reforms were introduced in the 1984 Matrimonial and Family Proceedings Act, which among other features enabled the courts to be guided by the objective of hastening the financial independence of the parties, and making a 'clean break' wherever possible. The courts were however left with discretion which is often used to over-ride the simple 'clean break'. The Family Law (Scotland) Act 1985 sets clearer guidelines to the courts North of the Border. It explicitly gives priority to the fair sharing of matrimonial property, it also mentions fair sharing of the economic burdens of childcare. In both jurisdictions however the courts have a problem with sharing pension assets (Freedman et al 1988).

The Indivisibility of Pension 'Assets'

Pension rights are not personal property. If the scheme is funded the wealth actually belongs to the Trust. Members of pension schemes have contingent rights on Pension Funds, whose Trustees can pay pensions (and lump sums) on the member's retirement or death. Provisions to prevent 'Spendthrift Trusts', protecting members, say from being hounded by creditors, also generally protect them from claims from their ex-spouses (see Ellison, 1987 for an indication of the complexity of the law, greatly simplified here). Rights in occupational pension funds are therefore not negotiable assets. The court cannot bind managers of occupational pension schemes to treat ex-wives as beneficiaries before or after the member's death. Furthermore the Trustees are also hampered in using discretion about paying benefit to persons other than members by the requirement of the Inland Revenue that the beneficiaries satisfy a dependency criterion. If, for example, the ex-wife had not been receiving alimony, it is unlikely that the fund could pay her a survivor benefit even if they wanted to. Pension 'assets' are not usually divisible.

Pensions in the Divorce Court

Pension matters have not figured much in practice in divorces (Eeklaar and Maclean 1986). This is also apparent, by default, in another survey of divorced people in 1984 (Gregory and Foster 1990). Half of the recently divorced men and one fifth of the women were members of occupational pension schemes. Of these, only a small number, 7% and 2% respectively, reported that their former spouse retained any benefit from the scheme, usually from lump sums or death-in-service benefits. What was more striking, though not surprising, was the low degree of information about pension matters among the people interviewed, as presumably among the public at large. There is however a growing minority of Family Law practitioners who are taking an interest in pension questions.

Under the new legislation it is still only a minority of divorces where the court is active in settling financial arrangements, either capital or income. Edwards and Halpern (1990) report a low overall rate of the courts making financial provisions. In the late 1980s there were about three times as many petitions filed as there were applications for either income or capital orders. Within wide geographical variations, there was a shifting balance among those orders which are applied for towards capital orders rather than income orders. They comment that these trends reflect a gradual move by the courts towards the clean break principle. They also comment that nobody knows what sorts of financial arrangements are being made by those couples who do not use the courts to reach a settlement.

Sometimes, especially in cases of couples with more wealth, an assessment of pension wealth is included in the balance when ordering a capital settlement. It is not uncommon for a wife's lawyer to claim a greater share of the home than a half on the grounds of lost pension rights - 'house for pension'.

These solutions are only possible where other assets are big enough to offset against pension, which is not always the case. Occasionally the prospective loss of pension rights has been successfully argued as a 'defence to proceedings for divorce' a reason why the divorce should not be granted (Ellison, 1987 pp 21/16ff).

In literature on divorce, as in legal practice, there is also little attention paid to pensions; honourable exceptions include the writing of Masson (1986) and Freedman et al (1988). Pensions are not mentioned, for example, in the Law Commission Report (1988) on Family Law and Matrimonial property. Arrangements for children in divorce attract more urgent concern, both in practice and in academic research. In this report, children are ignored except as impediments to their mothers earning pension rights. Another topic we leave outside our remit is alimony before retirement, and the related question of compensation for the differential acquisition or erosion of the partners' earning power. The examples generated in Chapter 3 may be useful in this context on some other occasion.

1.5 Solutions on the table

A multi-agency problem

It has been recognized that legislation would be necessary to facilitate division of pension rights on divorce within the next few years. The current situation on pensions and divorce in the law of England and Wales has been described as a stalemate (Harrison, 1989). Family Law alone cannot achieve much without amendment of the Pension Law, in whose court the ball is said to lie (Ellison 1987). Inland Revenue regulations would also have to be adapted: so would the State Earnings Related Pension. The GMP, which forms the floor to contracted out final salary pensions follows the SERPS rules about who is entitled to a survivor's benefit. Any legislation about the

apportionment of contracted-out pensions would need complementary revisions of SERPS, and in any case divorced people who actually draw SERPS should not be left out of any reform.

An official proposal

The Lord Chancellor's Department issued a consultation document in 1985, Occupational Pension Rights on Divorce, the last official utterance on the subject, on which there has been no further action. The document reviewed a number of previous documents (Law Commission 1969, 1980 1981 and Occupational Pensions Board 1976) and came up with its own specific proposal. Following a year after the Matrimonial and Family Proceedings Act of 1984, where the 'Clean Break' was in favour, the provisions it recommended were very limited. The division of pension was only to be undertaken by the court in what were presumed to be relatively few cases of hardship, with one divorcing party close to pension age. The pension in which the ex-spouse may be awarded an interest would be that payable after the Scheme member's death, not during his retirement. On the scheme member's death the court would rule how much of the widow's pension should be paid to the ex-wife. Any new wife would be entitled to all the GMP widow's pension, which was in any case outside these provisions. This illustrates the desirability of involving the State Scheme in any reform (as advocated by the Occupational Pensions Board, 1976). The discretion granted to the courts under the Lord Chancellor's proposal, at two stages, the time of the divorce and the scheme member's death was criticised as generating uncertainty for both the divorced and the surviving spouse (Equal Opportunities Commission, 1985).

The principle of preventing hardship

The spirit of the LCD's residual approach to 'hardship' cases only, for survivor benefits only, is not uncommon in

arrangements prevailing in other countries. Hoskins, 1978, reported on the survey carried out by the International Social Security Association in 1976. In some social security schemes survivor's benefits were paid to divorced women only where they had been receiving alimony (Austria, Italy Switzerland and much of Eastern Europe).

The question can be raised as to whether arrangements between divorcing parties and their pension insurance schemes are the best way of meeting the indisputably worthy objective of preventing divorced elderly women from falling below acceptable income standards. It might be better to have adequate social transfers not specifically conditioned on marital status. Hoskins cites Australia, New Zealand, Norway and Denmark as using means-tested transfers, and Sweden (at least at in the 1970s) as having effective protection from a universal benefit based on citizenship.

Pension splitting: Germany

Another class of solutions, pension splitting, contrasts with transfers confined to hardship cases, whether from ex-spouse's insurance or the state. Apportionment of pensions, as splitting is sometimes known, is already in operation in Germany and the State of California inter alia. The splitting of pension credits in West Germany, enacted in 1976, applicable to divorces after 1977, was the first to be adopted by a national scheme (see Kaltenbach 1978, Voegli and Willenbacher, 1989). The German legislation was accompanied by a new marriage law as well as a new divorce law. Marriage was defined as an equal partnership or community, and the notion of fault abandoned in divorce.

In the German pay-as-you-go pension scheme the calculation of pension rights to be split is straightforward. All pension rights are earnings-related, and there is effectively just one central public scheme containing most people's records. Every

year of contribution adds a defined point to a person's pension record, whose value depends on the ratio of that year's earnings to the national average. On divorce, the pension rights accumulated during the marriage by both partners are summed and compared. Half the difference is transferred from the account of the spouse with the greater record to the other one, creating a new account if necessary. Each partner draws benefit at their respective retirement ages, after, as far as pensions are concerned, a clean break.

Proposals for Pension Splitting in Britain

Splitting pension rights at the time of divorce has recently been put forward for the UK in a recent consultative document for the Labour Party by Michael Meacher MP (1990). It has also been advocated by Masson (1986) and by Freedman et al (1988). All of these schemes are predicated on the notion of community of property within marriage, written into the German and Scottish law, but not formally in English law. This implies that if pension rights are assets, a couple's pension rights are a joint asset. This in turn implies that there is a settlement of pension rights to be made for all divorcing couples, except those whose expected rights happen to be equal.

In the British context, pension provision is not unified in comparison with West Germany. The bulk of pension wealth is held by a large number of Occupational Pension Funds, and much of it involves pensions based on the members's final salary. Both these features complicate any pension splitting procedure compared to Germany. Michael Meacher's pension splitting proposal involves all couples (including cohabitants if they wish) registering an interest in each other's pension scheme while married. In the event of divorce both parties would essentially be treated as independent members of each scheme, with rights equivalent to half the transfer value of the pension earned up to that time. This assertion of joint

'ownership' of pension entitlement treats pensions as the couple's rather than the individual's deferred pay and implies equal shares in matrimonial property. In principle, interdependence within marriage would be followed by independence after divorce. In practice, arrangements may be augmented by spouse maintenance including further pension contributions.

Objectives of pension splitting

The main objective of pension splitting is equity between divorcing spouses, the prevention of hardship is a by-product in some cases. There is no guarantee that the procedure will always eliminate hardship. The couple's combined resources may be inadequate. On the other hand where both couples have adequate but unequal pension entitlement there would be an equity case for splitting the difference even though no hardship were involved.

If pension-splitting is seen as an issue of equity between partners, simple general rules are clearly appropriate and practical. They remove the need for couples to wrangle individually over a subject that in most cases seems remote and complex. If the reason for concern is primarily the prevention of hardship, discretion for the courts might seem more appropriate, though given the complexity and unpredictably involved, one may wonder how effectively all cases of hardship would in fact be prevented.

Children and Compensation

Other principles have been advanced in writing on this subject. Eeklaar and Maclean (1986) question the ideology of partnership on which splitting is based. They draw a distinction between childless marriages and those with children. In the latter case they appeal to a principle of compensation for the loss of income attributable to child-

rearing, in the former they expect spouses to have retained a 'good deal of economic independence'. It seems as if these authors feel that the partnership principle may erode this independence within or after marriage. For couples with children they suggest that maintenance ought ideally to compensate the woman to the extent to which 'her standard of living falls below that which she might have expected had her marriage broken down without caregiving'. This hypothetical point of reference is not the husband's income (with which the woman's is compared in pension splitting), but one which is likely to be lower. This formulation is similar to provision in Australia for couples to share the foregone earnings costs of children (Funder 1989). In the Australian case couples split the difference between a mother's actual and potential earnings, treated as the couple's investment in child rearing. Eeklaar and Maclean appear to be putting forward compensation for the whole of such a notional gap. However they are very doubtful as to whether it would be practicable to quantify the gap, as they also doubt the practicability of splitting pension rights in the courts. Besides the legal difficulties, people often have difficulties ascertaining what their pension rights are. Eeklaar and Maclean conclude by pointing to the limits of 'private law and individual resources' making good 'the shortfall in the community's obligations both to its children and to their caregivers'. They also want to preserve 'the individualist values represented by the right to divorce and to establish serial families'.

There are in practice, of course, formidable difficulties in estimating the opportunity costs of children in terms of foregone earnings and associated pensions. Whether or not these can be overcome in real life (Australia?), it may be instructive to look at their magnitudes in the illustrative experiments in Chapter 3, where they are easily ascertained as they are part of the procedure for constructing women's earnings and pension profiles. This can show to what extent and under what circumstances the pension splitting formula

might also serve to compensate for the pension cost of children.

Issues of Women's equality and independence

The simulations will also throw light on the individualist argument that no intervention is needed in the majority of cases, or at least in childless divorces. There is an argument that any continuing claim of the lower earner (almost always the wife) on pension rights after divorce, perpetuates an undesirable dependency. It is presumed that women's advances in the labour market have meant that they will be able to "earn their own pensions". As our simulations show this is true up to a point, but even if they do not earn inadequate pensions, most will earn inferior pensions to their husbands. Pension splitting should not perpetuate dependency within marriage, but would help to prevent inequity arising when pooling ceases. At least in the "German" form, it is not a proposal for alimony or maintenance out of a resources earned after divorce, it is merely a way of maintaining an interest in an asset jointly acquired during marriage. As the direction of transfer is from whomever has the higher pension to the lower it does not preclude transfers to men as well as women and it will become less necessary as (or if) the gap between spouses' earnings or pensions reduces.

The issue of whether and how to deal with pensions on divorce also throws up major issues in theory and politics of sexual equality. Should women be treated as equal and independent, or should they be treated as different because of the nature of their nurturing role? Where domestic responsibilities have not been divided, it is not equal treatment to expect women to earn their own pensions and carry the double burden of society's unpaid work and earn themselves, as individuals, the pension rights that their husbands and ex-husbands managed to earn, freed from the need to run the unpaid side of life. Pension-splitting in the case of such couples as do share both

the unpaid and paid work and are equally treated by the labour market, will not be necessary because both spouses will earn similar pension rights. Owen and Joshi (1990) argued for a two pronged approach, developing the possibility for both sexes combining paid and unpaid work on equal terms, but simultaneously providing adequate support for those whose major contribution was unpaid. This they suggested might come from an enhanced Basic pension, based on citizenship. Like the Swedish provisions cited above, adequate universal pensions would obviate the hardship case for pension splitting.

1.6 The variants of pension division simulated

In Chapter 3 three of the many possible ways to treat pensions after divorce are considered:

- (i) the 'status quo',
- (ii) the 'German scheme' or the splitting of pensions gained during marriage,
- (iii) the 'lifetime' split.

The 'status quo'

The first variant is a simplified version of the current regime for most British divorces. Apart from the State Basic Pension, all rights stay with scheme member and all survivor's benefit goes to the surviving, current spouse. For simplicity there are no lump sum benefits, pensioners with dependant children or deaths in service, in this or the following variant

Splitting pensions earned in marriage

Our 'German' type scheme is also very like the Meacher proposal. Unlike the latter, the rights split are confined to those actually accruing during the marriage, not any before, and there is no allowance for an ex-spouse helping to pay pension contributions after divorce. The split is calculated at the time of divorce, taking into account what is known to

have been earned already, although in a final salary scheme, and, because of Home Responsibility Credits, in SERPS some forecasting is necessary.

Sharing lifetime pensions

The 'lifetime' formula is one alternative approach. The benefits are split after the end of the working life, in our formulation, at the time of the later retirement of the two partners. It is based on earnings up to that time not just up to divorce. The gap between spouses pensions is split and weighted by the share of the marriage in the contributor's working life. The period before the first marriage is allocated to the first marriage, the period between marriages to the next marriage. There could obviously be further variants on this formula. For example, the point of reckoning might be the major earner's death instead; but this would reduce the number of years in which the transferee would benefit and hence the effectiveness of transfers at supporting the incomes of elderly divorcees. While a lifetime approach postpones the division of the pension until perhaps long after a divorce, it does have the apparent merit of taking account of differential acquisition or erosion of future earning power during a partnership. It would also be possible, though not necessarily desirable, to adjust the pension settlement in the light of subsequent marriages. In our scheme we would assume that settlements would not be affected by remarriage, although we have not looked at cases where women remarry. Another possible variant would leave to the court's discretion the fraction in which pension rights were divided up, given the 'factors' present in individual cases and the size of other assets. This is not considered here, and would seem to be administratively cumbersome.

The arguments in favour of scheme (ii) that settles at the time of divorce are that it is in the spirit of the Clean Break; that most of the relevant information is in principle

available; that all parties know in advance, as far as is possible, who is going to receive how much pension; that it is unaffected by future changes in marital status of either partner, or by changes in earning, pension scheme membership or contribution levels. Nothing that either party does after the divorce can therefore affect the size of the transfer, and there is no moral hazard. The weaker party has no claim on the contributions made by the ex-spouse after their partnership ends. The arguments against it compared to the lifetime approach, are that the amounts transferred may be less worth having, particularly after short marriages followed by periods of caregiving to the couple's children. Continuing pension sacrifice, resulting from caring activity due to the partnership, but incurred beyond the date of divorce cannot be taken into account. In fact our lifetime scheme (iii) does not always produce bigger transfers than scheme (ii) because the split lifetime pension gap is weighted in proportion to the length of the marriage.

1.7 Economic Inequality between the Sexes

The merits of these schemes cannot be considered in isolation from the relative economic position of the divorcing partners. The possibilities logically range from the traditional total financial dependency of wife upon husband to the reverse. Both extremes are rare. So too are cases where the partners earn equally and may be presumed independent. The most common situation is one where wives earn less than their husbands, with widest gaps at stages of their lives when they have caring responsibilities. In these cases, a partial financial dependency on husbands may be said to exist, but is perhaps not given adequate recognition (Joshi 1989).

The fact that neither the increase in female labour force participation nor Equal Opportunities legislation has given women equal outcomes on the labour market when compared to men

has been documented elsewhere (Joshi 1989, Wright and Ermisch 1990). Lower pay and shorter hours combine to make female earnings a far smaller share of total earnings than they are of the workforce. Little more than a quarter of all earnings (28%) in 1986 were gained by women who were near to half (45%) of all employees (our calculations, Family Expenditure Survey). Other indicators of women's inferior status in paid work are the percentage of couples earnings earned by wives (29% in 1986 on average) and the fact that 10% of all two employee couples had the wife as the higher earner.

As with the current plight of many lone mothers, that of divorced elderly women can be expected to reflect continuing disadvantages for women in the labour market (Joshi 1990a, 1989, 1991). These include inferior training, low pay, job segregation, obstacles to promotion, shortage of affordable childcare and inadequate support of community care. These may some time be eliminated by determined policy and /or the demands of the economy, but meanwhile they perpetuate financial dependency for many women either on husbands or the State.

Reducing these disadvantages would of course eventually reduce the problem of divorced women among others, but the disadvantages are intractable and irreversible for women who sacrificed their earning power in order to make unpaid contributions to reproduction. Measures to safeguard divorcees' interests in a couples' pension help to mitigate some of the unsatisfactory outcomes of marital breakdown.

2.1 Resources of the Elderly

The importance of enquiring into pensions after divorce is that for most people the package of pensions described in Chapter 1 is the main, if not the sole source of income in old age. Some elderly people have sources of income from assets or earnings, but for the most part pensions derived from past employment (or spouse's past employment) are the major source of income in old age (see Fry et al 1990). In a substantial minority of cases these pensions are at present supplemented by means-tested benefits (Income Support and Housing Benefit). The adequacy of future pensions can be gauged in relation to current assistance levels. Pensioners whose National Insurance pension was not augmented by much other income would tend to be eligible for assistance, as of course would those whose contribution record was inadequate. It can be argued that the Basic National Insurance system has the potential to give the most effective old age protection to women who have spent all or parts of their working lives doing unpaid work in the home (Owen and Joshi, 1989). Unless its value is dramatically uprated, pensioners with little else must be economically vulnerable. Many divorced women seem likely to be among them. They are unlikely to have occupational pensions of their own, or access to their ex-husbands'.

Current position of non-married elderly women

Because divorced elderly women are at the moment such a small minority, there is no reliable statistical evidence on the extent of their special financial problems, but we have plenty of evidence that elderly women who are not currently married tend to be living in reduced circumstances and to have low incomes. Family Expenditure Survey data for 'pensioner units' in 1984-6 shows the average gross income of single

females to be the lowest, £64 per week, compared to £75 among single male pensioners and £77 (equivalized) for pensioner couples (Fry et al, 1990). Among the three groups, the single females had the highest share of state pensions in average income (57%) and of assistance benefits (10%) and the lowest share (15%) of occupational pension. In 1986 more than half, 59%, of all men over 65 received an occupational pension compared to just over a quarter (27%) of all women many of whom would be widows benefitting from their former husbands' scheme. Our analysis of the 1986 FES also showed that those women who did receive occupational pensions got on average little more than half the average pension received by a man, £26 compared to £45 (at 1986 prices). Looking back to similar data for 1968, the real value of occupational pensions paid to women changed little, though coverage improved from 11%. In contrast the value of pensions paid to men did rise, though coverage changed less, having been 47% in 1968.

The Government Actuary's Survey of Occupational Pension Schemes in 1983 (Government Actuary's Department, 1986) showed that new pensions awarded to female contributors were below those awarded to men in the same sector. From the public sector new pensions to men averaged £44 per week, compared to £35 for women. In the private sector, new pensions in 1983 were £30 and £15 respectively.

The non-married women who are widows are increasingly being provided for by widows' pensions from company schemes as well as from the State. What appears to make the prospects for material comfort in old age for divorced women rather bleak is that they do not have access to survivors' pensions from their spouses, and will have to rely on whatever pensions rights they have earned in their own right, together with earnings when they are young and fit enough to remain in the labour market.

Examination of economic activity rates provides indirect

evidence that divorced elderly women have rather fewer financial resources than their contemporaries who have never married, or who are still married, or are widowed. Table 2.1, taken from the 1988 Labour Force Survey shows that 12 per cent of divorced women over 60 were economically active, compared to 4 per cent of the widowed, 5 per cent of the never married and 9 per cent of the currently married. It also shows that those divorced members of the labour force were much more likely to be working full-time than the other women over 60 who were still in the labour force. 5 per cent of the divorced elderly worked for more than 30 hours per week, over twice the rate of the other groups of women.

Table 2.1

Economic Activity Rates of Women over 60, by Marital Status				
UK 1988				
	Never-married	Married	Widowed	Divorced
	%	%	%	%
Active	4.9	9.2	4.1	11.8
Employed over 30 hours	1.3	1.9	0.6	4.1
Population '000	584	2958	2901	1000

 Source: Eurostat Labour Force Survey

Coverage of Occupational Pensions

Comparison of the working age generation (two thirds of men covered and one fifth of all women) with those over retirement age suggests that receipt of occupational pensions will continue to spread, but is by no means universal, especially among women. Amongst current employees in 1983 males outnumbered females by more than three to one as members of occupational pension schemes (Government Actuary 1986).

For both sexes, coverage is more likely in the public than the private sector and at higher salary levels. Female part-

timers are seldom in a pension scheme (11% in 1987, when 51% of female full-time employees were covered according to the GHS). The major reason for non-coverage of part-timers was that their job was not eligible for coverage. Since the Bilka-Kaufhaus case in the European court (1986), which decided that differential treatment of part-timers was indirect sex discrimination, and the 1990 case of Barber v Guardian Royal Exchange, where occupational pensions were deemed a form of remuneration, companies are likely to be forced to change such rules (Tomkins 1989). Although our simulations have not taken into account the implications of the Barber case for equalising pension ages, we have simulated the effect of covering part-timers in the experiments reported in Chapter 3 below.

As the attractiveness of the state scheme has been eroded by various developments during the 1980s, there has been an increase in the coverage of the labour force by private pensions, occupational pensions and personal pensions combined, and this has affected women as well as men. Full-time women employees have increased their membership of some sort of private pension schemes from 55% in 1983 to 65% in 1989. The corresponding figures for men are 64% and 80% (OPCS Monitor SS 90/3 on 1989 GHS).

2.2 Trends in Divorce

Current Features of Divorce and Remarriage

Since the 1970s the divorce rate has risen dramatically in Britain, as in other countries. Divorce rates in Britain are lower than they are in the United States, but higher than in most other European countries outside Scandinavia. It has been estimated that, at rates current in the 1980s, 37% of couples would eventually divorce (Haskey 1989). The risk is higher the younger are the partners at the time of marriage, and also for a number of identifiable groups such as the

remarried, the childless, couples starting childbearing early in marriage, people not in owner occupied housing and wives with higher earning power (Murphy, 1985, Ermisch 1989). Most divorces occur within a few years of age 30. In 1979, for example, 14% of divorces were to women under 25, 44% to those age 25-34, and 42% to those over 35.

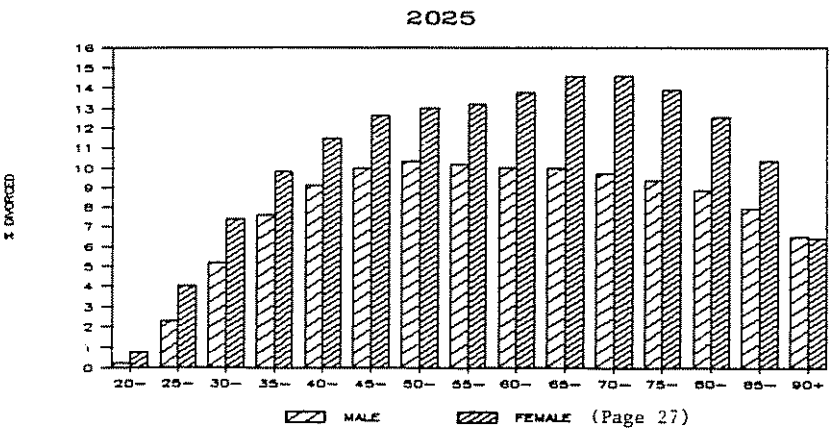
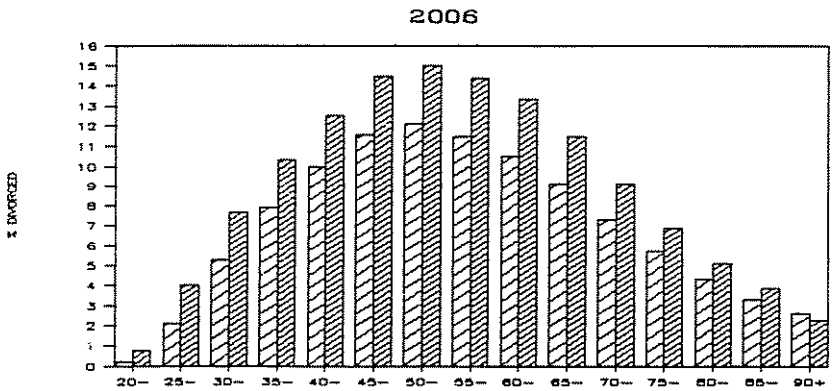
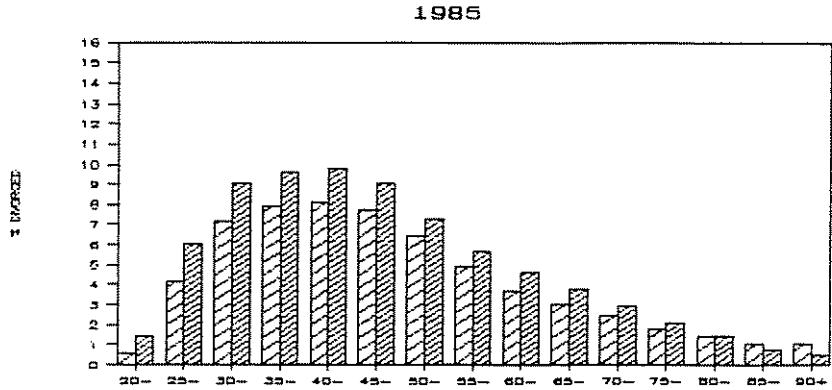
Most divorced people marry again. People divorcing in their twenties frequently remarry within a few years. Women divorcing at ages over 35, particularly those with children, face lower prospects of remarriage than younger women and than men. In the histories reported in the 1980 Women and Employment Survey, 70% of women whose first marriages ended between ages 25 and 34 remarried eventually, as did 50% of those aged over 35 at separation/divorce (Ermisch 1989). Different social class patterns for men and women in the propensity to remarry have been described by Haskey (1987) in a two-and-a half year follow-up. Low male economic status reduces the chances of men remarrying within 30 months, but raises those of their ex-wives.

The Ageing of the Divorced Population

The proportion of the population which is currently divorced is the outcome of the numbers of people in the population who have been divorced, who have not remarried and who have not died. Although there are equal numbers of men and women divorcing at any one time, there are more divorced women in the population than there are divorced men because men have a higher rate of remarriage and of mortality.

At present, the bulk of the divorced population is not elderly. They are of working ages. It is the age range around age 40 where there is the highest proportion of people who are divorced; just over 10 per cent of women in the age range 35-45, rather fewer males. This is illustrated in Figure 2.1 where the right hand, higher, parts of each bar represent the

Figure 2.1: Percentage of Age Group Divorced, 1985-2025

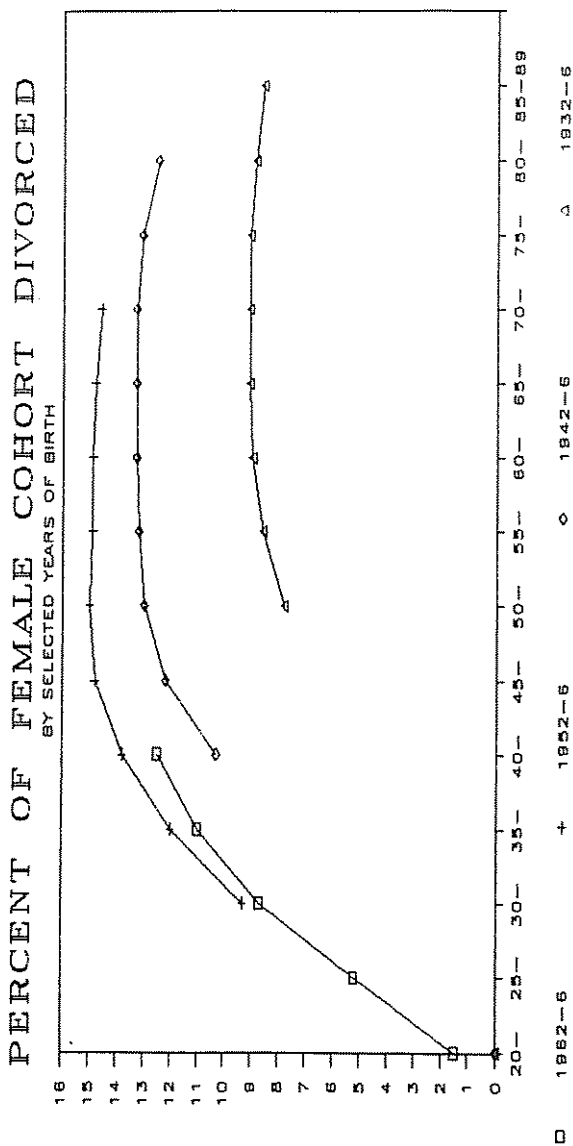


proportion of a female age group which is divorced and the left-hand bars in all age groups plot the proportions of males who are divorced. The hump around age 40 shows the age band where marital status is most likely to be divorced.

Projections of the future incidence of being divorced amongst the population show a very different picture (Haskey 1988). By the year 2006, the age group with the most divorced people becomes the band around 50. It is still expected that there will be more women than men among them. Within a higher level overall, the age structure shifts up. In the 1980s very few elderly people were divorced; they belonged to a generation that experienced little divorce. The proportions of the elderly projected to be divorcees for both sexes is going up. By the year 2025 when the Government Actuary's projections stop, the peak ages for the proportion of women divorced are between 65 and 75. By the end of the first quarter of the 21st century a significant proportion of elderly women will be divorcees, one in seven compared to one in thirty-two in 1985.

Figure 2.2 graphs the projected proportions divorced by birth cohort rather than by calendar year. It shows how the cohorts born in the 1930s had a much lower chance of experiencing the divorced state than the cohorts born in the 1940s and the 1950s. The cohorts born in the early 1960s are projected to have a slightly lower level of experience of the divorced state than the cohorts born in the 1950s because a higher proportion of that generation is projected never to marry at all. The age profiles for the cohorts do not show the downturn of the cross section. Once the female cohort reaches its peak proportion of divorced members, this does not fall off. Although some women remarry, they will be matched by an inflow of their contemporaries becoming divorced. The peak level of being divorced is projected for the cohorts born in the early 1950s at around 15 per cent of the population. They will carry this rate into old age with them, twice that of the generation born in the 1930s of whom around 7 per cent are

Figure 2.2



reaching old age in the divorced state.

2.3 Marital, Sex and Age Structure of the Elderly Population

Turning to the elderly population in themselves, their marital status is described in Table 2.2. Amongst the population over pension age in the mid-1980s, a very small proportion was divorced, 3 per cent of women over 60 and 2 per cent of men over 65. Most men over pension age (73%) were currently married. By contrast only 45% of the elderly females were currently married; and almost as many were widowed. The projections show this marital status composition of the elderly changing. Fewer elderly women are expected to be widows, more are expected to be divorcees.

The incidence of widow and widowerhood is falling because of improvements in mortality, alongside falling chances of marriages surviving. By the year 2025 the projections are that 13.5 per cent of the elderly female population will be divorcees and 9.4 per cent of elderly males.

If we turn to the ratio of females to males amongst divorced people over current pension ages, the excess of women is more apparent. There are more elderly women for both natural and artificial reasons. Women live longer and they are classified as elderly five years earlier. Taking the population over pension age, the sex ratios amongst the divorced elderly show nearly three divorced elderly women per elderly divorced man in 1985, 270 per cent. This drops to 245 per cent in 2025, still more than twice as many women as men among the divorced elderly.

The ageing of the elderly population as a whole stalls temporarily in the first decades of the next century, but among the divorced elderly the age structure shifts steadily upward. The experience of being divorced will spread up the age range.

Table 2.2

Numbers of Elderly People, by Marital Status and Sex:
1985 and projections for 2006 and 2025: England and Wales

	Single	Married	Widowed	Divorced	Total
Thousands					
1985					
Females 60+	588	2,714	2,598	186	6,086
Females 65+	483	1,715	2,305	118	4,621
Males 65+	219	2,190	536	69	3,014
Persons 60/65+	807	4,904	3,134	255	9,100
2006					
Females 60+	339	2,818	2,480	557	6,197
Females 65+	276	1,854	2,263	366	4,761
Males 65+	266	2,346	642	235	3,490
Persons 60/65+	605	5,164	3,122	792	9,687
2025					
Females 60+	588	3,387	2,558	1,017	7,550
Females 65+	346	2,253	2,322	758	5,679
Males 65+	457	2,802	735	415	4,408
Persons 60/65+	1,045	6,189	3,293	1,432	11,958
Sex ratio: Females per 100 males					
1985					
Over 60/65	268%	124%	485%	270%	202%
Over 65	221%	78%	430%	171%	153%
2005					
Over 60/65	127%	120%	386%	237%	178%
Over 65	104%	79%	352%	156%	136%
2025					
Over 60/65	129%	121%	348%	245%	171%
Over 65	76%	80%	316%	183%	129%
Marital status composition					
1985					
Females 60+	0.097	0.446	0.427	0.031	1.000
Females 65+	0.105	0.371	0.499	0.026	1.000
Males 65+	0.073	0.727	0.178	0.023	1.000
2006					
Females 60+	0.055	0.455	0.400	0.090	1.000
Females 65+	0.058	0.389	0.475	0.077	1.000
Males 65+	0.076	0.672	0.184	0.067	1.000
2025					
Females 60+	0.078	0.449	0.339	0.135	1.000
Females 65+	0.061	0.397	0.409	0.133	1.000
Males 65+	0.104	0.636	0.167	0.094	1.000

Source: Government Actuary's Department, Population Projections mid 1985-based.

2.4 Implications

Few people so far have experienced old age as divorcees. Those who are expected to reach the state in growing numbers, will almost certainly have a different social and economic profile from their contemporaries of different marital histories. While noting this complexity, this report will proceed on simplifying assumptions which do not model the selection processes explicitly. It will concentrate on divorced elderly women, because they are expected to be more numerous than divorced male pensioners and because, for women, marital status is an important determinant of retirement income. Whatever problems are faced by the current generation of divorced elderly women could be faced by over five times as many of them in the year 2025.

3.1 The Model

The method and its antecedents

Our approach is to apply the results of econometric analysis to simulate lifetime earnings, and pension profiles for a range of illustrative cases. These simulations show the sort of circumstances which lead to inadequate pensions and explore how far the outcome can be affected by changing rules covering entitlement to benefit from the contributions of an ex-spouse - living or dead, in State and private pension schemes. We explore the sensitivity of a woman's pension entitlement to her occupational level, the number of her children (if any), the length of her marriage and to variations in her labour force participation after divorce if she then has dependant children.

The simulation of illustrative cases does not necessarily reproduce the cross-section of actual experiences. Averaging across the individuals simulated does not necessarily reflect population averages. Indeed deliberately selected extreme but rare cases have more prominence in this exercise than they do in real life.

This Chapter develops earlier work along the same lines in which models fitted to data collected in the 1980 Women and Employment Survey have been used to estimate women's earnings foregone due to childbearing. The principles of the method of generating employment and earnings profiles for illustrative 'typical' individuals are set out in Joshi (1990). A first attempt to generate pension profiles, for women and men in the State Scheme, was reported by Owen and Joshi (1990). The particular formulae used in this exercise are shown in the Appendix. For women they are a multinomial logit estimate of the determinants of participation in full and part-time

employment, set out in Joshi and Davies (1990), and a pair of wage formulae, separate for full-time and part-time jobs, linking earnings to labour market experience estimated by Ermisch and Wright (1988).

Our previous paper also used these wage functions to generate lifetime earnings for women with otherwise average characteristics and zero, one two or three children. Earnings foregone to bring up two children came out at a little over half potential earnings after the age of 25 when the first child was assumed to be born. We repeated the exercise as closely as possible for three other European countries. Patterns of participation and magnitudes of earnings foregone were similar for Britain and West Germany, but France and Sweden contrasted markedly. In these two countries there is much more use (and subsidized provision) of child care outside the home. Mother's earning histories appear accordingly to be much less depleted. The subsidization of paid child-care should help protect divorced mothers, among other things, from low pensions. Another lesson of international comparison is that the sorts of effects of children on earnings and pension entitlements simulated here depend on culturally and historically specific conditions obtaining in Britain in the early 1980s. Attitudes and prices could change, altering patterns of mothers' employment, perhaps even fathers', but in this exercise prevailing practice is frozen.

The present model and its assumptions

The simulated participation profiles used here embody further refinements: husband's incomes are also generated, to which wives' participation is allowed to adapt, as it is to three levels of female wages. The parameters for generating men's earnings come from Wright's and Ermisch's (1990) study of married men, augmented at young ages by parameters for young single men taken from Greenhalgh (1980).

Any dependence of men's earnings on their marital status is set aside. Greenhalgh found that divorced men and married men had similar earnings functions. Though they differ between single and married men, it is not clear how the differential should be interpreted.

The hourly earnings profiles have been fixed at their maximum levels (last peak before retirement). The downturns implied by the quadratic functional forms are not entirely plausible, especially when they reverse rankings from peak to final salary level. Murphy and Welch (1990) demonstrate that the quadratic curve does not fit actual data too well beyond the peak. It overpredicts the downturn. The data they use are a pooling of cross-sectional and longitudinal material for US males from the CPS 1964-1987.

Hours of work were imposed for full-time workers on the basis of average hours reported in various surveys. At low and middle occupational levels men were assumed to work 44 hours per week and women 36. At the high occupational level the hours assumed were closer, 40 and 38 respectively. When women were simulated to be in part-time work, hours were allowed to vary, up to 30, according to the predicted probabilities of their being in part-time rather than full-time work.

Building the Illustrative People

We generated life histories summarised in Table 3.1 on the basis of three assumed levels of earning potential for both the man and the woman. The level of earning power affects the woman's chances of participation in the labour market and hence the length of her employment record to date. It thus affects her hourly wage indirectly and directly. The man's earning power is determined solely by the wage formula which is simply shifted up for higher levels of qualification.

The lowest of the three levels is that of someone who left

school with no qualifications. Among female occupations, this corresponds to non-skilled manual work or to a shop assistant for example. The middle level is set at O-level standard qualifications for both sexes, with the occupational level corresponding to that of a secretary for women, or a skilled manual worker for men. The highest level of earnings is that imputed to graduates.

We make the drastically simplifying assumption that employment is continuous for both men and women between finishing education and pension age, except for the domestic interruptions and early retirements generated in the female participation formula (and the deliberately extreme case of the career housewife). Explicit inclusion of random interruption for sickness or unemployment would lower lifetime earnings of both sexes, particularly, to be even more realistic, among the less skilled, but would not basically affect the differences between sexes with which we are mainly concerned here.

The occupational level is linked to the marital histories in that the unqualified woman is assumed to marry at age 20, the woman of middle skill level to marry at age 22, and the graduate to marry at age 24. In all cases, her husband is assumed to be two years older than herself. If she is to produce a two-child family, we assume that her first child is born three years after her marriage and her second child three years after that. This means the least qualified woman would have her second child at age 26 and the most qualified at age 30. If she has a four-child family, a fairly rare occurrence, we also assume shorter intervals, two-years between marriage and first birth and between the four births. This makes the unskilled woman marrying at 20, finish childbearing at age 28, if she has four children and the graduate would have her fourth child at age 32.

If these marriages end in divorce, we have assumed that this might happen at one of three possible points: after 6 years,

Table 3.1 SUMMARIES OF MARITAL HISTORIES GENERATED

	No of children	Age at marriage		Age of wife at:			Age last child at divorce	Age of Man at last birth
		Wife	Man	1st Birth	Last Birth	Divorce		
FIRST WIVES: Low Qualifications								
Marriage lasts 6 years	2	20	22	23	26	26	0	28
12	2	20	22	23	26	32	6	28
	4	20	22	22	28	32	4	30
24	2	20	22	23	26	44	18	28
	4	20	22	22	28	44	16	30
FIRST WIVES : Middle Qualifications								
Marriage lasts 6 years	2	22	24	25	28	28	0	30
12	2	22	24	25	28	34	6	30
	4	22	24	24	30	34	4	32
24	2	22	24	25	28	46	18	30
	4	22	24	24	30	46	16	32
FIRST WIVES: High Qualifications								
Marriage lasts 6 years	2	24	26	27	30	30	0	32
12	2	24	26	27	30	36	6	32
	4	24	26	26	32	36	4	34
24	2	24	26	27	30	48	18	32
	4	24	26	26	32	48	16	34
SECOND WIVES : Low Qualification								
Husband from early divorce	2	23	29	25	27	0	0	33
middle	2	23	35	25	27	0	0	39
late	2	35	47	37	39	0	0	51
SECOND WIVES : Middle Qualifications								
Husband from early divorce	2	25	31	27	29	0	0	35
middle	2	25	37	27	29	0	0	41
late	2	37	49	39	41	0	0	53
SECOND WIVES : High Qualifications								
Husband from early divorce	2	27	33	29	31	0	0	37
middle	2	27	39	29	31	0	0	43
late	2	39	51	41	43	0	0	55

NOTE: For First Wives variants also exist for unbroken marriages with 0, 2 and 4 children, and, for all broken marriages, with no children.

which is a relatively short marriage, but not an infrequent duration; after 12 years; or for the sake of illustration, a very long marriage which lasts 24 years. For comparison, the most common duration among marriages ending in divorce in 1988 was 4 years, and the median 10. The early divorce is (just) late enough for two children but not four to be born. Two or four, as well as no children, might be born in the 12 and 24 year variants. In the 'late' variant, the woman is aged 44 to 50 at the time of divorce and any children are over 16. The later divorces are less likely to be followed by remarriage.

We have made the following assumptions about remarriage. None of the first wives whose histories have been outlined are assumed to remarry. If they did, under present arrangements their pension entitlement will depend extensively on that of their next spouse. We do explicitly allow for first husbands remarrying. If they do, we have assumed it is after a year of

being unmarried, to second wives who are younger than their first wife, by a factor of 4 years in the case of the early divorces and by a factor of 10 years in the case of the first marriages which have lasted 12 or 24 years. The second wives are all assumed to have two children at 2 year intervals. The examples were constructed to avoid the complication of the man reaching pension age while responsible for a dependant child, because we have not included dependant's pensions in the pension simulation. The second wives were assumed to have the same earning power as the first wife. Their employment histories look rather different however, because they have older husbands with higher incomes and because they are young enough to have their participation affected by the husband's retirement. For this reason, they do not earn as big a pension in their own right as they would have done if they had been married throughout to a man closer their own age.

Death is assumed to occur at age 78 for all men and for women at age 81. This represents the life expectation of someone wh

has survived until pension age, according to English Life Table 14 (OPCS 1987). It is of course a simplification not to allow for differential mortality between social classes, the higher mortality of the divorced, nor for the possibility that some people die before they ever collect any pension.

The lone mother's 'benefit trap'

In order to explore the consequences of different labour force behaviour after divorce, we have adopted two assumptions about the labour market behaviour of divorced mothers. One of them gives the labour market behaviour predicted by the general model, which on the whole involves a rapid return to full time work. Such experience is by no means universal amongst lone mothers, many of whom stay out of the labour market for longer even than married mothers do, possibly because of the disincentives built in to the benefit system combined with the lack of childcare (Ermisch and Wright 1991, Joshi 1990a). We have constructed a 'benefit trap' variant whereby a lone mother who is not already working full-time when her marriage breaks up stays out of the labour market on benefit until her children are no longer dependent and she is no longer eligible for the benefit. These two scenarios form extremes of what actually happens, but they provide a range.

The 'career housewife'

We have constructed another extreme case. She is the career housewife. We have generated the incomes and pensions for a woman whom we assume never re-enters the labour market after leaving it on marriage: whether or not she has children, whether or not she divorces, she stays a housewife from marriage to retirement. We have assumed she does not qualify for Home Responsibility Credit and presume that if divorced she must have her own means or receive alimony. As far as National Insurance contributions are concerned, someone exercising the Married Woman's Option would have similar

pension rights to this case (though none of her pre-marriage SERPS, as anyone born late enough to start off in SERPS would already have missed the chance to opt out). Opted out women who divorce do not retain their exemption from contributions. No allowance is made for any second wife taking up the housewife-only career.

Location in time

The simulations generate an artificial lifetime in a time warp. It has some features of a contemporary cross section, and some of an era that will not be achieved until the fourth decade of the next century when contemporary pension schemes become mature. Earnings and participation evidence is drawn from 1980 and valued at 1990 prices. The rules of pension schemes are as laid down in 1988 legislation. Only cohorts entering the labour force after that date would be subject to these rules throughout their careers. For the sake of simplicity the transitional provisions of SERPS, and the contracting-out incentive have been set aside. Another way in which we have created a snapshot of the present is by making the assumption that neither prices nor the real level of earnings change. The model can allow for these to change, with differential consequences for different types of pension. Such dynamization has been left outside the scope of this report. It should first be instructive to understand the issue by comparing the pensions of people involved in divorce under this set of admittedly simple assumptions.

3.2 Results up to Pension Age

Labour force histories

Table 3.2 presents the main features of the work histories on which earnings and pensions are based, for three out of the seven occupational combinations of husband and wife we have considered. These are the cases where each partner has the

same level of qualification/occupational potential. The other combinations (apparent in Table 3.3) exclude those where a man with low qualifications has a better qualified wife, but do include all the cases where the situation is reversed, as is more frequent, and one where the wife's grade exceeds her husband's, hers high and his middling.

Men and unmarried women are assumed, as discussed above, to have continuous full-time employment from finishing education to their respective pension ages. The difference in the latter is the source of differences in years of work between them. Those with higher qualifications have fewer years of employment because of extra years in education. First wives with no children and no divorce have the same full-time employment history as the unmarried woman in the case of women in high occupations; in mid-level occupations, the childless married woman switches to part-time employment for eight years; if her earning power is low, her total employment is one year shorter than her unmarried counterpart, and seventeen of her years in work are part-time.

The employment records of wives who have children is again shorter. Among those not affected by divorce, bearing two children is associated with break in employment of eight years at lowest occupational levels, and seven at middle levels. At these two levels the break associated with having four children would be eleven and ten years respectively. As well as the break in employment, married women with children have substantially more part-time employment than the childless at middle to low occupational grades. At the high grade, graduate, because of the woman's higher earning power, interruptions associated with child bearing are shorter. The

Table 3.2 WORK HISTORIES

Part (a) OCCUPATIONAL GRADE: LOW, BOTH PARTNERS

	Years			
	FULL TIME	PART TIME	CHILD BREAK	EARLY RETIREMENT
Man	49	0	0	0
Unmarried Woman	44	0	0	0
FIRST WIVES				
Never Divorced				
No children	26	17	0	1
Two children	7	28	8	1
Four children	6	26	11	1
Housewife	4	0	0	40
Early Divorces: 6 years				
No children	44	0	0	0
Two children	32	1	11	0
Two children: on benefit	25	0	19	0
Housewife	4	0	0	40
Middle Divorces: 12 years				
No children	44	0	0	0
Two children	32	2	10	0
Two children: on benefit	25	1	18	0
Four children	29	2	13	0
Four children: on benefit	22	0	22	0
Housewife	4	0	0	40
Late Divorces: 24 years				
No children	42	2	0	0
Two children	23	13	8	0
Four children	22	11	11	0
Housewife	4	0	0	40
SECOND WIVES				
Husbands from:				
Short first marriage	9	27	7	1
Medium first marriage	9	21	7	7
Long first marriage	21	12	6	5

Table 3.2 WORK HISTORIES

Part (b) OCCUPATIONAL GRADE: MIDDLE, BOTH PARTNERS

	Years			
	FULL TIME	PART TIME	CHILD BREAK	EARLY RETIREMENT
Man	48	0	0	0
Unmarried Woman	43	0	0	0
FIRST WIVES				
Never Divorced				
No children	35	8	0	0
Two children	14	22	7	0
Four children	8	25	10	0
Housewife	5	0	0	38
Early Divorces: 6 years				
No children	43	0	0	0
Two children	32	3	8	0
Two children: on benefit	24	0	19	0
Housewife	5	0	0	38
Middle Divorces: 12 years				
No children	43	0	0	0
Two children	32	4	7	0
Two children: on benefit	24	2	17	0
Four children	30	2	11	0
Four children: on benefit	21	0	22	0
Housewife	5	0	0	38
Late Divorces: 24 years				
No children	43	0	0	0
Two children	25	11	7	0
Four children	21	12	10	0
Housewife	5	0	0	38
SECOND WIVES				
Husbands from:				
Short first marriage	15	21	6	1
Medium first marriage	19	15	6	3
Long first marriage	22	12	6	3

Table 3.2 Part (c) OCCUPATIONAL GRADE: HIGH, BOTH PARTNERS

	FULL TIME	PART TIME	CHILD BREAK	Years EARLY RETIREMENT
Man	44	0	0	0
Unmarried Woman	39	0	0	0
FIRST WIVES				
Never Divorced				
No children	39	0	0	0
Two children	34	2	3	0
Four children	29	2	8	0
Housewife	3	0	0	36
Early Divorces: 6 years				
No children	39	0	0	0
Two children	36	0	3	0
Two children: on benefit *	36	0	3	0
Housewife	3	0	0	36
Middle Divorces: 12 years				
No children	39	0	0	0
Two children	34	2	3	0
Two children: on benefit	24	2	13	0
Four children	30	1	8	0
Four children: on benefit	18	1	20	0
Housewife	3	0	0	36
Late Divorces: 24 years				
No children	39	0	0	0
Two children	34	2	3	0
Four children	29	2	8	0
Housewife	3	0	0	36
SECOND WIVES				
Husbands from:				
Short first marriage	31	3	5	0
Medium first marriage	31	3	5	0
Long first marriage	27	7	5	0

* Benefit trap not triggered considered.

mother of two returns to full-time work in the second year of her three-year birth interval, and only takes one year off at the time of her second birth. Her only two years of part-time employment, with near top of the range hours are taken after one year back full-time. This precise pattern is somewhat fortuitous. The graduate mother of four also works between her first two births and has only two years part-time, she takes eight years off altogether.

Divorced women are all, according to the model, less likely to be in part-time work than their continuously married counterparts, once divorced and having no access, it is presumed, to the income of another earner. Under the 'benefit trap' variant a break in employment is imposed until the last child reaches 16. The second wives, on this construction, have less full-time employment and more early retirement than first wives remaining in marriages to men of the same earning power.

Lifetime earnings

Table 3.3 and Figure 3.1 present some of the results of a number of calculations of gross earnings on the above range of assumptions. Figure 3.1 shows the year-by-year development of earnings for people in a given occupational grade, and compares the trajectory of earnings for a man, and a married woman (whose husband is in the same level, but two years older) with zero, two or four children. In the lower grades the gap between the man's earnings and the women's is even more striking than that between the childless wife and the mothers; in the high grade, the profiles are all higher and closer together.

As summarised in Table 3.3, the high earning man gets £755,000 over his lifetime, the middle level man £622,000 and the unqualified man £555,000. For married women with two

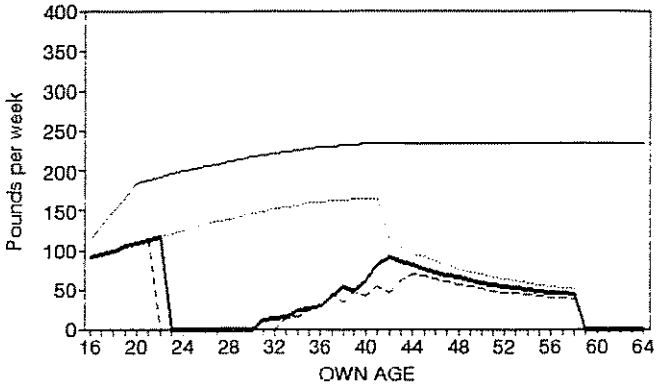
TABLE 3.3
LIFETIME EARNINGS

OCCUPATIONAL GRADE	(£ '000S)							
	LOW	MID	MID	MID	HIGH	HIGH	HIGH	
MAN	LOW	LOW	MID	HIGH	LOW	MID	HIGH	
WOMAN	LOW	LOW	MID	HIGH	LOW	MID	HIGH	
Man	555	662	662	662	755	755	755	
Unmarried Woman	340	340	390	603	340	390	603	
FIRST WIVES								
Never Divorced								
No children	249	239	351	603	219	329	603	
Two children	113	103	182	535	91	162	522	
Four children	92	84	143	423	74	123	417	
Housewife	20	20	31	30	20	31	30	
Early Divorces:6 years								
No children	340	340	390	603	340	390	603	
Two children	219	219	276	535	219	276	535	
Two children:on benefit	149	149	169	535	149	169	535	
Housewife	20	20	31	30	20	31	30	
Middle Divorces:12 years								
No children	340	340	390	603	340	390	603	
Two children	223	222	277	535	219	273	522	
Two children:on benefit	152	152	176	535	149	173	331	
Four children	197	197	244	428	197	244	424	
Four children:on benefit	124	124	140	428	124	140	214	
Housewife	20	20	31	30	20	31	30	
Late Divorces:24 years								
No children	334	330	390	603	321	390	603	
Two children	183	181	228	535	176	222	522	
Four children	165	163	196	423	159	190	417	
Housewife	20	20	31	30	20	31	30	
SECOND WIVES								
Husbands from:								
Short first marriage	121	111	186	502	99	167	472	
Medium first marriage	106	102	196	502	94	178	472	
Long first marriage	154	154	200	443	153	200	422	

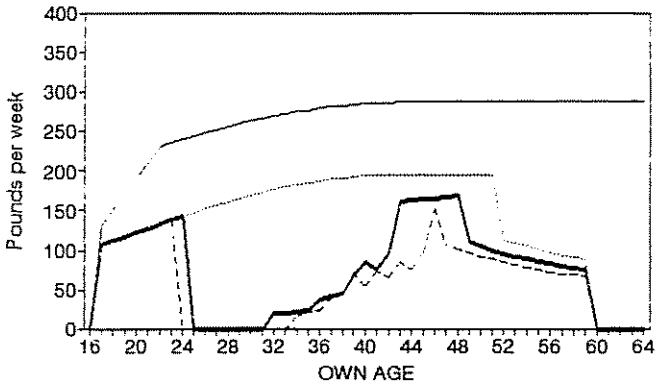
Figure 3.1

EARNINGS PROFILES

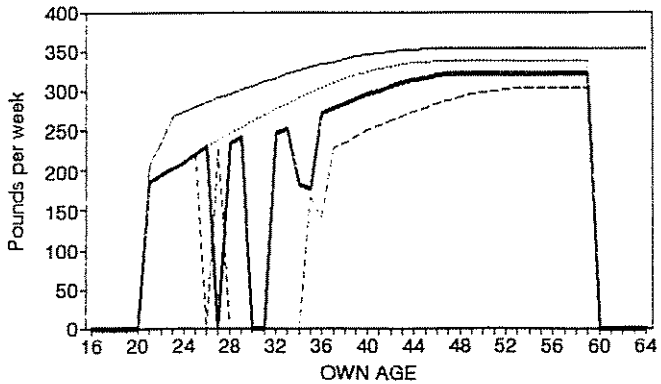
Occupation: man- low women-low



Occupation: man- mid women-mid



Occupation: man- high women-high



— man - - - wife: 0 children . . . wife: 2 children - . . wife: 4 children

children, the corresponding figures are £603,000, £390,000 and £113,000. The ratios of mothers' to men's go from .69 at the 'top' to .27 and .20 in the lower two categories. Note that unmarried women are simulated to earn at a lot less than an equivalent male in the lower two grades, around 60%, while the 'gender' gap is smaller in the high grade, the unmarried woman earning 80% of the man. The source of these differences is unequal rates of pay for equivalent experience, the longer hours assumed for the men and the longer working life imposed on them by State Pension Ages. Some, but arguably not all, of these factors are the result of sex discrimination. The full range of occupational combinations of spouses displayed in Table 3.3 shows that another source of the gap between spouses earnings can be a gap between their qualifications. The factors raising men's earnings mean that in our sole case of a wife more qualified than her husband (she high, he middle), his lifetime income exceeds hers even when she has no children. Table 3.3 also reveals that the level of a husband's income though it does affect participation has only a minor effect on a wife's lifetime income compared to her own occupation which affects both participation and pay. This negative effect of the husband's occupation amounts to little more than £10,000 over a lifetime whereas the difference between women's earnings by their own earning grade is of a different order of magnitude. Among the childless, the move from lower to middle qualifications adds over £100,000 to lifetime earnings. From low to the graduate level, it adds over £350,000.

The difference between the lifetime earnings of mothers with two children and wives with no children, the "opportunity cost" or foregone earnings due to bearing two children, is around half the childless women's lifetime earnings for women within the normal low to middle range of earning power, as previously estimated (Joshi 1990, Davies and Joshi 1990). The graduate women, who interrupt their employment much less, forego only around 13% of the childless lifetime earnings.

Lifetime earnings have also been calculated for the extreme and fairly rare case of a woman bearing four children. The additional opportunity costs are less than those of the first two for women in the low or middle occupational levels though they increase more than proportionately for the graduates. For the two big groups the earnings forgone raising four children are up to two-thirds of lifetime earnings, reaching this figure where their husband's qualifications are high and the wife has none.

The women expected to earn the most are graduates with no children, followed closely by the other graduates, even those with four children. At the bottom of the scale come women with low earning power, highly qualified husbands and children. The childless women in these two earning groups have intermediate earnings between the graduates and the other mothers. Among these mothers changes in the husband's earning power make less difference than changes in the number of children.

The lifetime earnings of the divorced women are on the whole higher than those of their continuously married counterparts, because of the extra full-time employment induced by the change in marital status. The extra earnings are modest, and in some cases negative (middle-skill couple divorced after 12 years, mothers of two and four facing the benefit trap). In the case of graduate mothers of two, who are simulated to work mostly full-time even if they do divorce, divorce does not increase lifetime earnings.

The second wives' lifetime earnings are sometimes higher, sometimes lower than those of first wives with two children, though also of the same order of magnitude. A factor working to their advantage is a longer period before marriage in which to accumulate a single woman's earnings record, on the other hand, their greater propensity to retire early works in the opposite direction. Similar remarks can be made of their

actual pensions (see Table 3.4), but not too much should be made of these cases since they are sensitive to the precise assumptions made about ages at remarriage and so on.

Where partners earnings are polarized, so too are pension entitlements likely to be. Table 3.3 reveals cases with the biggest gaps as being where there are many children, the husband is highly qualified and the wife not at all, or where the wife becomes a 'career housewife'.

3.3 Pensions earned

State Basic, SERPS, Money Purchase and Final Salary

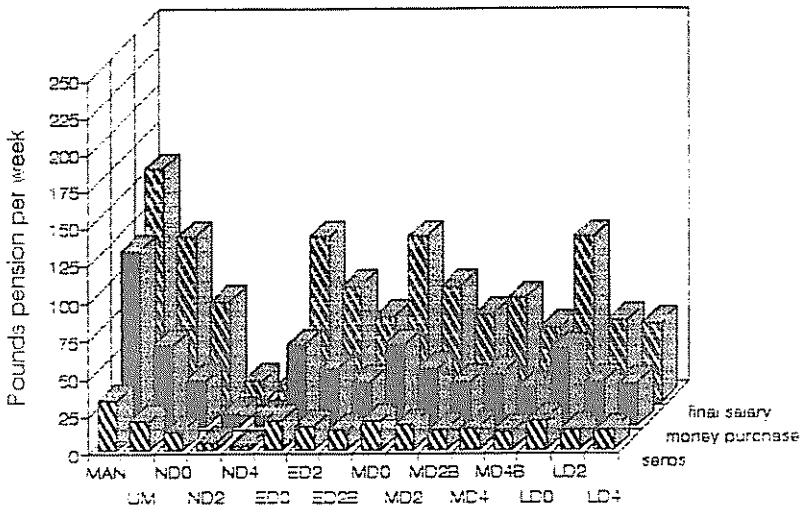
The weekly amounts of pensions of various types generated in the simulation are reported for the three occupationally homogamous couples in Table 3.4 and Figure 3.2. The graph presents, for each grade, the weekly pension from three earnings-linked sources, for a number of individuals. Final Salary pension is plotted in the back row, because it is invariably the biggest pension available from a given earnings history. It may have required larger contributions to achieve and its height is boosted by our assumption of no job-changing. SERPS is plotted in the front because the amounts are so much smaller. The Money Purchase pension (dark shaded bars), also an upper limit, turns out to be conveniently intermediate.

The 'horizontal' axes of Figure 3.2 start at the left with the individual invariably getting the highest pension, within type, the man. To his right appear the unmarried woman, continuously married women with zero, two and four children respectively, and then a series of women whose marriages end in divorce, with the longest broken marriages plotted at the right hand end.

Figure 3.2

EARNINGS-LINKED PENSIONS

Occupation: his-low hers-low



Occupation: his- mid hers- mid

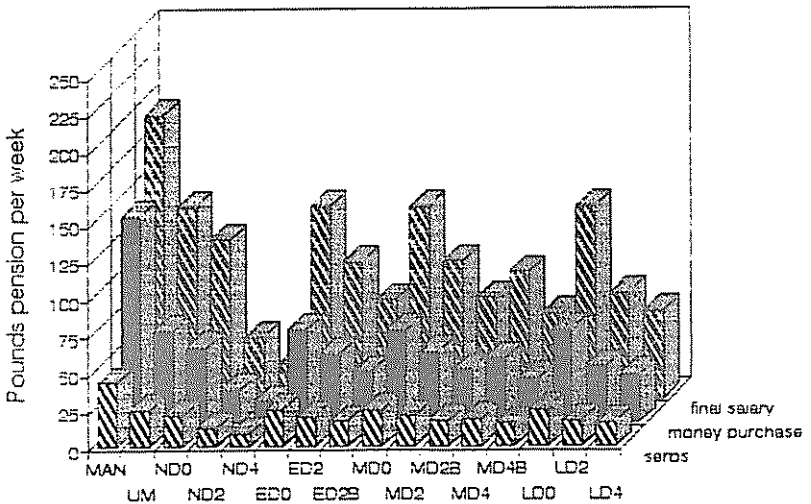
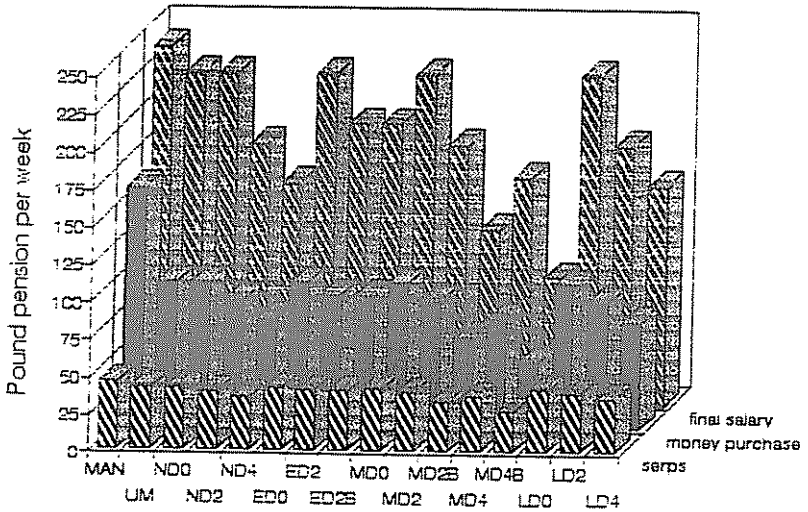


Figure 3.2 contd

EARNINGS-LINKED PENSIONS

Occupation: his- high hers- high



KEY TO X-AXIS

- MAN Man
- UM Unnamed woman
- ND0 Never divorced, 0 children
- ND2 Never divorced, 2 children
- ND4 Never divorced, 4 children
- ED0 Early divorce, 0 children
- ED2 Early divorce, 2 children
- ED2B Early divorce, 2 children: on benefit
- MD0 Middle divorce, 0 children
- MD2 Middle divorce, 2 children
- MD2B Middle divorce, 2 children: on benefit
- MD4 Middle divorce, 4 children
- MD4B Middle divorce, 4 children: on benefit
- LD0 Late divorce, 0 children
- LD2 Late divorce, 2 children
- LD4 Late divorce, 4 children

TABLE 3.4 PENSIONS UNDER THE STATUS QUO
(for selected matched couples)

3.4 Part (a) Both Partners Low-level occupations

OCCUPATIONAL GRADE LOW:BOTH PARTNERS	STATE BASIC	SERPS NCO	SERPS CO	PROT RTS	(£ per week)	
					MP TOTAL	FS TOTAL
Man	46.9	34.4	0.0	30.6	116.8	156.1
Unmarried Woman	46.9	20.5	0.0	12.5	54.5	110.3
FIRST WIVES						
Never Divorced						
No children	46.9	12.8	2.1	6.5	31.7	67.3
Two children	46.9	5.0	3.2	1.1	9.3	15.6
Four children	42.4	3.5	2.0	0.9	7.1	12.2
Housewife	28.2	0.9	0.0	0.6	3.3	6.3
Early Divorces:6 years						
No children	46.9	20.5	0.0	12.5	54.5	110.3
Two children	46.9	16.3	4.3	7.3	38.6	77.2
Two children:on benefit	46.9	13.7	5.9	4.7	29.8	58.1
Housewife	12.0	0.9	0.0	0.6	3.3	6.3
Middle Divorces:12 years						
No children	46.9	20.5	0.0	12.5	54.5	110.3
Two children	46.9	16.7	4.4	7.5	39.2	77.7
Two children:on benefit	46.9	14.1	6.1	4.9	30.4	58.7
Four children	46.9	15.3	4.9	6.3	35.0	69.3
Four children:on benefit	46.9	12.5	6.2	3.8	26.1	50.1
Housewife	19.2	0.9	0.0	0.6	3.3	6.3
Late Divorces:24 years						
No children	46.9	20.0	0.6	11.8	52.2	109.9
Two children	46.9	14.0	5.4	5.2	30.0	55.0
Four children	46.9	13.6	5.7	4.8	28.7	52.5
Housewife	33.7	0.9	0.0	0.6	3.3	6.3
SECOND WIVES						
Husbands from:						
Short first marriage	46.9	5.7	3.1	1.5	11.2	20.2
Medium first marriage	43.2	5.6	3.1	1.5	11.2	20.1
Long first marriage	46.9	13.2	5.1	4.9	27.9	56.3

NOTES

1. SERPS NCO: SERPS payable if never contracted-out
2. SERPS CO: SERPS payable if contracted out while in full-time work
3. PROT RTS: protected rights in the money-purchase scheme. Pension payable on basis of minimum contributions for contracting-out.
4. MP: money purchase scheme
5. FS: final salary scheme.
6. Both MP and FS based on contracting out while in full-time work only, and include SERPS CO.

TABLE 3.4 PENSIONS UNDER THE STATUS QUO (continued)

Part (b) Both Partners Mid-level occupations

	STATE BASIC	SERPS NCO	SERPS CO	PROT RTS	MP TOTAL	FS TOTAL
Man	46.9	43.0	0.0	38.2	139.3	191.3
Unmarried Woman	46.9	25.1	0.0	15.3	62.5	130.0

FIRST WIVES

Never Divorced						
No children	46.9	21.7	2.0	12.0	51.5	107.8
Two children	46.9	12.7	6.6	3.7	23.1	41.0
Four children	46.9	9.1	6.2	1.8	14.6	23.6
Housewife	28.2	1.6	0.0	1.0	4.9	9.9

Early Divorces:6 years

No children	46.9	25.1	0.0	15.3	62.5	130.0
Two children	46.9	20.5	4.4	9.8	46.3	92.3
Two children: on benefit	46.9	17.2	7.4	5.9	34.5	66.6
Housewife	13.2	1.6	0.0	1.0	4.9	9.9

Middle Divorces:12 years

No children	46.9	25.1	0.0	15.3	62.5	130.0
Two children	46.9	21.3	4.8	10.0	47.2	93.2
Two children: on benefit	46.9	18.0	7.8	6.2	35.7	67.8
Four children	46.9	19.5	5.2	8.7	43.0	85.5
Four children: on benefit	46.9	15.7	7.9	4.8	30.3	57.1
Housewife	20.4	1.6	0.0	1.0	4.9	9.9

Late Divorces:24 years

No children	46.9	25.1	0.0	15.3	62.5	130.0
Two children	46.9	18.3	6.0	7.4	38.1	71.6
Four children	46.9	16.1	6.4	5.9	32.2	59.1
Housewife	34.9	1.6	0.0	1.0	4.9	9.9

SECOND WIVES

Husbands from:

Short first marriage	46.9	13.3	6.7	4.0	24.6	44.5
Medium first marriage	46.9	15.1	6.2	5.4	29.7	55.3
Long first marriage	46.9	16.9	6.0	6.6	34.5	71.3

NOTES

1. SERPS NCO: SERPS payable if never contracted-out
2. SERPS CO: SERPS payable if contracted out while in full-time work
3. PROT RTS: protected rights in the money-purchase scheme. Pension payable on basis of minimum contributions for contracting-out.
4. MP: money purchase scheme
5. FS: final salary scheme.
6. Both MP and FS based on contracting out while in full-time work only, and include SERPS CO.

TABLE 3.4 PENSIONS UNDER THE STATUS QUO (continued)

Part (c) Both Partners High Occupational Grade

	STATE BASIC	SERPS NCO	SERPS CO	PROT RTS	MP TOTAL	FS TOTAL
Man	46.9	45.2	0.0	40.2	158.8	236.2
Unmarried Woman	46.9	41.8	0.0	25.4	96.7	218.7
FIRST WIVES						
Never Divorced						
No children	46.9	41.8	0.0	25.4	96.7	218.7
Two children	46.9	39.7	3.9	21.7	84.6	172.3
Four children	46.9	36.7	7.7	17.6	72.0	146.5
Housewife	28.2	2.0	0.0	1.2	4.9	10.1
Early Divorces:6 years						
No children	46.9	41.8	0.0	25.4	96.7	218.7
Two children	46.9	40.6	2.8	23.0	88.5	185.4
Two children:on benefit	46.9	40.6	2.8	23.0	88.5	185.4
Housewife	0.0	2.0	0.0	1.2	4.9	10.1
Middle Divorces:12 years						
No children	46.9	41.8	0.0	25.4	96.7	218.7
Two children	46.9	39.7	3.9	21.7	84.6	172.3
Two children:on benefit	46.9	33.3	11.1	13.5	61.0	117.5
Four children	46.9	37.3	7.3	18.2	73.8	151.7
Four children:on benefit	46.9	27.0	12.8	8.6	45.7	85.4
Housewife	18.0	2.0	0.0	1.2	4.9	10.1
Late Divorces:24 years						
No children	46.9	41.8	0.0	25.4	96.7	218.7
Two children	46.9	39.7	3.9	21.7	84.6	172.3
Four children	46.9	36.7	7.7	17.6	72.0	146.5
Housewife	32.5	2.0	0.0	1.2	4.9	10.1
SECOND WIVES						
Husbands from:						
Short first marriage	46.9	38.1	5.9	19.5	77.6	157.7
Medium first marriage	46.9	38.1	5.9	19.5	77.5	157.7
Long first marriage	46.9	33.2	5.5	16.8	67.3	149.7

NOTES

- SERPS NCO: SERPS payable if never contracted-out
- SERPS CO: SERPS payable if contracted out while in full-time work
- PROT RTS: protected rights in the money-purchase scheme. Pension payable on basis of minimum contributions for contracting-out.
- MP: money purchase scheme
- FS: final salary scheme.
- Both MP and FS based on contracting out while in full-time work only, and include SERPS CO.

It should be immediately clear from the pictures that sex and the type of pension are a more important sources of variation in pensions than differences in life-history for women in a given occupational category. Differences between occupational levels are also important.

Within the female cases SERPS is least adversely affected by motherhood, reflecting the operation of Home Responsibility Credits. Private pensions amplify the gap between the lifetime earnings of childless women and mothers (this also occurs in the case of low earners in SERPS). Motherhood makes proportionately the most difference to Final Salary Pensions, partly because of the adverse effect on the pension calculation of rights frozen at a relatively low pre-birth 'final' salary. The ratios of mothers' pensions to those of childless women depend not only on pension type but, positively, on occupation level. The low paid have the biggest proportional gaps. At mid-level occupations for both partners the lifetime earnings of a mother of two are 52% of a childless wife's. For SERPS the ratio is 58%; for Money Purchase 45%; and for final salary 38%.

The details of how the pensions plotted in Figure 3.2 are constructed, along with their accompanying Basic Pensions are shown in Table 3.4. Given our post-transitional assumptions almost everybody receives a full Basic Pension except the 'career housewife'. If she stays married we show her receiving the Category B pension on her husband's insurance. If she divorces but does not contribute, her entitlement to a fraction of Basic Pension increases with the length of her marriage. In the splitting discussed below we will, in a cavalier fashion, assume that there is no need to split Basic (though there may still be disparities in the Basic entitlement of couples retiring for the next few decades). It already has its own arrangement for divorce cases.

The pension that will be split will be whatever earnings related addition the pensioners are receiving. People who are not contracted out are assumed to get the SERPS shown in column 2 of Table 3.4. For men this ranges from £34.40, low occupation, to £45.24, high. For married mothers of two the corresponding range is £5.00 to £39.70. Note that the amounts of Final Salary Pension for people with uninterrupted careers are about five times the size of the SERPS pension, in accordance with the simple example given in Chapter 1.

Table 3.4 also shows a smaller amount of SERPS which is payable to the Contracted-out, which effectively extends Home Responsibility protection to them, as explained in Section 1.3 above. These additions scarcely exceed £6 in the case of the lowest paid group, go up to £8 in the middle and to £13 in the perhaps odd case of a graduate staying on benefit till her child was 16. They represent the value of being able to drop years of Home Responsibility from the denominator of the earnings averaging process as well as SERPS accumulated on part-time earnings over the lower earnings limit. In the graph and splitting exercise these SERPS payments are included, where appropriate, in the 'Total' Money Purchase or SERPS pension.

Another feature to note in Table 3.4 is the column showing the component of the Money Purchase scheme which constitutes Protected Rights, the Personal Pension analog of the GMP in occupational schemes (the Guaranteed Minimum Pension, which our program also calculates for computing the Contracted Out Deduction, and, eventually, simulating indexation). The Protected Rights column shows the minimum level of pension that would be obtained, assuming the minimum level of contributions consistent with contracting out and a zero rate of return on them. (The higher level of Money Purchase would represent more investment in contributions than could be saved by contracting out). This 'minimum' Money Purchase Pension is a little below SERPS for men, and a lot below SERPS for most

women (around one half).

Cases with 'inadequate' pensions

Apart from less common cases, such as one of the 20% of men not in a private pension scheme being married to one of the 20% of women who are, women's pensions (whether or not they divorce) are likely to be inferior to those of their husbands. Table 3.5 addresses the question of how absolutely low they are. We defined the minimum adequate earnings related pension as one which would cover (average) housing cost and hence keep the pensioner out of means-tested assistance. This is minimal as it would not allow for any extra expenses from disability or the need for long-term care, for example. With reference to Family Expenditure Survey evidence on pensioner housing costs, the adequacy threshold is set at £25 per week (over and above the State Basic Pension). The account of pension adequacy given here is also rather optimistic because we have assumed away sickness, unemployment, other employment breaks and job changing in the private schemes. The first column of Table 3.5 gives a count of all the divorced women's pensions we simulated by type of history. In most rows there are just seven cases representing the seven occupational combinations set out at the head of Table 3.3. The second column counts the number of these cases where the divorced woman's pension is below £25. Whatever is assumed about pension type, divorced women who become and remain housewives would receive inadequate pension. Among those with a foothold in the labour market, SERPS is inadequate for most cases (five sevenths where there are children and three seventh where there are none). By contrast all the Final Salary pensions to non-housewives are over £25, as are the Money Purchase Pensions, not shown. The inadequacy of SERPS is particularly important to note given that the majority of women are not members of private pension schemes. The right hand columns of Table 3.5 are discussed below.

TABLE 3.5 ADEQUACY OF DIVORCED WOMEN'S PENSIONS
Summary of experiments from 7 occupational groupings

	NUMBER OF CASES	PENSION < £25	CASES BROUGHT ABOVE £25 AFTER SPLITTING	
			Lifetime Basis	Marriage Basis
PENSION TYPES Both: SERPS				
EARLY DIVORCE				
NON-MOTHERS	7	3	0	0
MOTHERS - not on benefit	7	5	0	0
MOTHERS - on benefit	7	5	0	0
HOUSEWIVES	7	7	0	0
MIDDLE DIVORCE				
NON-MOTHERS	7	3	0	0
MOTHERS - not on benefit	14	10	2	3
MOTHERS - on benefit	14	10	0	0
HOUSEWIVES	7	7	0	0
LATE DIVORCE				
NON-MOTHERS	7	3	2	2
MOTHERS - not on benefit	14	10	2	6
HOUSEWIVES	7	7	0	0
PENSION TYPES Both: Final Salary				
EARLY DIVORCE				
NON-MOTHERS	7	0		
MOTHERS - not on benefit	7	0		
MOTHERS - on benefit	7	0		
HOUSEWIVES	7	7	7	2
MIDDLE DIVORCE				
NON-MOTHERS	7	0		
MOTHERS - not on benefit	14	0		
MOTHERS - on benefit	14	0		
HOUSEWIVES	7	7	7	7
LATE DIVORCE				
NON-MOTHERS	7	0		
MOTHERS - not on benefit	14	0		
HOUSEWIVES	7	7	7	7
PENSION TYPES MAN:Final Salary WOMAN:SERPS				
EARLY DIVORCE				
NON-MOTHERS	7	3	3	3
MOTHERS - not on benefit	7	5	5	5
MOTHERS - on benefit	7	5	5	3
HOUSEWIVES	7	7	5	0
MIDDLE DIVORCE				
NON-MOTHERS	7	3	3	3
MOTHERS - not on benefit	14	10	10	10
MOTHERS - on benefit	14	10	10	10
HOUSEWIVES	7	7	7	5
LATE DIVORCE				
NON-MOTHERS	7	3	3	3
MOTHERS - not on benefit	14	10	10	10
HOUSEWIVES	7	7	7	7

NOTE: All women except housewives have some employment post divorce.

Married women's pensions, shown in Table 3.4, tend to be lower than those of the divorced, and hence, if one assumed they did not benefit from a pooling of income with their husband, inadequacy would be even more prevalent among married SERPS members. Note that even the never married women in Table 3.4 are hardly adequately served by SERPS unless they have high qualifications. At middle levels their SERPS is just at the £25 threshold, and if unskilled below it. Another curious feature of SERPS is that a year of part-time earnings rather than a year gaining a Home Responsibility Credit may actually reduce pension entitlement. This is not illustrated in Table 3.4 but it happens in some cases of low skilled women married to high skilled men. The SERPS earned by a mother of four children who has a late divorce (£15.03) exceeds that earned if she had only two children (£14.41), although the latter has higher lifetime earnings.

Divorced women's pensions compared to others

Table 3.6 compares in detail the pensions to be expected by divorced women, in the status quo, with those they might have received under different circumstances. The example is confined to people of middle level qualifications only, but worked out for different pension types - both men and women in each of the three pension types and one hybrid, where the man has a Final Salary pension and the woman is in SERPS, a situation where the pension gap between man and woman is greatest. Along the top of Table 3.6 are set out the circumstances with which the divorced woman's pension is being compared. The first column looks at her pension if she had never married; the next two assume she had stayed married, and compares her pension with the half share of the couple's pooled pension while her husband is still alive and the total pension she would have received as a widow. The points of comparison in the last two columns are the pension pooled and inherited by the second wife.

TABLE 3.6

DIVORCED WOMEN'S PENSIONS COMPARED TO OTHERS

Both partners mid-occupational level

PERCENTAGES OF DIVORCED WOMAN'S PENSION RELATIVE TO:

PENSION TYPE	NEVER MARRIED	NEVER DIVORCED: pooled	NEVER DIVORCED: widowed	SECOND WIFE: pooled	SECOND WIFE: widowed
BOTH: SERPS					
Early Divorces:6 years					
No children	100	78	58	89	
Two children	82	74	60	73	
Two children:on benefit	68	62	50	61	
Housewife	6	7	7	6	
Middle Divorces:12 years					
No children	100	78	58	87	
Two children	85	76	62	73	
Two children:on benefit	71	65	53	62	
Four children	78	75	64	67	
Four children:on benefit	62	60	51	54	
Housewife	6	7	7	6	
Late Divorces:24 years					
No children	100	78	58	84	
Two children	73	66	54	61	
Four children	64	62	53	54	
Housewife	6	7	7	5	
BOTH: MONEY PURCHASE					
Early Divorces:6 years					
No children	100	66	52	76	
Two children	74	57	50	56	
Two children:on benefit	55	42	37	42	
Housewife	8	7	7	6	
Middle Divorces:12 years					
No children	100	66	52	74	
Two children	75	58	51	56	
Two children:on benefit	57	44	38	42	
Four children	69	56	51	51	
Four children:on benefit	48	39	36	36	
Housewife	8	7	7	6	
Late Divorces:24 years					
No children	100	66	52	72	
Two children	61	47	41	44	
Four children	51	42	38	37	
Housewife	8	7	7	6	

Table 3.6 DIVORCED WOMEN'S PENSIONS COMPARED TO OTHERS (continued)

PERCENTAGES OF DIVORCED WOMAN'S PENSION RELATIVE TO:

PENSION TYPE	NEVER	NEVER DIVORCED		SECOND WIFE	
	MARRIED	pooled	widowed	pooled	widowed
BOTH: FINAL SALARY					
Early Divorces:6 years					
No children	100	87	64	110	93
Two children	71	79	68	78	66
Two children:on benefit	51	57	49	57	48
Housewife	8	10	9	8	7
Middle Divorces:12 years					
No children	100	87	64	105	86
Two children	72	80	68	76	62
Two children:on benefit	52	58	50	55	45
Four children	66	80	72	69	57
Four children:on benefit	44	53	48	46	38
Housewife	8	10	9	8	7
Late Divorces:24 years					
No children	100	87	64	99	78
Two children	55	62	52	55	43
Four children	45	55	50	45	35
Housewife	8	10	9	8	6
MAN:FINAL SALARY, WOMAN:SERPS					
Early Divorces:6 years					
No children	100	24	21	25	23
Two children	82	20	19	20	19
Two children:on benefit	68	17	16	17	16
Housewife	6	2	2	2	1
Middle Divorces:12 years					
No children	100	24	21	24	23
Two children	85	21	20	21	19
Two children:on benefit	71	18	17	17	16
Four children	78	19	19	19	18
Four children:on benefit	62	16	15	15	14
Housewife	6	2	2	2	1
Late Divorces:24 years					
No children	100	24	21	24	22
Two children	73	18	17	18	16
Four children	64	16	15	15	14
Housewife	6	2	2	2	1

The main message of Table 3.6 is that almost invariably the divorced woman's pension is below that which she would have received in marriage, and less than that received by our second wives. The access to part of the man's pension in these cases is what the divorced woman is losing out on. She is also losing out on pension by the very fact of having married, when comparison is made with the never-married woman, except where she is childless. The extent of this pension consequence of divorce depends on pension type. Where pension types match, the ratio of the divorcee's pension to the pooled and widow's pensions mostly range between 50% and 80%. The slight advantage of the Money Purchase Scheme over the Final Salary scheme in respect of this ratio can be attributed to the adverse consequence of freezing rights earned before the child break in the Final Salary Scheme. The big contrast in Table 3.6 comes in the panel where the women are in SERPS and the man has a Final Salary pension. The divorced woman's pension is only around one fifth of what the married women get.

3.4 Splitting Pensions

Splitting rights earned on two bases

The 'evidence' of the simulation lends weight to the arguments set out in Chapters 1 and 2 for doing something about the low pension expectation of divorced women. Two possible ways of apportioning pension rights were set out in Section 1.6, the lifetime basis and that of the period of the marriage. In the simulation it became apparent that allocating pension rights to the period of the marriage was not straightforward. In the Money Purchase Scheme, 'all' that one has to forecast is the rate of return on contributions; in the Final Salary Scheme that final salary has to be forecast; and for SERPS, which affects all the mothers, even if contracted-out, it would be necessary to forecast how many years after the divorce would be covered by credits. We had the benefit of perfect

foresight, and assumed that consulting actuaries would behave as if they did too in practice.

For the split based on the years of marriage, pension attributable to those years was calculated for each spouse. The difference - the pension gap - is divided in half. The transfer is half the gap. On the 'lifetime' basis, the gap between total pensions is allocated to (each) marriage on the basis of a formula related to the length of marriage. In this case years up to a marriage (since school leaving or the previous divorce) were included in the fraction of the lifetime by which the pension gap was multiplied before being split. Because the lifetime formula throws in the benefit of pension rights earned before marriage, it will tend to produce bigger transfers. However, if the period of the marriage is one where the gap between spouse's earnings is particularly wide, as it would appear to be in Fig 3.1, calculating the amount to be transferred on the basis of the marriage years only can result in a bigger transfer than the other formula, particularly if the husband married young.

A selection of the estimated transfers is presented in Table 3.7. Part A takes the standard central occupational grade, for both parties, and looks at the pension transferred to the divorced woman in three types of pension and two types of split. In all cases, as would be expected the transfer increases with the length of the marriage and number of children, though not in a constant proportion. The housewife cases would get the biggest transfers. Once again the small amounts of money involved in SERPS are apparent. Transfers are well under £10 per week in most cases. By contrast most of the transfers calculated in the private schemes are well into double figures.

Part B takes a further selection of cases. The first is another couple both in SERPS, but her qualifications are low, while his remain at the middle level. Transfers are marginally

higher, on the whole, than the SERPS case in part A, but only by a pound or so per week. The central panel takes the reverse case where her occupational level is at the top, his remaining at the middle. Both have Final Salary pensions, and they are reasonably close. In the cases with no children (and in one with two) her pension exceeds his and the negative sign denotes a transfer to the husband, in the range £4 to £19 per week. The last case in Table 3.7B is the one with the biggest pension gap we can generate. The man is a graduate with Final Salary pension and the wife is unqualified with SERPS pension. In this case the transfer is around £20 for the six year marriage, a bit above £30 for the twelve year marriage and around £70 for the twenty-four year marriage.

Differences between the transfer on each type of split are also shown in both parts on Table 3.7. The small number of negative signs confirm the expectation that the lifetime basis would normally yield a bigger transfer. In the few cases, of divorced mothers in SERPS, where the marriage-bound split gives a bigger transfer, it is only by a small margin. The excess transfer on the lifetime formula is also usually modest, only running into double figures in the odd and especially artificial case of the career housewife. Apart from her, the other women should not mind too much about which formula is applied.

Effect on adequacy

It should be immediately obvious that splitting SERPS is not going to have much effect in bringing divorced women over the £25 threshold. To gauge the impact of these transfers on the inadequacy of divorced women's pensions we turn again to Table 3.5. The last two columns show the number of cases where pension inadequacy would be relieved by the two possible transfers from the husband's pension. These are very few

TABLE 3.7

WEEKLY AMOUNTS TRANSFERRED UNDER TWO SPLITTING SCHEMES
(£ per week)

A: STANDARD CASE

Man and woman both Mid occupational level, both same type of pension

Type of pension: Basis of Split	SERPS			MONEY PURCHASE			FINAL SALARY		
	D	R	D-R	D	R	D-R	D	R	D-R
Early Divorces:6 years									
No children	1	2	1	3	10	7	5	10	6
Two children	2	3	1	9	16	8	6	13	6
Two children:on benefit	1	4	2	8	20	12	6	14	8
Housewife	3	6	3	12	29	18	8	18	10
Middle Divorces:12 years									
No children	2	4	1	6	15	9	9	15	6
Two children	4	4	-0	20	23	3	15	18	3
Two children:on benefit	4	5	1	20	29	9	15	21	6
Four children	5	5	-0	22	25	3	16	19	3
Four children:on benefit	4	5	1	21	32	11	16	22	6
Housewife	5	8	3	24	43	19	17	27	10
Late Divorces:24 years									
No children	4	6	2	12	24	12	18	25	6
Two children	9	8	-1	39	46	7	31	33	2
Four children	10	9	-1	45	51	6	34	35	1
Housewife	11	13	2	48	70	22	36	43	8

Notes:

D pension earned during marriage split at time of divorce

R lifetime pension difference at retirement halved and pro-rated.

Amounts rounded to nearest £. Differences calculated from unrounded data

TABLE 3.7 (continued)
WEEKLY AMOUNTS TRANSFERRED UNDER TWO SPLITTING SCHEMES

B: Selected Variants

HIS Pension HER Pension	SERPS			Final Salary			Final Salary		
	SERPS			Final Salary			SERPS		
HIS Occupation HER Occupation	Mid			Mid			High		
	Low			High			Low		
	D	R	D-R	D	R	D-R	D	R	D-
Early Divorces:6 years									
No children	1	3	1	-5	-4	1	15	19	4
Two children	2	3	1	2	1	-1	16	19	4
Two children: on benefit	2	3	2	2	1	-1	15	19	4
Housewife	2	5	2	12	34	22	16	21	4
Middle Divorces:12 years									
No children	3	4	1	-10	-6	4	30	35	5
Two children	4	5	0	3	2	-1	32	36	4
Two children: on benefit	4	5	1	3	2	-1	31	36	5
Four children	5	5	0	15	9	-6	32	36	4
Four children: on benefit	4	5	1	15	9	-6	32	36	5
Housewife	5	7	2	24	48	24	32	38	6
Late Divorces:24 years									
No children	6	7	1	-19	-10	10	60	68	8
Two children	10	9	-1	-6	2	8	63	69	6
Four children	10	9	-2	11	17	6	64	69	5
Housewife	11	13	2	48	75	27	64	74	9

Notes:

D pension earned during marriage split at time of divorce

R lifetime pension difference at retirement halved and pro-rated.

Amounts rounded to nearest £. Differences calculated from unrounded data

where both pensions are SERPS. Out of 70 cases deemed to have inadequate pensions, splitting on the lifetime basis 'relieves' 6, and on the marriage-years basis 11. By contrast in a Final Salary world, only the housewives have inadequate pension and nearly all of them would be brought over the threshold by splitting. The lowest panel in Table 3.5 gives women in SERPS the benefit of splitting a Final Salary pension. 68 out of 70 hardship cases are relieved by the use lifetime formula and 59 by the marriage-based split. This demonstrates once again the value to women of having access to a man's good pension. It also illustrates the difficulty of providing, out of the pension assets of a short marriage, for the old age of a woman who stays permanently away from the labour market.

Compensation for the pension costs of childbearing

The pension cost of child rearing can be thought of as the difference between the combined pension a couple of parents ends up with and the pension that would have been earned if there had been no children. In practice we assume that only the mother's earning and pension rights are affected. As is apparent in Figure 3.1, the earnings losses associated with motherhood are spread right over the working life, not only around the time that children are young. In the case of divorce, some of the child related losses of earnings, and hence pension rights, are incurred after the end of the marriage. We have therefore calculated two versions of the child cost of pensions, the total lifetime pension loss, and the pension loss due to children incurred within marriage. In each case we have calculated the loss of pension due to children by subtracting the pension rights of mothers from those of otherwise equivalent women without children, calculated over the relevant period.

Figure 3.3 compares these two definitions of the pension cost of children with the total pension gap attributed to the

marriage years. The point of making this comparison is to see how far a German style split, of pension rights based on more easily observed data, might also coincide with, overcompensate or undercompensate the normally invisible pension cost of children. The three panels of Figure 3.3 show different occupations with selected pension type, SERPS for couples in the low occupation and Final Salary for the other two. It is necessary to have a different scale for the SERPS case on the vertical axis which is measuring pension differences in £ per week. Along the horizontal axis are ranged a selection of mothers' marital histories, the continuously married on the left with either two or four children, followed by those with marriages lasting 6, 12 and 24 years respectively as the eye moves to the right. Within each length there are the appropriate variants on number of children and the benefit trap. The men and childless women who appeared in a similar figure above (Fig 3.2) play a hidden part in this one. The men are the point of reference for the pension gap, childless women for child costs in pensions.

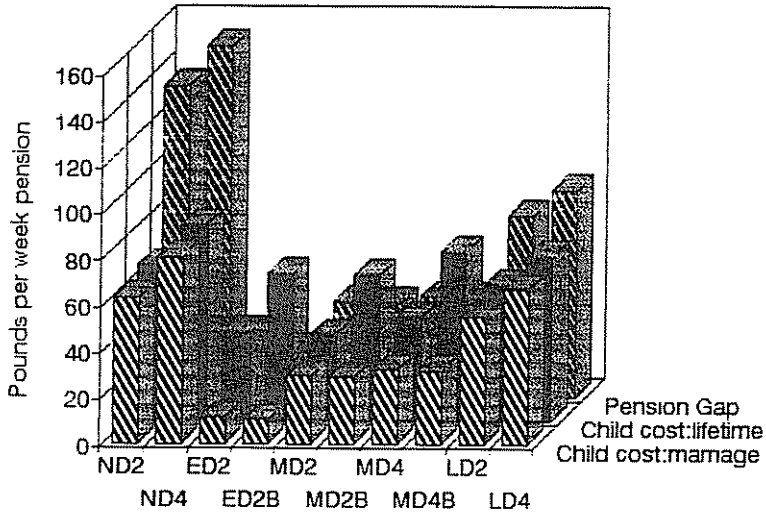
The Child Cost in pension rights earned in marriage is plotted in the front row, as it is normally smaller than the lifetime loss of pension. This is always the case in the private schemes, but not always in SERPS, through the vagaries of the operation of the credit formula. Another curiosity that this exercise has revealed is that the marriage and lifetime bases of calculating child costs for the continuously married can diverge. This is due the freezing of rights at a career break in the Final Salary scheme.

The ranking of the back and middle rows, pension gap and lifetime child costs is much more erratic, though more often than not the pension gap exceeds the child costs, particularly where the husband is in a better pension type and or occupation than the wife. The cases where child costs exceed the pension gap likely to be split in a 'German' scheme, include early divorces in SERPS, early divorces and some

Figure 3.3

PENSION GAP AND CHILD COST:FINAL SALARY

Occupation: his - mid hers - mid



Occupation: his - high hers - high

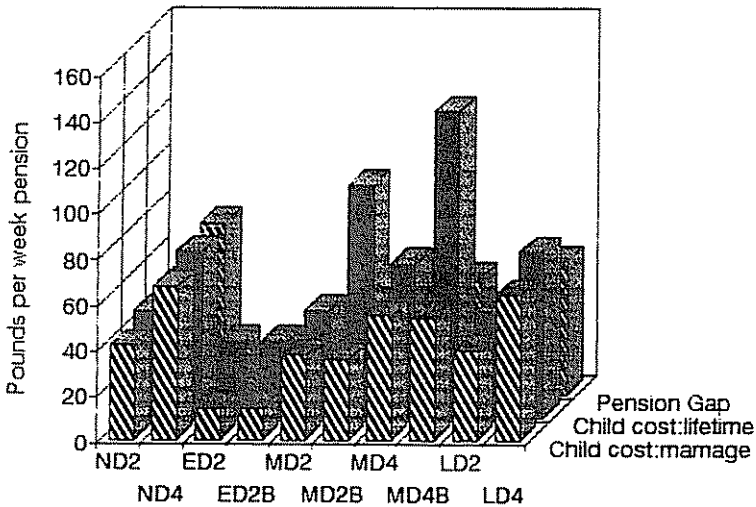
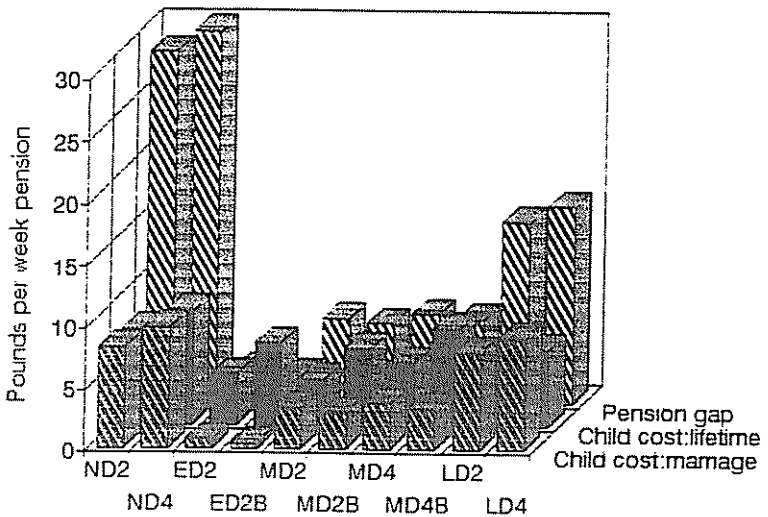


Figure 3.3 contd.

PENSION GAP AND CHILD COSTS: SERPS

Occupation: his - low hers - low



KEY TO X-AXIS

- ND2 Never divorced. 2 children
- ND4 Never divorced. 4 children

- ED2 Early divorce. 2 children
- ED2B Early divorce. 2 children: on benefit

- MD2 Middle divorce. 2 children
- MD2B Middle divorce. 2 children: on benefit
- MD4 Middle divorce. 4 children
- MD4B Middle divorce. 4 children: on benefit

- LD2 Late divorce. 2 children
- LD4 Late divorce. 4 children

benefit trapped cases in the mid-level, Final Salary example and all of the divorces where the woman is a graduate and both partners are in Final Salary schemes. In these sorts of cases splitting known pension rights at divorce would undercompensate for the lifetime pension costs of children. Examples of cases where there would be over compensation even in the well matched couples depicted in Figure 3.3 are the late divorces in at both middle and low occupational levels.

The difference between the front and back blocks, where visible, represents the amount of the 'German' pension gap that is not due to motherhood, and would be offered for splitting even to childless women. Even where the pension gap and the lifetime child cost were reasonably close, the one could not be put forward as a basis for compensation for childrearing unless childless women were not also sharing on the same basis. In this system they would be effectively excluded from benefits if all three bars in Fig 3.3 were the same height, ie the child costs within marriage comprised all of the lifetime ones and there was no other source of difference between mens and women's pensions. There is no such example in the many permutations we have generated so far.

Effect on second wives

We also looked into the question of how pension splitting would affect the transferrer's subsequent spouse, in these cases, the second wives with two children whom we constructed. Effecting a transfer, by whatever formula, reduces the husband's pension in which the second wife would share while he is alive, and inherit if she survives him. In each case the sum taken away from the second wife is half the sum transferred to the first one, because while the husband is still alive the second wife only has her share in the pool, after he dies, we assume the widow's pension is half of the original one. Thus, especially in SERPS, the amount of

pension withdrawn from the second wife is small. To assess the impact on hardship among second wives as widows, we looked for cases where pension splitting put their earnings-linked pension below £25 per week. In the private schemes, however low the qualifications, in no case did the second wife's pension as a widow come anywhere near close to this threshold, before or after splitting. Neither did it in SERPS where the woman had middle or high levels of qualification. Where both parties had low qualifications the SERPS pensions were mostly below £25 anyway, and splitting did not put any case under the line. It did push the second wife into the hardship category in a minority of cases (38%) where both pensions were SERPS, the woman has no qualifications and the man has at least some. In such cases, there were only a few pounds involved, and the post split pension was therefore still close to £25. We therefore conclude that second wives earning themselves normal pension rights are, on the whole, likely to accommodate the splitting of the husband's and survivor's pension. They should have plenty of warning.

Effect on scheme costs

Precise estimates of the effects of divorce on the funding of pension schemes would require simulation of an entire population, rather than the illustrative examples dealt with here. Even without this, however, two general points can be made. Firstly, increasing divorce rates are likely to lead to costs for pension schemes under the status quo. Secondly, adopting either of the two pension splitting schemes discussed above may well reduce these costs rather than increase them.

If divorced men tend to marry women younger than their first wives, then, under the status quo, increases in the divorce rate will expose pension funds to greater costs for survivor's benefits, a factor which scheme actuaries will have to take into account, and which some schemes adapt to by rules limiting survivors pensions for young widows or late

('deathbed') marriages.

Under either of the splitting variants considered above, the sum paid out by the scheme is unaffected during the life of the pensioner. When he dies, the first wife will continue to receive the amount transferred to her, while any second wife will receive a survivor's benefit of half of the residue. While two ex-spouses are alive, therefore, the scheme will have to pay out an extra amount equal to half the transfer each year. On the death of the first wife, the scheme will save precisely the same amount each year. Since the maximum that can be transferred is half the larger pension, the maximum annual cash flow difference is one quarter of the annual pension. The net cost to the scheme will therefore depend on the discount rate, the rate of remarriage, the age differential between the two wives and the differential life expectancy of the two sexes.

For illustrative purposes, consider a zero discount rate and a man who remarries. Here pension splitting will result in a saving to the scheme if the age gap between the two wives is greater than the difference between the sex-specific life expectancies. More precisely, the net benefit from splitting a re-married man's pension is $0.5T(D-M)$, where T is the amount transferred to the first wife, D is the age difference between the wives and M is the life expectancy of women minus that of men. In our simulations we have taken a national average estimate for M of three years; the smallest value of D we have considered is four, and the largest is ten; thus there would be a saving in each of our simulated cases. In the case of short first marriages, with a four year difference in ages, the total saving would be half of the annual transfer to the first wife, and in the case of the medium and long marriages, age difference of 10, the total saving would be 3.5 times the annual transfer.

3.5 Further issues

Issues which we have not had time to explore fully include the effect of covering part-time employment in private schemes. We have run simulations in which part-time years are credited in pro-rata. In the Final Salary version the final salary was taken as the full-time equivalent of the last year's earnings where these were part-time, and years of service also counted as full-time equivalents. For example a year of half-time work would count as half a year of service. Preliminary inspection of these results suggests that covering part-time employment in private pensions does not make much difference. Spells of part-time work produce low earnings, and the pension they generate in private schemes is not much greater than the SERPS they generate, which was included in the simulations discussed above. If private pension protection is indeed extended to part-time workers in the wake of the European Court decisions, it does not look as if this will make too much of a contribution to raising women's pensions.

Another possibility which we have not explored would be changing SERPS rules to eliminate the anomaly that doing a year of part-time employment rather than staying out of insured employment can actually reduce a person's supposedly earnings related SERPS. This could be done by extending HR coverage to years of low part-time earnings where there is also a domestic responsibility. However given what we have seen so far, the gains to be had from such a change are unlikely to be substantial.

The third unexploited issue which the simulation is designed to investigate is dynamization. Inflation and economic growth would both affect the pensions simulated here in a variety of differing proportions. Galloping inflation would probably narrow the unfavourable comparison of SERPS with the private pensions. Real earnings growth would increase the value of all

earnings related pensions, particularly the private ones, relative to Basic, on current indexation policy. It could also increase women's pensions more than proportionately if induced greater labour supply, ie longer hours and shorter absences from employment.

Finally, it is worth pointing out again that we have not attempted a full micro-simulation giving realistic weights to the probability of occurrence of each type or history, or allowing chance events to perturb the smooth profiles we have constructed. The simulation program used is already highly complex, and its development took longer than anticipated, but it could in the future be used as a basis for a full micro simulation. This would be another major exercise, whose value cannot be gauged until the results of this one have been considered.

CHAPTER 4 CONCLUSIONS

The major concern about effects of demographic trends on pension provision has been the growing numbers of pensioners expected in the 21st century relative to the numbers of people of working age who will be producing the resources on which the enlarged elderly population will have to live (DHSS 1985, Benjamin 1989 Johnson et al 1989). Most concern has been put into containing the claims of future pensioners on the next generation, but we have pointed to another demographic trend - the increase in the proportion of marriages that are breaking up - which produces a different sort of concern about pension provision in the 21st century. This is a concern that the family and marriage as a means of transferring resources from high earning men to the majority of women who earn much less breaks down when marriages break down. As pension provision becomes increasingly dependent upon an earnings record, if divorced women face old age in the 21st century with seriously depleted earnings records, they face an old age relatively less well-provided for than others of their generation, whatever the macroeconomic solution of dividing resources between generations.

Within the elderly generation and between elderly people of different sexes there is a possible case for redistribution of resources from those who have superabundant pension rights, or from those who have more pension rights, to those who have less. The suggestion that pension rights be split on divorce implies that the redistribution be explicitly between the divorcing parties and not between pensioners as a whole and those with the least rights. The cost of pension splitting is thus largely born by the major earner and his (or/her) later spouse. The pension scheme as a whole might either gain or lose, depending on their savings on reduced survivors pensions for subsequent spouse.

The simulations suggest that for those lucky enough to gain access to an interest in a good pension, pension splitting could be useful as well as equitable, but for parties mainly relying on SERPS, there are not enough pension resources to make an effective transfer. Pension splitting would be rather a capricious vehicle for bringing extra support to a vulnerable group.

The abolition of derived rights, such as widow's pension, has been proposed in European moves towards the individualisation of benefits. Such a development would reduce the resources available to split on divorce, but would also leave many married women with very low incomes in widowhood, less even than divorcees and never married women, who, if relying on SERPS are none too well provided for at present. Our simulated differences between men's and women's earnings and pension rights reflect unequal treatment in the labour market, differential domestic responsibilities between couples and other institutional factors. Men and women are earning in an environment where the chances of earning adequate pensions are better for men. Despite the potential pecuniary attractions of the marital partnership, an increasing number of women are settling, through choice or not, for an independent though economically handicapped existence. Policies are needed both to compensate for existing handicaps and to alter the institutions which create them.

Pension splitting on divorce is only one transfer policy. There are, of course, other ways of ensuring a decent minimum for all pensioners of whatever marital status. There is means-tested assistance, well targeted, but incompletely taken up and stigmatizing. Alternatively, the guaranteeing of a better basic pension irrespective of earnings records, would provide old age security for people whose work has been largely unpaid, whether they have been divorced or not (Owen and Joshi 1990).

The prospect of a problem with over a million elderly divorcees, mostly with small pensions, may be averted in the labour market. Some women will be in a position to protect themselves from poverty in old age by earning pension rights of their own. Some are hindered, among the manifold difficulties facing lone mothers, by benefit rules effectively deterring earning and which may indirectly perpetuate their benefit dependency into old age. For them, improved childcare, a restructuring of benefit and other measures to make the labour market more accessible, would all help. Women, in general, whether or not they ever become lone mothers, would benefit from improved access to jobs, training, promotion and good pensions and greater recognition of the need to combine paid and unpaid roles.

The problem of elderly divorced women on low pensions may be alleviated by means-tested or universal transfers; it will not be totally averted by splitting of pension rights on divorce. In the interests of equity and of clarifying an obscure area, introducing some procedure to deal with pensions at divorce is important and overdue, but it is not a panacea.

REFERENCES

Abel Smith B (1983) Sex Equality and Social Security, in Lewis ed. pp 86-102.

Benjamin B (1989) Demographic aspects of ageing, Annals of Human Biology, 16, 3, pp 185-235.

Benjamin B, S Haberman, G. Helowicz, G.Kaye and D Wilkie, (1987) Pensions: The Problems of Today and Tomorrow, London: Allen and Unwin.

Davies H B and Joshi H E (1990) 'The Foregone Earnings of Europe's Mothers' Birkbeck Discussion Paper in Economics 90/24.

Department of Health and Social Security (1985) The Reform of Social Security cmdn 9518 London: HMSO.

Department of Social Security (1990) A Guide to Retirement Pensions Leaflet NP 46 London: HMSO.

Eeklaar J and M Maclean, (1986) Maintenance after Divorce, Oxford: Oxford University Press.

Edwards S and A Halpern (1990) "Regional Injustice": Financial Provision on Divorce, Journal of Social Welfare Law, No. 2 pp 71-88.

Ellison R (1987) Pensions Law and Practice London: Longman Law Tax and Finance, Chapter 21.

Equal Opportunities Commission (1985) Response to the Lord Chancellor's Department's Consultation Paper "Occupation Rights on Divorce", Manchester: EOC.

Ermisch J F (1989) Divorce: Economic Antecedents and Aftermath in Joshi H (ed) The Changing Population of Britain, Oxford: Basil Blackwell pp 42-55.

Ermisch JF and Wright RE (1988) Differential Returns to Human Capital in Full-time and Part-time Employment: the case of British women. Discussion Paper in Economics 88/14, Birkbeck College, London.

Ermisch J F and R E Wright (1991) Welfare Benefits and Lone Parents Employment, Journal of Human Resources (forthcoming).

Freedman J, E Hammond, J Masson and N Morris (1988) Property and Marriage: an Integrated Approach. IFS Report no 29, London: Institute for Fiscal Studies.

Funder K (1989) Settling up in Australia, presentation to the Conference on the Economic Consequences of Divorce, Bellagio.

Fry V, S Smith and S White (1990) Pensioners and the Public Purse, Institute for Fiscal Studies Report Series No 36, London: IFS.

Government Actuary's Department (1986) Occupational Pension Schemes, 1983: 7th Survey London: HMSO.

Greenhalgh C (1980) Male-Female Wage Differentials in Great Britain: Is Marriage an Equal Opportunity? Economic Journal, 90, pp 751-775.

Gregory J and K Foster (1990) The consequences of divorce: The report of the 1984 Consequences of Divorce Survey carried out on behalf of the Lord Chancellor's Department OPCS Social Survey Division, London HMSO.

Groves D (1983) Members and Survivors: Women and Retirement Pensions legislation, in Lewis ed. pp 38-63.

Groves D (1987) Occupational pension provision and women's poverty in old age. In Glendinning and Millar (eds) Women and Poverty in Britain, Brighton: Wheatsheaf pp 199-217.

Harrison D (1989) Quest for a clean break. Guardian June 24, p 16.

Haskey J (1987) Social Class Differentials in remarriage after divorce: results from a forward linkage study, Population Trends 47 pp 34-42.

Haskey J (1988) Mid-year based projections by marital status Population Trends 52 pp 30-32.

Haskey J (1989) Current prospects for the proportion of marriages ending in divorce. Population Trends 55 (Spring) pp 34-37.

Hoskins D (1978) Problems of Divorce for Social Security Policy:ISSA Inquiry on Social Security and Divorced Persons, in International Social Security Association, Social Security and Divorced Persons, Studies and Research no 11, Geneva: ISSA pp 21-33.

Johnson P, Conrad C and Thomson D (Eds 1989) Workers versus Pensioners: Intergenerational Justice in an Ageing World Manchester: Manchester University Press for CEPR.

Joshi H (1989) The Changing Form of Women's Economic Dependency, in H Joshi (ed) The Changing Population of Britain, Oxford: Basil Blackwell.

Joshi H (1990) The Cash Opportunity Cost of Childbearing: an approach to estimation using British data, Population Studies, 44, pp 41-60.

Joshi H (1990a) Obstacles and Opportunities for Lone Parents as Bread Winners in Britain, in E Duskin (ed) Lone Parent Families: the Economic Challenge Paris OECD.

Joshi H and S Owen (1983) How many pensionable years? The lifetime earning history of men and women. Government Economic Service Working Paper 65.

Kaltenbach H (1978) New Divorce Law in the Federal Republic of Germany: sharing of pension rights, in International Social Security Association, Social Security and Divorced Persons, Studies and Research no 11, Geneva: ISSA pp 103-108.

Land H (1983) Who Still Cares for the Family? Recent Developments in Income Maintenance, Taxation and Family Law, in Lewis ed pp 64-84.

Law Commission (1969) Report on Financial Provision in Matrimonial Proceedings London HMSO.

Law Commission (1980) The Financial Consequences of Divorce: the Basic Policy Law Commission Discussion Paper, Cmnd 8041 London: HMSO.

Law Commission (1981) The Financial Consequences of Divorce Law Commission Report 112.

Law Commission (1988) Family Law and Matrimonial Property.

Law Commission Report 175, London: HMSO.

Lewis J (1983 ed.) Women's Welfare Women's Rights London and Canberra: Croom Helm.

Lewis J (1983) Dealing with Dependency : State Practices and Social Realities, 1870-45, in Lewis ed pp 17-37.

Lord Chancellor's Department (1985) Occupational Pension Rights on Divorce: a Consultation Paper.

Masson J (1986) Pensions, Dependency and Divorce Journal of Social Welfare Law November pp 343-361.

Matthewman, J (1989) Tolleys Social Security and State Benefits, 1989-90, Croydon: Tolley Publishing Co.

Meacher M (1990) Pensions, Couples and Divorce. Consultation Paper for the Labour Party Economic Equality Policy Review, House of Commons 30 May.

Murphy M J (1985) Demographic and socio-economic influences on recent British marital breakdown patterns Population Studies, 39 pp 441-460.

Murphy, K M and F Welch (1990) Empirical Age Earnings Profiles, Journal of Labour Economics, 8, 2, pp 202-229.

Occupational Pensions Board (1976) Equal Status for Men and Women in Occupational Pension Schemes Cmnd 6599 London: HMSO.

OPCS (1987) English Life Table 14 series DS No 7.

Oldfield M (ed), (1988) The P.M.I. Guide to Pensions. London: Heinemann Professional Publishing.

Owen S and H Joshi (1990) Sex, Equality and the State Pension. Fiscal Studies, Vol 11 no 1 pp 53-74, also Birkbeck Discussion Paper in Economics 89/7.

Reardon, A (1990) Allied Dunbar Pensions Guide, London: Longmans Law, Tax and Finance.

Stillerman B (1987) The Daily Telegraph Pensions Guide. London: Telegraph Publications.

Tomkins P (1989) Flexibility and Fairness: a study in equalisation of pension ages and benefits London: Lane Clark and Peacock.

Voegli W and B. Willenbacher (1989) Property Division and Splitting of Pension Assets in the Federal Republic of Germany: Legal assumptions, socio-legal reality and institutional frame of reference. Paper presented to the Conference on the Economic Consequences of Divorce, Bellagio.

Wright RE and Ermisch JF (1990) Male-Female Wage Differentials in Britain. Discussion Paper in Economics 90/10, Birkbeck College London (forthcoming in Economic Journal.)

APPENDIX: REGRESSION ESTIMATES USED

Participation equation for Women

Variable	Part-time		Full-time	
	b	t	b	t
Constant	-3.03	-5.42	1.52	4.37
Life cycle				
Currently married	3.26	5.06	1.95	3.92
Age (yrs x 0.1)				
if married	0.39	3.71	-0.36	-3.32
if not married	0.85	5.03	0.09	0.77
Age (yrs x 0.1) squared				
if married	-0.45	-4.64	-0.32	-3.04
if not married	-0.58	-3.34	-0.53	-3.48
Pregnant (D)	-0.80	-2.82	-1.00	-3.38
Presence of child 0-15 (D)	-2.44	-9.56	-4.85	-15.36
Age of yougest if				
0-4	0.49	8.93	0.38	4.97
5-10	0.06	1.73	0.24	4.94
11-15	0.01	0.20	0.35	4.75
Number of other children 0-4	-0.42	-1.91	-1.30	-3.33
Any other child 11-15(D)	0.02	0.13	0.39	2.27
Number of children 16+	-0.00	-0.02	-0.06	-1.36
Potential earnings				
Imputed pay, top occupation	0.87	3.61	3.31	13.37
Local unemployment rate (%)	-8.67	-4.46	-8.26	-3.97
Alternative resources				
Non-labour income (x 0.1)				
married	-1.13	-8.49	-1.72	-11.01
not married	-0.88	-1.84	-3.93	-7.45
Mortgage(D)	0.33	3.27	0.43	4.00
Husband unemployed (D)	-1.71	-5.85	-2.62	-6.21
Husband not working, other reason (D)	-1.24	-5.69	-1.17	-4.86
North of Mersey-tees (D)	0.37	3.07	0.58	4.47
Anyone physically dependent	-0.42	-3.49	-0.65	-4.82
Log-likelihood	-3410.80			
Chi-squared (44)	2654.80			

Multinomial logit model, estimated in the LIMDEF package.
 Data from the Women in Employment Survey (1980).
 Sample of 4384 women aged 16-59, neither students nor permanently sick, no missing values on included variables.
 For other details see Table 2 in Joshi (1992)

Wage Equations

Dependent variable log pay per hour

(a) Women	Part-time		Full-time	
	b	t	b	t
Constant	0.2380	4.7	0.0510	1.9
Education (A level)	0.1170	2.6	0.2160	7.4
Education (O level)	-0.0400	-1.2	0.1040	4.8
Education (other qualification)	0.0190	0.6	0.0520	2.3
Education (post-compulsory)	0.0720	7.8	0.0716	14.4
Full-time experience	0.0157	2.5	0.0466	17.6
Full-time experience squared x0.1	-0.0029	-1.9	-0.0091	-13.0
Part-time experience	0.0160	2.4	0.0374	5.3
Part-time experience squared x0.1	-0.0031	-1.4	-0.0088	-2.6
Interaction of full- and part- time	-0.0007	-1.9	-0.0016	-5.4
Years not employed	-0.0045	-2.5	-0.0115	-6.5
Heckman's Lambda	-0.0192	-0.9	0.0464	2.2
N	1084		1512	
R-squared	0.172		.422	

Source: Ermisch and Wright (1986), Table 3. Selectivity modelled by ordered probit.

(b) Men	Married Men 1980		Single Men under 30, 1975	
	b	t	b	t
Potential Experience ($\div 10$)	0.246	6.6	1.45	83.0
Potential Exp. Squared ($\div 1000$)	-0.465	6.3	-6.2	28.5
Education:				
Degree			0.637	100.3
Higher	0.509	21.0		
Diploma			0.544	44.5
A level(s)	0.316	8.0	0.283	34.3
O level(s)	0.203	8.2	0.076	4.5
CSE(s)	0.101	3.8		
Other Formal Qualifications	0.099	1.6	-0.036	0.6
Number of Regions Controlled		10		2
Constant	0.521	14.4	-0.732	203.3
R Squared	0.224		0.404	
N	2,094		562	

Source: Married men, Wright and Ermisch (1990) Table 1; Single men Greenhalgh (1980) Table 5. The latter is only used for the experience parameters for young men, of whom there were very few in the sample of married men. The steeper slopes from the right were spliced into the equation shown on the left up to ages 20, 22 and 23 for men with no qualifications (the reference category), O levels and Higher qualifications, respectively.