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Partnership Formation and Dissolution in Britain: Evidence from the 1958 birth cohort

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ABSTRACT

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By Ann Berrington

This thesis reviews recent trends in partnership formation and dissolution in Britain before investigating, for one particular birth cohort, the individual level determinants of partnership formation and dissolution. The work uses data from the National Child Development Study which has followed up since birth those born in Britain in one week of March 1958. We compare data from the age 33 partnership histories with those collected at age 23. We find that dates of entry into cohabitation are reported less accurately than for marriage and that the reliability of reporting decreases for men, those with less education and those with more complex partnership histories. Implications of these findings for future data collection are discussed.

Taking a lifecourse perspective and the methodology of discrete-time logistic regression hazards models we examine the family background and current lifecourse factors influencing the timing and type of first partnership formation, the outcome of cohabiting first partnerships, and the role of premarital cohabitation and other factors on the risk of first marriage dissolution. Socio-economic factors were found to be most important in determining the age at which partnership formation takes place, and whether partnership formation follows a premarital pregnancy. Attitudinal and cultural factors appear to influence the decision whether to marry directly or cohabit. For example cohabitation was more common among men and women with lower levels of religiosity, those whose parents separated, and among those brought up in the South and South East of Britain. Among this cohort entry into cohabitation was particularly likely among those living independently of the parental home: a finding of particular significance given the recent trends towards increased non-family living in young adulthood in Britain.

By using a lifecourse approach we demonstrate that many socio-economic and family background factors influence marital instability through more intermediate, demographic covariates, such as age at marriage and the timing of childbearing. Premarital cohabitation and previous cohabitation with another partner were both found to be associated with an increased risk of first marriage dissolution, although the effects were attenuated when other socio-demographic characteristics of cohabitors were controlled. Cohabiting first partnerships among the 1958 cohort were generally of short duration with almost one half marrying their partner within three years. Factors encouraging marriage among never partnered respondents, such as experiencing a conception, also tended to promote marriage among cohabitors. Rates of separation from cohabitation were higher among those cohabiting whilst attending higher education. For the latter cohabitation probably acts more as an alternative to remaining single. Lower marriage rates were found among socio-economically disadvantaged cohabitors in their late twenties and early thirties. It is possible that for these individuals cohabitation acts as an alternative to marriage.

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Chapter 1 Introduction

1.1 The Research Question

Over the past few decades there have been dramatic changes in partnership formation and dissolution in Britain, as in many other European countries. First marriage rates have declined, the age at which marriage occurs has increased, marital partnerships have become ever more fragile and an increasing number of men and women are choosing to live together outside of marriage. These changes form part of a wider transformation in patterns of childbearing and household formation which have been collectively termed the "Second Demographic Transition" (Van de Kaa, 1987; Lesthaeghe, 1995). This project aims to describe these large inter-cohort changes, and to examine, for a single cohort of individuals born in Britain during one week of March 1958, the individual level factors influencing patterns of partnership formation and dissolution.

Whilst the delay in marriage and increase in divorce have been well documented using data from vital registration (Haskey, 1992; 1995; 1996), less information is available concerning cohabitation. Cross-sectional data from the General Household Survey (GHS) have been crucial in delineating the increasing prevalence of cohabitation in Britain over the last two decades, and in providing some insight into the characteristics of cohabiting couples (Brown and Kiernan, 1981; Haskey and Kiernan, 1989; Kiernan and Estaugh, 1993; Haskey, 1995). However, these data tell us little about rates of entry into and exit from cohabitation, or the factors associated with these transitions. Information concerning the duration of premarital cohabitation is collected routinely in the GHS, but no retrospective information is collected about past cohabiting partnerships which did not translate into marriage and which are no longer current at the time of the survey. We have, therefore, in Britain been previously unable to address such questions as: "What proportion of cohabiting partnerships translate into marriage?" "How long do cohabiting partnerships last?" "Are cohabiting partnerships less stable than marital partnerships?" These research questions have already begun to be addressed for other developed countries where retrospective cohabitation histories began to be collected in the 1980s. See, for example, the 1981 Swedish Fertility Survey (Bernhardt and Hoem, 1985), the 1985 INED survey

(Leridon and Villeneuve-Gokalp, 1989; Leridon, 1990) and the 1987/88 United States National Survey of Families and Households (Bumpass and Sweet, 1989). As discussed in Section 1.3, the development of multivariate life table techniques during the late 1970s and early 1980s resulted in more sophisticated analyses and a growing international literature concerning the socio-demographic correlates of age at marriage, entry into cohabitation and the stability of marital and cohabiting unions.

In Britain, retrospective partnership data collected within the 1992 round of the British Household Panel Survey (BHPS) have permitted researchers to demonstrate the rapid increase in cohabitation and its acceptance among more recent cohorts (Buck and Scott, 1994; Ermisch, 1995; Ermisch and Francesconi, 1996). These data are, however, limited by the relatively small sample size of the BHPS, and the restricted socio-economic background information collected about respondents. Hence, only a few correlates of partnership formation and dissolution can be explored through these data (Ermisch, 1995; Ermisch and Francesconi, 1996)[1]

The availability of full partnership histories collected in 1991 from men and women born in 1958 who have followed up within the National Child Development Study (NCDS) provides a unique opportunity to extend our knowledge and understanding of partnership formation and dissolution in Britain. Since the retrospective partnership data are collected within a wider, prospective birth cohort study we are able to analyse the family background and early lifecourse factors which are antecedents of later demographic behaviour.

[1] As the BHPS survey progresses, an increasing amount of prospective data concerning the couple's socio-economic circumstances will become available from the panel waves permitting new analyses from a 'couple perspective'.

1.1.1 Research objectives

Work on this thesis began soon after the release of the NCDS age 33 data. The project had the following objectives:

a) to describe briefly trends in partnership formation and dissolution in Britain over the last 30 years and review the aggregate level explanations for these changes.

b) to describe the individual partnership trajectories taken by one cohort of men and women born in Britain during one week of March 1958 up to age 33.

c) to examine, for these individuals, the parental background and early lifecourse factors which influence the speed of entry into, and the type of first partnership.

d) to investigate the relationships between entry into parenthood and first partnership formation among this cohort.

e) to explore the effects of previous cohabitation and other individual level socio-demographic factors on the stability of first marriages entered into by age 33.

f) to examine the stability of first cohabiting partnerships entered into by this cohort, and to investigate the effect of childbearing on the outcome of these cohabiting partnerships.

Before describing the structure of the thesis we spend time in the subsequent sections delineating some of the major changes in partnership formation and dissolution that have occurred over the last few decades and hence place the 1958 cohort in its historical context. We introduce the concept of the individual lifecourse and discuss how event history techniques can elucidate the family background and current lifecourse factors associated with alternative partnership trajectories.

1.2 Changing Patterns of Partnership Formation and Dissolution

1.2.1 Trends in first marriage

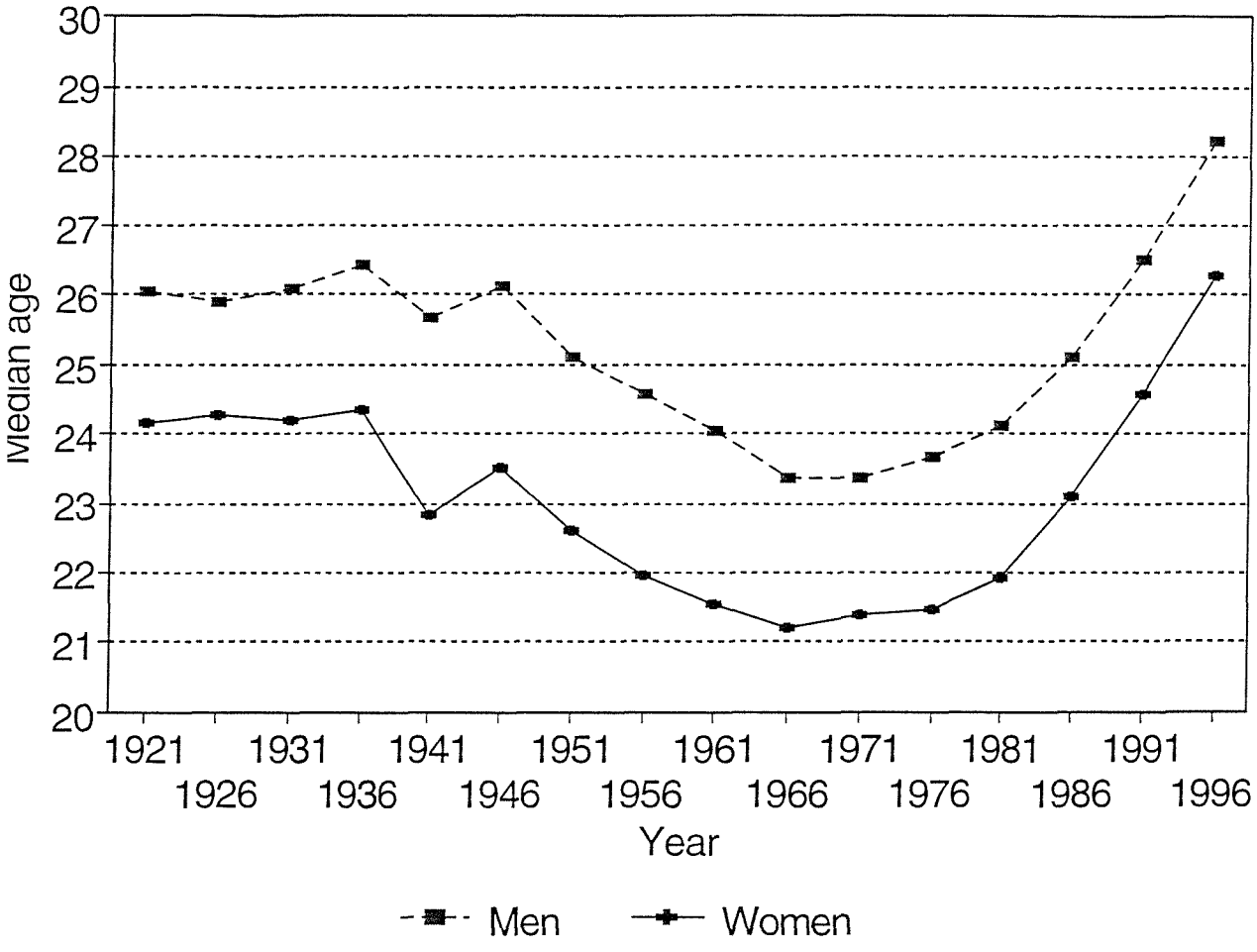
The last 25 years have seen a dramatic decline in rates of entry into first marriage at younger ages, and an associated sharp increase in the median age at first marriage from a minimum of 23 and 21 years for men and women respectively in the mid 1960s and early 1970s, to 28 and 26 years currently (Figure 1.1). This needs to be viewed in an historical context. Historically, entry into marriage in Britain was fairly late, with a significant proportion never marrying. Young adults often left the parental home at an early age to work as servants or in farm service. Couples had to wait until they had sufficient economic independence, before forming their own household (Hajnal, 1965).

Following the second world war, entry into marriage began to take place at younger ages, so that by the late 1960s leaving home was generally synonymous with entry into marriage for the majority of men and women (Anderson, 1983). According to Kiernan and Eldridge (1987) women from different socio-economic backgrounds started to marry at different ages, but within each social group a clear clustering effect was evident suggesting strong cultural norms governing the timing of marriage. "Marriage was seemingly inevitable and young women were expected to have married by their early twenties" (Kiernan and Eldridge, 1987 p 60).

One possible explanation for this acceleration into marriage during the 1950s and 1960s was the generally buoyant post-war economy. However, as Hobcraft (1996) notes increased income alone is not sufficient to explain the phenomenon. Rising real wages during the early part of the twentieth century did not result in a marriage boom; other factors, such as the development of the welfare state, universal free schooling, child and maternity benefits, also changed the economic setting in favour of early family formation in England and Wales.

Some authors observe an increasing emphasis on the sexual division of labour and on the role of motherhood during the early post-war period. Lesthaeghe and Surkyn (1988) argue that the acceleration of family formation during the 1950s and early 1960s partially

Figure 1.1: Median age at first marriage. England and Wales 1921-96.



Source: ONS Marriage and Divorce Statistics

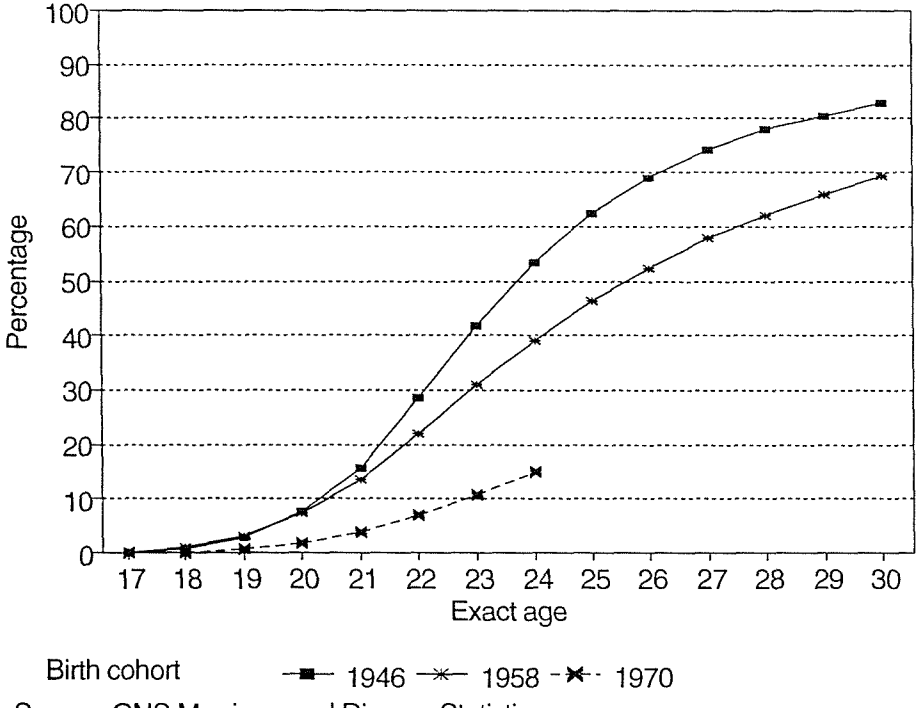
resulted from the embourgeoisement of working and middle classes. "The end of widespread warfare, renewed trust in institutions, and rising male wages provided further support..... Newly organized social security schemes and the concomitant redistribution of income in Britain made this family model with postponed earnings affordable to most" (Lesthaeghe and Surkyn, 1988, p 36).

The role of earlier childbearing in encouraging this marriage boom has also been highlighted. Lewis and Kiernan (1996) argue that the relaxation of sexual attitudes during the 1960s was associated with a decline in age at which first sexual intercourse took place. The new sexual morality of the 1960s stressed love and stability as being criteria for the basis of personal relationships. Sexual activity became increasingly separated from the process of marriage. With the use of modern contraception, particularly oral contraceptives, being fairly minimal during the 1960s many women became pregnant. The early 1960s marked the heyday of the so called shot-gun wedding with 22 per cent of all first marriages taking place in 1964 having a premaritally conceived birth (OPCS, 1987).

The beginning of the 1970s marked a turning point in Britain, as in other European countries, after which first marriage rates began to fall and the age at entry into marriage increased (Van de Kaa, 1987). It remains unclear whether these trends represent a delay in marriage to older ages, or a rejection of marriage altogether. Figures 1.2a and 1.2b show the percentage ever married by each age for the 1946, 1958 and 1970 birth cohorts. Of those born in 1946, around 91 per cent of women and 83 per cent of men were married by age 30. The corresponding figures for those born 12 years later in 1958 were 84 and 69 per cent. Interestingly, the 1958 birth cohort continued to have high rates of marriage in their teens. It is only when we compare this cohort with those born in 1970 that we see the move away from marriage at the youngest ages; one quarter of women born in 1958 were married by age 20, as compared with just eight per cent of those born in 1970 (ONS, 1997). It seems unlikely that marriage rates will increase sufficiently at older ages so that ultimately a similar proportion of the late 1960s and 1970s cohorts will ever marry.

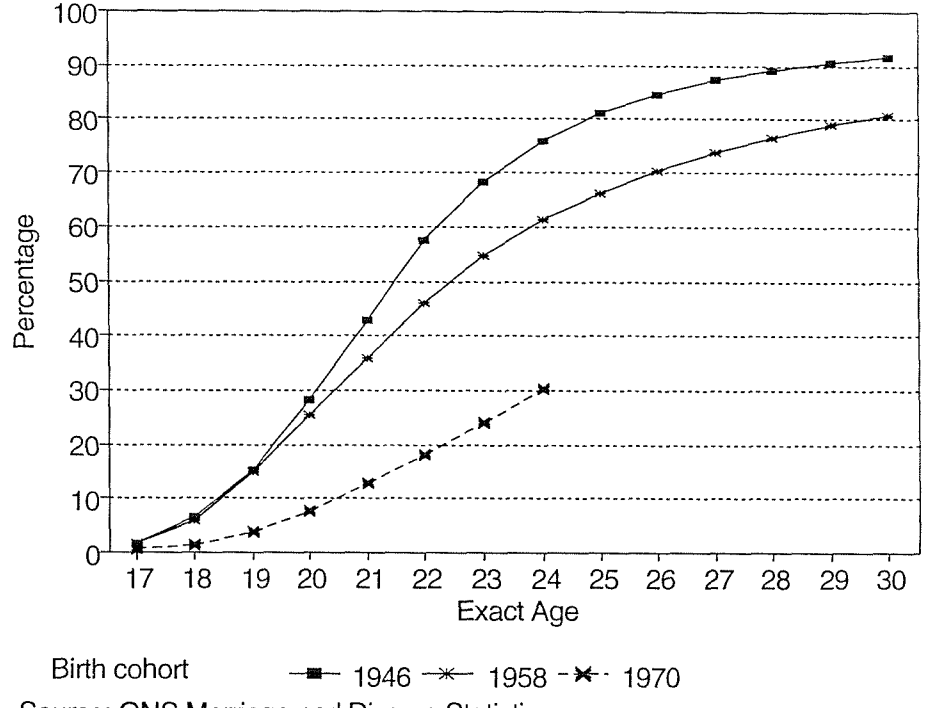
Three groups of macro-level explanations have been put forward for this delay in marriage and the associated postponement of parenthood. Neo-classical economists traditionally emphasize the increasing economic independence of women and hence the diminishing

Figure 1.2a: Percentage ever married by exact age. England and Wales. Males born in 1946, 1958 and 1970.



Source: ONS Marriage and Divorce Statistics

Figure 1.2b: Percentage ever married by exact age. England and Wales. Females born in 1946, 1958 and 1970.



Source: ONS Marriage and Divorce Statistics

returns from a sexual division of labour within marriage (Becker, 1981). At the macro level there does seem to be a correlation between trends in women's employment and trends in marriage (see for example evidence from the United States: Preston and Richards, 1975; McLanahan and Casper, 1995). However, these correlations do not necessarily denote a causal effect at the level of the individual. Oppenheimer (1988; 1997) argues that insufficient distinction is made between delayed marriage and non-marriage. Using ideas from job search theory, Oppenheimer (1988) argues that the timing of marriage is influenced by the amount of difficulty people experience in partnering assortatively. "The nature of the matching process changes as women's work involvement becomes more lifelong... Previously, husband's market work was the major factor determining the couple's lifestyle..... Now there are often two work careers, or potential work careers, that could make possibly conflicting demands that require adaptations" (Oppenheimer, 1988, p 583).

Greater emphasis is therefore placed on the selection process, and prolonged dating and cohabitation can be seen as a response to the increased search or a trial run in finding an appropriate match. As will be discussed in more detail in Chapter 3, evidence from micro-level individual studies does indeed suggest that women's increased educational attainment tends to be associated with a *delay* in marriage to older ages, not to an increase in *non-marriage*.

Most recently, Oppenheimer (1997) has highlighted the effect of increasing uncertainty in young men's economic position on marriage behaviour. We might expect marriage rates to be lower in periods of financial hardship. The trends in marriage behaviour in Britain provide some support for this hypothesis. The majority of those born in 1958 who left school at the minimum age went directly into jobs with around one fifth undertaking an apprenticeship following a fairly traditional line (Bynner and Fogelman, 1993). It is perhaps not that surprising therefore that teenage marriage remained a common occurrence among this cohort. Not until the early 1980s when the effect of economic recession was being felt, did the subsequent job insecurity lead to reduced levels of teenage marriage among later cohorts then reaching early adulthood (Kiernan, 1983).

The New Home Economic theorists argue that men's and women's wages work in opposite

directions in influencing family formation (Ermisch, 1979). De Cooman and colleagues (1987) find evidence in England and Wales supporting the hypothesis that at early stages of family formation higher male wages have tended to increase fertility, but that rises in women's pay, especially that following the implementation of the Equal Pay Act 1970, added to the opportunity cost of childbearing and contributed towards the postponement of first births. Improvement in women's education is often seen as a key factor promoting the delay in marriage since the opportunity costs of family formation are particularly high for women with higher levels of education and wage potential (Blossfeld, 1995). The 1958 birth cohort reached age 16 in 1974 and were thus part of the first cohort to experience the raising of the school minimum leaving age from 15 to 16 (Bynner and Fogelman, 1993). Indeed 80 per cent of women born in 1958 had some educational qualification as compared with just two thirds of those born in 1946. Increasingly, women continue on into higher education and enter professional careers. Nine per cent of women born in 1958 had degree level qualifications compared to five per cent of those born in 1946 (Kiernan and Eldridge, 1987). As the opportunity costs of family formation grow marriage and childbearing are delayed to older ages.

A number of authors have argued that economic factors cannot be viewed in isolation from the changes in cultural and social attitudes which occurred in post-war developed countries. According to Van de Kaa (1987) the changes associated with the "second demographic transition" relate to a shift from conservative to progressive societies. "...the progressive point of view stresses the equality of opportunities (income, education, etc.) and freedom of choice in behaviour (dress, sexual behaviour, etc.)" (Van de Kaa, 1987, p 7).

In a related thesis Lesthaeghe and Surkyn (1988) hypothesize that secularization and the growth of individualism have encouraged attitudes relating to individual autonomy and self-fulfilment and a decline in religious observance. Marriage and traditional family behaviour are rejected since these behaviours may require the subordination of individual needs to those of a spouse or children. This individualization is said to have continued despite the declining economic opportunities faced by young adults during the 1980s. A number of macro-level analyses have attempted to quantify these effects using data from attitudinal surveys such as the European Value Studies and Eurobarometer Surveys (see for example Lesthaeghe and Surkyn, 1988; Lesthaeghe, 1995). Recently, Lye and Waldron

(1997) have used individual level data from the United States to test the relationships between values and beliefs (concerning consumerism, regard for individual autonomy and personal fulfilment, and political ideology) with attitudes towards cohabitation, family and gender roles. They find that attitudinal change has not been linear and that some traditional values have persisted, for example in the concern for the parenting of children, whilst in other areas, for example gender equality, more liberal attitudes have come to the fore.

A final explanation for the delay in marriage and family formation during the early 1970s focuses on the independent role of contraceptive technology (Preston, 1986; Murphy, 1993). The availability of efficient contraception, particularly the introduction of oral contraceptives during the late 1960s (the contraceptive pill became available via the National Health Service to married women in 1967 and single women in 1974) meant that sexual activity prior to marriage was less likely to result in a conception. New forms of contraceptive technology thus facilitated the separation of sexual activity from childbearing and hence encouraged the formation of informal partnerships and the postponement of marriage (Preston, 1986).

1.2.2 The increase in cohabitation

We use the term cohabitation to refer to a man and woman living together as a couple without marriage. Alternative terminology found in the literature include 'informal unions', 'consensual unions', 'unmarried couples' and 'unmarried cohabitation' (Prinz, 1995). Cohabitation is not a new phenomenon. Prior to Lord Hardwicke's 1753 Marriage Act the joining of couples was generally a private and secular matter (Parker, 1990). Social historians have documented a variety of customary practices through which a man and woman could proclaim their relationship including besom marriages, common in Wales and the North, and the pledging of hands (handfasting), found in more remote regions of Scotland and the North of England (Gillis, 1985). The Marriage Act 1753 was intended to prevent these "clandestine marriages". All marriages which did not take place in a church or public chapel or which took place without banns being read or a licence being obtained were deemed null and void (Parker, 1990). However, even after 1754 informal

marriage practices continued, for example among the very poor and those who were formally married to someone else. Gillis (1985) suggests that during the period of industrialization of the 19th century common law arrangements such as "living tally" in Wales and "living over t'brush" in Northern England were particularly likely among sub-groups of the population such as miners, railway navvies, and mariners who had high rates of geographical mobility.

Civil marriage was introduced in 1836 and the subsequent period probably witnessed a decline in the number of informal marriages (Parker, 1990). According to Gillis (1985) industrialization caused formal marriage to become increasingly important for women's survival. Men became identified as the principal breadwinner and women increasingly retreated into domestic work. The end of the 19th century and beginning of the twentieth century was thus a period of conformity. Nevertheless, the decision by the Government to pay Separation Allowances to "common-law wives" as well as legal wives during the First World War (Parker, 1990) is evidence of the widespread existence of informal partnerships. In fact it was probably during the early post-war years, when couples married at an early age and levels of marital dissolution were relatively low that cohabitation was least prevalent. This situation began to change in the early 1970s when a new form of cohabitation emerged among young, never married people.

Our knowledge about this new form of cohabitation is surprisingly limited. One of the problems remains the heterogeneous nature of these partnerships. The point at which a sexual relationship becomes a cohabiting partnership is unclear, both conceptually and in terms of an operational definition allowing empirical research. Most UK Government surveys rely upon a phenomenological definition. In the General Household Survey individuals are asked if they are "living with someone as a couple". The self-reporting of cohabitation depends upon an individual's own definition of cohabitation, and their perception of their situation in relation to this definition (Berrington, 1992)[2]. In the

[2] The difficulty in asking respondents about *de facto* partnerships is demonstrated by the decision by OPCS to change the definition used in the GHS from "a man and woman living together as husband and wife" to "living together as a couple" since two people openly living together as an unmarried couple might be reluctant to say they were living as man and wife, as this could imply pretence (Berrington, 1992).

majority of British Government household surveys, the definition of cohabitation is driven by the definition of a household. Individuals can only be cohabiting with someone if this person is also 'a permanent member of the household'. This definition will therefore exclude couples who maintain separate permanent addresses but who spend the majority of their leisure time in each other's company and who essentially live together. Often couples in this situation are referred to as 'living apart together'.

The 1976 Family Formation Survey was the first survey in Britain to provide nationally representative information on current cohabitation and on the percentage of women who lived with their spouse prior to marriage (Dunell, 1979). Overall, two per cent of women were found to be living with someone outside of marriage at the time of the 1976 survey. Many of these women considered themselves "as married". Since 1979 annual estimates of the percentage of women currently cohabiting in Britain have been available from the GHS (Figure 1.3)[3]. Cohabitation remains most prevalent among women aged 20-24, among whom the percentage cohabiting increased from six per cent in 1981 to 25 per cent in 1996. Whilst the percentage of women in their twenties and early thirties who were cohabiting rose steadily over this period, increases in cohabitation among older women were greatest during the late 1980s and 1990s.

Further data from the GHS suggest that premarital cohabitation has gone from being a minority to a majority practice in just a single generation. During the late 1960s around three per cent of spinsters cohabited with their future spouse prior to marriage while in the early 1990s the figure was around 70 per cent (Haskey, 1995). During the 1960s and early 1970s the duration of premarital cohabitation remained fairly short - nearly two thirds of those marrying at this time had cohabited for less than a year (Dunell, 1979). It is only more recently, during the late 1980s and early 1990s, that the duration of premarital cohabitation has begun to increase (Haskey, 1995). It would seem then that cohabitation for many young adults remained during the 1970s and early 1980s a fairly short, transitional phase prior to marriage.

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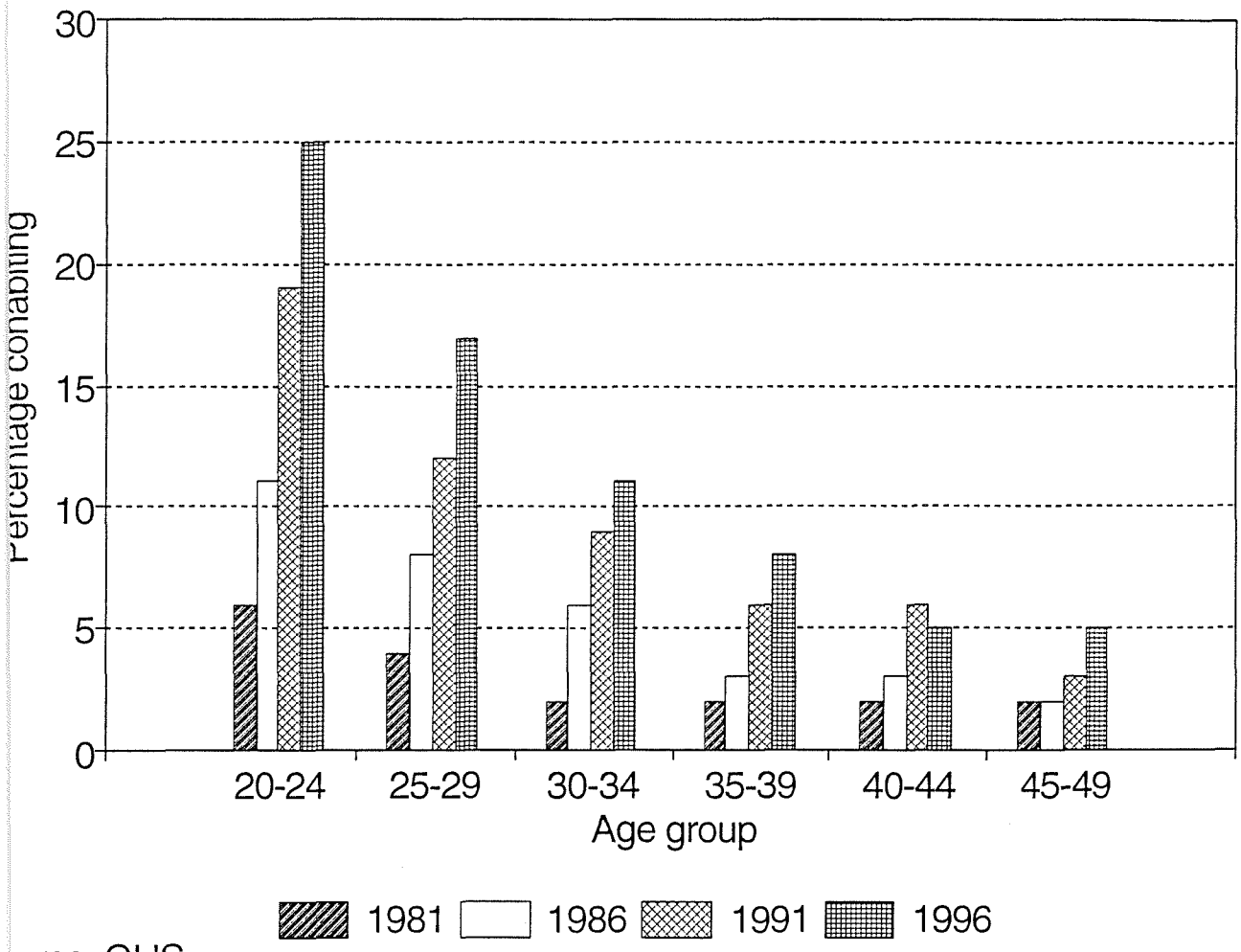
[3] Comparable data for men, and for the 16-19 age group, are not available since the early sweeps of the GHS only collected family information from women aged 18-49.

Figure 1.3: Percentage of women currently cohabiting by age. Britain 1981-96.



Source: GHS

Indeed, evidence from the 1989 British Social Attitudes Survey (BSAS) demonstrates a widespread acceptance of cohabitation as a temporary phase prior to marriage (Table 1.1). Respondents to the BSAS were asked what advice they would give to a young woman and a young man about forming partnerships with the opposite sex. Would they advise them to live alone, live with a steady partner without marrying, live together and then marry, or marry without living together first (Scott, 1990)? Over half of the youngest age group recommended premarital cohabitation as compared with less than one in five respondents aged 65 and over. This pattern probably reflects generational changes in attitudes towards partnership formation. It is clear that the percentage of older men and women who have ever cohabited is increasing through a process of cohort succession (Buck and Scott, 1994; Bumpass, 1995).

Table 1.1: Advice you would give to give to a young woman and young man about forming partnerships.

	Percentage suggesting:	
Age	Cohabit before marriage	Cohabit only
18-24	59	9
25-34	58	5
35-44	55	7
45-54	37	3
55-59	25	0
60-64	29	1
65+	19	1

Source: 1989 British Social Attitudes Survey, from Kiernan and Estaugh (1993).

Whilst a majority in the youngest cohorts was in favour of couples living together prior to marriage, far fewer recommended cohabitation without marriage. This suggests that at the end of the 1980s marriage remained an important part of the lifecourse, and that cohabitation was not seen as an alternative to marriage. Indeed, most (around 70 per cent) men and women interviewed within the 1989 BSAS agreed with the statement "People who want children ought to get married" (Scott, 1990).

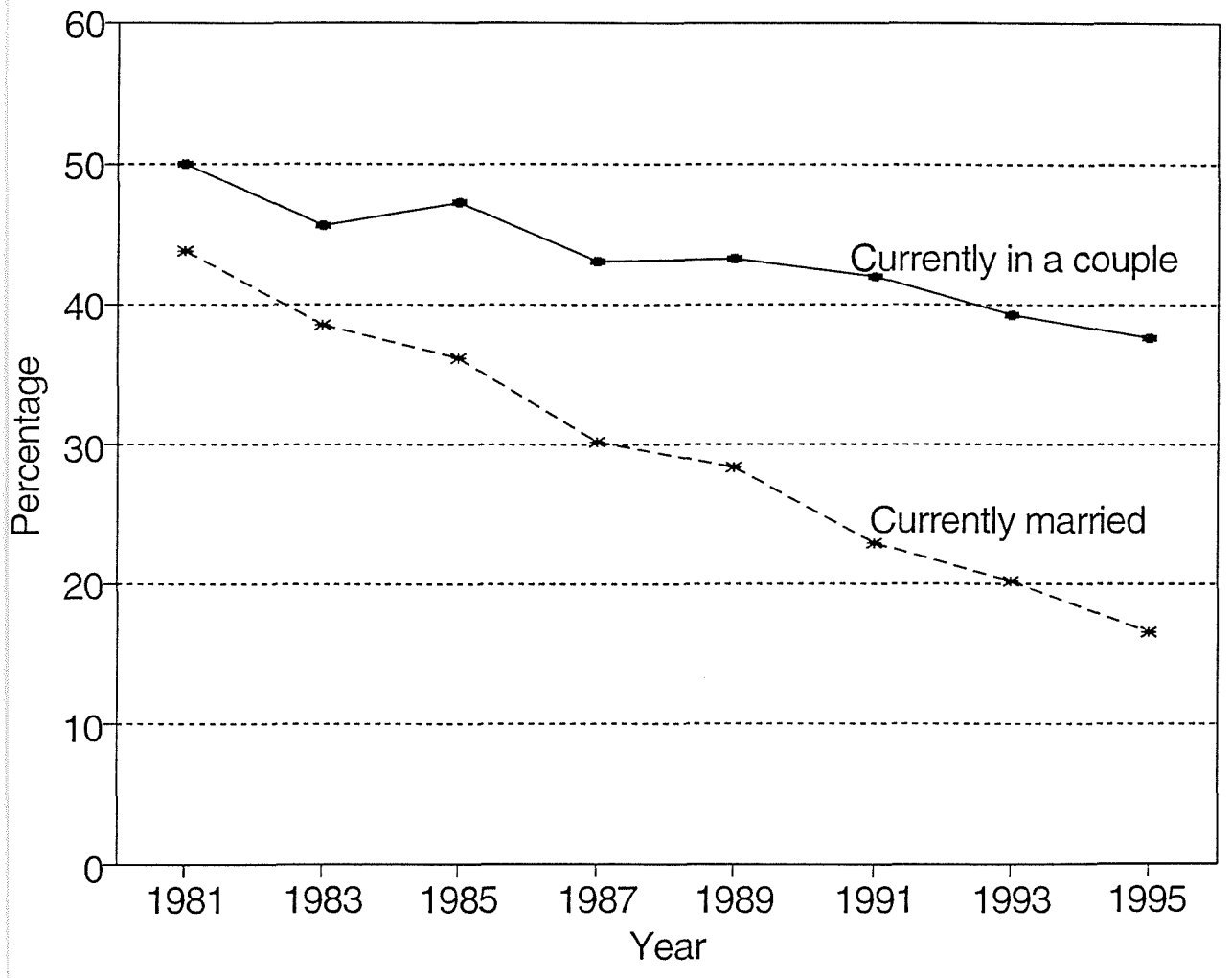
A question of interest is the extent to which the increase in cohabitation has compensated for the decline in first marriage rates in Britain. Previous analyses for the United States suggested that the decline in marriage during the early 1980s was fully compensated by an increase in cohabitation (Bumpass et al., 1991). Figure 1.4 shows the percentage of women in Britain aged 20-24 who are currently married, and the percentage who are currently in a couple between 1981 and 1995[4]. In 1981, the vast majority of women aged 20-24 who were in a couple were legally married, whereas today the figure is less than one half. But increased cohabitation has not fully compensated for the decline in marriage and we see an overall decline between 1981 and 1995 in the percentage of women in their early twenties who are in a couple.

A recurring theme in the literature is the extent to which cohabitation acts as an alternative to singlehood, a precursor to marriage, or an alternative to marriage (see for example Macklin, 1978; Trost, 1988; Leridon and Villeneuve-Gokalp, 1989; Rindfuss and Van den Heuvel, 1990; Kiernan and Estaugh, 1993; Manning, 1993; Manting, 1994; Brown and Booth, 1996). Existing work suggests that the answer to this question differs according to the particular country, time period (Leridon, 1990; Manting, 1994), the sub-group of the population that is being referred to (Manning, 1993; Loomis and Landale, 1994; Manning and Smock, 1995) and the couple's lifecourse stage (Kiernan and Estaugh, 1993; Loomis and Landale, 1994). In the following chapters we attempt to provide some further insight into this debate for a particular British cohort who were entering adulthood in the late 1970s when cohabitation first started to increase.

Cohabitation encompasses a wide variety of situations, from permanent co-residence with shared property and perhaps children, to what are essentially visiting unions. Macklin (1983) refers to cohabitation as a continuum of emotional and physical involvement ranging from a temporary casual relationship, to a trial marriage, to a temporary alternative to marriage, to a permanent alternative to marriage. In piloting the Family Formation

[4] Data on the proportion legally married for 1981-1989 are taken from the OPCS Marriage and Divorce Statistics, whilst estimates of the percentage currently cohabiting are from the GHS annual report. Since 1990 the Marriage and Divorce Statistics publication no longer include Table 1: Sex, age and marital condition. We have, therefore, used published data from the 1991 Census, and, for the years 1992-5, undertaken secondary analysis of GHS data so that the legal marital status and cohabitation data for these years come from the same source.

Figure 1.4: Percentage of women aged 20-24 who are currently married and percentage in a couple. Britain 1981-95.



ɔurces: GHS, 1990 OPCS Marriage and Divorce Statistics, and 1991 Census

Survey questionnaire in the early 1970s Dunell (1979) noted that those who were cohabiting could be divided into two groups. The first saw their relationship as a long term commitment, with shared possessions, income and perhaps children. These couples were often unable to marry due to one partner waiting for a divorce. The second group were less likely to view the relationship as long term, did not share possessions or finance and were less likely to have, or to plan to have children, describing their cohabitation as "convenient". Referring to the situation in Britain in the late 1980s, Kiernan and Estaugh (1993) distinguish young never married cohabitants who are living together in a child free phase prior to first marriage, those cohabiting after one or both partners has experienced a marital breakdown, and a third group of never married cohabitants with children. Kiernan and Estaugh (1993) argue that cohabitation acts primarily as a precursor to marriage for the first group, and more as an alternative to marriage for the last group.

Many authors have attempted to identify typologies of cohabitation, often using the level of extra-marital childbearing as an indicator of the extent to which cohabitation acts as an alternative to marriage (Kiernan and Estaugh, 1993; Prinz, 1995). Comparisons are generally drawn between Northern European countries, such as Sweden and Denmark where cohabitation is of longer standing and where around one half of births occur outside of marriage; countries such as Britain or France where cohabitation and extra-marital childbearing are becoming increasingly significant; and countries such as Italy and Spain where both cohabitation and extra-marital fertility remain less common. There are, of course, a number of countries which do not fit easily into such a categorisation. For example, in the Netherlands cohabitation has become a majority practice and a normal stage in the lifecourse of young adults (Manting, 1994); yet cohabitation generally remains a transitional, childless phase prior to marriage, and the percentage of extra-marital births remains at around 14 per cent (EUROSTAT, 1996).

1.2.3 Cohabitation and extra-marital childbearing

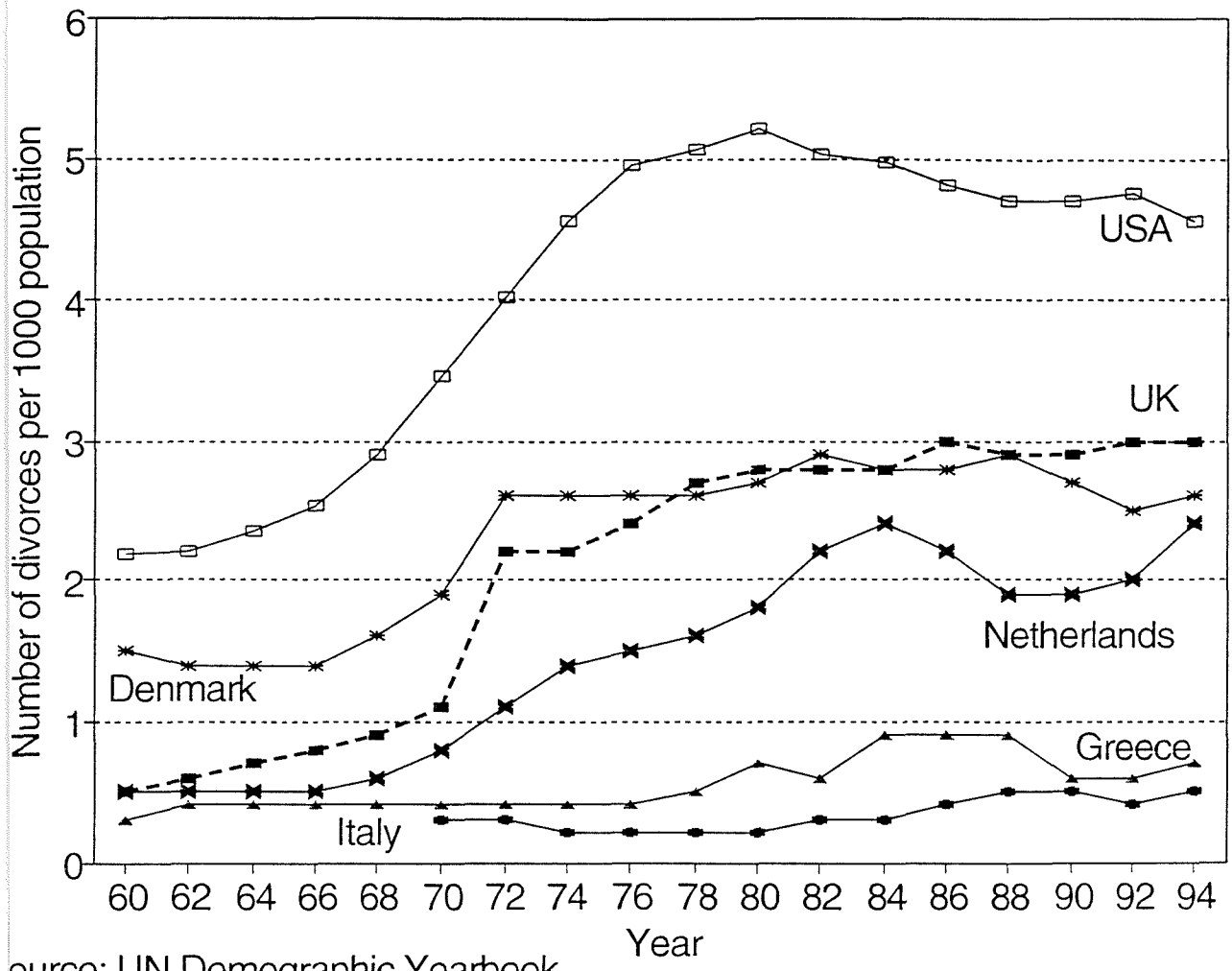
In Britain, cohabiting couples are increasingly becoming parents and contributing to the significant increase in the number of extra-marital births, so that currently one third of births take place outside of marriage. The proportion of extra-marital births is highest

among teenage mothers, where the percentage grew from 23 in 1964 to 87 per cent in 1995. Most of the increase in extra-marital fertility took place during the 1980s, suggesting that whilst the 1970s may have witnessed the separation of sexual activity from marriage, it was not until the 1980s that childbearing became disconnected from marriage (Lewis and Kiernan, 1996). Over half of all extra-marital births are currently registered in the name of both parents who provide the same address. If we assume that these couples are cohabiting then at least three quarters of the increase in extra-marital fertility over the last ten years has been associated with the rise in cohabitation. These trends have important socio-economic implications, for example concerning the rights and responsibilities of unmarried fathers. Relatively little is known about the socio-economic characteristics of cohabiting couple families or the stability of such partnerships. It is apparent from qualitative evidence that childbearing is a major factor associated with the decision of cohabiting couples to marry (McRae, 1993; De Jong Gierveld and Liefbroer, 1995). 69 per cent of British mothers who married following the birth of a child within a cohabiting partnership gave "their child(ren)'s security" as a reason for marrying (McRae, 1993). In Chapter 6 we examine for the 1958 birth cohort the antecedents of childbearing within first cohabiting partnerships and the effect of pregnancy and childbearing on the outcome of these partnerships.

1.2.4 Partnership dissolution

Whilst cohabitation is acting to delay entry into marriage, marital dissolution has become a more common event in the lifecourse of those who do marry. During the 1970s many developed countries witnessed a dramatic increase in the level of divorce as shown in Figure 1.5. In Britain, the crude divorce rate rose sharply in 1971 at the time of the implementation of the Divorce Law Reform Act 1969. This act introduced the concept of an "irretrievable breakdown of marriage" and couples could petition for divorce on the ground of one of five "facts" (adultery, unreasonable behaviour, desertion, two years separation with mutual consent, and five years separation without consent of one partner). The crude divorce rate levelled off during the early 1980s, increased slightly following the 1984 Matrimonial and Family Proceedings Act (which permitted couples to petition for divorce within their second and third years of marriage), and stabilised during the 1990s

Figure 1.5: Crude divorce rate for selected countries 1960-94.



ource: UN Demographic Yearbook

at a level of about three divorces per 1000 population. Whilst Britain has one of the highest divorce rates in Europe, the level remains significantly below that seen in the United States. If current marriage-duration specific divorce rates were to remain constant in the future in Britain around two in five marriages would ultimately end in divorce (Haskey, 1996). Similar proportions are found in Denmark, Sweden and Norway, with intermediate levels found in central and Eastern Europe and much lower levels in Southern Europe (EUROSTAT, 1997).

Divorce is occurring at shorter marriage durations. Whilst around one per cent of the 1956 England and Wales marriage cohort divorced during the first five years of marriage, the figures for the 1966, 1976 and 1986 marriage cohorts were four, ten and thirteen per cent (Haskey, 1996). This trend has implications for the average age of couples at divorce and the number and age of children experiencing parental separation. The proportion of children who experienced the breakdown of their parents' marriage by age 16 increased from nine per cent of those born in 1960 to 20 per cent of those born in 1979. The figure for current birth cohorts is likely to be nearer 28 per cent (Haskey, 1997). Only a minority (14 per cent) of NCDS cohort members reported the separation of their parents prior to age 33. Among the cohort themselves however, the level of marital dissolution is much higher.

One of the most widely given explanations for this increase in marital dissolution is the rise in women's labour force participation (Ruggles, 1997). Economic theorists such as Becker (1981) argue that women's increased economic independence results in declining economic gains to marriage, whilst feminist researchers such as Oppenheimer (1997) maintain that women's increased economic opportunities in the labour force allow them to escape from failing marriages. The former view suggests that increased divorce reflects a decline in the value of marriage as an institution, whereas the latter suggests that the rise in divorce results from increased dissatisfaction with particular marriages. In Britain and the United States right-wing authors such as Murray (1984) have highlighted the role of the Welfare State in facilitating marital breakdown by providing a baseline level of financial support for lone mothers and their children.

Other authors have highlighted the changes in divorce legislation which have made divorce easier, cheaper and quicker (Haskey, 1996). These changes are likely to reflect underlying

shifts in values and attitudes towards marriage and divorce (Lye, 1989). Lesthaeghe (1995) argues that the increase in divorce is part of the revolution in nuptiality patterns which has taken place during the "second demographic transition". Greater secularization and individuation mean that couples are now less likely to accept a situation which interferes with their personal fulfilment. Of course, it is difficult to distinguish the effects of ideational change from those resulting from women's expanded labour force participation. The direction of the causal relationship between the two remains unclear, and both could result from other underlying changes in society. It would seem that mutually fulfilling love may now be the only socially approved reason to marry and remain married. According to Lye (1989) "rising divorce rates are the product of a reorientation of family values, and a redefinition of the roles of women..... In the past marriage was based upon mutual commitment, self sacrifice and constraint, with well defined roles, rights and responsibilities for each partner. Today marriage is a relationship between two individuals who must continually negotiate rights and responsibilities...." (Lye, 1989, p 49).

These theoretical approaches and the implied hypotheses for individuals' risk of experiencing marital dissolution are explored further in Chapter 5. Investigating the outcome of cohabiting partnerships is made complex by the fact that couples can either marry or separate. Recent evidence from the 1994/5 National Survey of Families and Households (NSFH) suggests that in the United States fewer cohabiting couples are marrying and that a growing proportion are experiencing partnership breakdown (Bumpass, 1995). In Britain, transition rates calculated from the panel element of the BHPS indicate that currently around one third of cohabiting partnerships dissolve, three-fifths translate into marriage and around five per cent last 10 years or more (Buck and Ermisch, 1995). Much attention has focused on the relative stability of married and cohabiting partnerships: preliminary analyses using data from the BHPS suggest that cohabiting couples are between three and four times as likely to break up as married couples, even when the age of the couple and presence of children are taken into account (Buck and Ermisch, 1995). Similar findings emerge from France (Leridon, 1990), the Netherlands (Manting, 1994), Sweden (Hoem and Hoem, 1992) and the United States (Teachman et al., 1991). According to Ermisch (1995) around half of never married women who have their first child within their first cohabiting partnership can expect to become a never married lone mother through the dissolution of their partnership. With the increase in childbearing

inside cohabiting partnerships, the percentage of children currently affected by parental separation is likely to be greater than estimates based solely on marital dissolution rates. In Chapter 6 we investigate the stability of first cohabiting partnerships and the factors associated with their outcome in the context of the 1958 cohort.

1.2.5 Summary

The 1958 British birth cohort made their transitions to adulthood during a period of rapid social change. They were born during the 'golden age of marriage' to relatively young parents. During their own childhood, relatively few experienced the breakdown of their parents' marriage since divorce rates remained fairly low throughout the 1960s. In the mid-1970s when the cohort reached age 16, marriage rates had started to decline and couples were increasingly cohabiting prior to marriage. Nevertheless, teenage marriage remained a common occurrence. During the early 1980s, when cohort members were in their early twenties, marriage rates continued to fall, possibly in response to the marked economic recession of this time. Cohabitation became an increasingly accepted situation throughout the 1980s so that by the time the NCDS cohort reached age 33 in 1991, premarital cohabitation had become a majority practice and a substantial proportion of children were being born to cohabiting couples. Levels of divorce rose steadily over the period 1974-1991 to a point where we would now expect a significant number of cohort members to have experienced marital dissolution by age 33.

These socio-demographic changes mean that the 1958 birth cohort is a particularly interesting one to study. However, a major drawback of using data from the NCDS is the fact that they refer to a single cohort, and thus do not allow us to differentiate between age and period effects in our analyses. We will return to this issue at various points in the thesis.

1.3 The Lifecourse Approach

1.3.1 Individual partnership trajectories

The aggregate level trends in partnership formation and dissolution discussed above result from the combination of individuals' experiences. In this thesis we take the individual as the unit of analysis and investigate the partnership trajectories they make, and the family background, early and current lifecourse factors associated with these different trajectories. Our sample comprises those born in Britain in one week of 1958. A pertinent consideration is the constitution of the population represented by these individuals. Can their experience be extrapolated to all of those born in Britain during 1958, or even all of those born in the late 1950s? The partnership experiences of the 1958 birth cohort will have been affected by the particular social and economic opportunities and restrictions within which they were making their transitions; given the speed with which patterns of partnership formation have changed over the last thirty years further generalization would perhaps be unwise.

The detailed prospective and retrospective data available within the NCDS advocate the adoption of a lifecourse approach.

1.3.2 The lifecourse perspective

The collection of detailed event history data and the development of multivariate life table techniques in the early 1980s heralded the era of lifecourse research, which has now come so to dominate social demography. The lifecourse can be defined as "the sequence of events and experiences in a life from birth until death and the chain of personal states and encountered situations which influence and are influenced by this sequence of events" (Runyan, 1984, p 82). According to Mayer and Tuma (1990, p 5) "Lifecourse research has two main objectives: (1) to explain individual life events and social patterns of life trajectories within a common conceptual and empirical framework, and (2) to represent the social processes that generate these events and trajectories".

A number of basic assumptions of the lifecourse approach can be identified (Mayer and Tuma, 1990):

a) the lifecourse is a product of individual action, organizational processes, and institutional and historical forces.

b) events within a given life domain (such as leaving school or entry into parenthood) usually cannot be explained without reference to events in other life domains.

c) later life events are partly the consequences of earlier events, conditions and experiences.

d) lifecourse research requires a multi-level and multi-time framework. Individual time (for example, age or the duration spent in a particular state) must be placed within historical time.

The lifecourse perspective provides a useful framework for us to analyse the determinants of partnership formation and dissolution. Demographic events must be examined within the context of individual and historical time, previous lifecourse experiences and in relation to the transitions made by individuals in other domains. Event history analysis is a particularly useful tool in lifecourse research. It is concerned with the patterns and correlates of the occurrence of events (such as marriages or births), and involves the analysis of transitions between discrete states (such as being single, cohabiting, or married), according to the length of time spent in a state. Event history analysis allows us to examine the combined effect of a large number of variables on the risk of experiencing various lifecourse events. By using time-varying covariates we can build changes in the characteristics of the individual over time into the analysis. In this way we can model the inter-dependencies of different life domains - entry into parenthood and first partnership formation, for example.

Ideally we would wish to analyse data from a number of birth cohorts in order that individual and historical time can be separated. In our case, however, comparable longitudinal and retrospective partnership data for more recent cohorts are not yet available, and so age and historical time are synonymous.

As noted by Murphy (1995) the lifecourse approach does not provide any indication as to which of the large number of potentially important influencing variables should be included into a particular analysis. This is relevant given the broad array of potential information available on NCDS cohort members. To guide our selection of potential background variables for inclusion within each analysis we spend time in the first part of each chapter reviewing the relevant literature and putting forward specific hypotheses regarding the expected effect of particular covariates on the probability that the event under investigation will occur.

1.4 Structure of the Thesis

Chapter 2 of the thesis contains a detailed discussion of the data we shall be using. The design of the National Child Development Study and associated survey instruments are discussed, together with patterns of sample attrition and response bias. Many inconsistencies and missing values were found in the age 33 NCDS data and much time and effort during the initial phase of the project were spent editing and cleaning the partnership histories. Indeed, two versions of the partnership history data were collected at age 33, and these data are compared to partnership data collected at age 23 for an overlap period when the cohort member was aged between 16 and 22. Together these data provide a unique opportunity to assess the reliability of retrospective partnership histories. We explore the relative reliability of reporting of married and cohabiting partnerships and identify some of the demographic and socio-economic characteristics of the respondent which affect recall accuracy.

In Chapter 3 we describe the partnership trajectories undertaken by male and female cohort members up to age 33. We then focus on entry into first partnership and examine the individual level factors that are associated with the speed of partnership formation and the choice of whether to marry or cohabit. The existing literature concerning the family background and early lifecourse factors which affect first partnership formation is reviewed and a number of hypotheses are put forward. The hypotheses are tested using a discrete-time competing risks hazards model of first partnership formation. In these analyses we restrict ourselves to looking at fixed covariates only.

Chapter 4 develops our analysis to examine the relationship between partnership formation and the transitions made in other domains (leaving the parental home and entry into parenthood). We thus combine data from a number of event histories collected from NCDS cohort members at age 33. Since experiencing a conception is a key factor associated with the timing and type of first partnership formation we undertake further analyses investigating the lifecourse factors influencing the sequencing of entry into first partnership and entry into parenthood.

The next two chapters turn their attention to the outcome of marital and cohabiting partnerships. In Chapter 5 we focus on first marriage and investigate the role of the previous partnership history on the risk of marital dissolution. By using a life course perspective we can investigate how parental and socio-economic factors work through demographic factors such as age at marriage to affect the risk of divorce. In Chapter 6 we examine the outcome of cohabiting first partnerships among the 1958 cohort in terms of whether they translate into marriage or break down. We investigate whether the factors which encourage marriage among never partnered individuals also encourage marriage among cohabitors, and whether factors influencing marital stability also affect cohabiting partnerships. Of particular interest is the role of childbearing in these processes. Finally, Chapter 7 concludes with a summary of our most important findings, a discussion of areas for further work, and some recommendations for future data collection.

Chapter 2 The Data

2.1 The National Child Development Study

The National Child Development Study (NCDS) is a prospective cohort study which has followed up all those born in Britain between March 3-9 1958 (around 17,000 births). The survey began as a perinatal mortality study which was subsequently extended to monitor the educational, physical and social development of cohort members (Shepherd, 1995). In total, the cohort has been followed up in five sweeps: at age 7 in 1965; age 11 in 1969; age 16 in 1974; age 23 in 1981; and most recently at age 33 in 1991. At each of the first three sweeps immigrants to Britain who had been born in the target week were added to the survey group. Over time, a wealth of socio-economic, demographic, attitudinal and health data has been compiled on cohort members using a wide variety of sources and survey instruments (Table 2.1 and Appendix A). At birth, information was collected from parents and medical reports. At ages 7, 11 and 16 data from the cohort member were supplemented by material provided by the cohort member's school. Questionnaire information was collected from the cohort members themselves at age 11 (when they were asked about their interests outside of school and their educational aspirations), and at age 16 (when they were asked to complete a more extensive questionnaire about their attitudes to school, educational aspirations, reasons for leaving school, marriage and family formation intentions).

The age 23 questionnaire survey conducted between August 1981 and March 1982 sought socio-economic information regarding employment, training, further and higher education, income and savings, as well as demographic information on leaving home, first cohabitation, marriage and premarital cohabitation, pregnancy and childbearing. Funding for the age 33 survey was provided by a consortium headed by the Economic and Social Research Council and including a number of Government departments together with the National Institute for Health and Development, USA. Three survey companies - Social and Community Planning Research, NOP Market Research, and Research Surveys of Great Britain - provided 600 interviewers who carried out the research in the summer and autumn of 1991 (Shepherd, 1995).

Table 2.1: Data sources in each sweep of the NCDS.

Age of cohort member					
Birth	7	11	16	23	33
Parents	Parents	Parents	Parents		
	School	School	School		
	Tests	Tests	Tests		
Medical	Medical	Medical	Medical		
		Subject	Subject	Subject	Subject
			Census	Census	
					Partner
					Children

Source: Shepherd (1995)

At age 33, a number of questionnaires were used (Appendix A). In addition to factual and attitudinal data being collected from the cohort member themselves, data were also collected from the cohort member's current partner, and (for one in three cohort families) their children. The large volume of material amassed at age 33 is demonstrated by the fact that the dataset for the fifth sweep (over 6000 variables), is greater in size than all previous sweeps put together. Data from the age 33 survey were linked to earlier rounds, and since July 1994 have been held as a SIR database by the Data Archive. Given the size of the total combined NCDS1-5 database (over 200 megabytes) we requested that it be hosted online at the University of Manchester. This project first received an early version of age 33 data courtesy of the Social Statistics Research Unit (SSRU) City University in January of 1994, and later in 1994 we were able to access the database with the linked data for sweeps 1-5. The timing of events is reflected in the data cleaning process, whereby we first set about cleaning the age 33 data using only information contained within that survey round, before later comparing information collected at age 33 with that collected in earlier rounds.

2.2 Non-Response and Loss-To-Follow-Up

2.2.1 Response patterns within the National Child Development Study

For most longitudinal surveys which follow up individuals over a prolonged time period, the progressive loss from the study of original respondents is an important issue. The panel element of NCDS, where cohort members have been followed up on five separate occasions, leads to a complex pattern of response (Table 2.2). Of the 17,131 individuals who were followed up in any of the NCDS sweeps less than half (46 per cent) took part in all survey rounds (SSRU, 1992). Loss-to-follow-up increased with age and also with the length of time between survey rounds. 11,346 individuals (66 per cent of those who responded in any of the follow-up sweeps) responded at age 33. Individuals lost to follow-up may re-enter the study at a later survey round (wave non-responders). For example, 1,628 individuals followed up at age 33 had not taken part at age 23. The work reported in this thesis is generally based upon the sample present at both age 23 and 33 (n=9718).

These complex patterns of response result from a combination of factors including loss-to-follow-up through death, emigration, or a failure to trace the cohort member. Whilst some cohort members refused to cooperate any further with the survey, individuals are more generally lost to follow-up through an inability to make contact.

Calculating response rates is complex for longitudinal panel studies since the target sample (thought of here as all those currently living in Britain who were born 3-8 March 1958) changes over time, largely through the death and emigration of cohort members. In total, 73 per cent of those not known to have died or emigrated were interviewed face-to-face at age 33. However, if we restrict our attention to the subset who were successfully traced, 85 per cent took part in the age 33 interview (Ferri, 1993). Whilst the level of response within NCDS is generally quite good, we have to be aware of the possibility of bias if those who were successfully followed up within NCDS prove different in terms of their demographic and socio-economic characteristics from those who were not.

Table 2.2: Participation patterns in the NCDS following the initial 1958 Perinatal Study.

Age 7	11	16	23	33	Number of Individuals
1	2	3	4	5	7956
1	2	3	4	-	2092
1	2	3	-	-	1407
1	2	-	-	-	513
1	-	-	-	-	467
1	2	3	-	5	1109
1	2	-	4	5	615
1	2	-	-	5	199
1	-	3	4	5	293
1	-	3	-	5	81
1	-	-	4	5	106
1	-	-	-	5	51
-	2	3	4	5	495
-	2	3	-	5	105
-	2	-	4	5	56
-	2	-	-	5	31
-	-	3	4	5	197
-	-	3	-	5	52
1	2	-	4	-	232
1	-	3	4	-	111
1	-	3	-	-	142
1	-	-	4	-	51
-	2	3	4	-	167
-	2	3	-	-	197
-	2	-	4	-	30
-	2	-	-	-	133
-	-	3	4	-	98
-	-	3	-	-	145
Total					17131

Source: SSRU (1992, p 4, Table 3)

2.2.2 Characteristics of those lost to follow-up

There are two main ways in which we can evaluate the extent of response bias within the NCDS. The first involves a comparison of the socio-economic characteristics of the NCDS sample at different survey rounds. In this way we are essentially looking to see how representative the age 33 sample is of the original cohort included within the 1958 Perinatal Survey. Previous analyses of earlier sweeps suggest that the sample successfully followed up tends to under-represent those most disadvantaged in relation to education, housing and financial circumstances, and ethnic minorities (Shepherd, 1995). Table 2.3 demonstrates the response bias arising from loss-to-follow-up between age 23 and age 33. The percentage response bias describes the difference between the socio-economic characteristics of the achieved sample with that of the target sample[5]. A positive response bias means that the characteristic is over-represented in the achieved sample and vice versa for a negative response bias.

$$\text{Percentage response bias} = \frac{\%\ \text{achieved sample} - \%\ \text{target sample}}{\%\ \text{target sample}} * 100$$

Also presented in Table 2.3 are the distributions of a given characteristic among those who are and are not subsequently successfully followed up. We use a conventional t-test to look for statistically significant differences at the five per cent level.

Those lost to follow-up are more likely to have left school before or at age 16, to have no educational qualifications, and to be unemployed or economically inactive at age 23. Respondents followed up to age 33 were more likely to have married directly without cohabiting with their spouse before marriage, and are less likely to have experienced marital dissolution by age 23, as compared with those not followed up. Respondents lost to follow-up between age 23 and 33 are more likely to have cohabited, to have experienced marital dissolution, and, among women, to have remarried by age 23.

[5] Here the target sample refers to all those who took part at age 23.

Table 2.3: Response bias resulting from loss-to-follow-up between age 23 and age 33.

	Men			Women		
	Respondents present at age 23 and 33	Respondents present at age 23 only	Percentage response bias	Respondents present at age 23 and 33	Respondents present at age 23 only	Percentage response bias
Age left school						
After age 16	30.6	24.0 **	5.7	30.5	22.3 **	5.4
Educational qualifications at age 23						
Degree or above	11.6	8.7 **	6.1	9.8	7.2 **	4.8
A level/Teach/Nurse	32.1	23.8 **	6.9	20.7	16.3 **	4.5
O level/Craft	17.0	14.9	2.8	17.5	15.0 **	3.1
CSE and equivalent	17.0	16.6	0.2	24.5	22.4	1.6
None	22.4	35.9 **	-13.0	27.5	39.2 **	- 7.6
Economic activity at age 23						
Employed	85.3	74.7 **	3.1	66.2	56.3 **	3.0
Unemployed/Scheme	10.1	18.6 **	-17.5	6.7	10.1 **	- 9.7
Student	3.2	3.3	- 1.6	1.5	2.2	-10.0
Economically inactive	1.3	3.0 **	-25.3	25.4	31.2 **	- 4.3
Not known	0.2	0.4	-30.0	0.2	0.2	10.0
Partnership status at age 23						
No partnership	55.4	52.0 **	1.5	31.5	30.7	0.5
Cohabiting unions only	7.5	10.8 **	- 9.7	8.8	11.5 **	- 5.7
First marr (no cohab)	28.5	26.6	1.7	44.4	37.1 **	3.3
First marr (cohab prior)	6.6	7.3	- 2.5	10.1	12.9 **	- 5.3
Divorced	2.0	3.4 **	-15.2	4.6	6.4 **	- 7.3
Remarried	0.1	0.0	37.5	0.8	1.4 **	-12.6
Sample size	4728	1539		5035	1235	

Note: ** Denotes significant difference at the five per cent level

2.2.3 Factors associated with wave non-response at age 23

Some of those lost to follow-up between age 23 and 33 dropped out of the survey as a result of, or in association with, events occurring after the age 23 survey. Some idea of the factors associated with loss to follow-up can be gained by looking at those respondents present at age 33 who did not take part ten years earlier (Table 2.4). For example, we can see that non-response at age 23, at least among those who re-entered the study, is associated with more complex partnership histories. The percentage who by age 33 had married directly and had not separated was much higher (40 per cent of men and 45 per cent of women) for those present in both surveys, as compared to those present only at age 33 (33 and 32 per cent for men and women respectively). In contrast, the percentage who had three or more partnerships is significantly lower among those present at both surveys.

Table 2.4: Comparison of partnership histories at age 33 according to whether took part at age 23.

Partnership history at age 33	Respondents at age 33 only	Respondents at age 23 & age 33
Men		
No partnerships	8.3	11.7 **
Married directly, still married	33.4	40.4 **
Three or more partnerships	5.1	3.4 **
Other	53.2	44.5 **
Total (n=100%)	865	4676
Women		
No partnerships	6.8	6.6
Married directly, still married	32.4	45.0 **
Three or more partnerships	7.0	3.2 **
Other	53.8	45.2 **
Total (n=100%)	761	4998

Note: ** Denotes significant difference at the five per cent level

2.2.4 Cross-sectional comparisons with national level data

A second way in which we can evaluate response bias within the NCDS is to compare the characteristics of the NCDS cohort at a particular follow-up with comparative national level data from cross-sectional censuses or surveys (Ades, 1983). Applying this approach identifies, for example, the representiveness of the cohort in relation to all 33 year-olds in Britain in 1991[6]. One of the problems in undertaking such comparisons is the lack of standard definitions and instruments across the different surveys. Even legal marital status can be defined in a number of ways. Table 2.5 compares the marital status distribution of male and female NCDS cohort members at age 33, with the legal marital status distribution of 33 year-olds recorded in the 1991 Census (based on the two percent Sample of Anonymous Records) and 32-34 year-olds interviewed in the 1990/1991 General Household Survey (GHS). Note that the Census and NCDS include those living in institutions, whereas the GHS sample only includes those living in private residences. Whilst the NCDS and GHS use 'separated' as a distinct marital status, it is not used in the Census where individuals currently separated from a spouse without legally being divorced are coded as married. Nevertheless, the current marital status distribution of NCDS cohort members is similar to that found among 33 year olds nationally. The slightly lower proportion of single men among the NCDS cohort is not statistically significant.

We can also compare the number of men and women reported to be "living in a couple" at age 33 with other national level sources (Table 2.6). The 1991 Census estimate is based upon the reported relationships with the household reference person. The Office for National Statistics uses this information to derive a series of family types, including "cohabiting couple family". By assuming that the oldest male and oldest female in a cohabiting couple family are themselves the couple we can derive estimates of current cohabitation (Berrington, 1996). As shown in Table 2.6, the proportion of NCDS men and women living in a couple (around 80 per cent) is consistent with both the 1991 Census and the 1990/1991 GHS. The standard errors for the estimates derived from the GHS are fairly large due to the relatively small sample size.

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[6] The two are not exactly comparable as anyone born in the appropriate week of March 1958 who entered Britain after 1974 has not been included in the NCDS.

Table 2.5: Cross-sectional comparison of current marital status as reported at age 33 within the NCDS, the 1991 Census and the 1990/91 General Household Survey.

Sex Legal marital status	NCDS		1991 Census		1990/91 GHS (aged 32-34)	
	%	s.e.	%	s.e.	%	s.e.
Men						
Single	21.4	0.56	23.3	0.48	21.0	1.89
Married	69.0	0.63	68.9	0.53	71.3	2.09
Widowed	0.1	0.04	0.1	0.04	0.0	-
Divorced	6.8	0.34	7.7	0.08	6.2	1.12
Separated	2.8	0.23	-	-	1.5	0.56
Total sample size	5363		7724		467	
Women						
Single	14.6	0.47	15.1	0.41	13.2	1.42
Married	72.1	0.60	74.9	0.49	72.8	1.86
Widowed	0.4	0.08	0.1	0.04	0.4	0.26
Divorced	10.1	0.40	9.6	0.33	8.8	1.19
Separated	2.8	0.22	-	-	4.9	0.90
Total sample size	5628		7750		570	

Source: NCDS 'Cohort Member Questionnaire'; 1991 Census Two per cent Individual Sample of Anonymized Records; 1990/91 General Household Survey.

We can take a further step and compare the past experience of cohabitation of NCDS cohort members with that reported by 32-34 year-olds in the GHS. Since the GHS collects information only on past periods of cohabitation which took place prior to marriage, we are restricted in the comparisons we can make. In both surveys the proportion cohabiting with their spouse prior to marriage is higher for men than for women. This is not so surprising given the later age at marriage (and hence more recent marriage) of men. NCDS cohort members seem to be more likely to have cohabited premaritally with their first spouse than men and women reporting in the GHS. However, the large standard errors surrounding the GHS estimates mean the difference is not significant.

Table 2.6: Estimates of percentage currently living as a couple, and percentage who cohabited before first marriage from the NCDS, the 1991 Census and the 1990/1991 General Household Survey.

	NCDS		1991 Census		1990/91 GHS (aged 32-34)	
	%	s.e.	%	s.e.	%	s.e.
% Living as a couple[1]						
Men	78.7	0.55	77.8	0.68	81.8	1.79
Women	80.7	0.52	81.4	0.62	81.2	1.64
% Cohabited before first marriage						
Men	33.9	0.72	not asked		29.6	2.38
Women	29.4	0.65	not asked		25.5	1.96

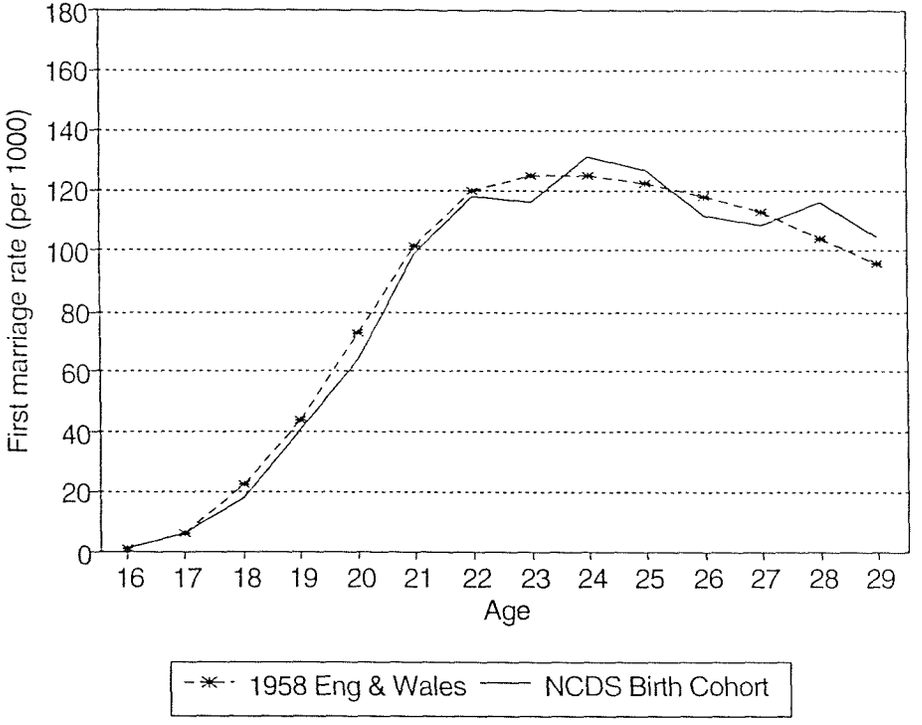
[1] Includes married and cohabiting couples

Source: NCDS 'Cohort Member Questionnaire'; 1990/91 General Household Survey; 1991 Census One per cent Household Sample of Anonymized Records.

2.2.5 Comparison of marriage rates from vital registration data

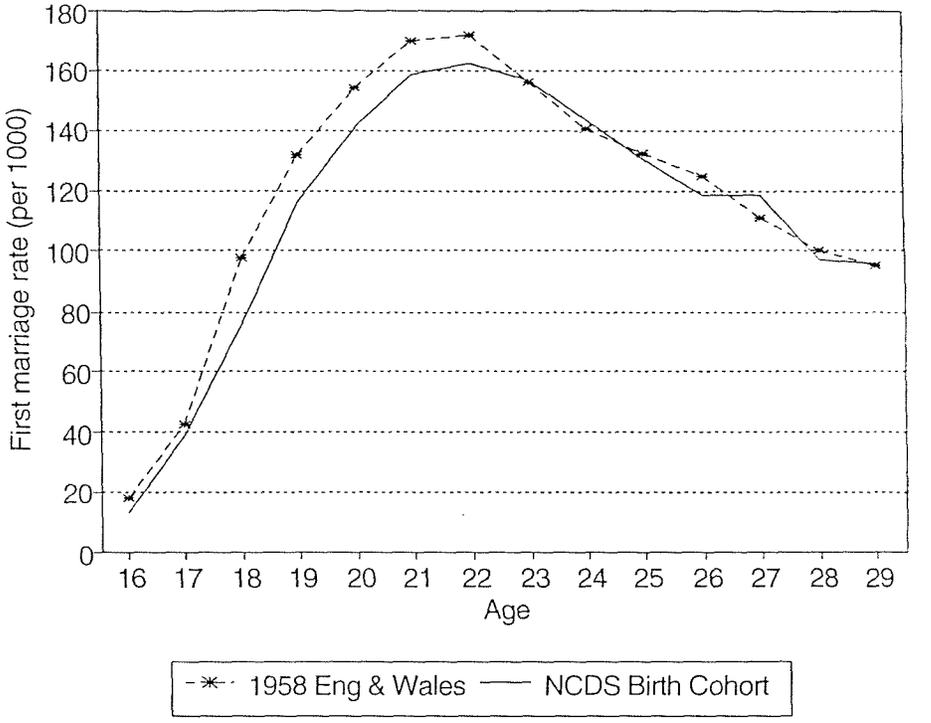
Further comparisons can be made between the reported rates of entry into first marriage among the NCDS cohort and those recorded within vital registration for the England and Wales 1958 birth cohort (OPCS, 1995b). The percentage ever married by exact age 32 is very similar for men (76 per cent for the NCDS cohort and 74 per cent from the vital registration) and identical for women (84 per cent). Closer inspection reveals, however, that among the NCDS cohort first marriage rates are lower at younger ages (especially among female cohort members) and slightly higher at older ages (Figures 2.1a and 2.1b). This pattern complements our earlier findings which suggests that the NCDS sample under-represents those more disadvantaged who are more likely to have married in their teens and early twenties. These patterns are similar to those found earlier by Kiernan and Eldridge, (1987) using data from the 1946 British birth cohort.

Figure 2.1a: Comparison of first marriage rates among men followed up within the National Child Development Study and the 1958 England and Wales birth cohort.



Source: Marriage and Divorce Statistics: Series FM2. Table 3.3b.

Figure 2.1b: Comparison of first marriage rates among women followed up within the National Child Development Study and the 1958 England and Wales birth cohort.



Source: Marriage and Divorce Statistics: Series FM2. Table 3.3b.

In summary, cross sectional comparisons of the partnership status of NCDS men and women with nationally representative data provide little evidence that the sample is biased demographically, although examination of those successfully followed up and those lost to follow-up suggests that the achieved sample over-represents more 'traditional' life course trajectories, and under-represents individuals who have had cohabiting partnerships or who have experienced marital dissolution. Comparison of first marriage rates in the NCDS cohort and among the national 1958 birth cohort suggests that the sample under-represents men and women who married in their teens and early twenties.

2.3 Evaluating the Internal Consistency of the Age 33 Partnership Histories

Some concern has been raised about the quality of data collected within the most recent round of the NCDS. It is possible that the limited budget available to carry out the fifth sweep, combined with the amount and detailed nature of the information being collected, resulted in resources being spread too thinly. In contrast to previous sweeps, the data were not edited by an 'in house' team of researchers before general release. This resulted in different researchers each spending time cleaning the data, making different assumptions and creating slightly different derived variables. We found a significant number of internal inconsistencies within the data, and considerable effort was spent checking and cleaning each variable. Many of these (out of range values and column shifts, for example) are likely to be the result of coding and processing errors which would normally be picked up either in the data collection or entry stage. Other sources of error include the survey instruments, interviewer and the respondent. Respondent error clearly becomes important when we are dealing with information recalled within retrospective event histories. The data cleaning process was made complex by the fact that some information, for instance concerning partnerships and births, was collected more than once at age 33, in a number of different questionnaires. Researchers are therefore faced with the problem of reconciling alternative versions of cohort members' event histories. Section 2.3 describes in some detail the process by which the two different partnership histories were reconciled. The programs used to achieve this were made available to researchers at City University, and have been used, in combination with other sources, to create a definitive set of partnership histories as recalled at age 33 (Di Salvo, 1995).

Information on partnerships was also collected from cohort members at age 23. Having reached our "best guess" as to the respondent's partnership history as recalled at age 33, we attempt in Section 2.4 to compare the age 23 and age 33 data for an overlap period when the cohort were aged 16-23. In this way we investigate the relative accuracy of reporting of dates of marriage and cohabitation, and how the accuracy of reporting differs according to the socio-economic characteristics of the respondent.

2.3.1 Partnership data collected at age 33

At age 33, full partnership histories were collected in two questionnaires: a face-to-face "Cohort Member" questionnaire (CM), and a self completion "Your Life Since 1974" questionnaire (YL). Both questionniares adopt a similar approach, using slightly different question wording. Partnerships (or relationships as they are referred to in the YL questionnaire) are defined as "living together as a couple for a month or longer". The two age 33 questionnaires ask all those who have ever married or cohabited (that is, lived as a couple for one month or more) the start and end dates of all partnerships, irrespective of their legal status, beginning with the first partnership and ending with the last. At the beginning of each set of questions concerning a partnership, the respondent is asked for the month and year in which the partnership began. Only after this is the respondent asked whether the partnership was married or cohabiting at the start. If cohabiting at the start they are then asked if they later married this person. If the answer is "yes", the respondent is then asked for the month and year of the marriage. The questions are repeated until the last or current partnership is completed.

2.3.2 Procedure for cleaning the age 33 partnership histories

The two age 33 partnership histories are not independent in as much as the interviewer was instructed to use the completed self completion questionnaire (which had been sent out earlier) to help guide the completion of the face-to-face interview. Since any inconsistencies between the two questionnaires were raised (at least theoretically) with the respondent and corrected by the interviewer, we have given precedence to the data from

the face-to-face CM interview. (Furthermore, 229 individuals did not self complete YL but did complete the CM interview). Our general approach, then, was based on the partnership histories collected in the CM questionnaire, with information from the self completion YL questionnaire used only when a problem was found. This said, all major differences between the two questionnaires, for example in year of entry into a partnership, or inconsistencies as to whether the partnership was marital or cohabiting, were individually examined. Below we discuss more specific rules used in the data cleaning exercise.

2.3.3 Inconsistencies in dating

Where there were minor differences in dating (for example, different months of entry into a partnership) data from the CM questionnaire took precedence. Where dates of entry or exit from partnerships were more than a few months different, the individual record was examined by hand. If there was reason to believe that the data from the self completion YL questionnaire were better than those from the CM questionnaire the former were used. Otherwise the dates from the CM interview were taken as "correct". Table 2.7 shows the year of first partnership as recorded in the CM questionnaire cross-tabulated against the year as reported in the YL questionnaire. In general there is good agreement between the two, with the majority of cases lying along the diagonal. The 47 cases where the two surveys provide years which are more than two years different are summarized in Box 2.1. They illustrate of the sorts of data problems encountered when attempting to analyse NCDS age 33 data. Ten relate to column shifts in the dataset, that is, where the response to the next question has been entered into the previous column. For person 093112N the date of first partnership should be 8/77 but has been changed to 87/72 where the 2 is part of the answer to the next question on whether the partnership was married or cohabiting at the start. Such column shifts are usually picked up by range checks and having been corrected are flagged as COLUMN=1. Other respondents were found to have an inconsistent year of entry into first partnership because they had referred to two different partnerships. Fifteen cases saw an earlier partnership reported in the CM questionnaire, whilst seven reported an earlier partnership in YL. In one further case a period of premarital cohabitation appeared in the YL questionnaire but not in the CM questionnaire. In

accordance with our general rule, the history with more partnerships is taken in preference, and so in the four cases where the YL questionnaire reports a greater number of partnerships, the individual is flagged as YLIFE=1 and the extra partnership added into the history from the CM. Care must be taken to ensure that all auxiliary information, for example, details of how any separation occurred or the date of divorce, is also reordered so that they refer to the correct partnership. All cases which have been reordered are flagged as REORDER=1.

Column shifts in "Cohort Member" data			COLUMN=1		
093112N	223025N	280015H	380044X	514022C	525044A
550175K	620070H	X41007F	Y20213Z		
"Your Life" remembered an earlier partnership			REORDER=1	YLIFE=1	
500535F	528010Y	X78010B	Y20267Z		
"Cohort Member" remembered an earlier partnership			YLIFE=2		
093062Z	095025D	120017Q	120142T	182004E	282021N
365004Y	431026A	510168M	520053Z	525056J	583026B
X87073D	Y01061V	Y20077U			
Year of start different - no other differences			YLIFE=2		
094017Z	110111Z	239003R	287079Y	288036K	350051Z
381163M	500045N	510079N	820021J	822513S	932028Y
950155J	X82487F	X40043E	X86008M	Y00128W	
Inconsistent partnership history - delete					
960003Q					

Box 2.1 Source of inconsistency in year of start of first partnership in the 'Cohort Member' and 'Your Life' questionnaires.

Inspection of the 17 remaining cases suggests that the two questionnaires are referring to the same partnership, but that either through respondent, interviewer or punching errors, the year of entry into first partnership is different. In some cases the month of start is the same, but in recording the year, sixes have been confused with zeros, eights with twos and so on. In one instance partnership histories from the two age 33 questionnaires are irreconcilable and the case is deleted from the analysis.

Table 2.7: Comparison of year of first partnership as reported in the 'Cohort Member' and 'Your Life' questionnaires.

'Your Life' questionnaire	'Cohort Member' questionnaire																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	miss -ing
1972	**2**						1			1											
1973		**6**	1																		
1974			**126**													1					
1975				**332**		1															
1976			1	2	**593**	2															4
1977	6		1		5	**960**	1	4	1		1										4
1978				2		4	**1133**	2		1	4	1			1						1
1979							7	**1257**	1												4
1980			1				1	5	**1186**	1	1			1	2						3
1981								1	3	**972**	1	1						1			3
1982								1	2	3	**844**										1
1983						1		1		1	3	**592**	2								5
1984										1	1		**466**	2							3
1985						1			1				2	**396**	4						1
1986						1	1	1	1	1		1	1	2	**287**			1			
1987					1						1				2	**246**		1			
1988									1		1		1			2	**204**	1			
1989							1									1	1	**141**			
1990								1					1						**107**		
1991																				**39**	
missing			2	1	6	6	10	10	15	9	8	7	1	3	3	2	1	2	1	1	59
Total	8	6	132	337	605	976	1155	1283	1212	990	865	602	474	404	299	252	206	147	108	40	88

Note: The analysis includes those who reported in both questionnaires that they had ever had a partnership.

2.3.4 Inconsistencies in partnership type

All inconsistencies between the CM and YL questionnaires as to whether a partnership was married or cohabiting at the start and whether the couple married later were checked by hand. For some respondents the two age 33 surveys disagreed completely as to whether a partnership was within, or outside of marriage. 56 individuals recorded a first partnership as married at the start in YL, and as cohabiting in CM. Conversely, 53 individuals said in the self completion questionnaire that their first partnership was cohabiting, but then in the face to face interview stated it was married. 52 individuals failed to report in either questionnaire whether their first partnership was married or cohabiting (Table 2.8). Those who agreed that their first partnership was cohabiting at the start were fairly consistent about whether or not they later married (Table 2.9).

Table 2.8: Comparison of individuals' responses in the 'Cohort Member' and 'Your Life' questionnaires as to whether first partnership was married or cohabiting at the start.

	'Cohort Member' questionnaire			
'Your Life' questionnaire	Married at start	Cohabiting at start	Missing	Total
Married at start	**5903**	56	42	6001
Cohabiting at start	53	**3826**	48	3927
Missing	141	68	**52**	261
Total	6097	3950	142	10189

Note: Sample includes all those who took part in both age 33 questionnaires.

Table 2.9: Comparison of individuals' responses in the 'Cohort Member' and 'Your Life' questionnaires as to whether they later married their first cohabiting partner.

'Your Life' questionnaire	'Cohort Member' questionnaire Married later? Yes	No	Missing	Total
Married Later?				
Yes	**2353**	14	7	2374
No	5	**1415**	12	1432
Missing	15	5	0	20
Total	2373	1434	19	3826

Note: Analysis includes those who took part in both age 33 questionnaires and said in both that their first partnership was cohabiting at the start.

In order to clean these data, individuals were flagged according to how their first partnership was recorded in the two surveys. All inconsistent cases were examined by hand and cross checked with responses to other questions such as "Whether the cohort member had ever been legally married?" (N506513), "What is the cohort members current legal marital status?" (N506515). Information from a later question which established for partnerships which broke down "Whether the cohort member was married to this partner?" (N501913) was also taken into consideration. In the few remaining cases where the situation remained unclear, precedence was given to the questionnaire which reported the partnership as cohabiting, as it is believed that respondents are less likely to "make up" cohabiting partnerships but might feel pressured into reporting cohabitation as marriage.

2.3.5 Inconsistencies in the number of partnerships reported at age 33

In situations where the YL questionnaire had more partnerships reported than CM, the individual is flagged (REORDER=1) and the CM partnership dates are replaced by the YL data. This necessitates reordering all CM data relating to a particular partnership to include the extra partnership.

2.3.6 Missing and irreconcilable partnership histories

Where elements of start or end dates are missing from the CM questionnaire cases have been checked to see if data from YL could be substituted. If a month of entry or exit from a partnership is still unavailable an average mid-year value of six has been imputed and checked for logical consistency. In the very few cases where this approach failed the middle month within the logically consistent time window was used. If a year of entry into or exit from a partnership was missing altogether the SSRU team were requested to return to the original questionnaire forms held at City University to see whether any information could be salvaged. Such cases are shown in Box 2.2. These cases are excluded from analyses where the particular date of entry or exit is required.

Finally, the 53 individuals shown in the lower half of Box 2.3 have partnership histories either so incomplete or inconsistent that they have been dropped from all analyses.

Year of start of first partnership missing

010144J	233025U	500025F	823518J	550253C	X32129V
145002R	433030B	525085R	962009P	680031L	
230007A	481046Q	526037K	985079R	815047Y	

Year of marriage missing for those who cohabited and then married

287005S	730048D
300062X	
517082P	

No cohabitation start date but have marriage date

515030H
325018K

End year of first partnership missing

289029T	380055C	431004Q	730118Y	960064M	Y01058H
330077F	382015A	517142E	825095S	986359C	Y20033X
350016X	385008V	520031P	845007E	Y00232R	

Start year of second partnership missing

090014W
182027T
434018T

End year of second partnership missing

822520P
500581P
517059U

No marriage year for third partnership

Y20255S
504033B

Inconsistent and incomplete partnership histories

010180N	090012S	X82529V	X82338N	782144T	289187N
986097Y	405046K	960003Q	516090H	581046X	350129M
216003M	X82515J	520051V	350154L	421077N	

Did not complete partnership history

010092R	043031E	055072N	083024K	085007V	092298A
093222V	183030M	188077S	233022N	238015T	285041L
350034Z	381156Q	382009F	384045W	400087X	433012Z
465038Z	500150K	500339F	516106V	516109B	565045D
650007U	750076X	750106D	815028U	882054Z	933001H
950144C	X30017X	X82114P	Y00087K	Y00135T	Y21026F

Box 2.2 Cohort members with missing or inconsistent partnership history data.

2.4 Comparing the Age 23 and 33 Partnership Data: Evaluating Recall Accuracy

Much of our knowledge concerning demographic patterns of partnership formation and dissolution comes from data collected within retrospective surveys. Typically, respondents are asked to recall dates (month and year) of entry into and exit from partnerships. Despite our reliance on demographic event histories, little is known about the accuracy of such recalled data and the ways in which measurement errors may affect substantive findings (Peters, 1988; Courgeau, 1992).

Respondents' accuracy can be investigated when an external data source is available for comparison, for example company records of unemployment (Mathiowetz and Duncan, 1988), official health records (Bryant et al., 1989) or a vital registration system (Courgeau, 1992; Poulain et al., 1992; Auriat 1993). Other opportunities to examine recall errors arise when the same data are collected from individuals at two different time points (Cherry and Rodgers, 1979; Peters, 1988). In this case, although the data are not independent, we can analyse how reporting may change over time since the event.

Previous research which compared the reports of demographic events in retrospective surveys with those collected in the Belgian Population Register suggested that the frequency of omissions and recall errors in retrospective event histories is quite high, that it is greater for men, and for certain events, especially residential moves (Auriat, 1993). However, Courgeau (1992) found that these data errors had a relatively small effect on substantive analyses of the duration spent in each residence after marriage, or the relationship between the couple's first birth and first residential move. He concluded; "Even if errors in the *dating* of past events are frequent, apparently these do not effect their *logical sequence*, or only very slightly so. This sequence is correctly memorized and the errors only form a kind of background noise which does not prevent coherent information from being drawn from all sources" (Courgeau, 1992, p 109).

A similar conclusion was reached by Peters (1988) who compared the current marital status reported by respondents in each panel of the National Longitudinal Survey of Labour Market Experience starting in 1968 with the dates of marriage and divorce collected

retrospectively from the same respondents in 1978 and 1983. Peters concludes that although there are systematic discrepancies in the retrospective marital histories, particularly among less educated and black American women, the two data sources provide qualitatively similar results when used in hazards models of the transition into first marriage, marital breakdown and remarriage.

These analyses, however, are likely to under-estimate the inaccuracy of partnership histories collected within recent retrospective surveys. The Belgian study confined itself to couples aged 41-57 years in intact first marriages - individuals, that is, with relatively simple partnership histories which one would expect to be easier to recall, whilst Peters (1988) included only women in her analyses who, we know from previous work (Poulain et al., 1992; Auriat, 1993) are better at reporting life events. Most importantly, neither survey collected information on *de facto* partnerships and hence examined the relative reliability of reporting of cohabiting and married partnerships.

The work reported here uses retrospective partnership histories collected from NCDS cohort members at age 23 and 33 to investigate the consistency of reporting of marital and cohabiting unions when the cohort members were aged between 16 and 22. The two surveys are ten years apart and provide important evidence as to the way in which the reporting of demographic events changes over time elapsed since the event. As the data refer to just one cohort born in 1958, our findings are limited to a relatively young age group reporting on the first part of their lifecourse. Nevertheless, the large sample size (of around 10,000 individuals) allows more detailed investigation of factors associated with the accuracy of recall. Before going on to describe our findings we first consider the factors which *a priori* are likely to affect respondents' ability to recall past demographic events.

2.4.1 Factors affecting respondents' ability to recall past events

Most of the research on recall accuracy has been undertaken by psychologists attempting to discover the mechanics of the memory process (Sudman and Bradburn, 1973; Baddeley, 1978). A number of well established factors have been found to determine the ability of individuals to recall past events. These include the time since the event (memory decay),

the importance of the event in the respondent's life (the saliency of the event), the amount of data required to be reported (the task difficulty), the amount of interference from other similar events, the social desirability of the event to be recalled and other factors associated with the respondent's motivation to answer the question (Groves, 1989).

This research might lead us to expect the start dates of partnerships began in the more distant past to be less well remembered. There may also be a selection effect whereby those who enter a partnership at very young ages are likely to have lower levels of education and be less accurate at recall (Peters, 1988). We might anticipate the reporting of marriage dates to be more accurate than dates of entry into cohabitation as the former is generally marked by a religious or civil ceremony, whilst the date of first cohabitation is less salient. Interference theory would lead us to suppose that individuals with more complex partnership histories will be less accurate in their recall.

And finally, responses to questions about marriage and cohabitation may be affected by the presence of a partner at the time of the interview (Aquilino, 1993). For those who remain in their first partnership the presence of a partner might be associated with more accurate recall, especially for men. If women are better at reporting marriage and cohabitation dates then they might help their partners provide accurate responses. Furthermore, it is more difficult for an individual to deny a period of premarital cohabitation if the other partner is present. Conversely though, among those whose first partnership has now ended the presence of a new partner might have a negative effect on the willingness of the individual to report previous partnerships.

2.4.2 Partnership data collected at age 23

There are a number of differences in the approach taken at age 23 and age 33 towards the collection of data on partnerships. The age 23 questionnaire used an initial question on current marital status to differentiate respondents and guide the interviewer through alternative questionnaire pathways. If the respondent is currently single, the questionnaire asks whether they "are currently living with someone as married at present", in which case start dates and information on the current partner are completed. All single respondents

are also asked whether they have "ever lived with someone as married for six months or more". If the answer is "yes" then information concerning start and end dates is collected on just the *first* cohabiting union. No enquiries are made about other closed periods of cohabitation after the first and before any current cohabitation.

For those who have ever been legally married, detailed data are collected concerning the first and current (or most recent in the case of those divorced or separated) marriage only, although again respondents are asked how many marriages they have had in total. For the first and current/most recent marriage the age 23 questionnaire inquires whether the couple lived together before they were married. Note that there is no time dimension involved in this question and hence quite short periods of cohabitation may be included. After the information on marriages has been collected, the age 23 questionnaire then asks those ever married "Did you ever live with anyone else for six months or more before you started living with your *first* husband/wife?" If the respondent replies in the affirmative the questionnaire then asks for information relating to the duration of their *first* cohabiting partnership, but no other ones. As for single men and women the total number of cohabiting relationships they have had where the respondent did not subsequently marry the person is noted.

In summary then, the age 23 questionnaire concentrates on obtaining information concerning respondents' *first* and *current/most recent marriage* and their *first (prior to first marriage) and current cohabiting unions*. The small number of cases for which we do not have a complete union history includes: individuals who have had two or more closed periods of cohabitation before their first marriage; individuals who have been married more than once and cohabited in between marriages; and individuals who have been married more than twice by age 23. However, with the exception of short periods of closed cohabitation (less than six months) which should have been recorded at age 33 but not at age 23, information concerning cohort members' first partnership should be the same. Comparisons can be made at either the aggregate or individual level. We begin by looking at the former.

2.4.3 Patterns of entry into first partnership

Table 2.10 shows the percentage of men and women who report having a partnership by age, and the percentage of partnerships reported to be cohabiting at the start in the 1981 and 1991 survey. At the aggregate level the reporting of age at first partnership is very consistent; by exact age 23, over one third of men and almost two thirds of women have had a partnership. At the youngest ages there are some discrepancies in the percentage of partnerships reported as cohabiting at the start, with higher estimates provided by the 1981 survey (especially for men).

Table 2.10: Percentage ever had a partnership, and cumulative percentage of first partnerships that are cohabiting at the start as reported at age 23 and age 33.

	Men				Women			
	% Ever had a partnership		% Partnerships cohabiting at start		% Ever had a partnership		% Partnerships cohabiting at start	
Survey	23	33	23	33	23	33	23	33
Exact age								
17	0.4	0.4	82.4	66.7	1.9	2.2	45.8	44.5
18	1.4	1.6	58.2	51.4	7.1	7.3	37.4	37.2
19	3.9	4.1	49.5	48.4	15.6	15.9	34.1	34.2
20	9.1	9.5	40.5	41.6	28.0	28.1	31.9	31.7
21	17.3	18.0	36.6	38.7	40.8	41.1	29.4	30.2
22	27.7	28.4	34.3	36.2	52.6	53.4	28.9	29.7
23	37.6	39.4	33.5	36.2	63.0	63.7	29.5	30.4
Sample	4668	4686	4686	4686	4988	4988	4988	4988

Note: Sample includes only those who took part in both the age 23 and 33 surveys.

2.4.4 Individual level inconsistencies in reported first partnership type

Further insight is gained by comparing the individual level responses in reported first partnership type at age 23 and age 33 (Table 2.11). Partnerships are classified as either a direct marriage, a cohabiting union which translated into marriage, a cohabiting union which ended in separation or one which is still continuing (shown separately for age 23

data). Consistent responses are shown in Table 2.11 in bold, whilst inconsistencies which could potentially be explained by the change in the definition of closed periods of cohabitation are shown as underlined.

Table 2.11: Type of first partnership as reported at age 23 and age 33 for those who reported ever having had a partnership in both sweeps.

	Type of first partnership reported at age 33			
	Direct married	Cohabiting later married	Cohabiting union only	Sample size
Type of first partnership reported at age 23				
Direct marriage	**3694**	136	11	3841
Cohabiting later married	128	**676**	21	825
Cohabiting now ended	30	87	**251**	368
Cohabiting still going	8	**251**	**193**	452
Sample size	3860	1150	476	5486

Note: Sample includes those present at age 23 and 33 and who reported a partnership in both surveys and a valid year of start for that partnership. Consistent responses shown in bold. Inconsistent responses which could potentially be explained by a change in the definition of cohabitation between surveys are underlined.

The overall similarity in the reporting of partnership type seen at the population level masks considerable inconsistencies at the level of the individual. Of those respondents who reported a partnership in both surveys, eight per cent gave an inconsistent response as to the type of first partnership. Further analyses show that the level of inconsistency is higher for men (ten per cent) than women (six per cent). At the individual level there are a number of inconsistencies as to whether the respondent was married or cohabiting in their first partnership which act to cancel each other out. 128 respondents (around two per cent) reported cohabiting with their future spouse at age 23 but subsequently reported 10 years later that they had married directly, whilst a similar number of individuals (N=136) said the opposite. There is no evidence then, that the passage of time since the event changes

the likelihood of respondents reporting premarital cohabitation.

The 'errors' made by those giving inconsistent responses as to the type of their first partnership at age 23 and 33 are shown in Table 2.12. As already mentioned, a number of individuals failed to recall a period of premarital cohabitation. Other respondents failed to recall at age 33 closed periods of cohabitation, and in a few cases marriages, that had been reported ten years earlier. In such cases the presence of a current partner possibly unaware of the cohort member's previous partnership history might be important. Cohort members may themselves want to forget earlier failed partnerships and not wish to have to recall dates and other information concerning this period of their lives.

Table 2.12: Error made by individuals inconsistently reporting their first partnership type at age 23 and age 33.

Type of error	N	%
At age 33 failed to recall a closed period of cohabitation reported at age 23	98	23
At age 33 failed to recall a period of premarital cohabitation reported at age 23	128	30
At age 33 failed to recall a marriage reported at age 23	7	2
At age 23 failed to recall a closed period of cohabitation later reported at age 33	24	6
At age 23 failed to recall a period of premarital cohabitation later reported at age 33	130	30
Inconsistency between age 23 and 33 as to whether partnership was marital or cohabiting	10	2
At age 23 reported a closed cohabiting partnership but at age 33 reported a cohabiting partnership which later translated into marriage	20	5
Partnership histories very inconsistent	12	3
Total	429	100

There are also those who recall at age 33 periods of cohabitation which were not mentioned at age 23. Some, but by no means all of these are unions of short duration, and hence missed in the earlier survey due to the six month definition of cohabitation. Other respondents who reported a period of cohabitation which had broken down at age 23

appear, in 1991, to have overlooked this (probably short period of) separation and reported a continuing cohabiting relationship or one which translated into marriage. Finally, some people are inconsistent as to whether their first partnership was marital or cohabiting.

In summary, the change in the definition of a cohabiting partnership from a minimum duration of six months to one month cannot explain most of the inconsistencies in the reported partnership type at age 23 and 33. It remains difficult, however, to identify the source of these errors as purely due to faulty recall, since some of the inconsistencies may be the result of differences in question wording, interviewer, instrument, coding or processing errors.

2.4.5 Regression analyses of inconsistent reporting of premarital cohabitation

Next we use a logistic regression model to identify the socio-economic and environmental factors associated with the probability of consistently reporting a period of premarital cohabitation for all first marriages that took place before exact age 23. The logistic regression models the probability of an individual i consistently recalling premarital cohabitation p_i, given a vector of independent variables $\underline{X_i}$ (shown in Table 2.13) thus:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \underline{\beta_1}'\underline{X_i}$$

where β_0 and $\underline{\beta_1}$ and are unknown parameters.

Despite the large number of covariates included in the analysis, only a small number of variables were found to be significant predictors of the ability to recall a period of cohabitation (Table 2.14).

Table 2.13: Summary table of variables used in regression analyses and their statistical significance at the five per cent level.

Variable	Premarital cohabitation remembered at age 23 but not age 33	Premarital cohabitation remembered at age 33 but not age 23	Consistent reporting of first marriage date
Sex	✓	✓	✓
Age at entry into partnership	✓	X	✓
Prior partnership history			✓
Duration of premarital cohabitation	✓	✓	
Whether marriage ended by age 33	X	X	✓
Whether partner present at interview	X	X	X
Occupational social class at age 23	X	X	X
Economic activity at age 23	X	X	X
Age left school	X	✓	
Highest qualification at age 23	X	X	✓
Father's social class at age 7	X	X	X
Age mother left school	X	X	X
Region of residence at age 16	✓	X	X

Note: Variables significant at the five per cent level are shown by ✓, whilst variables included in the original model but not found to be significant as X. Variables not included in the model are shown as blanks.

The top half of Table 2.14 shows for those who reported at age 23 that they cohabited with their future spouse before first marriage, the estimated odds ratio of whether they also report this premarital cohabitation at age 33. The lower half of Table 2.14 shows for those who report a period of premarital cohabitation before their first marriage at age 33, the estimated odds ratios for this also being reported at age 23. The data suggest that the odds of reporting premarital cohabitation successfully at age 33 are significantly lower for men, for marriages that occurred in the more distant past, and for marriages where the period of premarital cohabitation was of short duration (less than a year). Once these factors are

controlled, no effect is found relating to whether the marriage subsequently broke down. We find no evidence to suggest that the presence of a current partner during the interview affects the propensity to report premarital cohabitation, either among those who remain in their first marriage or for those whose first marriage had ended by age 33[7]. No interactions between gender and the remaining coefficients are found suggesting that their effects are similar for men and women.

These findings are generally consistent with those found previously by Peters (1988), and Poulain and colleagues (1992), although Aquilino (1993) had previously observed a positive association between the presence of a spouse at interview with an increased propensity to recall premarital cohabitation. Many socio-economic variables such as the respondent's socio-economic background, their highest education qualification, social class and economic activity (as measured at age 23) are not found to be significant predictors of whether the period of cohabitation is remembered or not. However, geographical region of residence at age 16 was significant. Further analysis is required to investigate why those brought up in the South, East and South East appear to be better at recalling periods of premarital cohabitation. It is interesting to note that the reporting is least accurate in those areas where the overall level of cohabitation is lowest (Haskey and Kiernan, 1989).

In the lower half of Table 2.14, few explanatory variables are found to be significantly associated with the reporting, at age 33, of a period of premarital cohabitation which had not been reported at age 23. Men are once again less likely to be consistent in their reporting, as are those who had left school at an early age. By far the most important factor is the length of the cohabitation reported at age 33, short periods of premarital cohabitation, especially those less than six months, being more likely to be recalled at age 33 but not 23. These inconsistencies may result from changes in the individuals' perception of their relationship prior to marriage. At the time they may have perceived their relationship as one of 'girlfriend and boyfriend', whereas with hindsight they may recognise that they were 'living together as a couple'.

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[7] Among those who married prior to age 23 and who remained in their first marriage at age 33, 57 per cent of male respondents conducted the family section of the age 33 interview in the presence of their partner, as compared with 16 per cent of female respondents.

Table 2.14: Logistic regression of proportion successfully recalling a period of premarital cohabitation at age 23 and 33.

Variable		Odds Ratio
Premarital cohabitation reported at age 23, whether later recalled at age 33		
Sex	Men	1.00
	Women	1.70 **
Age at marriage	Under 20	0.33 **
	20 and above	1.00
Duration cohabitation as reported at age 23	Less 12 months	1.00
	Greater 12 months	1.48 *
Region residence at age 16	Scotland and North	1.00
	Midlands and Wales	0.88
	South and East	2.42 **
	London and South East	2.73 **
	Not known	0.75
Intercept = 1.25	N=849	-2 Log Likelihood = 671.1
Premarital cohabitation recalled at age 33, whether reported earlier at age 23		
Sex	Men	1.00
	Women	1.47 **
Duration cohabitation as reported at age 33	Less 2 months	1.00
	2-5 months	3.71 **
	6-11 months	6.61 **
	Greater 12 months	6.47 **
Age left school	Age 16 years	1.00
	Age 17 or more	2.07 **
Intercept = -0.36	N=867	-2 Log Likelihood = 735.8

Note: ** Denotes significance at the five per cent level. * Denotes significance at the ten per cent level.

2.4.6 Inconsistencies in the reporting of first marriage date

Table 2.15 compares the first marriage date as reported at age 23 and age 33 for all marriages that took place by exact age 23 (whether the marriage was the first partnership or not). Overall, 89 per cent reported an identical month and year for their first marriage. A further three per cent of individuals report the date to within a couple of months. The percentage of exactly matching responses is higher among cases where the reported partnership history is consistent in the two surveys, especially for those who reported at age 23 and 33 that they had married directly and were still married at the time of the 1981 interview. Individuals who had experienced marital disruption or had more complex partnership histories are less accurate in reporting their first marriage date. Amongst those who provided inconsistent reports about their partnership history, the reporting of the date of first marriage is also less consistent; three quarters report the marriage date to within a couple of months, whilst six per cent report the same month but a different year. The inclination to report the same month but slightly different year of first marriage is not surprising: one is unlikely to forget that the wedding took place on a hot August day or a miserable March afternoon but one might well not recall whether it was 1976 or 1977.

Despite obvious errors in the dating of entry into first marriage, no systematic recall bias is evident; whilst six per cent of respondents at age 33 recall their marriage as having taken place earlier than originally reported, the same number give a later date. These errors will tend to act as background noise and may only become important when we try to combine the partnership history with other event histories to look at interactions between life events, marriage and first birth, for example (Courgeau, 1992).

Table 2.15: Comparison of reported date of first marriage at age 23 and 33, for first marriages reported by exact age 23.

	Exact year and month	+/- 2 mths	Exactly 12 months out	N
Partnership history at age 23 and 33 agrees				
Married directly				
Still married at age 23	91.2	94.1	3.3	3434
Divorced/remarried at age 23	76.9	85.8	5.8	260
Premaritally cohabited				
Still married at age 23	88.8	91.8	5.6	624
Divorced/remarried at age 23	73.1	82.7	7.7	52
Cohabited with another prior to marriage	73.1	76.9	11.5	26
Partnership history at age 23 and 33 disagrees	73.3	77.1	6.0	319
Total first marriages	**88.6**	**92.0**	**4.1**	**4715**

2.4.7 Regression analyses of inconsistent reporting of first marriage date

The trend for individuals with relatively simple partnership histories to recall more accurately their date of first marriage persists once the time since the marriage and other factors have been controlled for in a logistic regression (Table 2.16). Here the dependent variable identifies individuals according to whether they report the date of their first marriage to within plus or minus two months in the two survey rounds, or whether the reported date differs by more than this amount. The effect of age at first marriage (and hence the time since the event being reported) is reduced when other socio-economic variables are introduced into the model but remains statistically significant, suggesting some memory decay effect.

The accuracy of reporting for marriages which have since broken down is significantly

worse, even after controlling for time since the event - perhaps indicating a lower salience of the event in the respondent's memory. Although men report less accurately than women, the effects of the other variables do not generally differ according to sex. The only significant interaction suggests that men are particularly bad at reporting the date of first marriages which subsequently broke down. Whilst social class and economic activity are not found to be significant, there is a positive monotonic relationship between education and accuracy of recall. When we restrict our attention to those couples who at age 33 remained in their first marriage, the variable denoting whether the spouse was present at the interview is not associated with an increase in reliability, even for men.

Table 2.16: Logistic regression of proportion reporting same first marriage date at age 23 and 33[1]

Variable		Odds Ratio
Sex	Men	1.00
	Women	1.67 **
Age at marriage	Under 20	0.75 **
	20 and above	1.00
Partnership history as reported at 23 and 33	Agreed direct marriage	1.00
	Agreed premarital cohabitation	0.74 **
	Agreed previous cohabitation	0.21 **
	Disagreed as to whether cohabited	0.28 **
Whether marriage ended by age 33	Marriage still going	1.00
	Marriage ended	0.23 **
Educational qualifications	Degree or above	1.00
	A level Nurse/Teaching	0.37 **
	O Level and Craft	0.27 **
	CSE and equivalent	0.26 **
	None	0.19 **
Interaction	Women * marriage ended	2.65 **
Intercept = 4.10	N=4704	-2 Log Likelihood = 2438

Note: ** Denotes significance at the five per cent level. * Denotes significance at the ten per cent level.

[1] Reporting at age 33 a date to within two months of that reported at age 23. Sample refers to all first marriages taking place by age 23.

In summary, the accuracy with which individuals are able to report their date of first marriage varies systematically between sub-groups of the population. Like Peters (1988) and Poulain and colleagues (1992) we find that women, those with higher levels of education, those with simple partnership histories, and those still in their first marriage are more accurate in their recall.

2.4.8 Inconsistencies in the reported duration of premarital cohabitation

Marriage is marked by a legal ceremony and often a large celebration. No such ceremony usually marks the entry into an informal union. Indeed for many people the beginning of a cohabiting union is a gradual process not even distinguished by an event such as one partner moving all of their belongings into the other's house. We might expect, therefore, that the reporting of cohabitation start and end dates would be far worse than the reporting of marriage dates. The phrase "living as a couple" is open to many interpretations, and cohabitation as reported by NCDS cohort members is likely to include essentially visiting unions, or those who are "living apart together", as well as couples who permanently share the same household. The self-definition of cohabitation not only differs among individual cohort members but is also likely to change for the same individual over time. For example, in 1981 an individual may not have perceived their relationship with their partner as 'cohabitation'. However, 10 years on they may recognize that indeed they were essentially 'living as a couple' and report it as 'cohabitation'.

In Table 2.17 we take those who report at both age 23 and 33 that they had cohabited before first marriage, and compare the duration of the period of the premarital cohabitation. Overall, one third of individuals report the exact same duration of premarital cohabitation, whilst many more (59 per cent) report the duration to within a couple of months. As seen earlier in relation to marriage dates, the reporting of premarital cohabitation is more consistent among those with less complex union histories. Not surprisingly, when we include in the analysis only those individuals who report the same month and year of first marriage, the reporting becomes more consistent, but only by a relatively modest amount (37 per cent of individuals report exactly the same duration of premarital cohabitation, whilst 63 per cent report the duration to within a couple of months).

Table 2.17: Comparison of the reported duration of premarital cohabitation prior to first marriages before age 23.

Consistency of partnership history at age 23 and 33	Duration of premarital cohabitation			
	+/- 2 months	3-11 months out	More than 12 out	N
Partnership history at age 23 and 33 agrees				
Still married at age 23	59.8	30.6	9.6	624
Divorced/remarried at age 23	51.9	34.6	13.5	52
Recalled additional cohabiting partnership at age 33	53.8	23.1	23.1	13
Total	58.9	30.9	10.2	689

Note: Sample includes those who in both survey rounds reported a period of premarital cohabitation prior to first marriage.

Of particular interest is the pattern shown in Figure 2.2, for respondents to report longer durations of premarital cohabitation at age 33 as compared with age 23. The pattern persists among those who report the same month and year for their first marriage. This pattern may result from changes in the cohort member's perception of the partnership over time, as discussed above. In 1991, cohort members may recall the date that their relationship actually began, and not necessarily the date when they started to "live together as a couple". The greater acceptability of extended periods of premarital cohabitation in 1991 as compared to ten years earlier may also encourage this trend.

In order to identify whether this recall bias was due to a general trend to report slightly longer periods of cohabitation or whether it resulted from a few people changing their estimated duration substantially we need to look at the individual responses at age 23 and at age 33 on a scatterplot (Figures 2.3a and 2.3b). We can see that for both men and women there is a general tendency to bias the duration of cohabitation upwards when reporting at age 33. There are also a number of individuals who report quite short periods of premarital cohabitation at age 23 but very long durations at age 33. Whilst we must bear in mind that these patterns result from a combination of measurement errors, the data

Figure 2.2: Length of premarital cohabitation as reported at age 23 and 33.

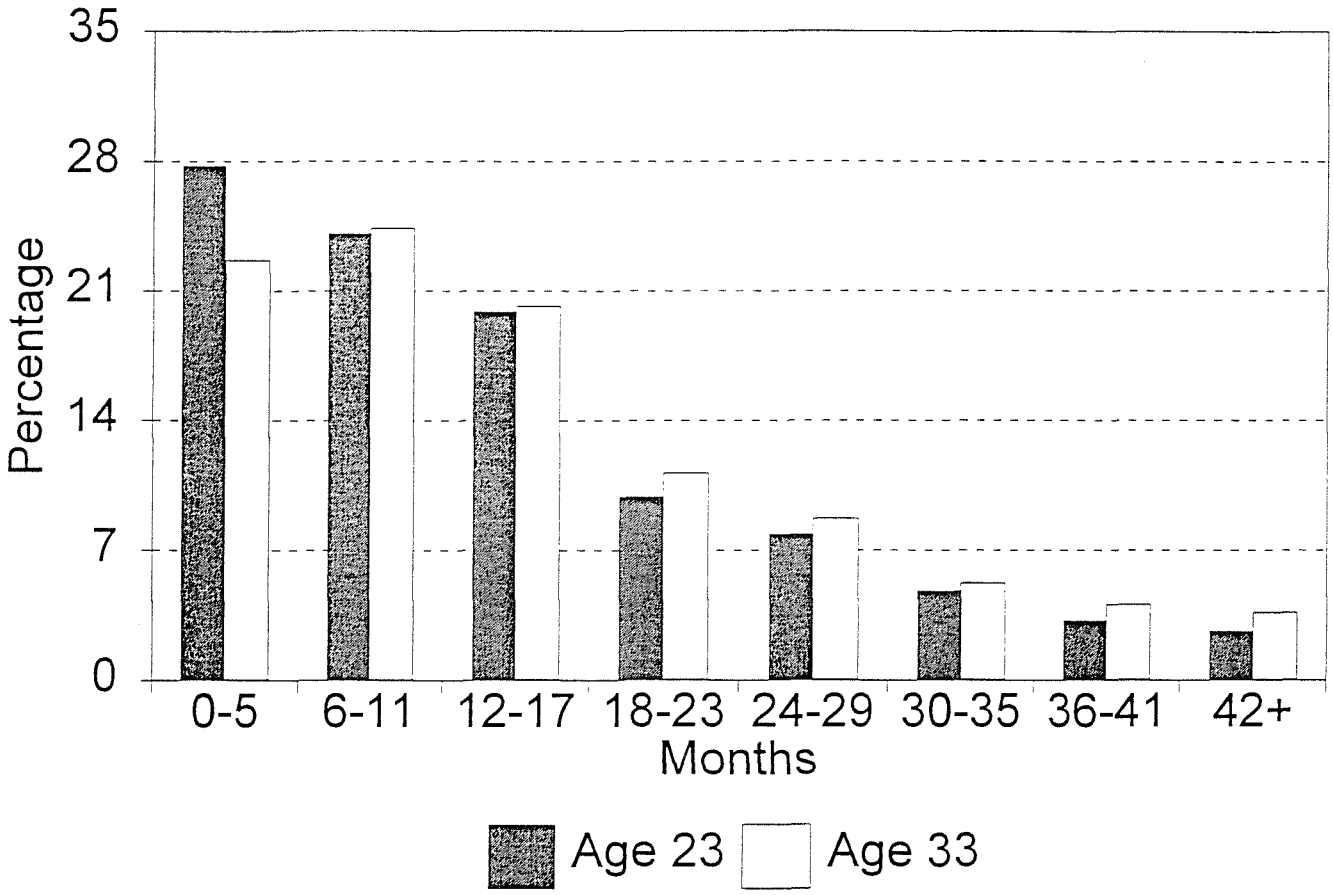


Figure 2.3a: Length of premarital cohabitation as reported by individual men at age 23 and 33.

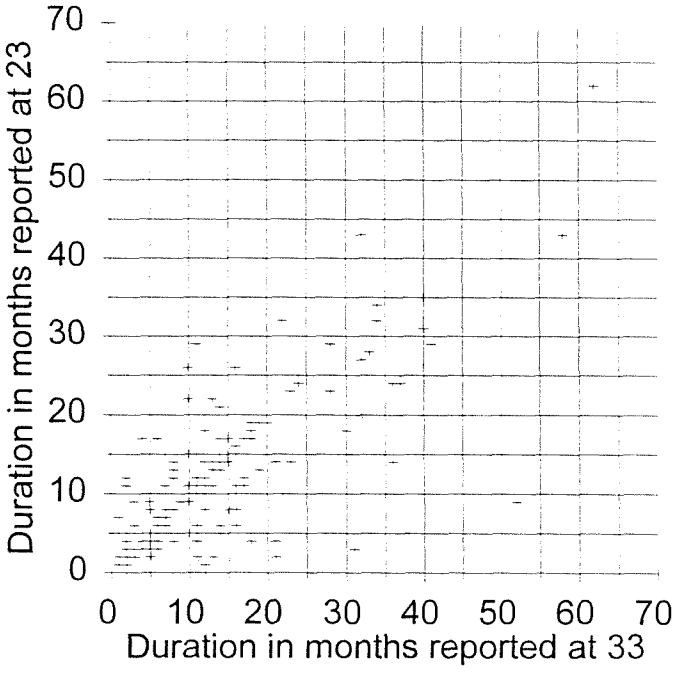
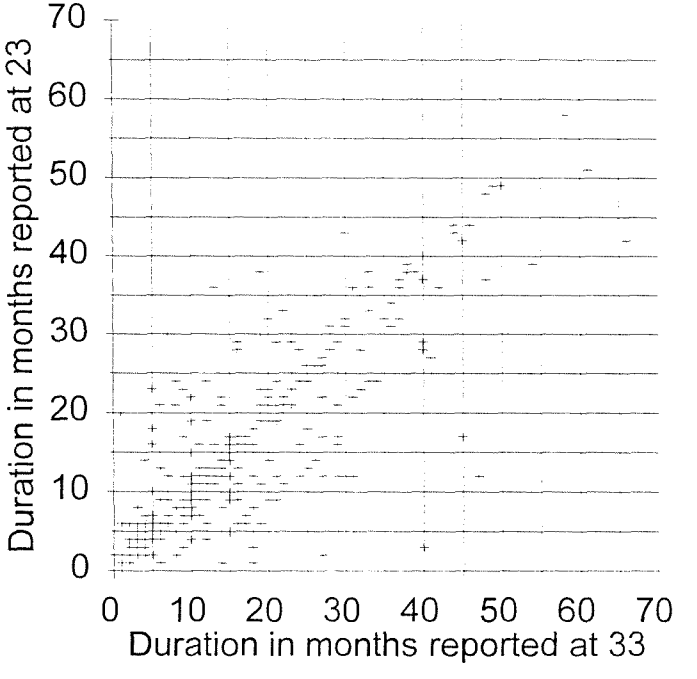


Figure 2.3b: Length of premarital cohabitation as reported by individual women at age 23 and 33.



seem to suggest that individuals' recollections of cohabitation are fluid and open to reinterpretation over time. Data on informal partnerships are less reliably collected within retrospective surveys than that for formal marriages.

2.4.9 Creating an adjusted partnership history

The analyses in this thesis use data collected at age 33 which have been cleaned and adjusted to include all partnerships and periods of premarital cohabitation that were reported at age 23 but omitted at age 33. In general we follow the premise that respondents are unlikely to make up imaginary partnerships for which they are required to report further details including dates of entry and exit. The characteristics of the adjusted and unadjusted data can be seen in Table 2.18. The two datasets report very similar proportions who are ever married or who have ever had a partnership, but the adjusted data contain more first partnerships that are cohabiting at the start. The percentage of first marriages preceded by cohabitation is also slightly higher in the adjusted dataset (for example, among men the percentage increases from 33.9 per cent to 35.3 per cent). Much of the change between the two datasets can be attributed to the inclusion in the adjusted data of closed periods of cohabitation which were recalled at age 23 but not at age 33. This is especially the case for men.

In further work not reported here (Berrington, 1997) we have compared the results from our discrete-time hazards models of entry into first partnership using this adjusted partnership history with those obtained using a) original age 33 data and b) original age 23 data. We observe only small differences in the effect of covariates and our substantive findings remain unaffected. Like Peters (1988) and Courgeau (1992) we conclude that these measurement errors are relatively unimportant for substantive findings, even when the partnership histories are analysed in conjunction with other event data such as childbearing and housing histories.

Table 2.18: Comparison of original and adjusted partnership history data.

	Men		Women	
	Original	Adjusted	Original	Adjusted
Percentage ever had a partner	88.82	88.81	93.12	93.40
Percentage ever married	78.39	78.42	85.07	85.21
Mean age at first partnership	23.79	23.71	21.88	21.81
Percentage first partnerships				
Direct marriage	56.47	54.95	63.65	62.19
Cohabitation leading to marriage	26.51	27.09	23.33	23.94
Cohabiting union only	17.03	17.96	13.02	13.87
Mean age at first marriage	24.42	24.40	22.47	22.46
Percentage first marriages preceded by cohabitation	33.92	35.28	29.41	30.71
Percentage first marriages preceded by a closed period cohabitation	5.99	7.09	4.79	5.58
Sample size	5538	5541	5756	5759

2.5 Summary

At the aggregate level, the age 23 and 33 surveys provide a reasonably consistent picture of age patterns and the prevalence of the different types of partnership. At an individual level some inconsistencies appear, especially among men. Marriage dates are reported better than cohabitation dates. There is a tendency for longer durations of premarital cohabitation to be reported at age 33 than at age 23. This may result from changes in the respondent's perception of their relationship, coupled with increases over time in the social desirability of cohabitation.

Logistic regression analyses of the reliability with which respondents report dates of

marriage and periods of premarital cohabitation suggest that recall errors are more numerous among men, those with less education, that they increase according to the time since the event, when partnerships histories are more complex, when the respondent is reporting on a partnership which has since broken down, and when the period of premarital cohabitation is very short. The presence of a partner at interview is not found to be associated with either the reliability of reporting of the date of first marriage or the reporting of cohabiting partnerships.

Chapter 3 First Partnership Formation

In this chapter we describe the partnership trajectories taken by NCDS cohort members before examining the patterns and determinants of entry into first partnership. We discuss some theoretical considerations pertaining to the modelling of cohabitation and marriage, and introduce the discrete-time hazards models used in this thesis. Taking a lifecourse perspective we put forward hypotheses as to how family background factors and current lifecourse experiences affect the timing of entry into first partnership and the decision whether to marry directly or cohabit.

This work uses the adjusted partnership history data discussed in Chapter 2, but was completed before clean fertility and housing history data were available. Consequently, in this chapter we confine ourselves to investigating the effects of fixed covariates on patterns of entry into first partnership. In Chapter 4 we shall examine the transition into first partnership in the context of leaving the parental home and the transition to parenthood.

3.1 Partnership Trajectories of the 1958 Birth Cohort

Overall, 89 per cent of the 5,541 men and 93 per cent of the 5,759 women who took part in the fifth sweep of NCDS had ever had a marital or cohabiting partner by age 33. Whilst the maximum number of partnerships reported was seven, the majority (63 per cent) of respondents had just one partnership where they have lived as a couple for a month or longer. Only four per cent have had three or more such partnerships. Around 46 per cent of men and 45 per cent of women had experienced a cohabiting partnership of some form, whilst 78 per cent of men and 85 per cent of women had been married at least once.

Three partnership types can be identified: direct marriages where the couple marry without living together beforehand; partnerships where the couple are cohabiting at the start but later marry each other; and cohabiting unions which have neither ended nor translated into marriage (as yet). Figures 3.1a and 3.1b show the trajectories taken by men and women

Figure 3.1a: Partnership trajectories of men born in 1958. Percentages.

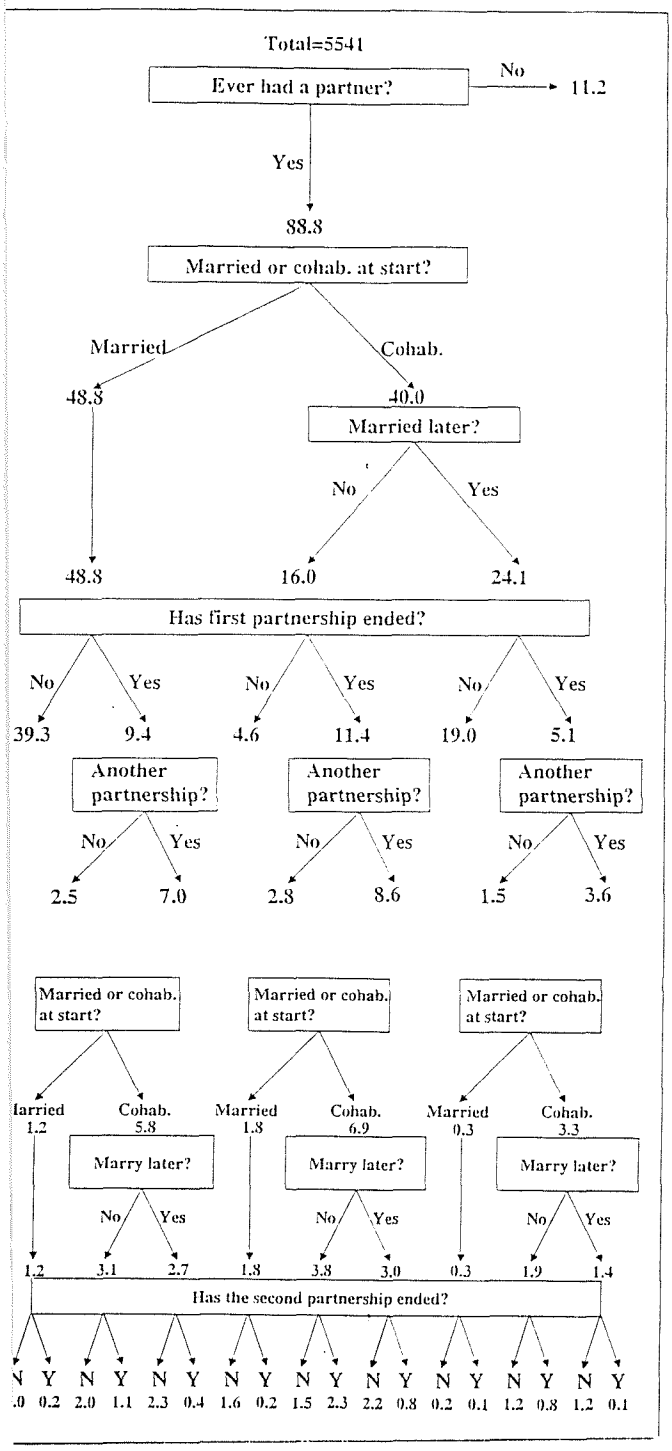
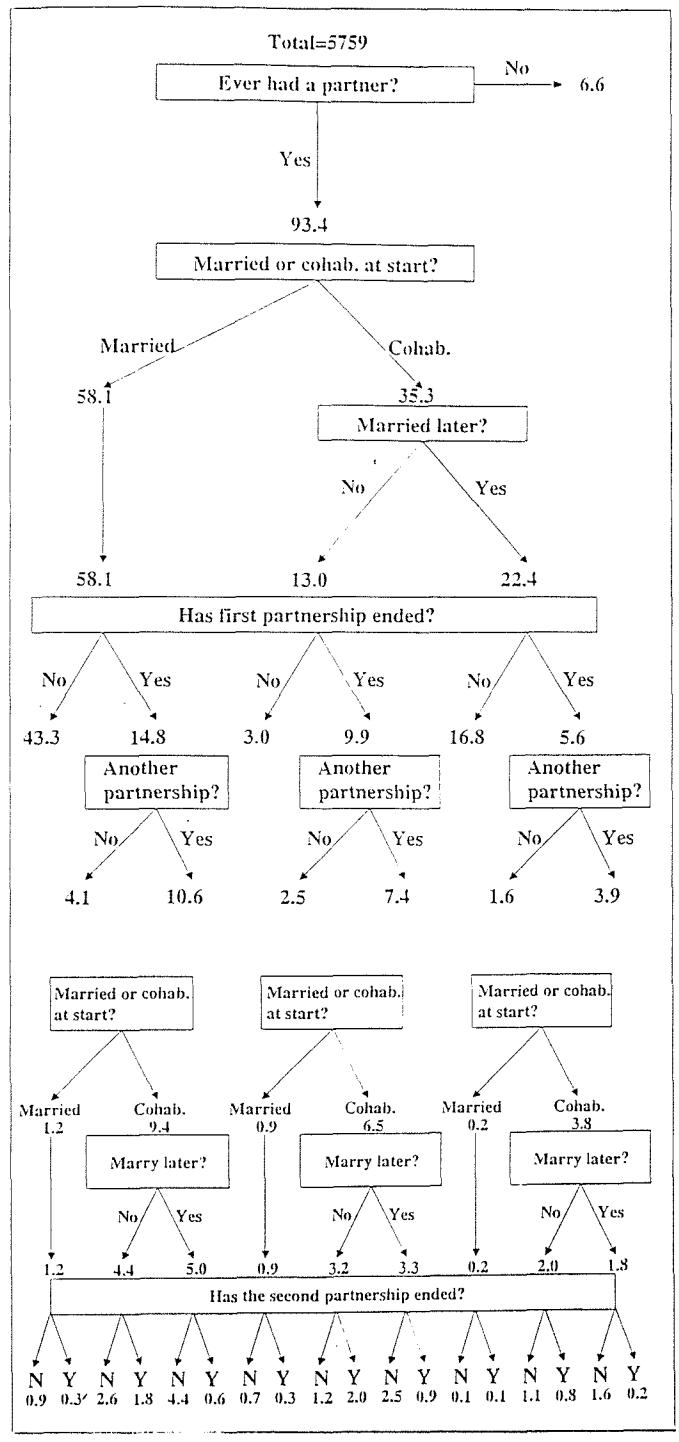


Figure 3.1b: Partnership trajectories of women born in 1958. Percentages.



born in 1958 through their first two partnerships according to partnership type. The percentages refer to the proportion of the total population who have followed that lifecourse up until that point. It is immediately obvious that the number of potential trajectories increases exponentially according to the number of partnerships included. The diversification of the lifecourse which has taken place over the last few decades is reflected in the relatively low percentage (39 per cent of men and 43 per cent of women now aged 33) who followed a "traditional" course of direct marriage (i.e. married their partner without cohabiting with them, or anyone else beforehand) and who remain currently married at age 33.

Overall, 35 per cent of men marrying for the first time lived with their spouse prior to first marriage as compared with 31 per cent of women. As Figures 3.1a and 3.1b show, premarital cohabitation is more common among later marriages. Amongst those who married their first partner directly, but who had experienced marital dissolution, less than one fifth went on to marry their second partner without cohabiting beforehand. Premarital cohabitation is also more common among those who have already experienced a closed period of cohabitation. By age 33, one in five ever married men and one in four ever married women had experienced the dissolution of their first marriage (mostly through divorce and separation).

3.2 Entry into First Partnership

3.2.1 Theoretical considerations in modelling entry into marriage and cohabitation

There are a number of ways in which we may model the process of first partnership formation depending on the assumed relationship between marriage and cohabitation (Manting, 1991). If our interest is primarily related to household formation, then what is of concern is the time when the respondent first enters a co-residential partnership. However, most academics, commentators and policy makers tend to emphasize differences between cohabitation and marriage, citing for example the lower reported levels of relationship quality (Brown and Booth, 1996) and the greater instability among cohabiting

partnerships (Buck and Ermisch, 1995). Accepting that marriage and cohabitation are different, there are at least two ways in which one could proceed.

One might view the decision to live together and the decision whether to marry or cohabit as a sequential process. In this case a two-stage model would be most appropriate where one causal process underlies the decision to live as a couple and a second underlies the decision whether to live as a cohabiting or a married couple (Yamaguchi, 1991 "Competing risk ideal type I"). We might then use one event history model to predict the overall rate of first partnership formation and a second logistic regression to ascertain whether the partnership was marital or cohabiting (Clarkberg et al., 1995). Alternatively, we may consider direct entry into marriage and entry into cohabitation to be two distinct processes or competing risks[8]. In this case the occurrence of one event removes the individual from the possibility of experiencing the other, (Yamaguchi, 1991 "Competing risk ideal type II"). Such an approach is taken by a number of authors, and is used here (Hoem, 1986; Liefbroer and De Jong Gierveld, 1992; Manting, 1994; Thornton et al., 1995; Ermisch and Francesconi, 1996).

3.2.2 Life table analyses of entry into first marriage and cohabitation

Entry into first partnership is a non-renewable process which can be analysed using conventional life table techniques. Multiple decrement life tables allow us to extend this methodology for situations where there is more than one type of decrement. An individual can either leave the single state through direct marriage or cohabitation, but cannot do both. Figures 3.2a and 3.2b show for men and women respectively, life table probabilities of marriage and cohabitation. Marriage probabilities increase to a peak for women in their early twenties and for men in their mid-twenties before declining. In contrast, the rate of entry into cohabitation increases throughout the teenage years, for women remains fairly constant through their twenties, and for men continues to increase up until their late twenties. These patterns reflect a number of underlying trends. First, rates of entry into

[8] Some individuals, for example those whose partners are still legally married to another person, will not have a choice between marriage and cohabitation.

Figure 3.2a: Life table rates of first entry into marriage and cohabitation among never partnered men by age.

Figure 3.2b: Life table rates of first entry into marriage and cohabitation among never partnered women by age.

first partnership are based on the population who remain single up until that age. Previous research has highlighted a cross-over in the relationship between socio-economic status and family formation. At young ages men and women from more disadvantaged backgrounds are more likely to begin family formation, whilst at older ages those with higher socioeconomic status have higher rates of family formation (Murphy and Sullivan, 1986; Berrington and Murphy, 1994). Hence those who remain single in their late twenties and early thirties are likely to be a heterogenous group consisting of both advantaged men and women who have relatively high rates of partnership formation, particularly cohabitation, and those more disadvantaged, for example the unemployed and economically inactive, who have very low rates of partnership formation.

A second process underlying the age pattern of entry into first partnership among NCDS cohort members is the increase over the last twenty years in the popularity of cohabitation. Data from the General Household Survey show how the percentage of single women aged 18-49 currently cohabiting more than doubled from nine per cent in 1981, to 23 per cent in 1991 (OPCS, 1996). NCDS cohort members who remained single in the late 1980s were deciding whether to marry or cohabit with their partner in a different social and moral climate from those who made the decision ten years earlier. As the NCDS refers to a single birth cohort it is impossible to differentiate between these age and period effects. Multiple birth cohort data are required to compare the experience of the NCDS cohort with more recent cohorts. Such data were not available for this project, but future analyses of the 1970 birth cohort may prove illuminating. We would anticipate that among more recent birth cohorts, the risk of entering cohabitation would increase at a much younger age, and that the risk of marrying would be lower at younger ages than is the case for those born in 1958.

3.3 Factors Affecting Entry into Marriage and Cohabitation

3.3.1 Introduction

This section reviews previous theoretical and empirical investigations of the factors relating to entry into first partnership. Whilst the examination of the determinants of age at marriage has long been a tradition among demographers, investigation of entry into cohabiting unions is more recent. Many of the early studies of the characteristics of cohabiting couples were based upon cross-sectional data. There are, however, a number of problems with this approach. First, analyses based on cross-sectional data can provide apparently inconsistent views according to whether cohabitors are compared with married couples, or with their never married counterparts. In the United States, comparison of cohabitors with never married individuals suggests that cohabitors are less likely to be employed and have lower levels of education (Tanfer, 1987), whilst comparison with married couples suggests that cohabitors are more likely to be employed and have higher levels of education (Spanier, 1983). Which is the correct comparison depends upon our view of whether cohabitation acts as an alternative to remaining single, or an alternative to marriage. Similarly, when comparing the percentages currently cohabiting within different socio-economic or educational groups, it is unclear what constitutes the population "at risk" of cohabitation. Different impressions of socio-economic differentials in the prevalence of cohabitation can be gained according to whether the percentage is based on the total population, the never married population, or the population in a couple (Berrington, 1991).

As noted by Blom (1994), many analyses have attempted to compare the social characteristics of cohabitors with married couples and those living outside a union, without distinguishing whether the characteristics were acquired before or after union entry. It is only more recently that the availability of full partnership and other event history data in different developed countries has permitted multivariate analyses of the transition into first partnership and hence the identification of the causal ordering of events.

The following section describes the covariates included in our preliminary analyses and their anticipated effect on entry into first partnership. The choice of covariates is made on

the basis of theoretical expectations, previous research findings and their availability within the NCDS dataset. In keeping with a lifecourse approach we distinguish those factors associated with past lifecourse experiences from those associated with current lifecourse experience. Let us begin with the former.

3.3.2 Parental and family background characteristics

Parental socio-economic status

Are parental social class, housing tenure, or maternal education associated with entry into marriage and cohabitation? Previous research from Britain and other developed countries has highlighted a strong positive relationship between parental socio-economic status and age at marriage. Many authors have argued that parental resources *indirectly* affect age at marriage by increasing the time spent in education and hence the career prospects of their offspring (Marini, 1978; Waite and Spitze, 1981; Michael and Tuma, 1985; Hoem, 1986; Blossfeld and Huinink, 1991). Other researchers have suggested, however, that social background may exert a *direct* effect on age at marriage through class specific values and perceptions regarding the "correct" age at which men and women should marry (Kiernan and Eldridge, 1987; Liefbroer and De Jong Gierveld, 1992; Ghilagaber, 1993). According to Ghilagaber (1993) men and women from different backgrounds are likely to have different values, aspirations and life time plans. Evidence from analyses of age at marriage among the 1946 British birth cohort tends to support this view. Kiernan and Eldridge (1987) found that the age at which women began to enter into marriage differed systematically between socio-economic groups (being lowest for factory workers, and highest for women in professional occupations), but that once this age was reached a "lemming effect" took over such that women in that particular socio-economic group married very rapidly.

In summary, we expect to find *an association between more advantaged socio-economic backgrounds (that is, father in non-manual occupation, mother left school after the minimum age of 15, owner-occupied housing) and a later age at marriage. However, once the cohort member's later lifecourse experiences have been entered into the model, these effects may become insignificant.*

There is less agreement between previous empirical studies as to the effect of socio-economic background on the propensity to enter into cohabitation. To some extent these inconsistencies result from the different historical contexts within which the rise in cohabitation has taken place in different countries. In Sweden, cohabitation traditionally was more common among working class men and women but has since been adopted by all social classes (Bernhardt and Hoem, 1985; Hoem, 1986). The opposite however, has been suggested for the Netherlands where, according to Liefbroer and De Jong Gierveld (1992), cohabitation started among young adults with a high level of completed education but has since been taken up to a greater extent by less educated men and women. In France, cohabitation is thought to have begun among working class women, but was taken up in the 1970s and 1980s in much greater numbers by middle and upper class women (Villeneuve-Gokalp, 1991), whilst in Norway it appears that modern cohabitation developed from two socially opposite origins, the educated elite and the working class (Blom, 1994).

As discussed in Chapter 1, young people in Britain began living together either as a prelude to, or as an alternative to marriage during the 1970s and 1980s. Kiernan and Estaugh argue that the rise in premarital cohabitation has not been confined to any particular social group and that there are "few differences between the socio-economic circumstances of these childless cohabitors and their childless married contemporaries" (Kiernan and Estaugh, 1993, p 69). They did find, however, that cohabiting couples with children are more disadvantaged than married couples with children. On the basis of these findings we suggest that *socio-economic background will have an effect on the timing of entry into first partnership, but that it will not affect the choice between marriage and cohabitation.*

Parental demographic characteristics

Previous empirical research has highlighted intergenerational associations in the timing of family formation (Kiernan and Diamond, 1983; Kiernan and Eldridge, 1987; Thornton, 1991; Manting, 1994). Evidence from the United States has clearly shown how parental beliefs and values relating to the timing and type of family formation can have independent effects on their children's behaviour (Axinn and Thornton, 1993). Parents who themselves

married at an early age will have more positive attitudes towards entering a partnership at a relatively young age. Manting (1994) suggests that younger parents may have more liberal attitudes and hence may be more willing to allow their offspring to enter into a cohabiting relationship. We might also expect cohort members whose mothers experienced a premarital conception to have been exposed during adolescence to more positive attitudes towards partnerships outside of marriage (Thornton, 1991). In the following analyses we test the hypothesis that *cohort members whose mothers began family formation at an early age will be more likely to enter into a first partnership at a young age and will be more likely to cohabit rather than marry. Men and women whose mothers had a premarital conception will be more likely to cohabit and less likely to marry*[9].

Region of upbringing

Regional differentials in the propensity to cohabit have also been found in many developed countries - for example, the Paris region of France (Leridon and Villeneuve-Gokalp, 1989), northern Sweden and Stockholm (Bernhardt and Hoem, 1985), middle and northern Norway (Blom, 1994). Previous analyses of cross-sectional data for Britain suggest that cohabitation is more common in the South and South East than in Scotland and the North (Haskey and Kiernan, 1989; Berrington, 1991). One possible explanation for this regional divide is the increased cost of housing in the South of England (Kiernan and Estaugh, 1993). Prior to the 1988 budget, mortgage tax relief was available for both individuals who jointly owned a house as long as they were not married. The tax system thus encouraged couples to live together outside of marriage. We might expect the effect of this legislation on the behaviour of young adults to be greater in the South of England where housing was more expensive. Whilst at the end of the 1980s the tax system was changed so that cohabiting and married couples are now treated in the same way with respect to mortgage tax relief, one could argue that the normative trend for couples to live together outside marriage had already been instilled to a greater extent in the South. Whether this explanation is the key or whether there are more pervasive cultural explanations for the regional differentials for couples to cohabit, the empirical evidence

[9] That is to say, the cohort member's mother had a conception less than eight months prior to the start of her first marriage.

would lead us to expect that for the 1958 cohort, *entry into cohabitation will be more likely among those who grew up in the South and South East.*

3.3.3 Current lifecourse characteristics

Ideally time-varying covariates, identifying the cohort member's current economic activity status, occupational social class and so on are required in order to investigate more closely the relationships between employment status and family formation. Whilst retrospective employment history data were collected within the age 33 round of NCDS, there were doubts as to the quality of these data. We decided, therefore, not to incorporate them in the current analyses. Instead we examine the effects of the cohort member's educational qualifications, occupational social class and economic activity as measured at age 23 on patterns of entry into first partnership. We recognise that for some individuals these socio-economic characteristics are measured at a time subsequent to family formation and hence there is a potential for reverse causation.

Economic theory of family formation

According to Becker (1981), the specialization of men into paid work and women into domestic production, and the dependency this creates, means that there are major gains from marriage. Single men and women marry when the gains from marriage are greater than the gains from not marrying. Couples are seen to marry assortatively, with positive assortive mating for traits that are complementary such as education, intelligence and attractiveness, whilst negative assortive mating occurs for traits that are substitutes, such as wage earning power.

If we accept Becker's argument, then the effect of increased education and economic prosperity on marriage timing will be different for men and women. Men with good labour market prospects will be better able to afford a family and will have greater attractiveness on the marriage market. *Hence we would expect higher rates of marriage among men who are employed, those with higher levels of education and those in higher earning occupations. Men who are unemployed or economically inactive will have lower rates of marriage.*

Women, however, are expected to specialize in domestic production. This poses a large opportunity cost in terms of lost earnings and career progression, especially for those most highly educated. As Becker notes "the gain from marriage is reduced by a rise in the earnings and labour force participation of women ..... because a sexual division of labour becomes less advantageous" (Becker, 1981, p 248). We would expect therefore that *for women, increased education and employment, especially in higher status occupations would be associated with lower rates of partnership formation. Women who are unemployed or economically inactive will have higher rates of marriage.*

Although Becker himself did not consider cohabitation in his economic theory of family formation, it would not be unreasonable to assume that the same sort of relationships exist between education and employment and entry into cohabitation. However, it seems likely that cohabitation requires less financial obligation than marriage and hence may be more attractive to the unemployed as an alternative. Cohabitation may also have a lower opportunity cost than marriage, being less permanent and less likely to involve children (Santow and Bracher, 1994; Thornton et al., 1995). Liefbroer and De Jong Gierveld (1992) suggest that an equal division of both household and market labour can more easily be attained within cohabitation than within marriage. If this were the case then *we would expect similar but weaker relationships between socio-economic status and entry into cohabitation. That is to say, unemployed men and those with lower levels of education may be more likely to cohabit rather than marry, whilst women who are employed in higher status jobs with higher levels of education may be more likely to cohabit.*

Since Becker's original formulation of his economic theory of marriage a number of criticisms and refinements have been made. Many authors have highlighted the need to distinguish the effect of current educational enrolment from educational attainment on the timing of partnership formation (Marini, 1985; Hoem, 1986; Oppenheimer, 1988; Blossfeld and Huinink, 1991; Thornton et al., 1995; Liefbroer and Corijn, 1996). In the following analyses we use the cohort member's highest level of educational qualification as a guide to the age at which they left education and the amount of human capital accumulated.

Educational enrolment

Partnership formation is generally postponed until individuals have completed their education. In attempting to explain this pattern, economic theorists have emphasized the large opportunity cost to disrupted schooling (Hogan, 1978; Oppenheimer, 1988). The decision to leave school and marry is costly because it truncates the accumulation of knowledge and skills necessary for an attractive job (Thornton et al., 1995). At the same time students tend to be relatively poor and dependent upon their parents for financial and material support and may thus be unable to undertake the financial responsibilities of marriage. Sociologists have emphasized the role incompatibility between marriage and being a student. Marriage is seen as an adult role and completion of full time education is often seen by society as part of the transition to adulthood (Hogan, 1978; Marini, 1978; 1985; Hoem, 1986; Blossfeld, 1995).

According to Oppenheimer (1988) educational enrolment acts to delay the age at marriage because it delays the transition to a stable work role and hence the time when individuals enter the marriage market. Unlike Becker, Oppenheimer argues that individuals have an imperfect knowledge of other marriage market participants and that there are costs involved in the search process. Future socio-economic attributes are often unpredictable at an early age. As a result "serious marriage searches may then be postponed until the emergent nature of each person's attributes and desired lifestyle is more manifest" (Oppenheimer, 1988, p 583).

Cohabitation is seen by Oppenheimer as a response to this delay in marriage, facilitated by the availability of modern contraceptives. "Cohabitation gets young people out of high cost search activities during a period of social immaturity....and it often offers many of the benefits of marriage, including the pooling of resources and the economies of scale that living together provide" (Oppenheimer, 1988, p 583).

Data from other countries suggest that cohabitation is more compatible with full time education (Hoem, 1986; Rindfuss and Van den Heuvel, 1990; Liefbroer, 1991; Liefbroer and De Jong Gierveld, 1992). This is not surprising given that the financial costs of entering cohabitation are much lower and that cohabitation requires less commitment than marriage. Liefbroer and De Jong Gierveld argue that "as partners in consensual unions

often expect less couple-oriented activities of each other than married partners, unmarried cohabitation will interfere to a lesser degree with the educational activities and the life-style expected of students" (Liefbroer and De Jong Gierveld, 1992, p 488). In Britain at least, students tend to live independently of their parents in shared accommodation. This non-family living may itself encourage entry into cohabitation. In summary, we hypothesize that *at younger ages there is a strong negative relationship between partnership formation and level of education. This effect will be much weaker for cohabitation than for marriage.*

Educational attainment

Once men and women have left full time education, Becker's thesis would lead us to expect that higher levels of educational attainment would be associated with increased rates of partnership formation among men, and lower rates among women. Whilst the empirical evidence seems to support Becker's thesis for men, the evidence for women is less convincing. In a recent cross-national study the relationship between educational attainment and entry into marriage was found to be either non-significant (in Sweden (Hoem, 1995) and West Germany (Blossfeld and Rohwer, 1995)), weak (in the Netherlands (De Jong Gierveld and Liefbroer, 1995)) or weakly positive (in the United States, (Oppenheimer et al., 1995)), once educational enrolment had been taken into account. Blossfeld (1995) concludes "more highly educated women tend to postpone marriage because they postpone the transition from youth to adulthood and not because they have accumulated a greater stock of human capital". "In terms of economic theory of the family, the conflict between women's increasing educational attainment and marriage is therefore confined to the period of transition from youth to adulthood and does not appear to continue throughout much of adult life" (Blossfeld, 1995, p 23).

In attempting to explain international differences in the observed effect of women's education on entry into marriage, Blossfeld (1995) and later Liefbroer and Corijn (1996) argue that the opportunity costs of family formation are not fixed, but vary according to the particular societal setting. The incompatibility of family formation and labour market participation is influenced by a number of exogenous factors such as the availability of public childcare, and the particular family system. We might expect the negative association between educational attainment and family formation to be greater in a country

such as Britain than Sweden, say. Furthermore, Liefbroer and Corijn (1996) note that the opportunity cost of family formation changes over the lifecourse, being highest for professional women in the early stages of their careers and less later on when they have established themselves. If this is true then we would expect the negative relationship between women's education and entry into first partnership to become weaker at older ages.

In summary we hypothesize that *once men and women have reached their early twenties and have completed full time education, the relationship between education and partnership formation will change. Among men there will be a positive relationship between education and partnership formation, whereas for women there will be a negative relationship which becomes weaker as age increases. These effects will be stronger for marriage than for cohabitation.*

Religious affiliation

The observed relationship between religiosity and entry into cohabitation is one of the most pervasive findings within the literature. Those who do not hold a religious affiliation are more likely to cohabit, although little difference has been found according to religious denomination (Tanfer, 1987; Liefbroer, 1991; Villeneuve-Gokalp, 1991; Blom, 1994; Manting, 1994). Since most religious groups discourage premarital sexual activity and cohabitation, commitment to and participation in religious activities is likely to decrease the incidence of cohabitation. At the same time religions generally place a high value on marriage, procreation and family life.

There is also evidence that cohabitation itself may influence religious behaviour and commitment (Thornton et al., 1992). Repeated measures of religiosity at different ages are required to identify the reciprocal effects of religiosity, cohabitation and marriage. Unfortunately little attitudinal data was collected at age 16, and so in our analyses we use religious affiliation as measured at age 23 to test the hypothesis that *men and women who do not express a religious affiliation are less likely to marry and more likely to cohabit.*

3.4 Methodology

3.4.1 Event history models

Our aim is to study the factors which affect the transition of individuals from the single state into either first cohabitation or first marriage. One way of analysing such a process would be to use a multinomial logistic regression model to estimate the probability that a particular event has occurred. This type of model has been used by Berrington and Murphy (1994) to investigate the socio-economic factors associated with alternative living arrangements of young people in Britain and by Liefbroer and colleagues (1994) to examine the link between young people's lifecourse intentions and their subsequent union formation behaviour. However, we have already seen in Figures 3.2a and 3.2b that the risks of marriage and cohabitation are not constant over time. Ideally we want to control for the duration spent in the single state and model the conditional probability that an event, say marriage, occurs in time interval t given that it had not occurred prior to this time interval. This can be done within either a continuous or a discrete-time event history model.

Many early lifecourse studies utilized Cox's (1972) partial likelihood method for parameter estimation (see, for example, Menken et al., 1981; Michael and Tuma, 1985; Murphy, 1985). These proportional hazards models assume that the effect of a covariate on the hazard rate is constant over the duration. Often this assumption is not valid and more recently demographers have used discrete-time hazards models which allow more easily for non-proportionality in the effects of covariates over the duration to be tested. A further advantage of using a discrete-time model is the ease with which time-varying covariates can be included in the model. There are further theoretical gains in using a discrete-time competing risks model. First, the duration spent in a state is only measured in NCDS data to the nearest month and hence is not truly continuous. When events are measured in discrete-time intervals it is common for two or more individuals to experience an event at the same time. Unlike some continuous time models (for example Cox's proportional hazard model), discrete-time models can handle these ties without introducing bias into the parameters. More importantly, if the explanatory variables are categorical, discrete-time models can be estimated using log-linear methods for the analysis of contingency tables

(Allison, 1982).

Manting (1994) chose to run separate discrete-time piecewise constant log rate models of entry into marriage, entry into cohabitation, and entry into first partnership. Comparison of the parameter estimates from the three models highlights differences in the effect of explanatory variables on the risk of marriage as compared with entry into cohabitation. Other authors have undertaken competing risk analyses of entry into first partnership following the work of Larson (1984) where partnership type, that is to say whether the partnership was marriage or cohabitation, is included as one of the covariates (Hoem, 1986; Liefbroer, 1991; Ghilagaber, 1993). By testing for significant interactions between partnership type and the remaining explanatory variables the authors were able to test for differences in the effect of explanatory variables on the risk of entry into cohabitation as opposed to marriage.

In the following analyses we use a multinomial logistic model to estimate the probability of being either single, married or cohabiting within each discrete-time interval. By including a set of dummy variables for each of the time intervals we estimate a non-parametric hazard rate which can change with age. One practical advantage of such a model is that we can use conventional statistical software that will run logistic regression and, for a polytomous response variable, multinomial logistic regression. The resulting output is thus familiar to many social science researchers (Allison, 1982)[10].

3.4.2 The discrete-time multinomial logistic hazards model

Consider a multinomial response vector with $\underline{Y}$ with s categories and let $\underline{\pi}$ be the corresponding vector containing the probabilities of falling in any particular category. The discrete-time competing risk model assumes that, for some individual i in the population, the odds of having an event of type r rather than of type s (the reference category) at discrete time point t are given by:

[10] All of the multinomial logistic analyses in this thesis are run using the SAS CATMOD routine employing dummy variables and a DIRECT statement.

$$\log\left(\frac{\pi_{rit}}{\pi_{sit}}\right) = \beta_{r0} + \beta_{r1}Z_{rit} + \underline{\beta}'_{r2}\underline{X}_{rit} \qquad r=1,....,s-1 \ ,$$

where π_{rit} is the hazard of an event of type r occurring at time t for an individual with covariates $\underline{X}_{rit}$, Z_{rit} is a function of the duration for individual *i* at time *t* for event type *r* and β_{r0} , β_{r1} and $\underline{\beta}_{r2}$ are unknown parameters. In this way the risk of entering into cohabitation relative to the risk of staying single, and the risk of entering into marriage relative to the risk of staying single are estimated simultaneously.

The inclusion of Z_{rit} allows duration effects to be modelled explicitly as one of the independent variables, whilst interactions between the duration effects and the other explanatory variables allow us to test for non-proportionality in the effect over age.

3.4.3 Model selection

Estimation of the parameter estimates is done by maximum likelihood, so that the value of the coefficients is determined by maximizing the probability of observing what has in fact been observed (Allison, 1982). We compare the fit of nested models by calculating twice the positive difference in their log likelihoods (deviance). Under the null hypothesis of no difference this statistic will have an asymptotic chi-squared distribution (Yamaguchi, 1991). The associated degrees of freedom refer to the number of constraints that distinguish the two models, that is to say the difference in the number of parameter estimates[11]. In the following analyses variables are kept in the model in the model if their inclusion is associated with a significant change in the deviance at the five per cent level. Two-way interactions between explanatory variables, and each explanatory variable and duration, are also tested for. Model fitting has been undertaken by hand, as there is no forward or backward selection available in the CATMOD procedure. Variables

[11] Note that the likelihood chi squared statistic automatically produced in logistic regression differs according to the statistical package used and whether aggregate or individual level data are input into which program. The SAS CATMOD procedure (unlike SAS LOGISTIC) enters individual level binary data into a contingency table for analysis. Hence the "population" refers to the total number of occupied cells in the contingency table, and the degrees of freedom to the number of occupied cells minus the number of covariates. We present the -2 log likelihood which we use, along with the conventionally defined degrees of freedom, to compare model fit.

included in the analysis and their significance at the five per cent level are shown in Table 3.1.

3.4.4 Defining the risk set

In order to enter the data into the discrete-time model we need to replicate the information for each individual for each time interval for which they are exposed to the risk of entering into a first partnership. Once they enter a partnership, or reach exact age 33 they are no longer exposed and are treated as censored. In this chapter we consider the whole age range 16-32 in a single analysis and model entry into marriage and cohabitation within each one year interval. (The hazard is constrained to remain constant within each two year interval). The data structure required for this analysis is shown in Box 3.1 using a simplified example of two individuals - a female who began cohabiting whilst aged 20, and a male who married directly whilst aged 24.

The variable STATE refers to the individual's partnership status within each time interval and is the dependent variable in our multinomial discrete-time model. If the individual remains single throughout the time interval STATE=2; if the individual enters a cohabiting partnership during the time interval STATE=0, whilst if the individual marries STATE=1. This replication procedure inflates the sample size considerably and at first sight we might be concerned that this would lead to an underestimation of the standard errors of the parameter estimates. However, as noted by Allison (1982), we are in fact assuming independence in the errors between each time interval. Whilst this is unlikely to be the case, exactly the same assumption is made with continuous time models and is rarely considered by researchers. A more pressing problem is the increased computing resource required to undertake multivariate analyses of these expanded datasets. The size of the dataset is directly related to the choice of time interval and there is a trade-off between greater model specificity and computing demands.

Personal identifier	Sex	Age (completed years) at start partnership	Yearly time interval since exact age 16	Partnership STATE
1	2	20	1	2
1	2	20	2	2
1	2	20	3	2
1	2	20	4	2
1	2	20	5	0
2	1	24	1	2
2	1	24	2	2
2	1	24	3	2
2	1	24	4	2
2	1	24	5	2
2	1	24	6	2
2	1	24	7	2
2	1	24	8	2
2	1	24	9	1

Box 3.1 Structure of data required for discrete-time logistic regression model.

3.4.5 Interpretation of parameter estimates

Table 3.2 shows for men and women the estimated coefficients from our final parsimonious model of entry into first partnership. Odds ratios can be calculated by exponentiating the parameter estimates. These odds ratios give the estimated odds of being in a particular response category (either marriage or cohabitation) relative to remaining single for that level of the independent variable, relative to the odds for the baseline category of the independent variable. So for example, the odds ratio of entry into cohabitation for men with no religious affiliation relative to those with a religious affiliation is exp(0.37) = 1.45. In other words the odds of cohabitation among those with no religious affiliation are 45 per cent higher compared to those with a religious affiliation.

Odds ratios such as these should be treated with caution within multinomial logistic regression as the numerator and the denominator of the probabilities will not sum to one. Estimated probabilities of being in each of the response categories are calculated for a

given set of characteristics within a multiple classification table. The probabilities of being in any particular response category at time t for an individual with covariates $\underline{X}_{rt}$ are given by:

$$\pi_{rit} = \frac{\exp(\beta_{r0}+\beta_{r1}Z_{rit}+\underline{\beta}'_{r2}\underline{X}_{rit})}{1+\sum_{k=1}^{s-1}\exp\ (\beta_{k0}+\beta_{k1}Z_{kit}+\underline{\beta}'_{k2}\underline{X}_{kit})}, \qquad r=1,.....,s-1,$$

$$\pi_{sit} = \frac{1}{1+\sum_{k=1}^{s-1}\exp\ (\beta_{k0}+\beta_{k1}Z_{kit}+\underline{\beta}'_{k2}\underline{X}_{kit})}.$$

The effect of each variable on the probability of being single, married or cohabiting within each time interval can then be examined by fixing age at a given level, holding all the other independent variables constant at their average level (achieved by weighting the estimated coefficient for each category of a variable by the proportion of the population in that category) and allowing the value of variable of interest to change (Table 3.3). The multinomial logistic model provides us with dependent (or net) rates. The effect of any covariate on the probability of cohabitation depends upon the effect of the covariate on the probability of marriage. We have to interpret the effect of education on the odds of entry into cohabitation, as the effect **given the effect of education on the odds of entry into marriage** (Hachan, 1988).

3.4.6 Unobserved covariates

As a result of unobserved heterogeneity caution must be taken in interpreting the trend in the hazard rate over time. In the following analyses of entry into first partnership the underlying hazard rate for each individual is unlikely to remain constant with age. The rate may increase linearly with age, or may first increase and then decline. What is clear,

however, is that even if the hazard rate is constant over time for each individual, differences across individuals in the hazard rate due to factors which are not included in the model will result in a declining hazard over time (Allison, 1984).

The competing risks model assumes that the processes underlying entry into marriage and cohabitation are independent. In models of marriage and cohabitation there will be unobserved factors, the presence of a partner for instance, relevant to both decrements which will cause some bias in the parameters. Hill and colleagues (1993) developed a "shared unmeasured risk factor" (SURF) model, which can estimate the level of interdependence and correct for the correlation in unmeasured risk factors. Their findings based on an analysis of entry into marriage and cohabitation in the United States suggest that the independence model does indeed underestimate the number of individuals who would cohabit if marriage was eliminated as a decrement. Furthermore, some of the effect of religiosity and parental family structure was found to be due to unmeasured correlated risk factors and consequently the size of these parameter estimates was reduced in the SURF model. However, in general the parameter estimates based upon the two models were fairly similar.

More recently Wu and Balakrishnan (1995) looked to see whether the SURF model made any difference to their analyses of the outcome of cohabiting partnerships in Canada. In this case marriage and separation are seen as competing risks. The authors found no differences in their substantive results whether or not the independence assumption is imposed.

Table 3.1: Summary table of included variables for model of entry into first partnership according to their significance at the five per cent level.

Variable	Men	Women
Age of mother at her first birth	✓	✓
Whether mother had a premarital conception	X	✓
Age mother left school	X	X
Father's social class at age 7	X	X
Tenure at age 7	X	X
Region residence at age 16	✓	✓
Highest educational qualification at age 23	✓	✓
Economic activity at age 23	✓	✓
Occupational social class at age 23	✓	✓
Any religious affiliation at age 23	✓	✓

Note: Variables significant at the five per cent level are shown by ✓, whilst variables included in the original model but not found to be significant as X.

3.5 Results

The final, parsimonious models shown in Table 3.2 include only significant main and higher order effects, with separate analyses for men and women[12]. Interactions between explanatory variables and age show that the effects of mother's age at first birth (for men) and highest educational qualification for both men and women are not constant over all the age groups. The shape of the underlying risk of direct marriage and cohabitation seen earlier in our life table analyses persists once other variables are controlled. The estimated probability of marrying rises to a peak among women in their early twenties and men in their mid-twenties. The probability of cohabiting continues to increase until the late twenties. These patterns are a combination of age and period effects which cannot be distinguished on the basis of a single cohort. To examine the impact of the remaining covariates on entry into first partnership we focus on the age range 22-23, when rates of entry into marriage and partnership formation are relatively high. Table 3.3 gives the predicted annual probabilities of cohabiting and marrying for each level of an independent variable, holding all other covariates constant at their average level.

3.5.1 Parental and family background characteristics

Once the respondent's own characteristics, particularly their level of education are controlled, the propensity to marry or cohabit is not found to be significantly related to father's social class, housing tenure at age seven, or to when their mother left school. However, the age at which their mother had her first birth is found to be significantly associated with the timing of entry into marriage and cohabitation. Having a mother who started childbearing in her teens is particularly associated with partnership formation among teenage men.

[12] Around four per cent of the men and three per cent of the women who reported that their first partnership was cohabiting at the start reported a period of cohabitation which then translated into marriage within two months. Re-coding such individuals as having married directly does not affect the results from the competing risk model.

Table 3.2: Parameter estimates from logistic regression hazards model of entry into first partnership. Men and women.

Variable		Men Cohabitation	Men Marriage	Women Cohabitation	Women Marriage
Intercept		-2.18 **	-3.52 **	-2.74 **	-3.92 **
Age	16-17	-4.14 **	-3.71 **	-2.76 **	-3.07 **
	18-19	-1.83 **	-1.38 **	-0.93 **	-0.13
	20-21	-0.81 **	0.14	-0.20	0.96 **
	22-23	-0.38 **	0.75 **	0.29 **	1.42 **
	24-25	-0.12	0.88 **	0.21	1.18 **
	26-27	0.01	0.63 **	0.31 *	0.86 **
	28-29	0.12	0.64 **	0.37 **	0.62 **
	30-32	0.00	0.00	0.00	0.00
Mother's age at first birth	< 20	0.13	0.31 **	0.13	0.17 **
	20-24	0.20 **	0.36 **	0.10	0.14 **
	25 and over	0.00	0.00	0.00	0.00
Mother had pre-marital conception	No			0.00	0.00
	Yes			0.16 **	-0.06
Region of residence at age 16	Scotland & North	0.00	0.00	0.00	0.00
	Midlands & Wales	0.08	-0.06	0.16 **	0.04
	South	0.17 **	-0.22 **	0.39 **	0.09
	SE & London	0.25 **	-0.51 **	0.37 **	-0.24 **
Highest educational qualification at age 23	Degree	0.00	0.00	0.00	0.00
	A Level	-0.28 **	0.57 **	-0.23 **	0.50 **
	O Level	-0.31 **	0.65 **	-0.15	0.77 **
	CSE	-0.29 **	0.52 **	-0.23 *	0.61 **
	None	-0.65 **	-0.23	-0.63 **	0.14
Economic activity at age 23	Employed	0.00	0.00	0.00	0.00
	Unemployed	0.17 **	-0.68 **	0.40 **	-0.04
	Inactive	-0.32	-1.33 **	0.87 **	1.31 **
	Student	-0.06	-0.67 **	0.47 **	-0.92 **
Social class at age 23	I	-0.18	0.46 **	-0.44 *	-0.08
	II	0.00	0.00	0.00	0.00
	IIIn	-0.39 **	0.19 **	-0.08	0.37 **
	IIIm	-0.19 **	0.43 **	-0.07	0.17
	IV	-0.31 **	0.12	0.17	0.37 **
	V	0.02	0.27	0.37	0.93 **
	Not known	-0.54 **	0.25 **	-0.49 **	0.27 **
Religious affiliation	No	0.37 **	-0.25 **	0.44 **	-0.10 **
	Yes	0.00	0.00	0.00	0.00
Age 16-17 * CSE qualifications		1.21 **	0.70	1.08 **	1.74 **
Age 16-17 * No qualifications		1.89 **	2.08 **	1.91 **	2.83 **
Age 18-19 * CSE qualifications		0.36	0.72 **	0.27	0.61 **
Age 18-19 * No qualifications		1.06 **	1.62 **	0.70 **	1.06 **
Age 20-21 * CSE qualifications		0.03	0.30 **	-0.01	0.33 **
Age 20-21 * No qualifications		0.48 **	1.11 **	0.38 **	0.59 **
Age 22-23 * No qualifications		0.39 **	0.65 **		
Age 24-25 * No qualifications		0.29	0.45 **		
Age 16-17 * Mother aged under 20 at first birth		1.10 **	0.75 *		
Age 18-19 * Mother aged under 20 at first birth		0.15	0.57 **		
Age 20-21 * Mother aged under 20 at first birth		0.41 **	0.28 *		

Model	**N**	**-2 log likelihood**	**d.f.**
Men	36647	25031.7	76
Women	30054	25592.5	68

Note: ** Denotes statistical significance at the five per cent level
* Denotes statistical significance at the ten per cent level

Female respondents whose mother had a premarital conception are significantly more likely to cohabit, although no difference is found among men. Regional differentials in the propensity to enter into cohabitation are striking. People living as teenagers in Scotland and the North are the least likely to cohabit, followed by those from the Midlands and Wales. Cohabitation is most likely among those brought up in London and the South East. Conversely, the probability of marriage for men is highest in Scotland and the North and lowest among those from London and the South East. For women the probability of marriage is fairly constant in all areas apart from London and the South East (where it is much lower).

3.5.2 Current lifecourse characteristics

With age still fixed at 22-23 and the other independent variables held constant at their average level, the probability of marriage is highest among men in professional and skilled manual occupations, and lowest in intermediate non-manual occupations such as administrators, sales executives and computer analysts. In contrast, it is this latter group, alongside unskilled manual workers, who are more likely to cohabit. Men in junior non-manual occupations, for example working as bank clerks and sales representatives, are the least likely to cohabit. Women in professional and intermediate occupations are less likely to marry than if they were in junior non-manual or manual occupations. But whereas professional women are also less likely to enter into cohabitation (and hence are more likely to remain single), women in intermediate occupations, such as teachers and nurses, are more likely to cohabit alongside semi-skilled and unskilled workers.

As expected, men in work have higher probabilities of marriage than the unemployed, the economically inactive, or students. In fact the yearly probability of marriage whilst aged 22-23 is twice as high among employed men (0.10) than among the unemployed (0.05) (who are more likely to cohabit). Among women, economic inactivity at age 23 is strongly associated with entry into marriage. This probably reflects the greater propensity of married women to have childcare responsibilities. Contrary to our expectations, however, employed women also have a higher probability of marrying compared to

unemployed women, and a lower probability of entering into cohabitation.

Educational differences in first partnership formation are particularly important. The probability of marrying at age 22-23 is highest for those with intermediate level qualifications. At the same time, men and women with degree level qualifications are more likely to cohabit. At first sight this finding appears to contradict our earlier finding that professional men and women were less likely to cohabit than those in intermediate non-manual occupations. However, whilst professional men and women will generally have degrees, not all of those with degree level qualifications (around ten per cent of the population) will be in a professional occupation. Seemingly it is those individuals with degrees who are in intermediate occupations, such as teachers and managers, who are most likely to cohabit. That the effect of education is not proportional with age, however, is demonstrated by the significant interactions (shown in Table 3.2) between lower levels of education and the probability of marrying and cohabiting at young ages.

These effects can be seen more clearly in Figures 3.3 and 3.4 where the probabilities of entering cohabitation and marriage within a one year interval are plotted for each educational group. Those with no educational qualifications have relatively high probabilities of cohabiting during their teens, but much lower probabilities at older ages. Those with degrees have the greatest probability of cohabiting at older ages. Patterns of cohabitation among those with A, O, and CSE level qualifications are similar.

Probabilities of marriage among teenagers are highest for those with low levels of education, moderate for those with intermediate levels and lowest for those with degree or higher qualifications. Among those in their mid to late twenties the patterns are different. Men and women with O and A level qualifications have the highest probabilities of marriage, whilst those with no educational qualifications have much lower chances of marriage. In fact in their late twenties men with degree level qualifications have higher probabilities of marriage than those with no educational qualifications. Among women, however, those with degree qualifications continue to have the lowest probabilities of marriage at all ages.

Table 3.3: Estimated probabilities of entering first partnership within a one year period Men and women.

Variable		Men Cohabit	Marry	Remain single	Women Cohabit	Marry	Remain single
Age	16-17	0.00	0.00	0.99	0.01	0.01	0.98
	18-19	0.02	0.02	0.96	0.04	0.07	0.89
	20-21	0.04	0.07	0.89	0.06	0.15	0.79
	22-23	0.06	0.09	0.85	0.08	0.18	0.74
	24-25	0.07	0.10	0.83	0.08	0.14	0.77
	26-27	0.08	0.07	0.85	0.09	0.11	0.80
	28-29	0.09	0.07	0.84	0.10	0.09	0.81
	30-32	0.08	0.04	0.88	0.07	0.05	0.88
Mother's age at first birth	< 20	0.06	0.10	0.84	0.09	0.19	0.73
	20-24	0.06	0.10	0.83	0.09	0.18	0.73
	25 and over	0.05	0.08	0.87	0.08	0.16	0.76
Mother had pre-marital conception	No/Not known				0.08	0.18	0.74
	Yes				0.09	0.17	0.74
Region of residence at age 16	Scotland	0.05	0.11	0.84	0.07	0.18	0.75
	Midlands	0.06	0.10	0.84	0.08	0.18	0.73
	South	0.06	0.09	0.85	0.10	0.19	0.71
	SE + London	0.07	0.07	0.86	0.10	0.14	0.75
Highest educational qualification at age 23	Degree	0.08	0.06	0.86	0.12	0.12	0.76
	A Level	0.06	0.10	0.84	0.09	0.19	0.73
	0 Level	0.05	0.11	0.84	0.09	0.23	0.68
	CSE	0.06	0.10	0.85	0.09	0.20	0.71
	None	0.06	0.09	0.85	0.06	0.14	0.79
Economic activity at age 23	Employed	0.06	0.10	0.84	0.07	0.14	0.79
	Unemployed	0.07	0.05	0.87	0.10	0.13	0.77
	Inactive	0.05	0.03	0.92	0.11	0.35	0.54
	Student	0.06	0.06	0.89	0.12	0.06	0.83
Social class at age 23	I	0.06	0.11	0.83	0.07	0.13	0.80
	II	0.08	0.07	0.85	0.10	0.14	0.77
	IIIN	0.05	0.09	0.86	0.08	0.19	0.73
	IIIM	0.06	0.11	0.83	0.09	0.16	0.75
	IV	0.06	0.08	0.86	0.11	0.18	0.71
	V	0.08	0.09	0.83	0.11	0.28	0.61
	NK	0.05	0.09	0.86	0.06	0.18	0.76
Any religious affiliation	No	0.07	0.08	0.85	0.11	0.16	0.73
	Yes	0.05	0.11	0.85	0.07	0.18	0.74

Note: The baseline logit has been calculated for age 22-23 using a weighted sum of the remaining estimated coefficients, where the weights for each category of an independent variable correspond to the proportion of the total male population who fall into that category. Statistically significant interactions between age and educational qualification, and age and mother's age at first birth are also included in the baseline logit.

Figure 3.3a: Probabilities of first marriage among never partnered men by age and highest educational qualification.

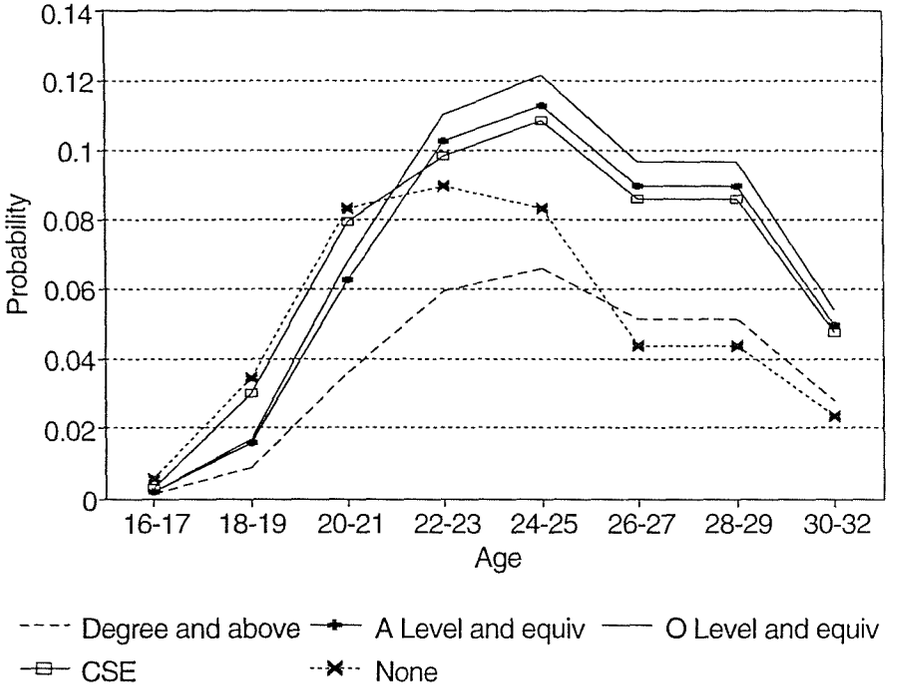


Figure 3.3b: Probabilities of first marriage among never partnered women by age and highest educational qualification.

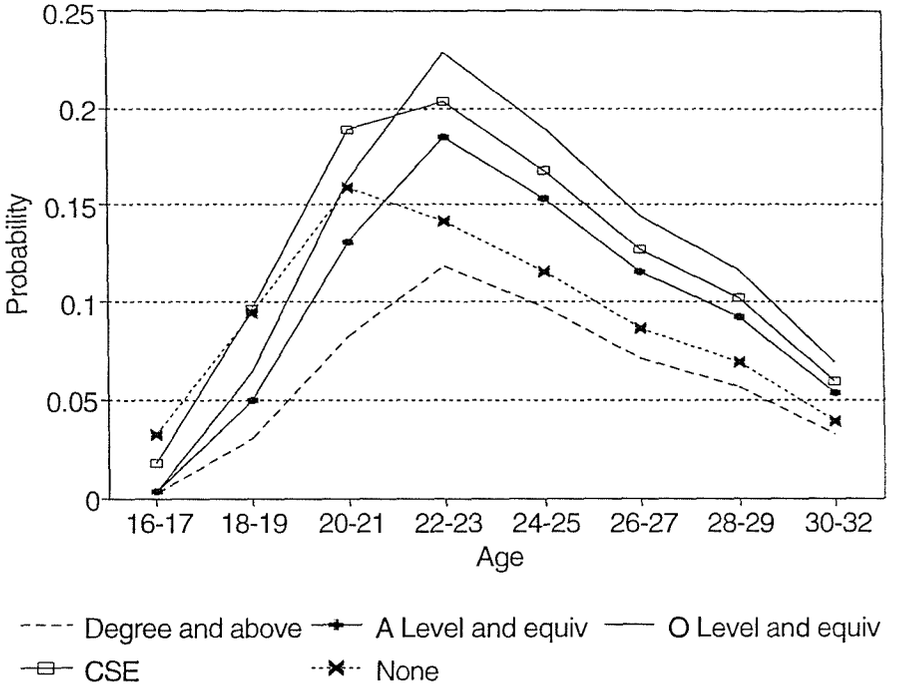


Figure 3.4a: Probabilities of first cohabitation among never partnered men by age and highest educational qualification.

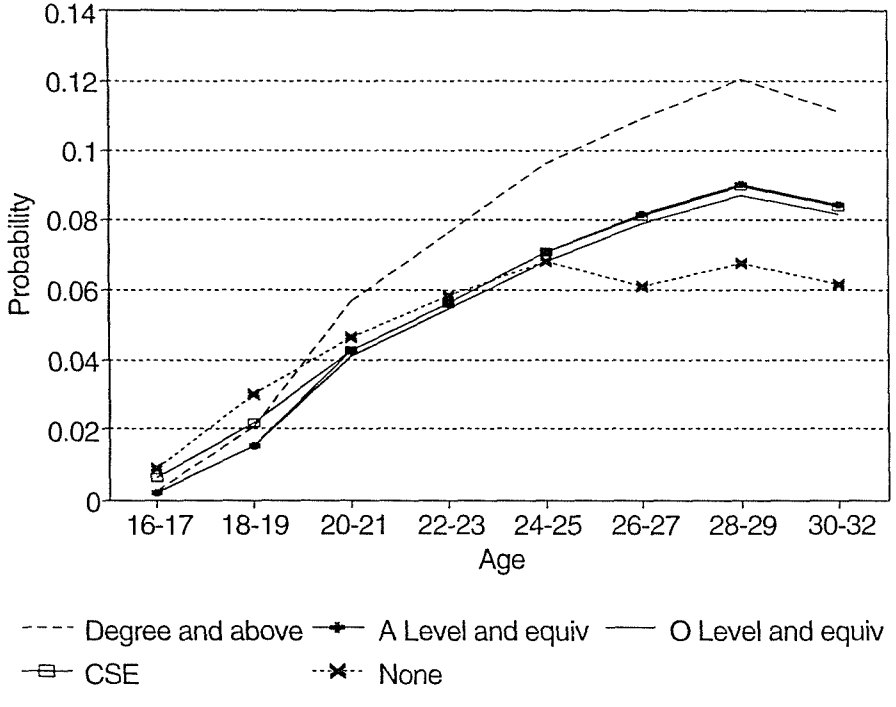
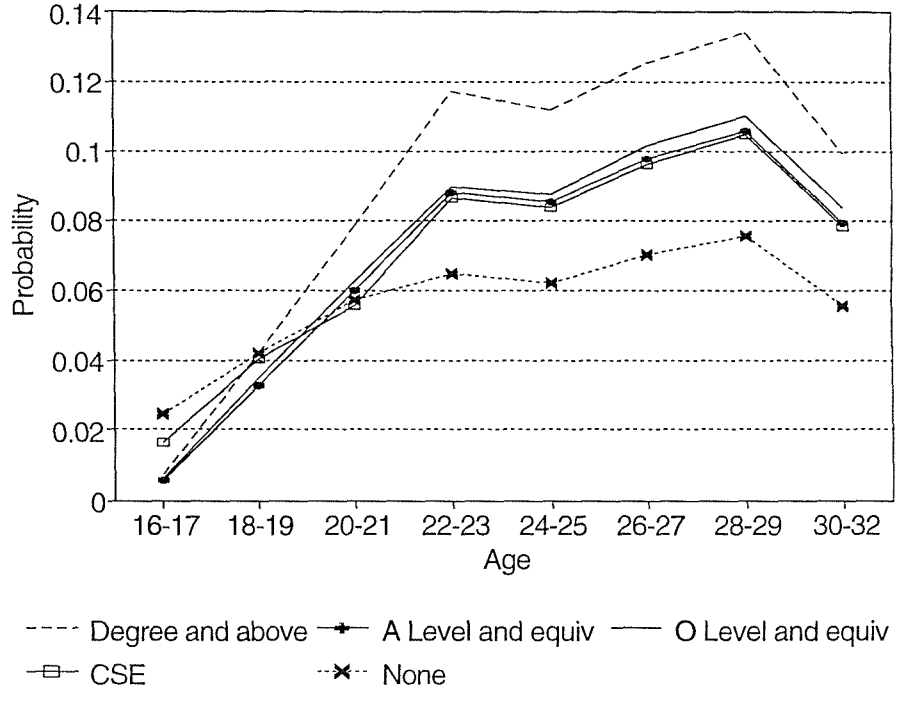


Figure 3.4b: Probabilities of first cohabitation among never partnered women by age and highest educational qualification.



As in many developed countries absence of a religious affiliation is associated with a greater propensity to cohabit and lower propensity to marry directly, although no differences are found between the different Christian and non-Christian affiliations. For example, whilst aged 22-23, eleven per cent of women without a religious affiliation start cohabiting each year compared to seven cent of those with an affiliation.

3.6 Discussion

In Britain it remains uncommon for people pursuing full time education to marry. Contrast this with those who left school at age 16 who are much more likely to enter a partnership, particularly marriage, in their teens. The majority of men and women with higher levels of education remain single into their early twenties, when, having accumulated sufficient economic and human capital, they begin forming marital and in particular cohabiting unions. A selection effect is clear among the least educated with the minority who remain single in their late twenties and early thirties representing the most disadvantaged, economically, educationally and possibly physically. As Figures 3.3 and 3.4 have shown, rates of entry into marriage and cohabitation in this group are low.

Social class differentials in the propensity to cohabit persist among the similarly qualified, with men and women in intermediate occupations more likely to cohabit than those in professional occupations. We speculate that whilst both of these groups will have been exposed to opportunities to drift into informal cohabitation at university, the small group who enter professions such as law and medicine may have more traditional views of family formation; indeed to some extent the professions themselves demand more conventional family formation behaviour. Junior non manual workers also display more conservative partnership formation behaviour, delaying partnership formation to slightly later ages and then marrying directly without cohabitation. This pattern has been observed previously within cross-sectional data (Haskey and Kiernan, 1989; Berrington, 1991) but we can only speculate as to its cause. Many of these individuals are in occupations which can be described as "junior professions": secretaries, bank clerks, policemen and firemen, for example. They may aspire to join the ranks of the professional and intermediate social classes and consequently hold more conservative attitudes. Furthermore, unlike those in

intermediate occupations, many men and women in junior non-manual occupations will have remained in the parental home prior to partnership formation and hence will have had less opportunity to drift into informal partnerships. We shall investigate this further in the next chapter.

Our limited analysis of the relationship between employment status and partnership formation lends some support to the New Home Economic arguments that, for men, employment is associated with marriage. Further studies are required to explore whether cohabitation acts as an alternative to direct marriage among those with less economic security. Contrary to our prior expectations employed women are also more likely to enter into marriage than their unemployed counterparts.

In the context of religious differentials it is probable that the propensity to marry rather than to cohabit reflects both individual religiosity, whereby an individual would be likely to follow the teachings of their religion, together with community religiosity, whereby norms and values passed on from members of the community - particularly those within the individual's church and family - will manifest themselves in traditional behaviour. In Chapter 4 we refine our analyses of the influence of religiosity on cohabitation by identifying the frequency with which those who report a religious affiliation attend religious services and meetings. We anticipate that such a measure will establish a stronger relationship between religiosity and the propensity to marry rather than cohabit.

The observed regional differentials in the propensity to marry and cohabit reflect the environment within which individuals have been brought up and suggest that social context remains an important indicator of subsequent demographic decisions. Parental family building characteristics also have an impact on the respondents' own demographic behaviour. Early family formation on the part of the respondent's mother promotes earlier partnership formation. Furthermore, daughters whose mothers experienced a premarital conception are more likely to begin a co-residential partnership outside of marriage. We speculate that these findings result from the transmission during adolescence of attitudes and beliefs concerning the "correct age" at which partnership formation should begin, and the acceptability of sexual partnerships outside marriage (Thornton, 1991; Manting, 1994).

Chapter 4: The Role of Childbearing in First Partnership Formation

4.1 Childbearing Data from the National Child Development Study

By the time we were completing our preliminary analyses of first partnership formation discussed in Chapter 3, researchers at SSRU had finished the task of cleaning the fertility histories collected from cohort members at age 33. These data were kindly given to us in advance of general release, and are incorporated in our subsequent analyses. This chapter begins by examining the quality of the NCDS pregnancy/fertility histories before investigating the role of pregnancy and childbearing on partnership formation. We also look at the relationship between the transition out of the parental home and entry into first partnership. We end by examining the antecedents of experiencing pregnancy prior to partnership formation.

4.1.1 Evaluating the quality of the pregnancy/fertility histories

In the self-completion "Your Life" questionnaire cohort members were asked, for each of their natural children (including those that were still born), the child's date of birth, sex, birth weight, where the child is now, and if dead, the date of death. The "Your Life" questionnaire did not collect information concerning pregnancies that did not result in a live or still birth. The "Cohort Member" questionnaire, on the other hand, did attempt to collect a full pregnancy history by asking the respondent to recall all pregnancies including those that ended in a miscarriage or abortion (Box 4.1), along with their dates. Further details of live births (for example, birth weight and current whereabouts) were then elicited. Theoretically these data should provide us with a full pregnancy history for both men and women up to age 33. However, this seems unlikely to be the case in practice.

Little work has been done to investigate the completeness of the pregnancy histories collected at age 33. Previous analyses of pregnancy histories collected from women of childbearing age within the 1976 Family Formation Survey found the recall of miscarriages

to be fairly accurate but terminations to be severely underreported (Dunell, 1979). Whilst we might expect the willingness to recall terminations to have increased in the twenty-five years since the 1967 Abortion Act, there are a number of reasons why it is highly unlikely that all of the pregnancies which did not result in a live birth have been recalled, especially by male cohort members.

For each pregnancy:

"Did this pregnancy end in a live birth, or a miscarriage, or a still birth, or what?"

Live birth	- Single		1
	- Twins	- identical	2
		- fraternal	3
		- not sure	4
	- Multiple		5
Still birth			6
Miscarriage			7
Abortion			8
Still Pregnant			0

Box 4.1 Wording of pregnancy history question in the 'Cohort Member' questionnaire.

First, many miscarriages occur early in pregnancy and will have passed unnoticed by both male and female cohort members. Secondly, some men will not be aware of their paternities, especially if their partner experiences a miscarriage or termination early in pregnancy, if the couple are no longer together, or if the conception took place within a clandestine union. Finally, the initial question used to collect the pregnancy history information (shown in Box 4.1) does not refer to abortion as an explicit outcome and thereby does little to encourage respondents to recall terminations. The emphasis placed on miscarriages and not abortions may also have resulted in cohort members misclassifying abortions as miscarriages.

Table 4.1 shows the outcome of all conceptions reported by male and female cohort members at age 33 according to the year of conception and highest educational

qualification. Overall, 89 per cent of the conceptions reported by men and 84 per cent of the conceptions reported by women led to a live birth. The percentage resulting in miscarriage was slightly higher for women (nine per cent) than men (seven per cent). Women reported twice as many terminations (six per cent of all conceptions) as men (three per cent).

Table 4.1: Outcome of conceptions as reported at age 33 by sex, year of conception and highest educational qualification.

	Percentage resulting in Live birth	Still birth	Miscarriage	Termination	Total (N = 100 %)
Year of conception					
Men					
1970-1977	78.0	0.1	4.5	16.4	177
1978-1982	89.7	0.7	6.0	3.6	972
1983-1987	88.8	0.5	8.7	1.9	1309
1988-1991	88.7	1.2	7.6	2.5	644
Women					
1970-1977	77.5	0.6	7.5	14.9	653
1978-1982	85.0	1.0	7.8	6.1	1491
1983-1987	86.5	1.2	9.6	3.1	1271
1988-1991	80.2	0.4	14.8	4.7	494
Highest educational qualification					
Men					
Degree	84.4	0.3	9.6	5.6	302
A Level	87.5	0.9	8.3	3.2	986
O Level	88.1	0.2	8.1	3.6	531
CSE	90.4	0.7	5.7	3.1	543
None	89.7	1.2	5.9	2.7	740
Women					
Degree	75.3	0.0	11.7	13.1	283
A Level	80.0	0.8	11.2	8.0	735
O Level	82.2	0.6	10.2	7.0	685
CSE	85.4	0.5	7.8	5.6	1008
None	86.9	1.0	8.1	4.0	1198

The quoted number of still births is entirely consistent with the level we would expect, given that the overall rate for England and Wales declined from around 12 still births per thousand births in 1974, to five per thousand in 1991 (Macfarlane and Mugford, 1984;

OPCS, 1995a). It is less clear whether the number of miscarriages has been underreported. Estimates of the percentage of conceptions which result in spontaneous abortion vary widely. Leridon (1977) considering a number of different studies, and Wilcox and colleagues (1988) suggest that the percentage of recognised pregnancies that are spontaneously aborted lies at around 15 per cent. Bongaarts (1975) puts the figure closer to 25 per cent. Both of these estimates are higher than that from the NCDS (even if we allow for the unknown number of pregnancies which would have ended in miscarriage but were removed from the population at risk by induced abortion). The higher levels of miscarriage reported by those with higher levels of education and for recent conceptions point to some under-reporting of miscarriages, particularly among men and women with lower levels of education, and for conceptions that took place in the more distant past.

We can compare the number of terminations reported by NCDS cohort members with data collected for England and Wales within the vital registration system (Table 4.2). During the mid-1970s when the NCDS cohort were in their teens, the percentage of conceptions experienced by women under 20 which were terminated under the 1967 Abortion Act rose from 25 per cent in 1974 to 28 per cent in 1977. These figures are far higher than those recorded in the NCDS for the corresponding periods[13]. For example, during 1978-1982, when the cohort were in their early twenties, the percentage of conceptions (which had not miscarried) reported by NCDS women to have ended in an abortion (6.6 per cent) is only half that which we would expect given the rates shown in Table 4.2.

[13] Since conceptions resulting in a miscarriage are not included within the national vital registration system we have divided the number of abortions reported by NCDS cohort members by the number of reported conceptions that resulted either in a live birth, a still birth, or an abortion.

Table 4.2: All conceptions: Percentage terminated by abortion[1]. England and Wales.

Age at conception	Calender year	Percentage terminated
Under 20		
	1974	25.0
	1975	26.4
	1976	28.1
	1977	28.2
20-24		
	1978	11.9
	1979	12.7
	1980	13.3
	1981	14.2
	1982	14.3
25-29		
	1983	9.7
	1984	10.0
	1985	10.8
	1986	11.1
	1987	11.9

[1] Terminated under the 1967 Abortion Act

Source: Tables 12.1, 12.4 and 12.5. Birth Statistics. London: HMSO.

The data suggest that terminations have been underreported by around 50 per cent in the NCDS pregnancy histories. Interestingly, this level of underreporting is similar to that found within the pregnancy histories collected within the 1976 Family Formation Survey (Dunell, 1979) and is slightly lower than that found within a number of surveys carried out in the United States (Jones and Forrest, 1992). Whilst the overall level of terminations seems to have been understated by NCDS cohort members, differentials according to socio-economic background are as expected. Dunell (1979), analysing the pregnancy histories collected within the 1976 Family Formation Survey noted that a much higher proportion of first pregnancies to non-manual women resulted in an abortion, miscarriage or stillbirth.

More recently, studies of aggregate level data have shown a clear tendency for termination rates among teenagers to be lower in more deprived regions of Britain (Wilson et al. 1992).

Due to the high degree of non reporting of miscarriages and terminations, particularly by male cohort members, we decided to set aside the full pregnancy history data and to use information on the occurrence and dates of live births only. This decision has important implications for the way in which the relationship between childbearing and partnership formation is described within our statistical analyses. Like most other models which use pregnancy status to explain entry into a partnership, pregnancies which end in a miscarriage or an induced abortion will not be identified. If pregnancies which lead to a maternity are more likely to be associated with subsequent partnership formation than those which are terminated, the pregnancy variable will overestimate the relationship between experiencing a pregnancy and subsequent partnership formation. We are in effect conditioning past events on future events (Blossfeld et al., 1995).

The following analyses use maternity and paternity history data which have been cleaned by researchers at City University using information from both age 33 questionnaires. The level of precision with which cohort members reported the dates of birth of their children is far greater than that seen for dates of entry into partnership (Di Salvo, 1995). This is not surprising given the greater salience of a birth date, celebrated each year as a birthday. In total, complete birth histories were available for 11,407 men and women, including 3,274 who had not yet had a live birth.

4.2 Entry into Parenthood among the 1958 Birth Cohort

Table 4.3 shows by age the percentage of male and female cohort members who have ever had a live birth. Women begin childbearing earlier than men such so that by exact age 20, 12 per cent of women have become parents compared to four per cent of men. By exact age 33 two thirds of men and three quarters of women have become parents. Also shown in Table 4.3 are data from vital registration describing entry into motherhood for all women born in England and Wales in 1958[14]. Patterns among the NCDS cohort are similar to the national picture, although the under-representation in the NCDS sample of women from disadvantaged backgrounds is reflected in the lower rates of childbearing at the youngest ages.

Table 4.3: Percentage of men and women ever having had a live birth by age.

	Percentage who have ever had a live birth		
	NCDS cohort		1958 England & Wales cohort
Age in completed years	Men	Women	Women
15	0.1	0.2	<0.5
16	0.3	1.4	2
17	0.9	4.1	5
18	2.0	8.1	9
19	3.6	11.9	14
20	6.0	17.0	19
21	9.4	22.6	24
22	14.2	28.4	30
23	19.1	35.2	36
24	24.6	41.1	41
25	30.5	46.9	47
26	35.8	52.8	52
27	41.4	58.0	57
28	47.2	62.6	61
29	52.9	67.0	65
30	57.6	70.6	68
31	61.6	73.7	71
32	64.8	76.0	74

Source: 1993 Birth Statistics. Series FM1 no. 22. Table 10.3. London: HMSO.

[14] Similar comparisons are not possible for male cohort members as the age of the father is not always collected at birth registration.

4.2.1 Partnership status at first birth

The close, two-way relationship between childbearing and partnership formation can be seen in Table 4.4. Partnership formation is often associated with commencement of regular sexual activity and it is not surprising, therefore, that over 80 per cent of first conceptions are reported to have occurred after entry into first partnership. Indeed, almost ten per cent of men and eight per cent of women who had a live birth conceived their first child in the initial six months of their first partnership. The desire for children is often cited as a motive for partnership formation, especially marriage (McRae, 1993; De Jong Gierveld and Liefbroer, 1995). Marriage remained the predominant setting for childbearing for the 1958 birth cohort, with three quarters of first conceptions taking place after entry into first marriage.

Table 4.4: Partnership status at first birth among men and women born in 1958.

	Men		Women	
	N	%	N	%
Date of first conception				
Before first partnership	558	15.2	815	18.5
After first partnership	3104	84.8	3588	81.5
Before first marriage	966	26.4	1226	27.8
After first marriage	2696	73.6	3117	72.2
Total	3662	100	4403	100
Date of first birth				
Before first partnership	148	4.0	294	6.7
After first partnership	3514	96.0	4109	93.3
Before first marriage	423	11.6	604	13.7
After first marriage	3239	88.5	3799	86.3
Total	3662	100	4403	100

Note: Conception refers to a conception which resulted in a live birth.

Of the remaining conceptions which took place before first marriage, around one half were legitimized through marriage prior to the birth (around 14 per cent of total first births). Historically the legitimation of extra-marital conceptions through marriage, often referred to as "shotgun weddings" or "dependent marriages" (Bourgeois-Pichat, 1986) was an important facet of family formation. More recently, however, the trend has been for couples not to marry but to live in informal unions, resulting in an unprecedented increase in the proportion of births that take place outside of marriage. As noted by Parnell and colleagues (1994) it seems as if legitimation has changed from being a 'normative response' to a matter of 'individual choice'.

4.3 Modelling Entry into First Partnership with Pregnancy Status as a Time-Varying Covariate

Our aim in the remainder of this chapter is to incorporate information on pregnancy and childbearing into our discrete-time analyses. We begin with a discussion of the expected effect of a pregnancy on entry into first partnership and the choice between marriage and cohabitation.

4.3.1 Partnership formation following a pre-partnership conception

Given the close relationship between pregnancy and partnership formation we would expect a strong positive relationship between experiencing a *conception* and subsequent partnership formation and for this effect to be stronger for entry into marriage than for cohabitation (Goldscheider and Waite, 1986; Teachman et al., 1987; Hoem, 1988; Blossfeld and Huinink, 1991; Landale and Forste, 1991; Ghilagaber, 1993; Blom, 1994). The effect of the *presence of children* on partnership formation is less clear, however (Landale and Forste 1991; Blossfeld et al., 1993; Blossfeld et al., 1995; Liefbroer and Frątczak, 1995). Some studies have found lower rates of partnership formation, particularly among older never married women with children (Rao, 1990; Liefbroer and Frątczak, 1995).

Figure 4.1a: Probability of entry into marriage and cohabitation during the twelve months following a conception. Men.

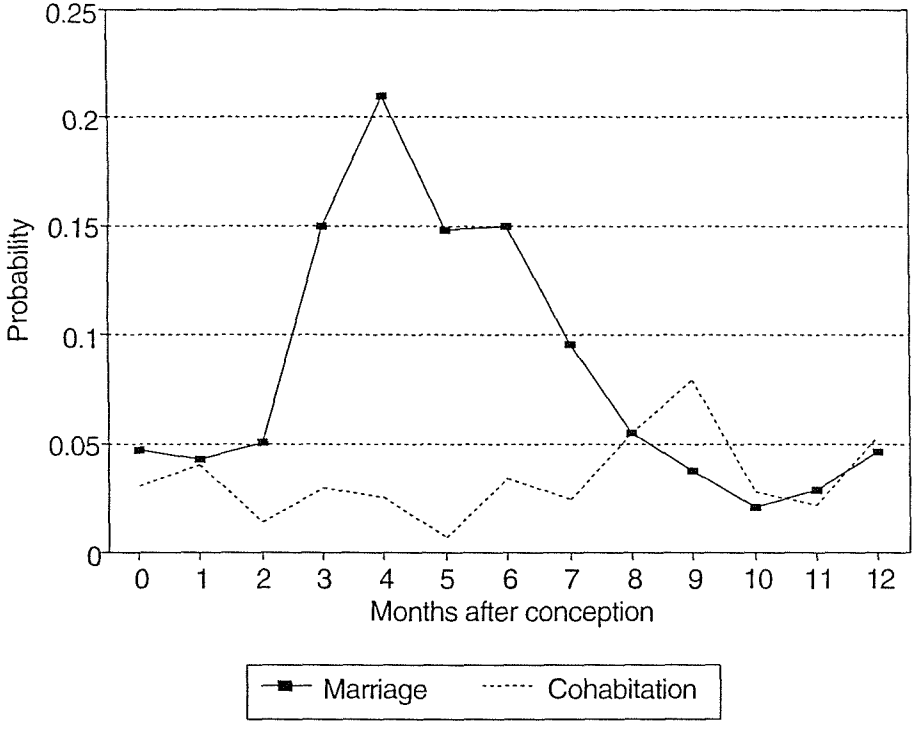
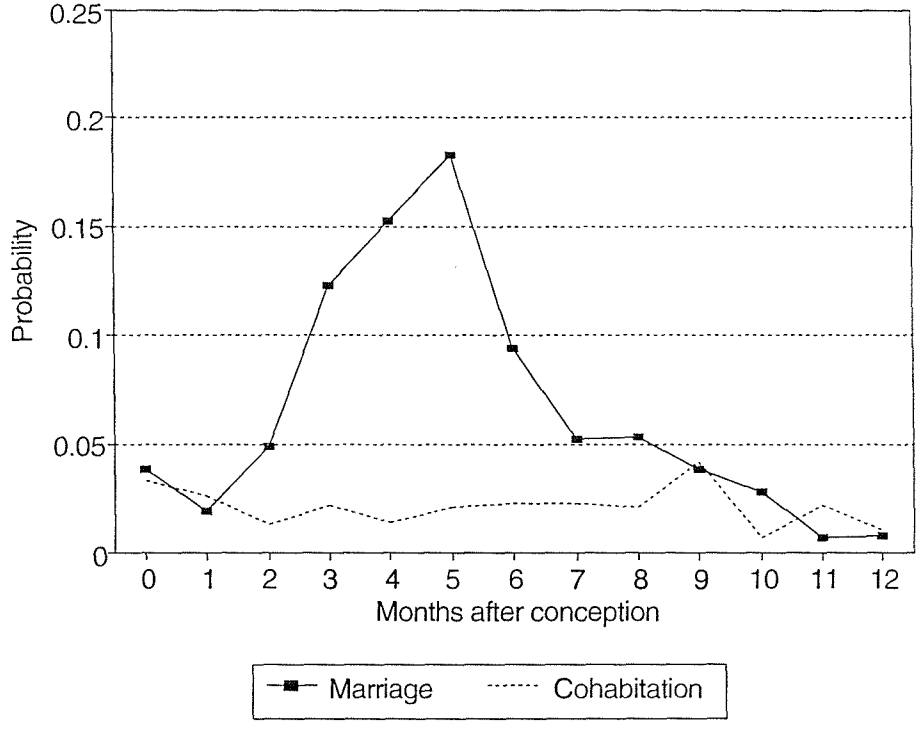


Figure 4.1b Probability of entry into marriage and cohabitation during the twelve months following a conception. Women.



Empirical evidence from other countries suggests that the probability of partnership formation is greatest during the earliest stages of pregnancy, lower during late pregnancy, sometimes rising once again after the birth (Blossfeld et al., 1993; Blossfeld et al., 1995). For the 1958 cohort, life table rates of entry into marriage and cohabitation in the 12 months following a conception support these findings (Figures 4.1a and 4.1b). Entry into marriage is more likely than entry into cohabitation. The probability of marriage increases rapidly to a peak during the second trimester of pregnancy before falling off dramatically amongst those who are still single at the birth of their child. These patterns make substantive sense. Rates of partnership formation within the first trimester of pregnancy are lower because it takes some time for the pregnancy to be recognized and action to be taken. The rate then increases before falling in late pregnancy when women are unlikely to want to undergo a formal wedding ceremony and celebration. Indeed, some of the cohabiting mothers interviewed by McRae gave as reasons for delaying marriage until after the birth, "not wanting to marry whilst all fat", and "not wanting to be seen to have been pressured into marriage because of the pregnancy" (McRae, 1993 p 42).

The probability of cohabitation is less variable over the course of the pregnancy, although there is a slight peak at the time of the birth. This effect may be an artefact of the imprecise way in which individuals report the start date of cohabitation, recalling it as roughly the same time as the birth. Alternatively, couples may actually decide to live together once the baby is born. The birth of a child may mark a new phase in the couple's relationship involving a greater level of commitment. The couple may feel that the male partner could provide some practical support if they were living together.

In the following analyses we use a time-varying covariate which has a value of 0 for never pregnant/never having fathered a child. The value then changes to 1 when the individual (or their partner) is 0-2 months pregnant, 2 for 3-5 months pregnant, 3 for 6-8 months pregnant, 4 from the month of birth until 11 months after the birth and 5 for one year or more after the birth. We test the hypothesis that *rates of entry into partnership are particularly high in the first and second trimesters of pregnancy, low around the time of the birth, and then either remain the same or rise slightly following the birth.* Given that there are fewer barriers to entry into cohabitation, *the change in magnitude of the*

coefficients corresponding to the different stages of pregnancy will be more accentuated for entry into marriage than for entry into cohabitation.

Before describing the discrete-time model in more detail, we discuss three further explanatory variables (parental separation, behavioural and emotional adjustment at age 16, and independence from the parental home) which were not included in the earlier analyses of Chapter 3.

4.3.2 Parental separation

Earlier research based upon the age 23 follow up highlighted a number of relationships between family disruption in childhood and the transitions made by cohort members in early adulthood. Cohort members who experienced the divorce or separation of their parents were more likely to leave home early, to experience early partnership formation, cohabit, enter parenthood at an early age and conceive children outside marriage (Cherlin et al., 1991; Kiernan, 1992; Ní Bhrolcháin et al., 1994; Russell, 1994; Cherlin et al., 1995). Similar associations between family disruption and cohabitation have been documented for Sweden (Ghilagaber, 1993), France (Villeneuve-Gokalp, 1991) and the United States (Michael and Tuma, 1985; McLanahan and Bumpass, 1988; Bumpass and Sweet, 1989; Thornton, 1991; Furstenberg and Teitler, 1994).

The extent to which these outcomes can be interpreted as a direct effect of parental separation *per se* is the subject of debate (Ní Bhrolcháin et al., 1994). Many researchers stress the importance of controlling for characteristics present in the family prior to separation (Cherlin et al., 1991). Even where a statistical association between family disruption in childhood and negative outcomes in young adulthood persists net of other background characteristics, the underlying causal mechanisms remain unclear (Ní Bhrolcháin et al., 1994; Wu and Martinson, 1993). As noted by Michael and Tuma (1985) "parental structure" when used as an explanatory variable in models of young adults' behaviour only has a meaning in as much as it represents a "bundle" of effects of other unmeasured variables, family income, parenting practices or marital conflict, for example.

In particular, the economic deprivation often associated with living in a single parent family is likely to be related to lower levels of educational attainment and occupational status and hence a greater likelihood of marrying and having children at an early age (McLanahan and Bumpass, 1988; Thornton, 1991).

Some researchers argue that marital conflict and disruption reduces the level of social control that parents have over their children (McLanahan and Bumpass, 1988; Thornton, 1991). Lone parents, faced with the additional responsibilities of bringing up a family without a partner are said to have fewer opportunities to monitor and socialize their children, resulting in an earlier age when their children begin dating, have sexual relationships and enter into their first coresidential union, more often outside of marriage (Thornton, 1991).

Other authors argue that the association between parental separation and partnership formation extends not so much from a lack of social control but from the way in which divorce and remarriage modify parents' and children's attitudes towards non-marital sex and marriage. Thornton (1991) suggests that the experience of marital dissolution and subsequent reentry of divorced parents into courtship and non-marital relationships may result in the parents themselves having more liberal attitudes towards non-marital sex and cohabitation. At the same time the children of divorced parents may have more negative attitudes towards marriage as an institution and look to extra-marital relationships and cohabitation as alternatives (Mueller and Pope, 1977; Thornton, 1991; Villeneuve-Gokalp, 1991). An essential difference between the socialization and social control hypotheses described above, is that "the socialization hypothesis stresses the effect of *prior* experience on *current* behaviour while the social control hypothesis stresses the effect of *current* family situation on *current* behaviour" (Wu and Martinson, 1993 p 212).

Finally, past research has highlighted the importance of the quality of the home environment in affecting the timing of leaving home and family formation of young adults (Michael and Tuma, 1985; Goldscheider and Goldscheider, 1989; Aquilino, 1991; Thornton, 1991; Kiernan, 1992; Cherlin et al., 1995). Marital disruption is often related to a decline in household income, and downward housing mobility. In addition, the home

environment may be negatively affected by continued marital conflict with the absent parent or by conflict resulting from family reconstitution. Early marriage and family formation might therefore be seen by the children of divorced parents as a route out of the parental home (Thornton, 1991). Data from the NCDS cohort regarding the reasons young people gave for leaving the parental home would seem to support such a suggestion with those who experienced family disruption in childhood being more likely to report leaving home for negative reasons particularly friction (Kiernan, 1992; Cherlin et al., 1995).

In the following analyses a dichotomous variable is used to identify those at age 33 whose parents separated. We have not attempted to identify when the separation occurred and whether, or for how long, the cohort member subsequently lived in a lone parent family or in a reconstituted family. Such discrimination would be necessary to distinguish between the above mentioned hypotheses (McLanahan and Bumpass, 1988; Wu and Martinson, 1993). We anticipate that *cohort members whose parents separated are more likely to enter into a partnership at an early age and are more likely to cohabit than those who did not experience parental separation.*

4.3.3 Behavioural and emotional problems in adolescence

Other studies of this cohort have found associations between social maladjustment in childhood and an earlier age at partnership formation, an increased propensity to cohabit and experience a pre-marital conception (Ní Bhrolcháin et al., 1994; Russell, 1994; Cherlin et al., 1995). In the following analyses we use teachers' assessments of the respondents' behaviour to identify those socially maladjusted at age 16 (Rutter, 1967). Teachers were asked to indicate the extent to which the study child exhibited various behaviours described in 26 statements. The response categories were "Does not apply", "Applies somewhat", "Certainly applies", given a weight of 0, 1 and 2 respectively. We follow Rutter (1967) in classifying those with a total score of nine or more as having 'deviant' behaviour. Subscales are used to group those with aggressive or anti-social behaviour into a 'conduct disorder' category, and those who exhibit neurotic behaviour, (that is, tending to be worried, nervous, afraid and tearful) into an 'emotional disorder' category. There is a final

'mixed' category who exhibit both types of behaviour[15]. We hypothesize that *men and women with behavioural problems at age 16 are more likely to enter a partnership, particularly cohabitation, at an early age.*

4.3.4 Independence from the parental home

A number of studies have found residential independence from the parental home is associated with delayed entry into first partnership. Goldscheider and Waite (1987) argue that non-family living provides young people with independence and autonomy which they are then loathe to give up. The experience introduces young people to options beyond the family and allows them "to develop skills, men to manage their domestic needs and women to learn to support themselves" (Goldscheider and Waite, 1987, p 514). In contrast, those living with their parents may see marriage as a possible route out of the parental home and a way of making their transition to adulthood. At the same time an association has been found between residential independence and cohabitation (Carlson, 1986; Liefbroer, 1991; Liefbroer et al., 1994; Manting, 1994). Liefbroer (1991) suggests that this is to be expected since young adults living within the parental home would be more exposed to, and hence more likely to conform to their parents' disapproval of cohabitation. The types of accommodation utilized by those already living outside of the parental home also provide more opportunities for forming informal partnerships (Liefbroer et al., 1994).

At age 33, information on first housing destination after leaving the parental home has to be derived from the housing histories collected in the "Your life since 1974" event history questionnaire. These are somewhat incomplete with no information being available for around one in ten. Our analyses utilize cleaned data made available by researchers at SSRU (Di Salvo and Smith, 1995). A summary of these data is shown in Table 4.5, which gives the percentage of male and female cohort members who had never left home by 33, the percentage whose first destination was to live with a partner, to live alone (or as a lone

[15] The scale is essentially a screening tool and, whilst indicating the sample likely to contain individuals with psychiatric disorder, is not a diagnostic technique (Rutter, 1967). Furthermore, previous analyses of this cohort suggest considerable movement of individuals into and out of the 'deviant' category over the lifecourse (Ghodsian et al., 1980).

parent), or to share with others. The percentage for whom the data are missing is also shown.

Six per cent of men and three per cent of women are recorded as never having left home. The most common destination is to live with a partner (48 per cent of men and 56 per cent of women). Among those who entered a first partnership by age 33, 39 per cent of men and 30 per cent of women experienced a period of independent living beforehand. In the following work a time-varying covariate uses the date when the respondent left home to identify those currently living independently. Those who left prior to partnership formation but whose first destination is unknown are included as a residual missing category. We hypothesize that *cohort members who have left home and experienced a period of independent living are more likely to cohabit and less likely to marry.*

Table 4.5: First housing destination after leaving the parental home.

First housing destination	Percentage Men	Women
Never left parental home	6	3
First living arrangement was with		
no other adults	14	10
friends/others	23	23
partner	48	56
Housing destination not known	10	9
Total (100%)	4190	4476

4.4 Methods and Results

We use a discrete-time multinomial logit model to investigate factors associated with entry into first marriage and cohabitation. This model is similar to that described in Section 3.4.2, the only difference being the inclusion of time-varying covariates $\underline{W}_{rit}$. The discrete-time competing risk model assumes that, for some individual in the population, the odds of having an event of type r rather than of type s (the reference category) at discrete time point t are given by:

$$\log\left(\frac{\pi_{rit}}{\pi_{sit}}\right) = \beta_{r0} + \beta_{r1}Z_{rit} + \underline{\beta}'_{r2}\underline{X}_{rit} + \underline{\beta}'_{r3}\underline{W}_{rit} \qquad r=1,....,s-1$$

where π_{rit} is the hazard of an event of type r occurring at time t for an individual with fixed covariates $\underline{X}_{rit}$ and time-varying covariates $\underline{W}_{rit}$. Z_{rit} is a function of the duration for individual i at time t for event type r and

β_{r0} , β_{r1} , $\underline{\beta}_{r2}$ and $\underline{\beta}_{r3}$ are unknown parameters.

4.4.1 Model Specification

Since we are interested in the way in which a pregnancy affects the propensity to form a partnership, rather than the other way around, we need to minimize any association between pregnancy and partnership formation resulting from couples conceiving soon after entering a partnership. Therefore, we analyse the probability of marriage or cohabitation within each one month interval from age 16. Individuals contribute months of exposure up until the time when they either enter their first partnership, or are censored by the age 33 survey. The disadvantage of using such small time intervals is the increased dataset size which necessitates separate analyses for three age ranges: 16-19; 20-24; and 25-32. The population included in each analysis is those who remain unpartnered at exact age 16, 20 and 25 respectively. Table 4.6 shows the variables in our model according to whether or not they are found to be significant at the five per cent level. Tables 4.7, 4.8, and 4.9 contain the parameter estimates for our final models for the three age groups.

Table 4.6: Summary table of included variables for model of entry into first partnership according to their significance at the five per cent level.

Variable	Men			Women		
	16-19	20-24	25-32	16-19	20-24	25-32
Age of mother at first birth	X	✓	✓	✓	✓	X
Whether own mother had a premarital conception	X	✓	X	X	✓	X
Whether parents separated by 33	✓	✓	✓	✓	✓	X
Age mother left school	X	X	X	X	X	X
Father's social class at age 7	X	X	X	X	X	X
Housing tenure at age 7	✓	X	X	✓	X	X
Region residence at age 16	✓	✓	X	✓	✓	X
Behaviour/emotional problems at age 16	✓	✓	✓	✓	X	X
Age left school	✓			✓		
Highest educational qualification at age 23		✓	✓		✓	✓
Occupational social class at age 23		✓	✓		✓	✓
Religious activity	✓	✓	✓	✓	✓	✓
Whether living independently (t)	✓	✓	✓	✓	✓	✓
Pregnancy/childbearing status (t)	✓	✓	✓	✓	✓	✓

Note: Variables significant at the five per cent level are shown by ✓, whilst variables included in the original model but not found to be significant as X. Variables not included are shown as blanks. (t) denotes time-varying covariate.

Table 4.7: Parameter estimates for discrete-time multinomial logistic model of entry into first partnership between age 16 and 19.

Variable		Men Cohabitation	Men Marriage	Women Cohabitation	Women Marriage
Intercept		-6.75 **	-6.25 **	-6.19 **	-4.95 **
Age	16	-1.71 **	-3.00 **	-1.16 **	-2.43 **
	17	-1.17 **	-1.96 **	-0.72 **	-1.46 **
	18	-0.32 **	-0.94 **	-0.33 **	-0.68 **
	19	0.00	0.00	0.00	0.00
Mother's age at first birth	< 20			0.31 **	0.45 **
	20-24			0.13	0.10
	25 and over			0.00	0.00
Parents separated	No	0.00	0.00	0.00	0.00
	Yes	0.68 **	-0.05	0.47 **	0.24 **
	Not known	0.11	0.63	0.48	0.15
Housing tenure at age 7	Owner/occupied	0.00	0.00	0.00	0.00
	Public rented	0.15	0.46 **	0.29 **	0.29 **
	Other/not known	0.05	0.49 **	0.19	0.10
Region of residence at age 16	Scotland + North	0.00	0.00	0.00	0.00
	Midlands + Wales	-0.16	-0.09	0.21	0.11
	South	0.25	-0.53 **	0.26 **	0.28 **
	SE + London	0.32	-0.61 **	0.62 **	0.04
	Not known	0.17	-0.04	0.23	-0.07
Teacher rated behaviour at age 16	'Normal'	0.00	0.00	0.00	0.00
	'Emotional disorder'	-0.17	0.07	0.78 **	-0.09
	'Conduct disorder'	0.94 **	0.16	0.74 **	0.10
	'Mixed disorder'	1.31 **	0.64	-0.47	-0.12
	Not known	0.49 **	0.15	0.27 **	0.03
Age left school	Before age 17	0.00	0.00	0.00	0.00
	Age 17 or above	-0.33 *	-1.72 **	-0.55 **	-1.16 **
Religious activity	None	0.00	0.00	0.00	0.00
	Weak	-0.48 *	-0.63 **	-0.52 **	-0.25 **
	Strong	-0.43 **	-0.14	-0.47 **	-0.05
	Not known	0.02	-0.05	-0.90	0.20
Whether living independently (t)	No	0.00	0.00	0.00	0.00
	Yes	1.04 **	0.41 *	1.10 **	-0.78 **
	Not known	0.44 **	0.46 **	0.37 **	-0.12
Pregnancy status (t)	Never pregnant	0.00	0.00	0.00	0.00
	0-2 months pregnant	2.25 **	3.11 **	2.11 **	1.85 **
	3-5 months pregnant	2.64 **	5.04 **	2.10 **	4.25 **
	6-8 months pregnant	2.73 **	4.69 **	1.80 **	3.59 **
	Child 0-11 months	2.34 **	3.55 **	1.95 **	2.02 **
	Child 12+ months	1.65 **	2.59 **	0.80 **	0.87 **
Parents separated * pregnant 3-5 months				-0.24	-0.68 **
Parents separated * pregnant 6-8 months				0.39	-1.37 **

Model	N	-2 log likelihood	d.f.
Men	205264	5962.4	54
Women	203614	15618.6	62

Note: ** Denotes statistical significance at the five per cent level
* Denotes statistical significance at the ten per cent level

Table 4.8: Parameter estimates for discrete-time multinomial logistic model of entry into first partnership between age 20 and 24.

Variable		Men Cohabitation	Men Marriage	Women Cohabitation	Women Marriage
Intercept		-5.56 **	-5.67 **	-5.36 **	-4.86 **
Age	20	-0.51 **	-1.26 **	-0.49 **	-3.69 **
	21	-0.31	-1.90 **	-0.48 *	-0.60 **
	22	-0.13	-0.24 **	0.08	0.12
	23	-0.15	-0.16 *	0.00	0.23 **
	24	0.00	0.00	0.00	0.00
Mother's age at first birth	< 20	0.30 **	0.36 **	0.10	0.21 **
	20-24	0.28 **	0.23 **	0.00	0.22 **
	25 and over	0.00	0.00	0.00	0.00
Mother had pre-marital conception	No	0.00	0.00	0.00	0.00
	Yes	-0.20 **	-0.12	0.24 **	-0.18 **
	Not known	0.39 **	-0.08	0.18	-0.17
Parents separated	No	0.00	0.00	0.00	0.00
	Yes	0.45 **	-0.22 **	0.53 **	-0.21 **
	Not known	0.57 *	0.21	0.13	-0.36
Region of residence at age 16	Scotland & North	0.00	0.00	0.00	0.00
	Midlands & Wales	0.10	-0.06	0.11	0.06
	South	0.14	-0.10	0.36 **	0.10
	SE & London	0.32 **	-0.54 **	0.26 **	-0.31 **
	Not known	-0.26	-0.15	0.07	0.16 *
Teacher rated behaviour at age 16	'Normal'	0.00	0.00		
	'Emotional disorder'	-0.04	-0.48 **		
	'Conduct disorder'	0.06	-0.08		
	'Mixed disorder'	0.21	-0.72 **		
	Not known	0.11	-0.03		
Highest education qualification at age 23	Degree	0.00	0.00	0.00	0.00
	A Level	-0.03	0.75 **	-0.38 **	0.08
	0 Level	0.02	0.95 **	-0.09	0.29 *
	CSE	0.09	0.82 **	-0.11	0.35 **
	None	-0.01	0.56 **	-0.29	0.15
Social class at age 23	I	-0.10	0.48 **	-0.24	0.35
	II	0.00	0.00	0.00	0.00
	IIIN	-0.24 *	0.26 **	0.06	0.28 **
	IIIM	0.03	0.35 **	-0.08	0.01
	IV	-0.25	-0.11	0.10	0.19 *
	V	-0.02	-0.03	0.02	0.40
	Not known	-0.50 **	0.22 **	-0.43 **	0.19 **
Religious activity	None	0.00	0.00	0.00	0.00
	Weak	-0.42 **	0.27 **	-0.14 **	-0.08
	Strong	-0.32 **	0.38 **	-0.21 **	0.29 **
	Not known	0.14	-0.03	0.18	-0.75
Whether living independently (t)	No	0.00	0.00	0.00	0.00
	Yes	0.87 **	-0.01	0.95 **	-0.52 **
	Not known	0.57 **	-0.13	0.36 **	-0.27 **
Pregnancy status (t)	Never Pregnant	0.00	0.00	0.00	0.00
	0-2 months pregnant	1.94 **	2.04 **	1.49 **	1.56 **
	3-5 months pregnant	1.93 **	3.71 **	1.25 **	2.58 **
	6-8 months pregnant	2.29 **	3.30 **	0.79	1.43 **
	Child 0-11 months	2.35 **	1.70 **	1.46 **	0.01
	Child 12+ months	1.40 **	0.36	0.59 **	-0.31
Age 20 * Living independently		0.10	-0.67 **		
Age 20 * Mother had birth <20		0.20	0.51 **		
Age 23 * Mother had birth <20				-1.24 **	-0.41 *
Age 20 * Mother had birth 20-24		-0.21	0.48 **		
Age 20 * Social class V		0.39	0.53 **		
Age 20 * 'A' level quals				0.05	3.63 **
Age 21 * 'A' level quals		-0.09	1.45 **	0.61 **	0.71 **
Age 20 * 'O' level quals				-0.28	3.70 **
Age 21 * 'O' level quals		-0.28	1.42 **	0.21	0.67 **
Age 20 * CSE quals				0.21	3.63 **
Age 21 * CSE quals		-0.07	1.54 **	0.15	0.77 **
Age 20 * No educational quals		-0.27	0.42 *	0.51 *	3.82 **
Age 21 * No educational quals		0.25	1.80 **	0.40	0.80 **
Parents separated * Child 0-11 months				-1.83 *	-0.41 *

** Denotes statistical significance at the five per cent level * Denotes statistical significance at the ten per cent level

Men N=172091, -2 log likelihood=24344.95, d.f.=96 Women N=119522, -2 log likelihood=24706.77, d.f.=90

Table 4.9: Parameter estimates for discrete-time multinomial logistic model of entry into first partnership between age 25 and 32.

Variable		Men Cohabitation	Men Marriage	Women Cohabitation	Women Marriage
Intercept		-5.00 **	-5.33 **	-5.05 **	-5.13 **
Age	25	-0.06	0.38 **	-0.07	0.80 **
	26	-0.03	0.20	0.15	0.54 **
	27	-0.02	0.38 **	0.13	0.58 **
	28	-0.06	0.18	0.13	0.33
	29-32	0.00	0.00	0.00	0.00
Mother's age at first birth	< 20	-0.05	0.29 **		
	20-24	0.07	0.25 **		
	25 and over	0.00	0.00		
Parents separated	No	0.00	0.00		
	Yes	0.24 *	0.10		
	Not applicable/known	0.05	-0.22		
Teacher rated behaviour at age 16	'Normal'	0.00	0.00		
	'Emotional disorder'	-0.41 *	-1.06 **		
	'Conduct disorder'	0.35 **	-0.11		
	'Mixed disorder'	-0.41	-0.03		
	Not known	-0.12	-0.01		
Highest educational qualification at age 23	Degree	0.00	0.00	0.00	0.00
	A Level	0.09	-0.02	-0.18	-0.14
	0 Level	0.08	-0.28 **	0.13	-0.30
	CSE	0.07	-0.17	-0.06	-0.32
	None	-0.10	-0.75 **	-0.22	-0.69 **
Social class at age 23[1]	I	0.08	0.33	-0.40	-1.40 *
	II	0.00	0.00	0.00	0.00
	IIIN	-0.18	0.03	0.21	-0.09
	IIIM	-0.04	0.19	0.37 *	-0.36
	IV	-0.19	-0.45 **	-0.24	-0.33
	V	-0.30	-0.46		
	Not known	-0.25 *	-0.15	-0.28	-0.17
Religious activity	None	0.00	0.00	0.00	0.00
	Weak	-0.11	0.55 **	-0.53 **	0.37 **
	Strong	-0.30 **	0.43 **	-0.34 **	0.41 **
	Not known	-0.65	0.01	-0.58	0.81 *
Whether living independently (t)	No	0.00	0.00	0.00	0.00
	Yes	0.49 **	-0.31 **	0.50 **	-0.36 **
	Not known	0.02	-0.24	-0.15	-0.54 **
Pregnancy status (t)	Never pregnant	0.00	0.00	0.00	0.00
	0-2 months pregnant	2.39 **	2.51 **	2.14 **	2.54 **
	3-5 months pregnant	2.11 **	3.07 **	1.65 **	1.98 **
	6-8 months pregnant	2.74 **	2.64 **	1.57 **	1.21
	Child 0-11 months	1.94 **	0.66	-0.65	-0.78
	Child 12+ months	0.96 **	-0.28	0.30	-0.31
Age 25 * No educational quals		0.04	0.53 **		
Parents separated * Child 0-11 mths		2.03 **	1.81		

[1] Social class IV and V women have been combined due to small numbers remaining single at ages 25-32.

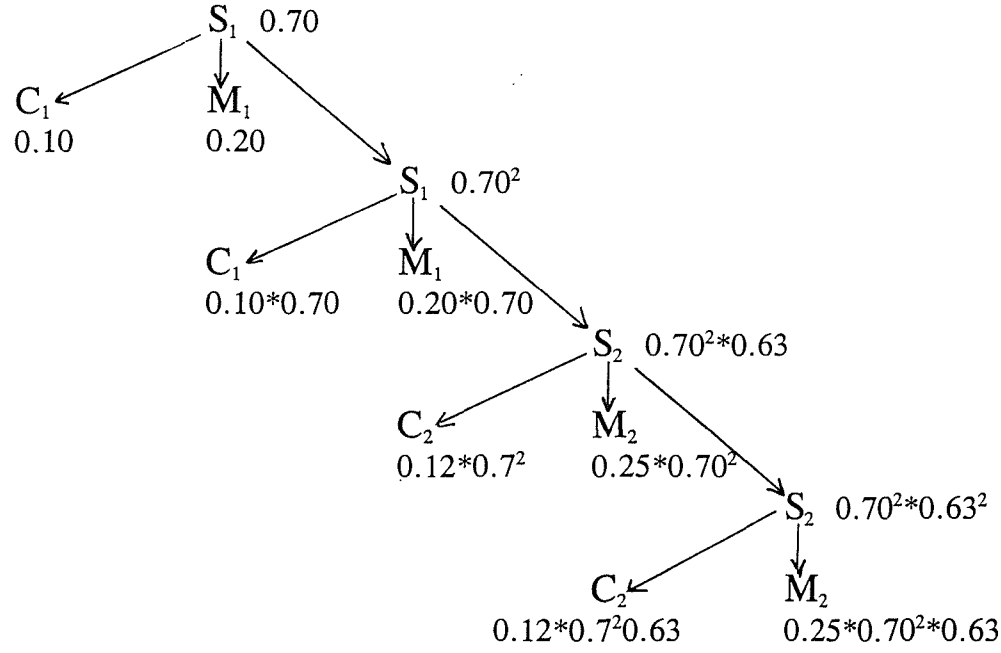
Model	N	-2 log likelihood	d.f.
Men	95614	14936.20	70
Women	54473	8476.91	48

Note: ** Denotes statistical significance at the five per cent level
* Denotes statistical significance at the ten per cent level

4.4.2 Cumulative probabilities of marriage and cohabitation

These odds ratios can be converted into the estimated probabilities of marrying or cohabiting for a given time interval and set of characteristics (see Section 3.4.5). Although these monthly probabilities are very small and difficult to interpret we can use simple probability theory to accumulate them and estimate the probability of marrying or cohabiting by the end of the age group. In the simplified example shown in Box 4.2 we use (unrealistically large) six monthly probabilities of marriage and cohabitation for two age groups, 16 and 17. We wish to calculate the cumulative probability of marrying, cohabiting and remaining single by the end of the seventeenth year. The probability of cohabiting in a six month interval is 0.10 whilst age 16, and 0.12 whilst aged 17. The probability of marriage in each six month interval whilst aged 16 is 0.20 and 0.25 whilst aged 17. The probability of remaining single in each six month period is 0.70 for those aged 16 and 0.63 for those aged 17.

Box 4.2 Simplified example of method used to cumulate probabilities over an age range.



In the first six months the probability of cohabiting is 0.10, whilst in the second six months the probability is 0.10*0.70, i.e. the probability that they remained single in the first sixth months multiplied by the probability of cohabitation in the second six months. The probability of cohabiting in the third six month interval (whilst they are now aged 17) is $0.12*0.70^2$, and the probability in the fourth six month interval is $0.12*0.70^2*0.63$.

Therefore the cumulative probability of cohabiting by age 17 is

$0.10+(0.10*0.70)+(0.12*0.70^2)+(0.12*0.70^2*0.63)$ = 0.27

Similarly the cumulative probability of marriage by age 17 is

$0.20+(0.20*0.70)+(0.25*0.70^2)+(0.25*0.70^2*0.63)$ = 0.54

The probability of remaining single is $0.70^2*0.63^2$ = 0.19

Tables 4.10, 4.11 and 4.12 show the predicted probabilities of cohabiting, marrying, or remaining single by exact age 20, 25 and 33 associated with that level of the independent variable holding other variables constant at their average level. When considering the influence of the fixed covariates we assume the respondent remains living within the parental home and that they do not become pregnant. In examining the effect of independence from the parental home we assume that the respondent was living independently throughout the age range. For the effect of pregnancy and childbearing in the three age ranges we suppose a conception is experienced at exact age 18, 23, or 27, giving rise to a birth nine months later.

A number of family background and current lifecourse factors are found to be associated with patterns of first partnership formation of the 1958 birth cohort. As teenagers, rates of partnership formation are higher for women than for men (Tables 4.7 and 4.10). The rates increase sharply with age, reaching a peak for men and women in their early twenties when the probability of marriage is significantly higher than that of cohabitation (Tables 4.8 and 4.11). Those who remain single in their late twenties and early thirties display lower marriage rates, and for many individuals entry into cohabitation is more likely (Tables 4.9 and 4.12).

Table 4.10: Estimated probabilities from discrete-time multinomial logistic model of entry into first partnership by exact age 20 among those single at exact age 16.

Variable		Men Cohabit	Marry	Remain single	Women Cohabit	Marry	Remain single
Mother's age at first birth	< 20				0.08	0.17	0.76
	20-24				0.07	0.12	0.81
	25 and over				0.06	0.11	0.83
Parents separated	No	0.03	0.02	0.95	0.06	0.12	0.81
	Yes	0.06	0.02	0.93	0.10	0.15	0.75
	Not known	0.03	0.03	0.93	0.10	0.14	0.76
Housing tenure at age 7	Owner occupied	0.03	0.01	0.96	0.06	0.11	0.83
	Public rented	0.04	0.02	0.94	0.07	0.15	0.78
	Other/not known	0.03	0.02	0.95	0.07	0.12	0.81
Region of residence at age 16	Scotland + North	0.03	0.02	0.95	0.05	0.12	0.83
	Midlands + Wales	0.03	0.02	0.95	0.07	0.13	0.80
	South	0.04	0.01	0.95	0.07	0.15	0.78
	SE + London	0.04	0.01	0.95	0.10	0.12	0.78
	Not known	0.04	0.02	0.94	0.07	0.11	0.82
Teacher rated behaviour at age 16	'Normal'	0.03	0.02	0.96	0.06	0.13	0.81
	'Emotional disorder'	0.02	0.02	0.96	0.12	0.11	0.76
	'Conduct disorder'	0.07	0.02	0.91	0.12	0.14	0.75
	'Mixed disorder'	0.10	0.03	0.87	0.04	0.12	0.85
	Not known	0.04	0.02	0.94	0.08	0.13	0.80
Age left school	Before age 17	0.04	0.03	0.93	0.08	0.18	0.75
	Age 17 and after	0.03	0.01	0.97	0.05	0.06	0.89
Religious activity	None	0.04	0.02	0.94	0.09	0.14	0.77
	Weak	0.03	0.01	0.96	0.06	0.12	0.83
	Strong	0.03	0.02	0.95	0.06	0.14	0.80
	Not known	0.04	0.02	0.94	0.04	0.18	0.79
Whether living independently	Never left home	0.03	0.02	0.95	0.07	0.13	0.81
	Living independently	0.09	0.03	0.88	0.19	0.06	0.76
	Not known	0.05	0.03	0.92	0.09	0.11	0.79
Pregnancy history	Never pregnant	0.03	0.02	0.95	0.07	0.13	0.81
	Conception at exact age 18	0.16	0.39	0.45	0.13	0.66	0.21

Table 4.11: Estimated probabilities from discrete-time multinomial logistic model of entry into first partnership by exact age 25 among those single at exact age 20.

Variable		Men Cohabit	Marry	Remain single	Women Cohabit	Marry	Remain single
Mother's age at first birth	< 20	0.16	0.36	0.49	0.14	0.51	0.36
	20-24	0.15	0.33	0.53	0.14	0.54	0.33
	25 and over	0.12	0.26	0.62	0.15	0.46	0.39
Mother had a pre-marital conception	No	0.14	0.31	0.54	0.13	0.52	0.35
	Yes	0.12	0.29	0.59	0.17	0.45	0.38
	Not known	0.21	0.28	0.51	0.16	0.46	0.38
Parents separated	No	0.13	0.32	0.55	0.13	0.52	0.35
	Yes	0.21	0.25	0.55	0.22	0.42	0.36
	Not known	0.21	0.35	0.44	0.16	0.40	0.44
Region of residence at age 16	Scotland & North	0.13	0.35	0.53	0.12	0.52	0.36
	Midlands & Wales	0.14	0.33	0.54	0.13	0.53	0.34
	South	0.15	0.32	0.54	0.16	0.53	0.31
	SE & London	0.18	0.21	0.60	0.17	0.41	0.43
	Not known	0.10	0.31	0.59	0.12	0.57	0.31
Teaching rated behaviour at age 16	'Normal'	0.14	0.32	0.54			
	'Emotional disorder'	0.13	0.19	0.67			
	'Conduct disorder'	0.15	0.30	0.56			
	'Mixed disorder'	0.20	0.18	0.63			
	Not known	0.15	0.31	0.54			
Highest educational qualification at age 23	Degree	0.16	0.15	0.69	0.18	0.36	0.46
	A Level	0.13	0.33	0.54	0.12	0.50	0.37
	0 Level	0.13	0.39	0.48	0.13	0.58	0.30
	CSE	0.15	0.35	0.50	0.13	0.59	0.28
	None	0.14	0.32	0.54	0.13	0.54	0.33
Social class at age 23	I	0.14	0.38	0.48	0.11	0.57	0.32
	II	0.17	0.26	0.58	0.16	0.44	0.40
	IIIN	0.13	0.32	0.55	0.15	0.53	0.32
	IIIM	0.16	0.34	0.50	0.14	0.45	0.41
	IV	0.14	0.24	0.63	0.16	0.50	0.34
	V	0.16	0.24	0.59	0.14	0.57	0.29
	Not known	0.10	0.32	0.58	0.10	0.52	0.38
Religious activity	None	0.17	0.26	0.57	0.17	0.45	0.39
	Weak	0.11	0.33	0.56	0.15	0.43	0.42
	Strong	0.12	0.36	0.52	0.12	0.56	0.32
	Not known	0.19	0.25	0.56	0.23	0.24	0.53
Whether living independently	Never left home	0.14	0.31	0.55	0.14	0.51	0.36
	Living independently	0.32	0.25	0.44	0.36	0.30	0.35
	Not known	0.24	0.26	0.50	0.21	0.40	0.39
Pregnancy history	Never pregnant	0.14	0.31	0.55	0.14	0.51	0.36
	Pregnant at exact age 22	0.19	0.74	0.07	0.16	0.58	0.26

Table 4.12: Estimated probabilities from discrete-time multinomial logistic model of entry into first partnership by exact age 33 among those single at exact age 25.

Variable		Men Cohabit	Marry	Remain single	Women Cohabit	Marry	Remain single
Mother's age at first birth	<20	0.27	0.41	0.32			
	20-24	0.30	0.39	0.31			
	25 and over	0.31	0.33	0.37			
Parents separated	No	0.29	0.37	0.34			
	Yes	0.34	0.38	0.28			
	Not known	0.32	0.31	0.37			
Teaching rated behaviour at age 16	'Normal'	0.30	0.38	0.32			
	'Emotional disorder'	0.26	0.17	0.57			
	'Conduct disorder'	0.40	0.32	0.27			
	'Mixed disorder'	0.22	0.40	0.39			
	Not known	0.28	0.38	0.34			
Highest educational qualification at age 23	Degree	0.28	0.43	0.30	0.25	0.51	0.25
	A Level	0.30	0.42	0.29	0.22	0.47	0.30
	0 Level	0.32	0.34	0.34	0.30	0.40	0.30
	CSE	0.31	0.37	0.32	0.29	0.41	0.33
	None	0.29	0.27	0.44	0.26	0.31	0.43
Social class[1] at age 23	I	0.31	0.46	0.23	0.23	0.16	0.61
	II	0.33	0.37	0.30	0.24	0.47	0.29
	IIIN	0.28	0.39	0.33	0.29	0.43	0.28
	IIIM	0.30	0.43	0.27	0.36	0.34	0.30
	IV	0.31	0.27	0.42	0.22	0.38	0.40
	V	0.29	0.27	0.44			
	NK	0.28	0.34	0.38	0.20	0.43	0.36
Religious activity	None	0.35	0.30	0.35	0.34	0.33	0.33
	Weak	0.28	0.46	0.26	0.20	0.46	0.34
	Strong	0.25	0.44	0.32	0.23	0.47	0.31
	Not known	0.21	0.33	0.46	0.16	0.62	0.23
Whether living independently (t)	Never left home	0.30	0.37	0.33	0.26	0.42	0.32
	Living independently	0.46	0.26	0.28	0.41	0.29	0.30
	Not known	0.32	0.30	0.38	0.26	0.28	0.46
Pregnancy history	Never pregnant	0.30	0.37	0.33	0.26	0.42	0.32
	Pregnant at exact age 27	0.39	0.57	0.04	0.29	0.54	0.17

[1] Social class IV and V women have been combined due to small numbers remaining single at ages 25-32.

4.4.3 Parental characteristics and childhood experiences

Our findings regarding the effects of father's social class and mother's age at leaving school are consistent with the results from Chapter 3. Parental demographic characteristics remain more persistent in their effect on both the timing and type of first partnership. As before, cohort members whose mothers had a teenage birth are significantly more likely to enter a partnership in their teens and early twenties. For example, the probability of a woman marrying by age 20 is 0.17 for those whose mothers had a teenage birth, compared to 0.11 for those whose mothers began childbearing in their late twenties.

Parental separation is consistently related to an increased tendency to cohabit, except for women in the oldest group. Thus, for single men aged 20, the probability of cohabiting by age 25 is 0.21 for those whose parents separated, compared with 0.13 for similar men who did not experience parental separation. At early ages parental separation is associated with higher rates of marriage, but older men and women who had experienced parental separation are less likely to marry.

With childbearing status included in the analysis the variable identifying whether the respondent's mother experienced a premarital conception is no longer found to be related to entry into first partnership. This suggests an intergenerational association in the propensity to experience a non marital conception (see Section 4.5).

Teenagers with anti-social behaviour are more likely to have entered a cohabiting partnership by age 20, but not marriage. For example, eight per cent of men with behavioural problems in adolescence begin cohabiting by age 20 compared to three per cent of those with 'normal' behaviour. Women with emotional problems in adolescence are also twice as likely to cohabit by age 20 as those with 'normal' behaviour. Of those men and women who remain single in their twenties the association between anti-social behaviour in adolescence and early partnership formation is attenuated when highest educational qualification is entered into the analysis. (This is not surprising given the previously observed relationship between 'conduct disorders' in adolescence and lower educational attainment (Maughan and Hagell, 1996)). However, men having emotional problems in adolescence are significantly less likely to marry and more likely to remain

single throughout their twenties and early thirties.

4.4.4 Current lifecourse characteristics

As highlighted in Chapter 3, staying on in full-time education acts to delay entry into marriage. Differentials in the speed of entry into first marriage according to education are particularly marked for women: the probability of marrying by age 20 is three times as high for women who left school at age 16 as for other women. Between 20 and exact age 25 marriage is most likely among those with intermediate levels of education. It is not until cohort members reach their late twenties and early thirties that we see a positive relationship between educational attainment and marriage; even then we notice that rates of partnership formation remain lower in the small, select group of women in professional occupations who are still unpartnered at age 25. We note that this group only contains one per cent of all women unpartnered at age 25.

The relationship between education and entry into cohabitation is less clear. Among teenage women, those who left school at 16 are more likely to have begun cohabiting by age 20, although no difference is seen for teenage men. During their twenties and early thirties the relationship between education and the propensity to cohabit changes according to whether social class and residential independence are also included in the analysis. Table 4.13 shows a series of nested models of entry into first partnership for men and women aged between 20 and 24[16]. When highest educational qualification is entered into the analysis (model a) those with degree level qualifications are significantly more likely to cohabit than those with intermediate or lower levels of education (amongst whom there is little difference).

[16] The models for the older age group show similar effects and are available on request from the author.

Table 4.13: Parameter estimates for education, social class and living independently from discrete-time multinomial logistic models of entry into first partnership among men and women aged between 20 and 24.

Variable		Model a Cohabit	Model a Marry	Model b Cohabit	Model b Marry	Model c Cohabit	Model c Marry
Men							
Highest educational	Degree	0.00	0.00	0.00	0.00	0.00	0.00
qualification	A Level	-0.28 **	0.78 **	-0.40 **	0.78 **	-0.03	0.74 **
at age 23	0 Level	-0.32 **	0.99 **	-0.44 **	0.99 **	0.02	0.95 **
	CSE	-0.28 *	0.84 **	-0.39 **	0.86 **	0.09	0.82 **
	None	-0.39 **	0.53 **	-0.51 **	0.59 **	-0.01	0.56 **
Social class	I			-0.16	0.48 **	-0.10	0.48 **
at age 23	II			0.00	0.00	0.00	0.00
	IIIN			-0.31 **	0.27 **	-0.24 *	0.26 **
	IIIM			-0.10	0.36 **	0.03	0.35 **
	IV			-0.34 **	0.11	-0.25 *	-0.11
	V			-0.04	-0.04	-0.02	-0.03
	Not known			-0.59 **	0.22 **	-0.50 **	0.22 **
Whether living	No					0.00	0.00
independently (t)	Yes					0.87 **	-0.01
	Not known					0.57 **	-0.13
Age 21 * A level quals		-0.09	1.40 **	-0.10	1.42 **	-0.09	1.45 **
Age 21 * O level quals		-0.26	1.36 **	-0.26	1.37 **	-0.28	1.42 **
Age 21 * CSE quals		-0.04	1.49 **	-0.04	1.49 **	-0.07	1.54 **
Age 20 * No educational quals		-0.17	0.56 **	-0.25	0.47 **	-0.27	0.42 **
Age 21 * No educational quals		0.28	1.75 **	0.29	1.76 **	0.25	1.80 **
Age 20 * Social class V				0.42	0.53 **	0.39	0.53 **
Age 20 * Living independently						0.09	-0.67 **
Women							
Highest educational	Degree	0.00	0.00	0.00	0.00	0.00	0.00
qualification	A Level	-0.40 **	0.18	-0.57 **	0.22	-0.38 **	0.08
at age 23	0 Level	-0.28 **	0.56 **	-0.44 **	0.51 **	-0.09	0.29 *
	CSE	-0.36 **	0.66 **	-0.54 **	0.61 **	-0.11	0.35 **
	None	-0.67 **	0.47 **	-0.83 **	0.45 **	-0.29	0.15
Social class	I			-0.19	0.32	-0.24	0.35
at age 23	II			0.00	0.00	0.00	0.00
	IIIN			-0.09	0.38 **	0.06	0.28 **
	IIIM			-0.17	0.07	-0.08	0.01
	IV			0.11	0.22 *	0.10 *	0.19 *
	V			-0.16	0.51	0.02	0.40
	Not known			-0.53 **	0.28 **	-0.43 **	0.19 **
Whether living	No					0.00	0.00
independently (t)	Yes					0.95 **	-0.52 **
	Not known					0.36 **	-0.27 **
Age 20 * A level quals		0.01	3.64 **	0.04	3.63 **	0.05	3.63 **
Age 21 * A level quals		0.59 **	0.71 **	0.61 **	0.70 **	0.61 **	0.71 **
Age 20 * O level quals		-0.36	3.73 **	-0.34	3.70 **	-0.28	3.70 **
Age 21 * O level quals		0.18	0.67 **	0.19	0.66 **	0.21	0.67 **
Age 20 * CSE quals		0.14	3.63 **	0.16	3.62 **	0.21	3.63 **
Age 21 * CSE quals		0.12	0.77 **	0.13	0.76 **	0.15	0.77 **
Age 20 * No educational quals		0.50 *	3.79 **	0.51 *	3.78 **	0.51 *	3.82 **
Age 21 * No educational quals		0.39	0.79 **	0.40	0.78 **	0.40	0.80 **

Note: Variables also included: age, mother's age first birth, whether parents separated, whether mother had premarital conception, emotional/behavioural problems at age 16, region, religion, pregnancy status. ** Denotes significance at five per cent level. * Denotes significance at ten per cent level.

Men				**Women**			
Model	**N**	**-2 log likelihood**	**d.f.**	**Model**	**N**	**-2 log likelihood**	**d.f.**
a	172091	24532.60	76	a	119522	24935.97	74
b	172091	24467.62	90	b	119522	24881.58	86
c	172091	24344.95	96	c	119522	24706.77	90

When social class is also included (model b) the association between degree level qualifications and cohabitation becomes stronger, reflecting the fact that for men and women with degree level qualifications cohabitation is less common among those in professional occupations. However, the inclusion of the covariate identifying people living independently completely attenuates these educational differentials (model c). Those living away from the parental home in their early twenties are more likely to cohabit and are less likely to marry directly. This suggests that it is not education *per se*, but the experience of non-family living, that is important in promoting cohabitation in this cohort.

Once education and independence from the parental home are controlled, social class differences in the propensity to marry and cohabit are generally small, although men and women in intermediate non-manual occupations such as teachers and managers are less likely to marry and are more likely to cohabit or remain single. As expected, individuals with no religious affiliation are significantly more likely to cohabit, whilst those who regularly attend religious meetings tend to marry (apart from teenage men among whom marriage rates are higher for those with no religious affiliation, probably reflecting premarital conceptions).

Experiencing a conception is strongly associated with entry into first partnership, especially marriage. The parameter estimates shown in Tables 4.7, 4.8 and 4.9 demonstrate the pattern discussed earlier with marriage rates peaking 3-8 months following a conception and staying lower for those still single after the birth. The impact of a pregnancy on the probability of marriage is greatest among teenagers. For example, around two thirds of teenage women who experience a conception at exact age 18 are estimated to marry by age 20, in comparison to 13 per cent of never pregnant women. The positive effect of experiencing a pregnancy on partnership formation is greater for men than for women, an observation made previously in other countries. This may result from the selective reporting of conceptions by male cohort members. Men are more likely to have knowledge of (and report) conceptions they fathered if they subsequently had a relationship with the mother (Ghilagaber, 1993; Blom, 1994). This results in an over-estimation of the strength of the link between fathering a child and partnership formation.

Our analyses found few significant interactions between pregnancy status and the remaining covariates, suggesting that the effect of a pregnancy on the decision to marry or cohabit does not differ according to factors such as social class or religiosity. To some extent this may reflect the small sample number of people in some population sub-groups who experience a conception before partnership formation. Given the importance a pregnancy has for partnership formation we will undertake further analyses to identify the antecedents of a pre-partnership pregnancy. Due to the aforementioned inaccuracies in the male fertility histories we focus our attention on female cohort members.

4.5 Antecedents of a Pre-Partnership Conception

Table 4.14 presents the family formation trajectories taken by age 33 according to the social class of the respondent's father. Overall, six per cent of women have neither had either a partnership nor a birth. One half married their first partner directly without a premarital conception, whilst a significant minority (seven per cent) experienced a conception and married prior to the birth. Many women cohabited with their first partner, but only two per cent began doing so after becoming pregnant. Five per cent of women did not enter a partnership following a conception, and became lone parents.

Table 4.14: First family transition experienced by women by age 33, according to their father's social class.

Father's social class	Row percentage No Event	Preg--> birth	Preg--> marry	Preg--> cohabit	Marry	Cohabit	Sample (100%)
I	9	0	1	1	46	43	222
II	8	2	3	1	47	38	632
IIIn	5	4	3	1	58	30	452
IIIm	6	5	8	2	53	26	1891
IV	4	5	10	2	55	24	713
V	5	7	17	3	42	27	233
Total	6	5	7	2	51	30	4724

The percentage who had not experienced a family event is highest among women from the most advantaged backgrounds. Those from intermediate social class backgrounds are the least likely to remain single and the most likely to enter marriage directly. There is clear linear association between the respondent's socio-economic background and the propensity to marry following a conception: only one per cent of women whose father had a professional occupation experienced this trajectory as compared with 17 per cent women from the poorest social class background. A slightly higher percentage of women from unskilled manual class backgrounds conceived and subsequently cohabited, as compared to other women.

4.5.1 Discrete-time hazards model of first family transition

These differentials persist when other factors are controlled within a multivariate competing risks model of first family transition, where individuals exit the reference category of being single and never pregnant through each of the routes discussed above. Individuals contribute person-years of exposure until the time they either enter their first partnership or conceive, whichever is the sooner. We restrict our attention to female cohort members in the age ranges 16-19 and 20-24. Tables 4.15 and 4.16 present the parameter estimates from the discrete-time multinomial logistic hazards models, whilst Tables 4.17 and 4.18 present the estimated probabilities of experiencing each of the transitions by exact ages 20 and 25 respectively.

In fact it seems that socio-economic factors exert the largest effect on the propensity to have a pregnancy prior to partnership formation among the 1958 cohort. For teenage women, father's social class, mother's age at leaving school and parental housing tenure are all found to be negatively associated with the risk of a conception prior to partnership formation (Table 4.15). The educational experience of older women mediates parental socio-economic factors, so that those with lower educational qualifications are significantly more likely to have a pre-partnership conception. Taking single, never pregnant women aged 20, for instance, we expect five per cent of those with no educational qualifications to marry after a premarital conception by age 25, compared to two per cent of women with intermediate level qualifications, and less than one per cent of those with A level or above

qualifications[17]. Women with intermediate level qualifications are more traditional in their family formation trajectories, being more likely to marry directly.

Women whose mothers delayed childbearing into their late twenties are themselves more likely to delay family formation than women with younger mothers. Contrary to our expectations, women whose mothers experienced a premarital conception are not themselves at a higher risk of marrying following a premarital conception, although they appear more likely to cohabit in their first partnership, and (as teenagers) become a lone parent.

One quarter of women whose parents remained together experienced a family event by exact age 20, as compared to a third of those who experienced parental separation. Parental separation is particularly associated with cohabitation and lone motherhood.

There are distinct regional differentials in the propensity to make each type of family transition. People brought up in Scotland and the North of England are more likely to marry following a premarital conception. Southerners, especially from London and the South East, are less likely to experience a pregnancy prior to partnership formation and more likely either to stay single or to cohabit prior to experiencing a conception.

Independence from the parental home remains significantly associated with cohabitation, but only entry into cohabitation prior to experiencing a conception. Religiosity is linked to an increased risk of marriage and a lower risk of cohabitation, and also to an increased likelihood of marriage following a premarital conception. Our analyses reveal an association between emotional and behavioural problems in adolescence and a tendency to begin family formation at an early age, and also with pregnancy prior to partnership formation. For example, three per cent of teenage women who were reported by their teachers as having emotional or behavioural problems become a lone mothers, as compared to one per cent of other women. These results concur with those of Dearden and

[17] Given that the majority of women born in 1958 completed their education prior to age 20 we are confident that this relationship is not the result of women interrupting their schooling following a pregnancy.

colleagues (1994) who documented an association between social maladjustment at age seven and an increased risk of a premarital conception.

Table 4.15: Parameter estimates for discrete-time multinomial logistic model of first family transition between age 16 and 19. Women.

Variable		Marry	Pregnancy marry birth	Cohabit	Pregnancy cohabit birth	Pregnancy remain single birth
Intercept		-3.17 **	-6.12 **	-3.70 **	-8.21 **	-6.43 **
Age	16	-3.88 **	0.12	-1.69 **	0.32	0.19
	17	-2.10 **	0.51 **	-1.10 **	0.30	0.00
	18	-0.84 **	0.26	-0.54 **	0.13	0.09
	19	0.00	0.00	0.00	0.00	0.00
Mother's age at first birth	< 20	0.81 **	1.01 **	0.38 **	0.78	0.31
	20-24	0.29 **	0.67 **	0.24 *	0.99 **	0.51 **
	25 and over	0.00	0.00	0.00	0.00	0.00
Mother had pre-marital conception	No	0.00	0.00	0.00	0.00	0.00
	Yes	-0.11	0.16	0.18	0.35	0.61 **
	Not known	0.05	0.03	0.51 **	0.67	0.97 **
Parents separated	No	0.00	0.00	0.00	0.00	0.00
	Yes	0.36 **	0.10	0.54 **	0.64 *	0.44 **
Father's social class at age 7	Non-manual	0.00	0.00	0.00	0.00	0.00
	Manual	0.37 **	0.79 **	0.06	1.05 *	0.65 **
	Not known	0.19	0.69 **	0.44 **	1.35 **	0.81 **
Parents' housing tenure at age 7	Owner occupied	0.00	0.00	0.00	0.00	0.00
	Public rented	0.30 **	0.60 **	0.33 **	-0.24	0.18
	Other/not known	0.20	0.23	0.05	-0.15	0.23
Age mother left school	Under age 15	0.35 **	0.16	0.10	0.36	0.28
	Age 15 or more	0.00	0.00	0.00	0.00	0.00
	Not known	0.02	0.04	0.30 **	0.68	0.27
Region of residence at age 16	Scotland & North	0.00	0.00	0.00	0.00	0.00
	Midlands & Wales	-0.05	-0.02	0.26 *	-0.70	-0.45 *
	South	0.26 **	-0.04	0.45 **	-0.77	-0.38
	SE & London	-0.18	-0.39	0.62 **	-1.33 *	-0.60 *
	Not known	-0.16	-0.40	-0.12	-0.30	-0.76 *
Behaviour rating at age 16	'Normal'	0.00	0.00	0.00	0.00	0.00
	'Emotional disorder'	0.20	0.32	0.82 **	0.97 *	1.35 **
	'Conduct/Mixed disorder'	0.48 **	0.95 **	0.80 **	1.08 **	0.79 **
	Not known	0.11	-0.05	0.16	0.38	0.58 **
Reading ability at age 16	Poor	0.24 *	0.27	0.31 **	0.47	0.36
	Average/good	0.00	0.00	0.00	0.00	0.00
	Not known	0.09	0.68 **	0.20	0.57	0.27
Religious activity	None	0.00	0.00	0.00	0.00	0.00
	Weak	-0.31 **	-0.41 *	-0.67 **	-0.37	-0.32
	Strong	-0.02	-0.15	-0.61 **	-0.01	-0.03

Note: The small number of individuals with missing information as to whether their parents separated, or their religious affiliation have been deleted from this analysis.

** Denotes statistical significance at the five per cent level, * Denotes statistical significance at the ten per cent level

N=17050, -2 log likelihood=12446.7, d.f.=130

Table 4.16: Parameter estimates for discrete-time multinomial logistic model of first family transition between age 20 and 24. Women.

Variable		Marry	Pregnancy marry birth	Cohabit	Pregnancy cohabit birth	Pregnancy remain single birth
Intercept		-2.10 **	-7.40 **	-3.12 **	-9.96 **	-7.44 **
Age	20	-0.23 **	0.47	-0.34 **	0.72	0.41
	21	-0.04	0.51	-0.09	0.03	0.81 **
	22	0.04	0.62	0.20 *	0.66	0.91 **
	23-24	0.00	0.00	0.00	0.00	0.00
Mother's age at first birth	< 20	0.15	0.45	-0.10	0.67	0.75 *
	20-24	0.29 **	0.35	0.02	0.33	0.65 *
	25 and over	0.00	0.00	0.00	0.00	0.00
Mother had pre-marital conception	No	0.00	0.00	0.00	0.00	0.00
	Yes	-0.14 *	-0.31	0.34 **	0.09	0.22
	Not known	-0.19	0.28	-0.11	1.57 **	-0.66
Parents separated	No	0.00	0.00	0.00	0.00	0.00
	Yes	-0.15	0.06	0.61 **	0.43	0.94 **
Region of residence at age 16	Scotland & North	0.00	0.00	0.00	0.00	0.00
	Midlands & Wales	0.13	-0.62 *	0.21 *	0.51	0.55
	South	0.20 **	-0.61 *	0.45 **	0.39	0.52
	SE & London	-0.27 **	-0.93 **	0.33 **	-0.60	0.12
	Not known	0.26 **	-1.18 *	0.20	2.23 **	0.04
Behaviour rating at age 16	'Normal'	0.00	0.00	0.00	0.00	0.00
	'Emotional disorder'	-0.27	0.83 **	-0.12	-0.76	1.19 **
	'Conduct/mixed disorder'	-0.03	0.06	0.20	0.00	1.14 **
	Not known	-0.01	-0.21	-0.07	-2.54 **	0.70 **
Highest educational qualification at age 23	A Level and above	0.00	0.00	0.00	0.00	0.00
	0 Level	0.41 **	1.72 **	0.13	1.73	0.31
	CSE	0.49 **	2.09 **	0.15	2.77 **	0.40
	None	0.34 **	2.95 **	0.14	3.29 **	1.24 **
Religious activity	None	0.00	0.00	0.00	0.00	0.00
	Weak	-0.10	0.30	-0.23 *	0.25	0.59
	Strong	0.28 **	0.65 **	-0.28 **	-0.22	-0.13
Living independently (t)	No	0.00	0.00	0.00	0.00	0.00
	Yes	-0.66 **	0.24	0.89 **	1.19 *	0.31
	Not known	-0.26 **	0.68 *	0.25	2.12 **	0.70 *

Note: The small number of individuals with missing information as to whether their parents separated, or their religious affiliation have been deleted from this analysis. Women with above A level qualifications have been combined due to small sample sizes.

** Denotes statistical significance at the five per cent level, * Denotes statistical significance at the ten per cent level

N=10581, -2 log likelihood=14177.6, d.f.=115

Table 4.17: Estimated probabilities from discrete-time multinomial logistic model of first family transition by age 20 among women never partnered and never pregnant at exact age 16.

Variable		Marry	Pregnancy marriage birth	Cohabit	Pregnancy cohabit birth	Pregnancy remain single birth	Remain single
Mother's age at first birth	< 20	0.18	0.06	0.09	0.01	0.02	0.65
	20-24	0.12	0.05	0.08	0.01	0.03	0.73
	25 and over	0.09	0.02	0.07	0.00	0.02	0.80
Mother had pre-marital conception	No	0.12	0.04	0.08	0.00	0.02	0.74
	Yes	0.11	0.04	0.09	0.01	0.03	0.72
	Not known	0.12	0.04	0.12	0.01	0.04	0.68
Parents separated	No	0.12	0.04	0.07	0.00	0.02	0.75
	Yes	0.15	0.04	0.12	0.01	0.03	0.66
Father's social class at age 7	Non-manual	0.10	0.02	0.08	0.00	0.01	0.79
	Manual	0.13	0.05	0.08	0.01	0.02	0.71
	Not known	0.11	0.04	0.11	0.01	0.03	0.70
Parents' housing tenure at age 7	Owner occupied	0.11	0.03	0.07	0.01	0.02	0.77
	Public rented	0.13	0.05	0.09	0.00	0.02	0.70
	Other/not known	0.13	0.04	0.07	0.01	0.02	0.74
Age mother left school	Under age 15	0.14	0.04	0.08	0.01	0.02	0.71
	Age 15 or more	0.11	0.04	0.08	0.00	0.02	0.76
	Not known	0.11	0.04	0.10	0.01	0.02	0.73
Region of residence at age 16	Scotland & North	0.12	0.04	0.06	0.01	0.03	0.74
	Midlands & Wales	0.11	0.04	0.08	0.00	0.02	0.74
	South	0.15	0.04	0.10	0.00	0.02	0.70
	SE & London	0.10	0.03	0.12	0.00	0.02	0.74
	Not known	0.11	0.03	0.06	0.01	0.01	0.79
Behaviour rating at age 16	'Normal'	0.12	0.04	0.07	0.00	0.02	0.76
	'Emotional disorder'	0.12	0.05	0.14	0.01	0.06	0.62
	'Conduct/mixed disorder'	0.15	0.09	0.14	0.01	0.03	0.58
	Not known	0.12	0.04	0.08	0.01	0.03	0.73
Reading ability at age 16	Poor	0.14	0.04	0.10	0.01	0.03	0.69
	Average/good	0.12	0.03	0.08	0.00	0.02	0.75
	Not known	0.12	0.06	0.09	0.01	0.02	0.70
Religious Activity	None	0.13	0.05	0.12	0.01	0.02	0.67
	Weak	0.11	0.03	0.07	0.00	0.02	0.77
	Strong	0.14	0.04	0.07	0.01	0.02	0.72

Table 4.18: Estimated probabilities from discrete-time multinomial logistic model of first family transition by age 25 among women never partnered and never pregnant at exact age 20.

Variable		Marry	Pregnancy marriage birth	Cohabit	Pregnancy cohabit birth	Pregnancy remain single birth	Single, never Pregnant
Mother's age at first birth	< 20	0.54	0.01	0.12	0.00	0.02	0.31
	20-24	0.58	0.01	0.13	0.00	0.01	0.27
	25 and over	0.49	0.01	0.14	0.00	0.01	0.35
Mother had pre-marital conception	No	0.55	0.01	0.12	0.00	0.01	0.30
	Yes	0.49	0.01	0.17	0.00	0.01	0.31
	Not known	0.50	0.02	0.12	0.01	0.01	0.36
Parents separated	No	0.55	0.01	0.12	0.00	0.01	0.31
	Yes	0.46	0.01	0.22	0.00	0.03	0.29
Region of residence at age 16	Scotland & North	0.53	0.02	0.12	0.00	0.01	0.33
	Midlands & Wales	0.56	0.01	0.13	0.00	0.02	0.29
	South	0.65	0.01	0.11	0.00	0.01	0.22
	SE & London	0.43	0.01	0.17	0.00	0.01	0.38
	Not known	0.60	0.01	0.12	0.01	0.01	0.26
Behaviour rating at age 16	'Normal'	0.54	0.01	0.13	0.00	0.01	0.31
	'Emotional disorder'	0.45	0.03	0.13	0.00	0.03	0.36
	'Conduct/mixed disorder'	0.51	0.01	0.16	0.00	0.03	0.29
	Not known	0.54	0.01	0.12	0.00	0.02	0.31
Highest educational qualification at age 23	A Level and above	0.47	0.00	0.14	0.00	0.01	0.39
	0 Level	0.58	0.02	0.13	0.00	0.01	0.27
	CSE	0.60	0.02	0.12	0.00	0.01	0.24
	None	0.53	0.05	0.13	0.01	0.02	0.26
Religious activity	None	0.48	0.01	0.17	0.00	0.01	0.33
	Weak	0.46	0.01	0.14	0.00	0.02	0.37
	Strong	0.58	0.01	0.11	0.00	0.01	0.28
Living independently	Never left home	0.54	0.01	0.13	0.00	0.01	0.31
	Living independently	0.29	0.02	0.34	0.00	0.02	0.34
	Not known	0.43	0.02	0.18	0.00	0.02	0.34

4.6 Discussion

The 1958 birth cohort were making their transitions into first partnership during two decades of rapid change in patterns of family formation. By analysing entry into first partnership within three age ranges we have been able to investigate the way in which parental characteristics work through the cohort members' own experiences to affect the timing of first partnership formation and the choice between marriage and cohabitation.

Our analyses suggest that socio-economic factors played the greatest role in influencing the timing of partnership formation. Parental socio-economic background affects the age of entry into first partnership through its impact on respondents' age at leaving school and level of educational attainment. Enrolment in full time-education clearly delays marriage, and educational differentials in the timing of marriage are greater for women than for men, a pattern found previously in Britain by Kiernan and Lelièvre (1995). This may reflect the increased opportunity costs of family formation for educated women, particularly those at the start of their careers. However, the fact that we see higher rates of partnership formation among more educated women in their late twenties and early thirties suggests that there are gains to marriage other than those derived from the specialized division of labour and highlights the need for a revised theory of marriage timing (Oppenheimer, 1997).

We have also observed persistent inter-generational associations in the timing of first partnership formation, indicating that parental attitudes and cultural norms gained through socialization in childhood play an independent role in influencing the timing of partnership formation (Axinn and Thornton, 1993). Further studies are required to establish whether the preference of men and women who have witnessed the dissolution of their parents' marriage to cohabit rather than marry straight away is directly related to the experience of parental separation, or to other social and economic factors indirectly associated with family breakdown.

Attitudinal factors are important in affecting the choice between marriage and cohabitation, at least for the 1958 cohort. We have seen that cohabitation is significantly less likely among those with strong religious beliefs, whom we would expect to have more traditional

family values. The tendency of professional men and women to cohabit less than their similarly educated counterparts in intermediate occupations (managers and teachers for instance) also suggests that cultural norms play an independent role. It would also be interesting to model the socio-economic characteristics of both partners in order to investigate the joint effect of both the man's and the woman's social class. As an example, teachers and nurses have the same social class. We might speculate that teachers who live with other teachers may be more likely to cohabit, than nurses who live with, say, doctors - the norms of the medical profession predicating more traditional behaviour.

The persistent effect of region of upbringing also suggests that cultural norms are important in affecting the lifecourse trajectories of young adults. Men and women brought up in the South East of Britain, including London, are significantly less likely to marry directly and more likely to cohabit or remain single. These findings suggest that the higher proportions of never married individuals in the South East noted by Berrington and Murphy (1994) using cross-sectional data cannot be wholly explained by selective migration of single adults to the South East.

Of particular interest is the observed relationship between non-family living and entry into cohabitation. We would argue that the previously observed relationship between higher levels of education and entry into cohabitation (Kiernan and Lelièvre, 1995) results from the fact that those with degree level qualifications are more likely to be living independently of the parental home. Given the increasing numbers of young adults in Britain who leave home to live independently (Berrington and Murphy, 1994) this association may have important implications for the family partnership formation patterns of younger cohorts.

Entry into first partnership is often related to entry into parenthood. The legitimizing of extra-marital conceptions through marriage remained an important facet of family formation among this cohort. We have shown how the probability of marriage following a conception peaks in the second trimester of pregnancy, and is much lower just prior to the birth and for the select group who remain single after the child is born.

By expanding our competing risks model to identify those who marry or cohabit following

a pre-partnership conception we find that socio-economic background factors, acting through the cohort member's level of education, are the strongest predictors of whether entry into first partnership precedes or follows entry into parenthood. Respondents who experience a conception whilst single and subsequently marry are similar to those who experience a conception and then cohabit. They are generally younger women from poorer social class backgrounds who have lower levels of education. There is then a distinction between those who cohabit following entry into parenthood (who tend to be more socio-economically disadvantaged) and those for whom cohabitation is not associated with entry into parenthood (who tend to be more advantaged). These findings corroborate earlier evidence from the General Household Survey suggesting that childless cohabiting couples have similar socio-economic characteristics to childless married couples, but that cohabiting couples with children tend to be socio-economically disadvantaged compared to their married counterparts (Kiernan and Estaugh, 1993).

We conclude that socio-economic variables such as education are most useful in predicting the speed with which cohort members enter their first partnership and whether partnership formation follows a pre-partnership conception. The decision whether to cohabit or marry may be influenced more by cultural and attitudinal factors.

Chapter 5 First Marriage Dissolution: The Role of Cohabitation

5.1 Introduction

Since the late 1960s the level of divorce in Britain has steadily increased, so that despite some recent levelling off in the trend, current rates suggest that two in five marriages will ultimately end in divorce (Haskey, 1996). Although this has been well documented through vital statistics, there has been relatively little work to investigate the socio-economic and demographic factors associated with marital dissolution. To a large extent the lack of research in Britain reflects the paucity of suitable retrospective or prospective survey data in contrast to other developed countries, particularly the United States. Here, event history techniques were first employed in this area by Murphy (1985) who, using data from the 1976 Family Formation Survey and the 1980 General Household Survey, found that socio-economic factors were generally less important than demographic factors in predicting marital dissolution. The NCDS provides a unique opportunity in Britain to take a lifecourse approach to investigate the family background and current lifecourse determinants of marital dissolution (among those married by age 33).

During the 1980s, as couples increasingly began to live together outside of formal marriage, attention in the divorce literature turned towards the role of premarital cohabitation in affecting the stability of marriages. Early theoretical speculation suggested that couples who lived together before marriage would be at a lower risk of marital dissolution since only those cohabiting couples who found themselves to be well suited and more committed to marriage would decide to marry (Macklin, 1978). However, the empirical evidence actually suggests that those who live together before marriage have a higher risk of dissolution (Haskey, 1992). In this chapter we investigate whether this association can be explained by the socio-economic and demographic characteristics of premarital cohabitors.

The availability of full cohabitation and marriage histories within the NCDS also allows us to extend previous research by investigating whether the risk of marital dissolution is

greater among those who had a cohabiting partnership with someone else before living with their spouse. Just as for premarital cohabitors, this group is likely to possess other socio-economic and demographic characteristics which are themselves associated with higher risks of marital dissolution. Furthermore, the propensity to experience partnership dissolution is likely to be correlated within individuals.

This chapter has four sections. First we describe the lifecourse trajectories taken by cohort members into and out of first marriage. We present life table estimates of marital dissolution according to respondents' previous experience of cohabitation. We then outline the theoretical framework within which we put forward hypotheses as to the expected effect of various background variables on the risk of marital dissolution. The third section describes our findings from a series of discrete-time hazards models of first marriage dissolution within eight years. We conclude by discussing the implications of these findings for Britain.

5.1.1 Lifecourse trajectories into and out of first marriage

By age 33, 78 per cent of male and 85 per cent of female cohort members had ever married. Table 5.1 summarises the lifecourse trajectories taken by those who had married. The vast majority of the 1958 birth cohort (93 per cent of men and 94 per cent of women) married their first partner. In total around one third cohabited with their spouse before marriage, with a median duration of premarital cohabitation of 14 months. Among those ever married, one in five of the men and one in four of the women had experienced the dissolution of their first marriage by age 33. In order to compare the risk of dissolution according to various background characteristics we need to take account of the fact that those married more recently will have been exposed to the risk of dissolution for a shorter time. Life table techniques account for this censoring.

Table 5.1: Lifecourse trajectories into first marriage among the 1958 birth cohort.

Trajectory into first marriage	Percentage Men	Women
Married first partner directly	62.2	68.2
Married first partner after period of premarital cohabitation	30.7	26.2
Previous cohabiting partnership(s) then married directly	2.5	1.1
Previous cohabiting partnership(s) then married after period of premarital cohabitation	4.6	4.5
Total ever married (100%)	4345	4907

5.1.2 Risks of marital dissolution according to previous experience of cohabitation

Table 5.2 shows the life table probabilities of separating within the first eight years of marriage according to the respondent's previous experience of cohabitation[18]. Men and women who lived with their spouse before marriage are seen to experience significantly higher rates of marital dissolution than those who marry directly. The difference is slightly higher among men, with one in four of those who premaritally cohabited experiencing separation as compared to one in six men who married their partner directly. These findings replicate earlier ones from a number of developed countries including Britain (Haskey, 1992), Canada (Balakrishnan et al., 1987; Hall and Zhao, 1995), the Netherlands (Manting, 1992), Sweden (Bennett et al., 1988; Hoem and Hoem, 1992; Trussell et al., 1992) and the United States (Teachman and Polonko, 1990; Bumpass et al., 1991; Teachman et al., 1991; Axinn and Thornton, 1992; DeMaris and Rao, 1992; Schoen, 1992).

[18] The date of separation refers to the time when the couple stopped living together.

Table 5.2: Life table probabilities and odds ratios of first marriage dissolution within eight years according to previous experience of cohabitation.

	Men		Women	
	Probability dissolution	Odds ratio	Probability dissolution	Odds ratio
Whether cohabited premaritally				
No	0.16	1	0.18	1
Yes	0.23	1.57	0.23	1.36
Whether cohabited with another partner				
No	0.18	1	0.19	1
Yes	0.26	1.59	0.29	1.74

A number of explanations have been put forward to explain the association between premarital cohabitation and marital instability. Some researchers have questioned whether the effect is a statistical artefact. That is to say, if the risk of marital dissolution increases with partnership duration (a hypothesis for which there is inconsistent empirical support; see for example Becker et al., 1977; Bracher et al., 1993) then these patterns may reflect the longer time spent in a partnership. Studies which have controlled for total partnership duration have variously found the effect of premarital cohabitation to be unchanged (DeMaris and Rao, 1992), reduced (Haskey, 1992; Trussell et al., 1992) or removed altogether (Teachman and Polonko, 1990).

We hypothesize that the observed relationship between the length of premarital cohabitation and marital dissolution reflects the outcome of the contrasting effects of premarital cohabitors having less traditional attitudes to marriage and divorce and the extent to which they have rigorously tested the partnership before embarking upon marriage (Bracher et al., 1993). Most authors have argued that those who live with their spouse before marriage are a select group whose demographic and socio-economic characteristics make them prone to experience marital breakdown (DeMaris and Leslie, 1984; Bennett et al., 1988; Booth and Johnson, 1988; Axinn and Thornton, 1992; Hall and Zhao, 1995). This view is supported by data from the NCDS (Table 5.3). Premarital cohabitation is more likely

among those who have experienced parental separation, those who have experienced a previous partnership, and those whose spouse was previously married.

Cohabitors have consistently been found to have less traditional attitudes towards marriage and family formation (Bennett et al., 1988; Axinn and Thornton, 1992; Thomson and Colella, 1992; DeMaris and MacDonald, 1993). Religiosity can be used as one measure of traditionalism and, as shown in Table 5.3, premarital cohabitation is most likely among those who report no religious affiliation and least likely for those with high levels of religious practice. Premarital cohabitation is also more common among those who lived independently from the parental home before partnership formation. It is possible that if these respondents experience marital difficulties they may be able to return to independent living more easily than those without such an experience.

Finally, a growing body of evidence indicates that marital satisfaction may be lower among couples who cohabit before marriage (Booth and Johnson, 1988; Brown and Booth, 1996). Some authors have suggested that the experience of cohabitation may have an independent effect on marital stability, for example, through its effect on young adults' attitudes towards marriage and acceptance of divorce (Booth and Johnson, 1988; Axinn and Thornton, 1992; Thomson and Colella, 1992). Unfortunately data available from the NCDS do not permit us to test these hypotheses explicitly. In summary, therefore, we test the hypothesis that *the association between premarital cohabitation and marital stability is attenuated and could even become positive once other control variables are entered into the analysis.* We also test the hypothesis that *the effect of premarital cohabitation results from the longer time spent in a partnership among those who premaritally cohabit.*

Table 5.3: Percentage of men and women who premaritally cohabited before first marriage according to various background characteristics.

Background characteristic	Percentage premaritally cohabited		Number of first marriages	
	Men	Women	Men	Women
	%	%	N	N
Age at marriage				
16-19	20.7	17.0	377	1295
20-24	24.5	25.9	2233	2503
25-33	52.4	57.6	1735	1109
Whether had a premarital conception				
No	32.2	26.9	3557	3915
Yes	49.4	45.9	788	992
Whether had a previous partnership				
No	33.0	27.8	4037	4633
Yes	64.9	79.9	308	274
Whether partner previously married				
No	30.9	25.0	3784	4150
Yes	82.6	65.6	282	477
Not known	47.3	55.7	279	280
Whether lived independently prior to first partnership				
No	27.6	21.2	2427	3034
Yes	47.8	49.9	1480	1430
Not known	35.1	30.3	438	443
Religious activity				
None	42.0	35.7	1715	1294
Weak	31.8	28.6	1598	2421
Strong	16.8	18.3	340	553
Not known	38.7	39.3	692	639
Whether parents separated				
No	33.1	27.5	3161	3613
Yes	45.4	40.2	467	619
Not applicable/known	38.2	39.4	717	675

Returning to Table 5.2 we see that men and women who had one or more previous cohabiting partnerships before living with their spouse are at a higher risk of marital dissolution. The effect is slightly larger for women than for men. These patterns are likely to be the result of a selection effect whereby those who have already lived in a cohabiting partnership will have less traditional attitudes towards marriage and marital dissolution, and will have other demographic characteristics which place them at a higher risk of marital dissolution. For example, almost one quarter of women who cohabited with another partner had a birth before marriage, as compared with six per cent of those who married directly.

The higher risk of marital breakdown among those who lived in another partnership before first marriage is also likely to reflect unmeasured individual level heterogeneity in the propensity to experience partnership dissolution. Indeed, we might expect the duration of subsequent partnerships to be correlated within individuals (Lillard et al., 1995). Unfortunately, the relatively small number of individuals in this cohort who had a cohabiting partnership before marriage means that we are unable to test this directly. Our hypothesis therefore, is that *the observed association between experience of a cohabiting partnership before marriage and subsequent marital instability is reduced but not eliminated when other factors are controlled.*

5.2 Lifecourse Determinants of Marital Dissolution

The following discussion uses a lifecourse approach to group the factors found to be associated with the risk of marital dissolution into three categories: parental and family background factors; early lifecourse characteristics; and early marital factors (including experience of cohabitation). This allows us to identify the temporal ordering of effects (Hoem and Hoem, 1992; Bracher et al., 1993; Amato, 1996). By first including parental and family background variables into our model, and subsequently incorporating factors describing the cohort member's lifecourse experiences, we are able to demonstrate the way in which many socio-economic background factors are associated with increased risks of marital dissolution through their effect on a number of largely demographic early marital factors (Figure 5.1). We begin by discussing these more intermediate determinants which

have previously been found to exert independent influences on the risk of marital dissolution.

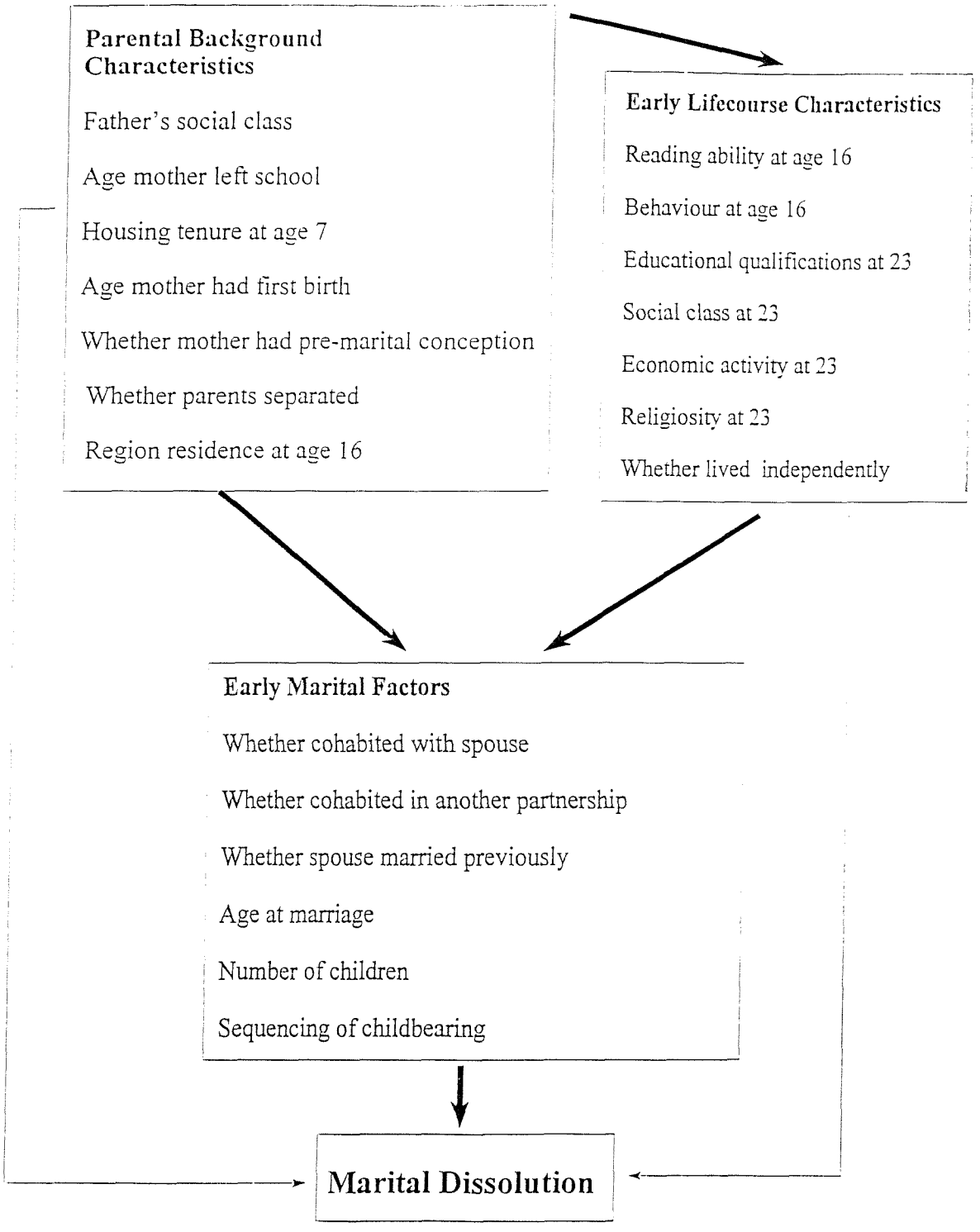
5.2.1 Early marital factors

Age at marriage

Previous research has consistently found a strong negative relationship between age at marriage and the risk of divorce even when the characteristics of those who marry young have been taken into account (White, 1990). Many authors have emphasised the immaturity and lack of preparedness for marriage of those who marry in their teens (Goode, 1966; Levinger, 1976). Economists highlight the lack of investment in partner search and the lack of knowledge of the longer term characteristics of their future spouse (Becker et al., 1977; Oppenheimer 1988). Other researchers argue that couples who marry at young ages tend to have poor marital role performance resulting from a lack of adequate adult role models during adolescence, and a greater divergence in marital role expectations (Bumpass and Sweet, 1972; Booth and Edwards, 1985). Still more explanations focus on the lower social barriers to dissolution among those who marry in their teens, and the greater opportunities in terms of remarriage partners for young divorcees (Booth and Edwards, 1985).

As our data refer to a single birth cohort, age and calendar year are perfectly correlated and so age can also be taken to mean period. Since there has been an increase in the risk of marital dissolution over the period 1974-1991, we would argue that any positive effect of a young age at marriage on marital instability will be underestimated within this analysis. In summary, in the following analyses we test the hypothesis that *the risk of marital breakdown is negatively associated with age at marriage.* If the effect of age at marriage is due to lack of preparation by those who marry in their teens then *this effect will decline as marriage duration increases.*

Figure 5.1: Lifecourse framework for analysing the determinants of marital dissolution.



The timing of childbearing

Previous research has tended to focus either on the timing of first birth in relation to the timing of first marriage, or on the number of children present in a marriage. The two aspects are interrelated such that we cannot investigate both simultaneously. Since premarital cohabitation is associated with premarital childbearing, we choose to focus on the timing of childbearing. Moreover, Murphy (1985) found the timing of childbearing to be more important than the number of children in predicting marital dissolution.

A premarital conception provides a strong incentive to marry in order to legitimise the birth. Researchers generally argue that these "shot-gun" or "forced" marriages will be less stable than marriages in which the couple spend a longer time in partner search (Goode, 1966; Furstenberg, 1976; Levinger, 1976; Becker et al., 1977). If a premarital conception acts as an indicator of a hastily organized marriage, then we would expect to find particularly high risks of dissolution during the early years of marriage (Morgan and Rindfuss, 1985). Those who experience the birth of their first child before marriage have been found to be at a particularly high risk of marital dissolution (Balakrishnan et al., 1987; Teachman and Polonko, 1990; Bracher et al., 1993). Becker and colleagues (1977) argue that these women will have a reduced ability to search for a suitable spouse, whilst Teachman (1983) highlights the fact that women who were single at the birth of their child will have already experienced a period of lone parenthood and will therefore have less traditional attitudes towards marriage and divorce. In summary, we test the hypothesis that *those who marry following a premarital conception are more likely to experience marital dissolution, particularly during the first few years of marriage. Those who have a birth before marriage also have a higher risk of dissolution, although since children generally live with their biological mother, the effect is greater for women.*

Partner's marital history

Ideally, information concerning the cohort member's spouse is required in order to fully investigate the determinants of marital breakdown. Unfortunately, little information is available within the NCDS concerning partners with whom the respondent is no longer living. Information is available concerning the legal marital status of the cohort member's first spouse, although the data are missing for a number of respondents, particularly those whose first marriage has broken down. In general, rates of marital dissolution have been

found to be higher for couples where one or both have been previously married, reflecting the increased propensity of certain individuals to experience marital dissolution (Bumpass and Sweet, 1972; Haskey, 1984; Teachman and Polonko, 1990; Bumpass et al., 1991). We put forward the hypothesis therefore, that *the risk of marital dissolution is higher among cohort members whose partners have been formerly married.*

5.2.2 Parental and family background factors

Parental socio-economic status

We investigate whether parental social class, housing tenure, or maternal education are significantly associated with levels of marital breakdown. Previous research has highlighted an association between lower parental socio-economic status and increased risks of marital dissolution. These effects have generally been found to operate indirectly, for example through age at marriage (Kiernan, 1986; Bumpass et al., 1991). Our hypothesis is that *there is a negative relationship between parental socio-economic status and marital instability, but that this association becomes insignificant once early marital factors are controlled.*

Parental demographic characteristics

In comparison with socio-economic background factors, the demographic characteristics of respondents' parents have been found to exert a more direct effect on the risk of first marriage dissolution (Kiernan, 1986). Previous empirical research has highlighted intergenerational associations in the timing of family formation (Kiernan and Diamond, 1983; Thornton, 1991). Since age at marriage is strongly associated with marital stability we would expect the age at which the respondent's mother began to form her own family to be indirectly associated with marital stability. In addition, younger mothers are likely to have more liberal attitudes towards marital dissolution, and hence maternal age may also exert a direct effect on the risk of marital dissolution.

Cohort members whose mothers experienced a premarital conception may have been exposed during adolescence to more positive attitudes towards partnerships outside of

marriage (Thornton 1991). We might expect, therefore, that these respondents will be more likely to experience marital dissolution, but that this will be mediated though its effect on the risk of experiencing a premarital cohabitation and a premarital conception.

Previous work has also highlighted an inter-generational association in marital instability. The effect of parental separation on the risk of marital instability generally persists once other socio-economic factors are controlled for, but tends to be mediated through a number of intermediate determinants; in particular a young age at marriage, experience of premarital cohabitation and premarital conception (Kiernan, 1986; Glenn and Kramer, 1987; McLanahan and Bumpass, 1988; Bumpass et al., 1991; Amato, 1996). Our hypothesis is that *having a young mother, a mother who experienced a premarital conception or parents whose own marriage broke down are associated with higher risks of marital dissolution, but that these effects are mediated through more intermediate determinants of marital breakdown such as age at marriage and experience of cohabitation.*

Region of upbringing

Research from other developed countries has found significant intra-national regional differentials in the propensity to experience marital dissolution (Balakrishnan et al., 1987; Lillard et al., 1995). In Chapter 4 we saw that those who were brought up in the South (and the South East in particular) were more likely to cohabit and less likely to marry. In the following analysis we test the hypothesis that these patterns relate to regional differences in attitudes towards marriage and that *marital dissolution is less likely among those brought up in Scotland and the North, and more likely among those brought up in the South and the South East.*

5.2.3 Early lifecourse characteristics

Reading ability

Previous research has highlighted an association between poor reading ability in childhood and higher risks of partnership breakdown in adulthood (Maughan and Hagell, 1996). The pathways through which this association works are likely to be complex given the

association of poor childhood reading skills with general socio-economic disadvantage, behavioural disorders in childhood, and depression and anxiety in early adulthood (ALBSU, 1987; Maughan and Hagell, 1996). In the following analyses we use reading ability at age 16 to identify poor readers[19]. Those with a raw score of less than 20 in the age 16 reading comprehension test are identified as 'poor readers' (17 per cent of all men and 16 per cent of all women contacted at age 16). This group contains over three quarters of those who, at age 23, self-reported continued reading problems. Our hypothesis is that *men and women with poor reading skills are more likely to experience marital dissolution but that this association will be attenuated when later lifecourse experiences are controlled.*

Behavioural/emotional problems

It has been suggested that individual personality factors might be important determinants of the risk of marital dissolution (Murphy, 1985). Recent investigations based upon the 1958 birth cohort have demonstrated the importance of behavioural/emotional indicators for a number of outcomes in early adulthood, including entry into cohabitation and premarital childbearing (Ní Bhrolcháin et al., 1994; Cherlin et al., 1995). Such factors are, therefore, also likely to be associated with an increased chance of marital dissolution. Previous research by Kiernan (1986), studying teenage marriages among the 1946 British birth cohort, found neuroticism to be significantly associated with the risk of dissolution. More recently, Maughan and Hagell (1996) noted that for women, behavioural difficulties in childhood were directly associated with later partnership breakdown. The authors suggest that this association is mediated through an early age at marriage and, citing evidence from Quinton and colleagues (1993), the tendency for individuals with 'deviant' behaviour to pair assortatively.

In the following analyses we use teacher assessments of cohort members' behaviour at age 16, collected using the Rutter School Behaviour Scale, to identify respondents who have behavioural or emotional problems. Our hypothesis is that *men and women reported as having 'deviant' behaviour at age 16 are more likely to experience marital dissolution, but*

[19] This reading test was constructed specifically for the NCDS by the National Foundation for Educational Research in England and Wales to be parallel to the Watts-Vernon test of reading comprehension. For further details see Fogelman (1983).

that this association tends to be mediated through early marital factors.

Economic activity and social class

Economic theory suggests that the specialization of men into market work and women into domestic production, and the dependency this creates, means that there are major economic gains from marriage. Among men, higher levels of education and employment in high status occupations would tend to increase these gains. This hypothesis is supported by empirical findings which suggest that marital dissolution is higher for men with lower levels of income (Levinger, 1976), unemployed men (Bracher et al., 1993) and those in unskilled manual occupations (Goode, 1966; Haskey, 1984; Murphy, 1985).

Among women, however, economic theory suggests that increased economic independence reduces the financial gains to marriage and the barriers to marital breakdown. Furthermore, increased economic activity, particularly in higher status occupations may mean that women will be less able or willing to make post-marital adjustments, rendering marital dissolution more likely (Oppenheimer, 1988). In addition, labour force participation of women may expand the alternatives to marriage by increasing the possibility of meeting other potential partners (Bracher et al., 1993).

In summary, we test the hypothesis that *among men, employment, especially in higher social class occupations, is associated with lower rates of marital breakdown, and unemployment and economic inactivity are associated with higher rates of marital dissolution. Among women, those who have lower social class occupations and those who are economically inactive have lower rates of marital dissolution.*

Educational qualifications

The relationship between education and marital dissolution is complicated by the fact that highly educated women (who have the greatest potential for economic independence), will tend to marry more educated men (for whom the gains from marriage are greatest). At the same time education may have an independent effect on the risk of separation. We would expect those with more education to make a better choice of marital partner and to communicate more effectively than poorly educated couples, thus facilitating problem solving within the relationship (Amato, 1996). On the other hand, higher levels of

education may be associated with more liberal attitudes towards marriage and divorce, weakening the social barriers to marital dissolution (Levinger, 1976).

Given these counteracting forces it is not surprising that we find inconsistencies in the empirical evidence (Balakrishnan et al., 1987; Teachman and Polonko, 1990; Bumpass et al., 1991; Bracher et al., 1993). Recent work by Hoem (1995) shows how the effect of education on marital breakdown has changed over marriage cohorts in Sweden, whilst Blossfeld and colleagues (1993) demonstrate that the importance of education in indicating ability to cope with the social and economic consequences of marital breakdown is greatest in more traditional family settings. In the following analyses we investigate the hypothesis that *there is a positive association between education and marital stability, but that this relationship is reduced (and could become negative for women) once early marital factors, particularly age at marriage and childbearing status are controlled.*

Experience of non-family living

In the previous chapter we found an association between independence from the parental home and entry into cohabitation. It seems likely that those who have experienced a period of independence will value their autonomy to a higher degree, and having experienced a period of non-family living may be more willing to dissolve a marriage. Our hypothesis then is that *those who have experienced a period of non-family living before entry into first marriage are more likely to experience marital dissolution.*

Religious activity

Level of religious practice has been found in other developed countries to be strongly associated with a reduced level of marital breakdown irrespective of whether religiosity is measured during adolescence (Bracher et al., 1993) or at the time of the survey (Balakrishnan et al., 1987; Bumpass et al., 1991). We test the hypothesis that *respondents who report regular religious attendance have lower rates of marital dissolution and that this association is reduced once early marital factors, particularly experience of cohabitation and timing of childbearing, are included in the analysis*[20].

[20] We note that there is a possibility for reverse causation in the relationship between religious practice and marital dissolution among the minority of respondents who married and divorced prior to age 23.

5.3 Results

We model the probability of marital dissolution within each three month time interval for the first eight years of marriage. Marriages which end in the death of a spouse and those which began less than eight years before the age 33 survey are treated as censored. We first investigate the effect of parental and family background variables on the risk of marital dissolution (Model 1), before including characteristics of the cohort member themselves (Model 2). Finally, we incorporate early marital factors including the respondent's experience of cohabitation (Model 3). The parsimonious model is chosen using a combination of forward selection and backward elimination and only those variables which are significantly associated with the risk of marital dissolution at the five per cent level are retained in the model. We test for all interactions. Tables 5.4 and 5.5 show the parameter estimates for the variables found to be significant in each of the three nested models. The risk of marital breakdown is fairly constant over the first eight years of marriage, although when childbearing status is taken into account (Model 3) the risk of dissolution is significantly lower in the first couple of years of marriage remaining constant thereafter. A similar pattern has been observed using Australian data (Bracher et al., 1993). Only a few interactions between the covariates and marriage duration were found to be significant, suggesting proportionality in the effect of the majority of covariates over time, at least for the first eight years of marriage. Significant interactions are shown in the lower sections of Tables 5.4 and 5.5.

Below we describe our findings concerning the effect of cohabitation on marital stability, and highlight some of the new insights that the lifecourse approach brings to our understanding of marital dissolution in Britain.

Table 5.4: Odds ratios from discrete-time logistic regression hazards model of first marriage dissolution within eight years. Men.

Model		Model 1	Model 2	Model 3
Degrees of freedom		12	26	42
Deviance		6627.1	6580.6	6377.0
Intercept		-5.48	-5.66	-5.28
Marriage duration in years	0-1	0.84	0.25 **	0.13 **
	2-3	0.88	1.14	0.84
	4-5	0.90	1.12	0.71 *
	6-7	1.00	1.00	1.00
Mother's age at first birth	15-19	1.31 **	1.20	1.21
	20-24	1.08	1.01	1.06
	25+	1.00	1.00	1.00
Whether parents separated	No	1.00	1.00	1.00
	Yes	1.67 **	1.58 **	1.42 **
	Not known/applicable	1.27	1.14	1.09
Region of residence at 16	Scotland/North	1.00	1.00	1.00
	Wales/Midlands	1.27 **	1.28 **	1.31 **
	South/East	1.20	1.23 *	1.25 *
	S.E & London	1.27 *	1.28 *	1.23
	Not known	1.16	1.22	1.22
Behaviour rating at age 16	'Normal'		1.00	1.00
	'Emotional disorder'		1.62 **	1.51 **
	'Conduct disorder'		1.02	0.96
	'Other disorder'		1.82 **	1.75 *
	Not known		0.99	0.98
Religious activity	None		1.00	1.00
	Weak		0.84 *	0.94
	Strong		0.60 **	0.71 *
	Not known		1.67	1.92
Highest educational qualification	Degree		1.00	1.00
	A level		1.32	1.40
	O level		1.32	1.34
	CSE		1.63 **	1.67 **
	None		1.22	1.25
Economic activity	Employed		1.00	1.00
	Unemployed		1.35 **	1.20
	Inactive		2.12	2.12
	Student		1.00	0.93
Age at marriage	16-19			2.32 **
	20-24			1.13
	25+			1.00
Duration of premarital cohabitation	None			1.00
	0-2 months			1.12
	3-11 months			1.58 **
	12-23 months			1.58 **
	24+ months			1.60 **
Whether had a previous partnership	No			1.00
	Yes			1.88 **
Timing of childbearing	No children (t)			1.00
	Premarital birth			0.66 **
	Premarital conception			0.50 **
	Currently pregnant (t)			0.11 **
	Marital birth (t)			0.31 **
Marriage duration 0-1 * A level qualification			3.22 *	3.29 *
Marriage duration 0-1 * O level qualification			4.22 **	4.66 **
Marriage duration 0-1 * CSE level qualification			3.53 **	3.90 **
Marriage duration 0-1 * No qualification			3.39 *	3.86 **
Marriage duration 4-5 * Age at marriage 20-24				1.72 **

** Denotes significance at the five per cent level. * Denotes significance at the ten per cent level. (t) Denotes time-varying covariate.

Table 5.5: Odds ratios from discrete-time logistic regression hazards model of first marriage dissolution within eight years. Women.

Model		Model 1	Model 2	Model 3
Degrees of freedom		9	29	41
Deviance		8859.3	8790.1	8537.0
Intercept		-5.14	-5.40	-5.22
Marriage duration in years	0-1	0.90	0.90	0.51 **
	2-3	1.20 *	1.20 *	0.94
	4-5	1.21	1.21 *	1.12
	6-7	1.00	1.00	1.00
Parental housing tenure	Owner occupier	1.00	1.00	1.00
	Public rented	0.92	0.80 **	0.78 **
	Private rented	0.90	0.83	0.80 *
	Other/not known	1.00	0.97	0.95
Whether parents separated	No	1.00	1.00	1.00
	Yes	1.38 **	1.28 **	1.17
	Not known/applicable	1.14	1.04	1.13
Behaviour rating at age 16	'Normal'		1.00	1.00
	'Emotional disorder'		1.05	1.02
	'Conduct disorder'		1.62 **	1.49 **
	'Other disorder'		1.73 **	1.77 **
	Not known		1.22 **	1.21 **
Religious activity	None		1.00	1.00
	Weak		0.93	0.99
	Strong		0.59 **	0.72 **
	Not known		1.40	1.07
Highest educational qualification	Degree		1.00	1.00
	A level		1.51 **	1.49 **
	O level		1.88 **	1.73 **
	CSE		1.95 **	1.79 **
	None		1.95 **	1.70 **
Social class	I		0.98	0.81
	II		1.00	1.00
	IIIn		0.73 **	0.71 **
	IIIm		0.74 *	0.73 *
	IV		0.93	0.87
	V		0.81	0.67
	Not known		0.79 *	0.76 **
Economic activity	Employed		1.00	1.00
	Unemployed		1.27	1.36 **
	Inactive		0.90	1.19
	Student		0.94	0.91
Age at marriage	16-19			2.69 **
	20-24			1.45 **
	25+			1.00
Duration of premarital cohabitation	None			1.00
	0-2 months			1.60 **
	3-11 months			1.25
	12-23 months			1.12
	24+ months			1.36 **
Whether had a previous partnership	No			1.00
	Yes			2.16 **
Timing of childbearing	No children (t)			1.00
	Premarital birth			0.73 *
	Premarital conception			0.69 **
	Currently pregnant (t)			0.20 **
	Marital birth (t)			0.33 **
Marriage duration 0-1 * Premarital birth				2.08 **

** Denotes significance at the five per cent level. * Denotes significance at the ten per cent level. (t) Denotes time-varying covariate.

Premarital cohabitation

The univariate association between premarital cohabitation and marital dissolution is reduced but remains statistically significant when we control for other socio-economic characteristics. The higher rates of premarital cohabitation of NCDS cohort members who married more recently mean that the inclusion of age at marriage actually increases the size of the effect. As would be expected, the inclusion of the respondent's previous experience of cohabitation and premarital childbearing both act to reduce the size of the effect in our final model. A rather complex relationship between length of premarital cohabitation and the risk of marital dissolution is found. For men, no increase in the propensity to experience marital dissolution is seen among those who cohabit for less than three months. However, men who cohabit for longer durations are around one and a half times more likely to experience marital dissolution. Among women, a rather different pattern emerges whereby the risk of marital dissolution is higher among those who cohabit for a very short time, lower for those who cohabit for between three months and two years and higher again for those who cohabit for more than two years. By holding all other variables constant at their "average" level, the independent effect of premarital cohabitation on the cumulative risk of experiencing marital dissolution in the first eight years of marriage is illustrated in Figures 5.2a and 5.2b. Whilst 86 and 83 per cent of men and women who married directly are predicted to remain in an intact marriage, only 79 and 77 per cent of men and women who lived with their spouse for two years or more before marriage will do so.

Interestingly, there are no significant interactions between experience of premarital cohabitation and the remaining covariates, suggesting that the factors underlying the risk of marital dissolution are similar for those who do and do not live with their spouse before marriage. In further analyses (not presented) we follow Teachman and Polonko (1990) in assessing whether the negative effect of premarital cohabitation on marital stability results from the longer time spent in a partnership by couples who lived together before marriage. For those who lived with their spouse before marriage, the start of the marriage is recalibrated to become "marriage duration" t, where t corresponds to the length of premarital cohabitation. Given that couples who lived together before first marriage are, by definition, not at risk of partnership dissolution before marriage their experience is left-censored until the marriage date.

Figure 5.2a: Estimated probabilities of first marriage remaining intact according to whether lived with spouse prior to marriage. Men.

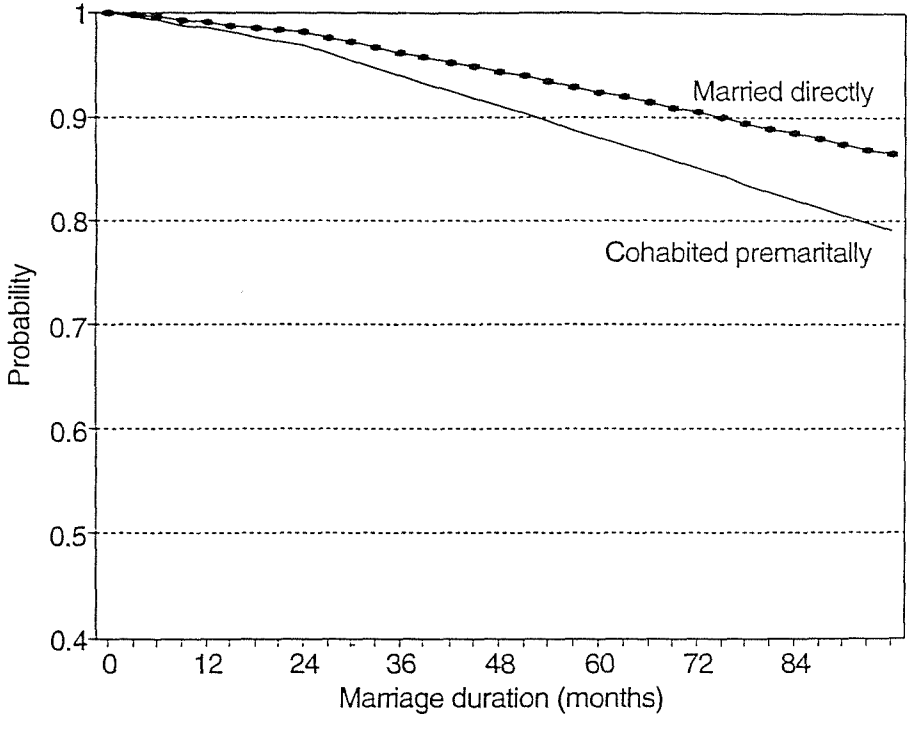
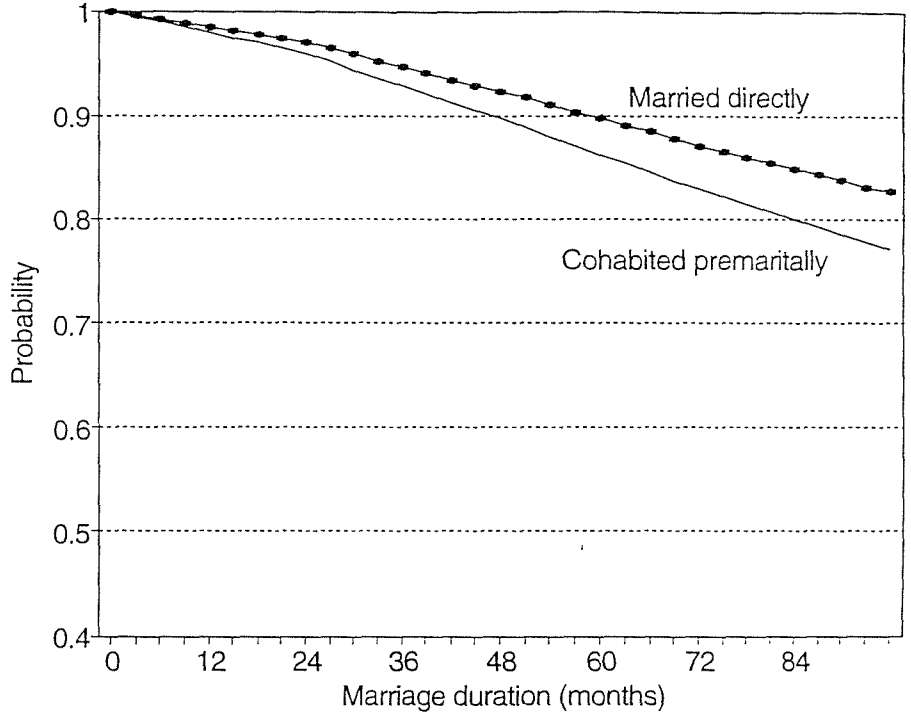


Figure 5.2b: Estimated probabilities of first marriage remaining intact according to whether lived with spouse prior to marriage. Women.



We find that the parameter estimates for premarital cohabitation are unchanged among men, and are only slightly reduced in magnitude for women, indicating that the increased risk of marital dissolution of those who live with their spouse before marriage cannot be explained by the longer time spent in a partnership.

Experience of previous cohabiting partnerships

The higher risk of marital dissolution among those who cohabited in one or more partnerships before first marriage is also found to persist once other socio-economic factors are included in the analysis. As for premarital cohabitation, the inclusion of age at marriage into the analysis dramatically increases the size of the effect, highlighting the fact that those who lived with another partner before their spouse tend to marry at a later age. The tendency for respondents who have already been in a cohabiting partnership to live with their spouse before marriage means that the inclusion of premarital cohabitation into the model decreases the size of the effect. Nevertheless, as Figures 5.3a and 5.3b show, men and women who experienced a previous cohabiting partnership before first marriage are significantly more likely to experience marital dissolution. It is possible that these "serial monogamists" have particular characteristics which mean that they are either unwilling or unable to maintain a long term co-residential partnership.

Parental and family background factors

As anticipated, parental socio-economic factors are found to be less important than parental demographic characteristics, particularly parental separation, in affecting the risk of marital dissolution. Comparison of Models 1-3 in Tables 5.4 and 5.5 reveals how, for both men and women, the effect of parental separation is mediated through the cohort member's later life course experiences, for instance, their lower levels of education, early age at marriage and increased propensity to cohabit. Those men whose mothers began family formation at an early age are seen to have a higher risk of marital dissolution, but this effect is mediated through an association between early childbearing and lower levels of education. For women, maternal age is not significantly related to the risk of marital dissolution, but parental housing tenure is found to be significant. Contrary to our expectations, we find that women brought up in owner occupied housing are more likely to experience marital dissolution than those in publicly rented housing. Among men but not women, a persistent

Figure 5.3a: Estimated probabilities of first marriage remaining intact according to whether had a previous partnership. Men.

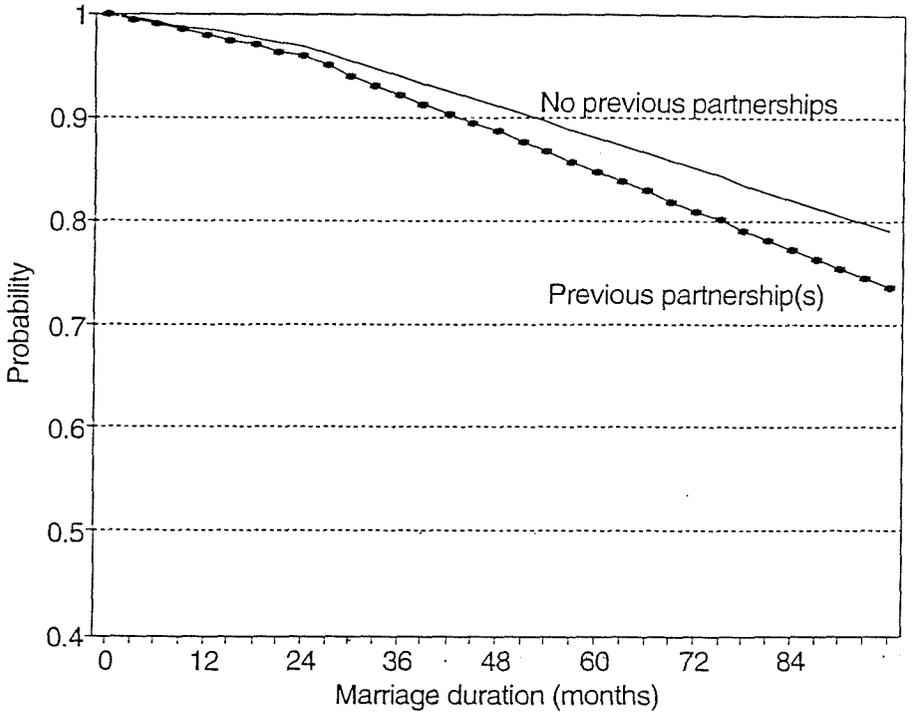
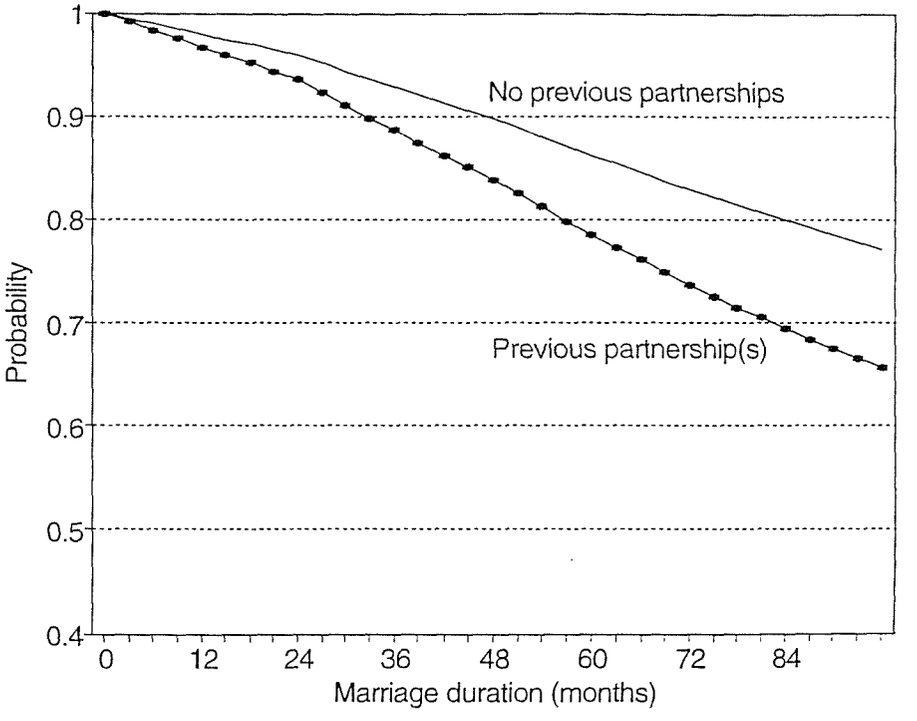


Figure 5.3b: Estimated probabilities of first marriage remaining intact according to whether had a previous partnership. Women.



regional effect is observed whereby those brought up in Scotland and the North are significantly less likely to experience marital dissolution than those brought up in other regions. No particular effect of living in the South East is seen.

Early lifecourse characteristics

Whilst poor reading ability is not found to be associated with a propensity for marital dissolution, a heightened risk for those with behavioural problems at age 16 is found. A gender difference is seen - among men it is those identified as having 'emotional disorders' who are most at risk, whereas among women the risk is highest among those with 'conduct disorders'. The small number of men and women who display both types of 'deviant' behaviour are also found to be at higher risk of marital breakdown.

As anticipated, men and women with higher levels of religiosity are significantly less likely to experience marital dissolution. Comparison of Models 2 and 3 demonstrates how this effect tends to act through more intermediate determinants of marital dissolution. Cohort members who regularly attend religious meetings are less likely to cohabit, to experience a premarital conception, to remain childless, and are more likely to experience a birth inside marriage. Contrary to our expectations there was no difference in the propensity to experience marital dissolution according to whether the respondent had experienced a period of non-family living. We do find, however, that men and women with degree level qualifications are less likely to experience marital separation than those with lower levels of education, although there is little difference between the remaining categories. As anticipated, these educational effects are reduced when age at marriage is entered into the model (reflecting the later age at marriage of those with degree level qualifications), and tend to increase once premarital cohabitation and childbearing status are included (reflecting the greater levels of premarital cohabitation and childlessness among those who are most educated). Among men (but not women) a significant interaction between education and marital duration is found, indicating that men with degree level qualifications are particularly unlikely to experience marital dissolution during the first two years of marriage.

The parameter estimates relating to social class and economic activity are generally small

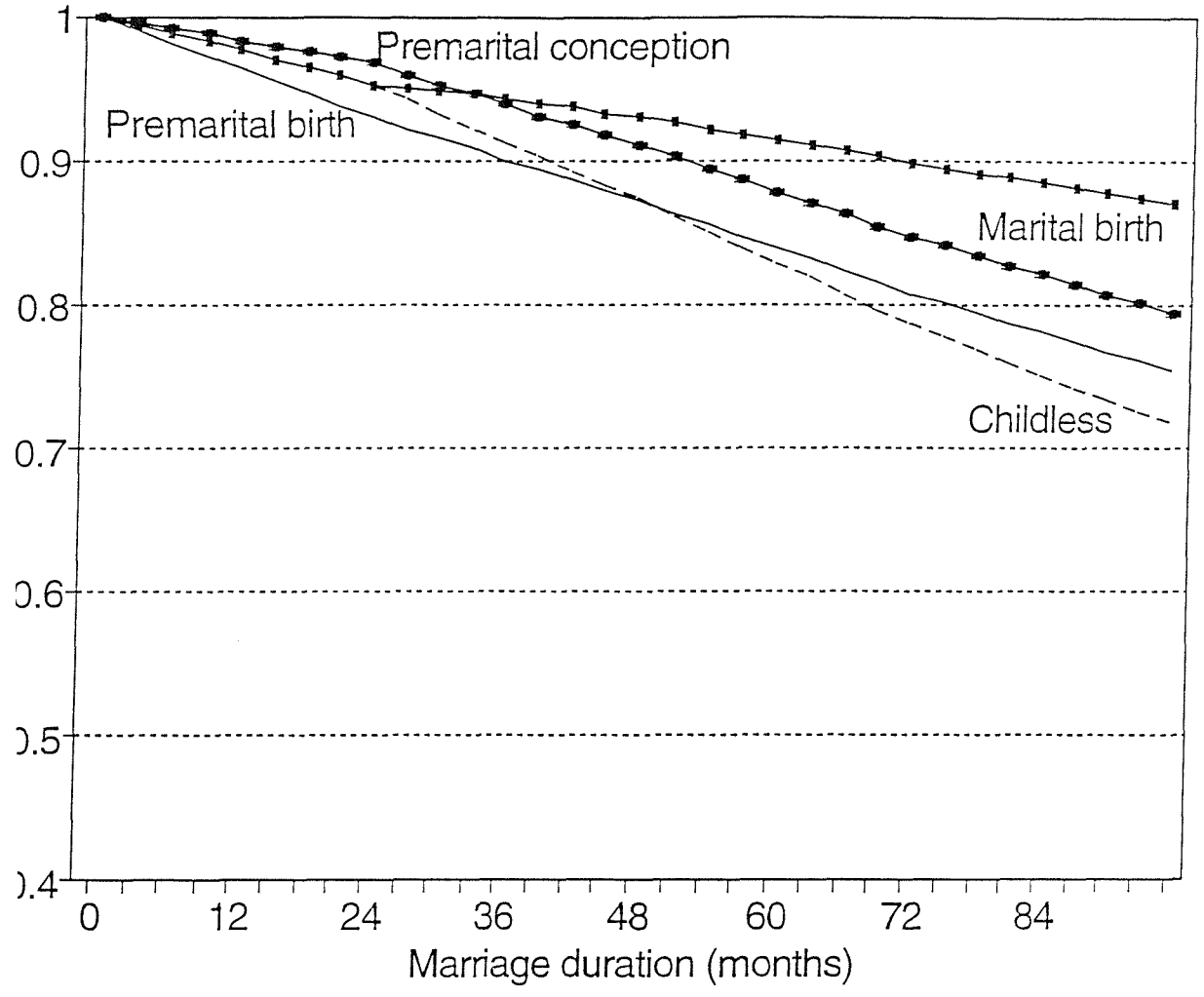
and insignificant, although there is some evidence to suggest that rates of marital dissolution are higher among women in intermediate occupations, men who are economically inactive and women who report themselves as unemployed. There is clearly a possibility that both economic inactivity and marital dissolution are related to other unmeasured characteristics such as ill health.

Early marital factors

As Model 3 in Tables 5.4 and 5.5 shows, age at marriage remains one of the most significant predictors of marital breakdown even when the socio-economic characteristics of those marrying at different ages are taken into account. For example, 70 per cent of women who married in their teens remained in an intact marriage after eight years as compared with 83 per cent of those who married in their early twenties. Similarly, the parameter estimates corresponding to childbearing status are large and negative suggesting that, in comparison to the reference group of those who remain childless, experiencing a conception which results in a live birth has a stabilising effect upon marriage. However, as anticipated, the increase in marital stability associated with the birth of a child is less for premaritally conceived children, especially those born before marriage. Contrary to our expectations, we find no evidence to support the argument that the risk of marital disruption is particularly high in the first few years of marriage for couples who marry following a premarital conception. Yet we do find that women who marry following the birth of a child are at a particularly high risk of experiencing dissolution during the first two years of marriage.

Figure 5.4 shows the cumulative probability of women remaining in an intact marriage after eight years according to alternative childbearing scenarios. The risk of marital dissolution within eight years is greatest among those who remain childless. Among those who experience a premarital birth the risk of disruption is high in the first few years, but by eight years a slightly higher proportion of marriages are predicted to remain intact than for childless women. Among those who have a premarital conception, the risk of dissolution is lower in the first couple of years of marriage than for those who delay childbearing until a couple of years after marriage.

Figure 5.4: Estimated probabilities of first marriage remaining intact according to alternative childbearing scenarios. Women.



Ultimately, however, 87 per cent of those who experience a marital birth after two years are predicted to remain in an intact marriage, compared to 80 per cent of those with a premarital conception. Finally, contrary to our expectations, the risk of marital dissolution is not found to differ according to whether the respondent's spouse had been previously married, once other factors are controlled (hence the absence of this variable from Tables 5.4 and 5.5). To some extent this negative finding may reflect problems in the quality of the data. Preliminary investigations reveal that information concerning the spouse is particularly likely to be missing for cohort members who have experienced marital dissolution.

5.4 Discussion

Cohabitation for the 1958 British birth cohort, who were making their transitions to adulthood during the late 1970s and early 1980s, remained a minority practice. In total, one third lived with their spouse before first marriage. Our analyses have confirmed earlier findings for Britain, which suggest that premarital cohabitors have a higher risk of marital dissolution. The effect cannot be explained by the longer time spent in a partnership among those who premaritally cohabit. Investigation of the characteristics of NCDS cohort members who premaritally cohabited provides strong evidence for a selection effect. When the socio-economic characteristics of cohabitors are controlled within the multivariate analysis the effect of premarital cohabitation on the risk of marital dissolution is attenuated but still persists. It remains unclear whether this residual effect reflects an underlying causal mechanism whereby the experience of premarital cohabitation itself acts to increase the likelihood of marital dissolution (for example through changing young adults' attitudes towards marriage and divorce), or whether the effect would disappear altogether if we were able to control fully for differences in the characteristics of those who do and do not premaritally cohabit (Lillard et al., 1995). In order to address this issue multi-wave, prospective data concerning detailed information on cohort members' attitudes towards marriage and divorce are required (Axinn and Thornton, 1992).

No clear relationship is seen between the length of premarital cohabitation and the risk of marital dissolution. We suggest that these patterns reflect the outcome of two underlying processes highlighted by Bracher and colleagues (1993). Those who cohabit for a short period of time are likely to be more committed to marriage than those who cohabit for longer periods. (Indeed, those who live with their spouse for just a few months before marriage are likely to have had a very clear intention to marry their partner when they began living together). However, those who premaritally cohabit for a short period are more unconventional than those who marry directly, but unlike those who cohabit for longer, do not test their relationship rigorously, say for 12-18 months, before embarking upon marriage. At the same time the risk of marital dissolution is significantly higher for couples who marry after cohabiting for two years or more. It may be that such men and women have particular reasons for marriage (for example 'to save the relationship') and that those reasons may have negative implications for the marriage.

What is clear is that the effect of premarital cohabitation on the risk of marital dissolution is relatively modest in comparison with other factors, particularly those relating to the timing of entry into marriage and parenthood. We demonstrate this by calculating the cumulative probability of experiencing marital dissolution for four hypothetical populations: those with "average" characteristics who do and do not premaritally cohabit; a "high risk" population who cohabit premaritally; and a "low risk" population who cohabit premaritally. The characteristics of the "high" and "low risk" populations are shown in more detail in Figures 5.5a and 5.5b. As already seen in Figures 5.2a and 5.2b, men and women with average characteristics who cohabit are more likely to experience marital separation than their contemporaries. However, this difference is negligible when we contrast cohabitors who either do, or do not have, other characteristics associated with marital dissolution.

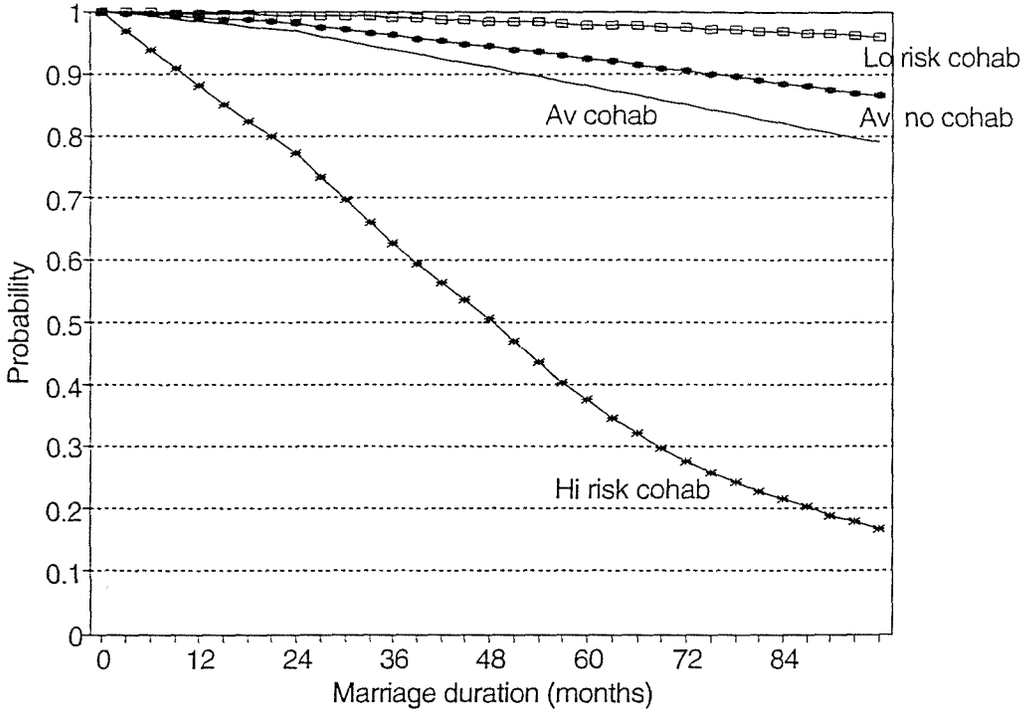
The work presented here has extended previous studies in Britain by investigating the role of previous partnerships on the risk of marriage dissolution. Men and women born in 1958 who had one or more cohabiting partnerships before living with their first spouse are, like those who premaritally cohabit, a select group. Our analyses nevertheless, have shown that the positive relationship between experience of previous partnership dissolution and first marriage dissolution remains highly significant once other socio-economic factors are

controlled. It is likely that the increased risk of marital dissolution among this group reflects unmeasured heterogeneity in the propensity of some individuals to experience partnership dissolution.

Our findings concur with earlier work in Britain which suggests that demographic factors are more important than socio-economic factors in affecting the risk of marital dissolution. Interestingly, men and women who marry in their teens continue to be at a higher risk of marital dissolution throughout the first eight years of marriage, suggesting that researchers should look beyond simple explanations which focus on a lack of preparedness for marriage among those who marry at a young age. As Murphy (1985) observed, childless couples have higher risks of marital dissolution, although the direction of causality underlying this relationship is unclear. Those who have a premarital conception, or a premarital birth are more likely to experience marital dissolution than if their first birth took place inside marriage. Among women who have a birth before marriage the risk of marital dissolution is particularly high during the first two years of marriage. We might speculate that the presence of a young child places additional strains on the marital relationship at a time when the couple are having to adjust to their new roles. These problems are likely to be heightened i) if one partner is not the biological parent of the child; or ii) if the marriage was the result of an unplanned conception.

The prospective nature of our data have allowed us to investigate the way in which many parental and family background and early lifecourse factors are associated with the risk of marital dissolution. For example, factors relating to parental separation have an effect on the risk of marital dissolution by reducing age at marriage and encouraging or condoning premarital cohabitation and premarital childbearing. Unfortunately, the data available do not permit an investigation of the causal factors underlying this. Alternative explanations include the lack of appropriate marital role models and reduced parental supervision of those whose parents separated (McLanahan and Bumpass, 1988; Amato, 1996), the fostering of lower commitment towards marriage, and the transmission of more liberal attitudes towards marital dissolution (Glenn and Kramer, 1987; Thornton, 1991; Amato, 1996; Axinn and Thornton, 1996).

Figure 5.5a: Estimated probabilities of first marriage remaining intact among 'low risk' and 'high risk' premarital cohabitors. Men.



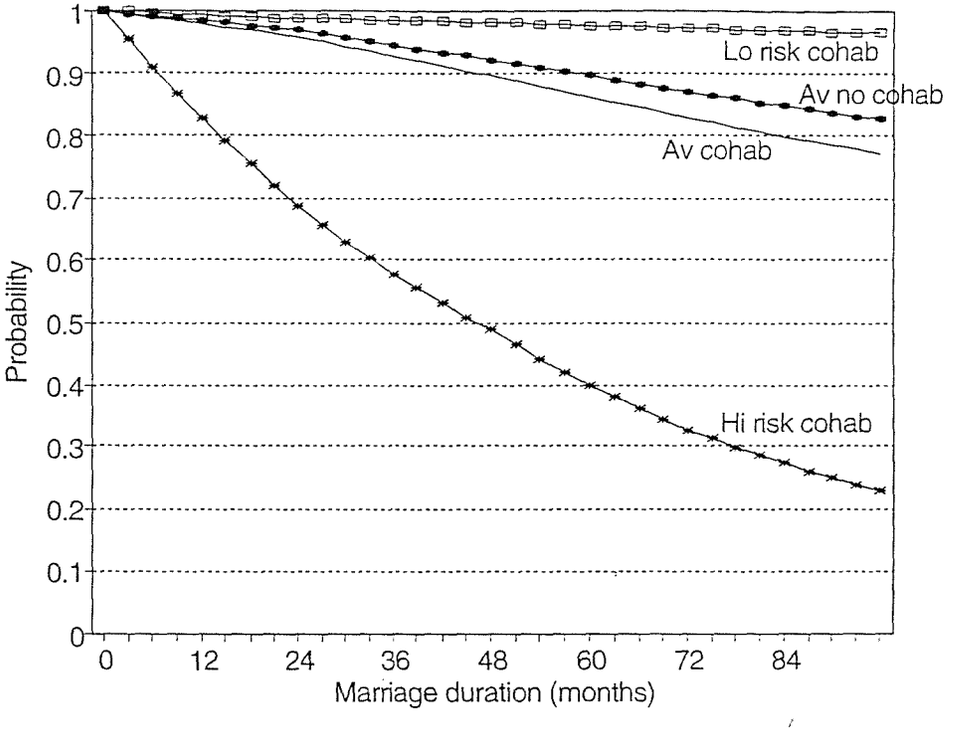
Low Risk:

Parents marriage intact
Mother had first birth 25+
Scotland/Northern region
No behaviour problems at 16
Strong religious practice
Degree level qualifications
Employed
Married age 25 or above
One child after two years
No previous partnership

High Risk:

Parents separated
Mother had teenage birth
Wales/Midlands region
Behaviour problems at 16
No religious affiliation
CSE level qualifications
Employed
Married age 20-24
No children
Had previous partnership

Figure 5.5b: Estimated probabilities of first marriage remaining intact among 'low risk' and 'high risk' premarital cohabitors. Women.



Low Risk:

Parents marriage intact
Parents owner occupiers
No behaviour problems at 16
Strong religious practice
Degree level qualifications
Employed in junior non-manual occupation
Married age 25 or above
One child after two years
No previous partnership

High Risk:

Parents separated
Parents owner occupiers
Behaviour problems at 16
No religious affiliation
CSE level qualifications
Employed in intermediate non-manual occupation
Married age 20-24
No children
Had previous partnership

More recent lifecourse characteristics such as level of education also work through intermediate determinants, in particular age at marriage, to affect the risk of marital dissolution. When these factors are controlled, it is only those with degree level qualifications who are seen to have a significantly reduced risk of marital dissolution. Men with higher levels of education are particularly unlikely to separate during the first few years of marriage. It should be remembered, however, that this highly educated group constitutes only a small proportion (less than 10 per cent) of all those born in 1958 who ever married by age 33. Hence, for the vast majority, level of education does not exert a direct effect on the risk of dissolution. Furthermore, the previous chapter highlighted the delay in marriage among men and women with higher levels of education. We might speculate that to some extent the significantly lower levels of marital dissolution among those with higher levels of education reflect a selection effect whereby only those most committed to the institution of marriage will actually be married by age 33.

Finally, our findings provide support for Murphy's (1985) suggestion that the risk of marital dissolution cuts across conventional social class boundaries. It is possible that, with a sufficiently large sample size, further insight may be gained by focusing not on social class but on particular occupational groups, such as police officers and journalists who are thought to have higher risks of marital dissolution (Noble, 1970; Hoem 1995). Incorporating time-varying information concerning the couple's economic activity might also be worthwhile. It is entirely plausible that a change in economic status, for example, a sudden job loss or returning to work following childbearing, may be particularly important in influencing the risk of marital breakdown.

The role of individual personality factors is also highlighted by the persistence of an association between behavioural and emotional problems during adolescence and the outcome of first marriage. The pathways through which such an association exists are likely to be complex and require further investigation. Those who score highly on the 'emotional' subscale also tend to be described by their teachers as 'rather solitary'. We might speculate that men with 'emotional' disorders have more general problems in developing inter-personal relationships than others. For women, the association between 'conduct' disorders in childhood and later partnership dissolution is mediated through an

early age at marriage and may be due to their selection into particularly unsupporting partnerships (Quinton et al., 1993).

In conclusion, the lifecourse approach taken here has provided important insights into the pathways through which family background and socio-economic factors influence the risk of dissolution. Further follow-ups of the 1958 birth cohort are essential if we are to investigate how the risk of marital dissolution changes for those who enter marriage after age 33, and whether the chance of dissolution gradually decreases at longer marriage durations. More recent prospective data, including those for partners, are required to discover whether the effect of premarital cohabitation has disappeared for recent marriage cohorts within which premarital cohabitation is the norm.

Chapter 6: The Outcome of Cohabiting First Partnerships

6.1 Introduction

A recurring question is the extent to which cohabitation is a precursor to, rather than a substitute for, formal marriage. In Chapter 3 we found that four in ten NCDS cohort members cohabited with their first partner. In this chapter we address such questions as how long on average these cohabiting first partnerships last, and how childbearing affects the probability of separation or the translation of cohabiting partnerships into marriage. We begin by examining the relative stability of cohabiting and married first partnerships, and calculate life table probabilities of marriage and separation for partnerships which are cohabiting at the start. We then use discrete-time hazards models to investigate the demographic and socio-economic factors which affect the "choice" between marriage and separation. Having established that experiencing a conception is a key factor promoting marriage among cohabitors, we proceed to model the lifecourse antecedents of experiencing a pregnancy among never pregnant female cohabitors.

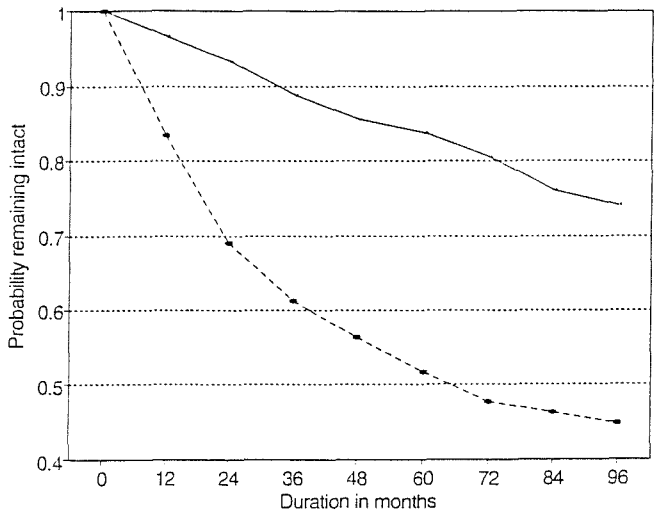
6.1.1 Life table analyses of the outcome of cohabiting first partnerships

With the dramatic increase in cohabitation in Britain, the relative stability of cohabiting and marital partnerships has important social policy implications, not least for the adults and children directly involved. It is widely acknowledged that cohabiting partnerships are less stable than marital partnerships and data from the NCDS support this (Bumpass and Sweet, 1989; Hoem and Hoem, 1992; Buck and Ermisch, 1995; Toulemon, 1997). Figures 6.1a and 6.1b show, for all men and women born in Britain in 1958, the cumulative probability that their first partnership remained intact according to whether the respondent was married or cohabiting at the outset and their age at entry [21]. Partnerships which began at an early age (synonymous here with an earlier time period) were more fragile than those entered into at older ages. For each age at entry category, first partnerships starting as cohabitation

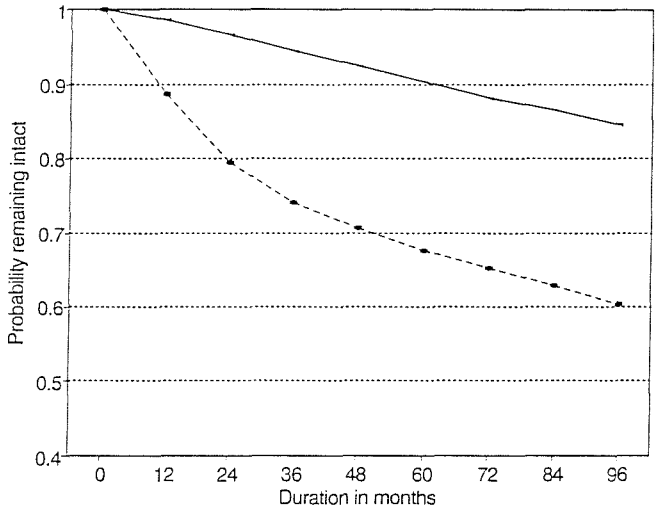
[21] Married and cohabiting partnerships ending in widowhood are treated in all analyses as censored.

Figure 6.1a: Cumulative probabilities of first partnership remaining intact according to partnership type and age at entry. Men.

a) 16-19



b) 20-24



Marriage Cohabitation

c) 25-32

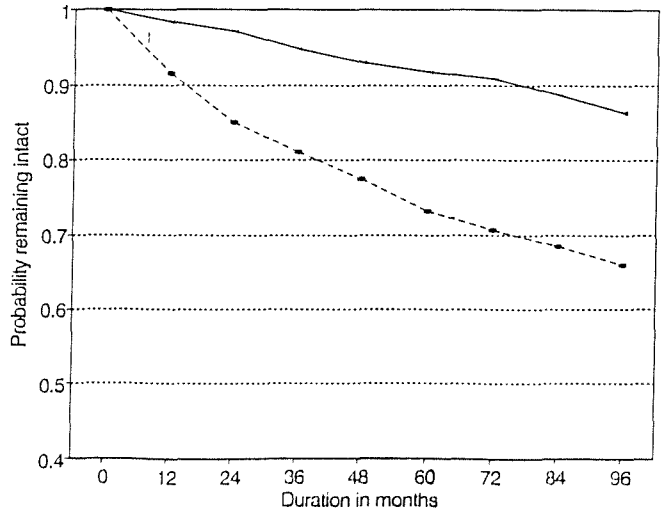
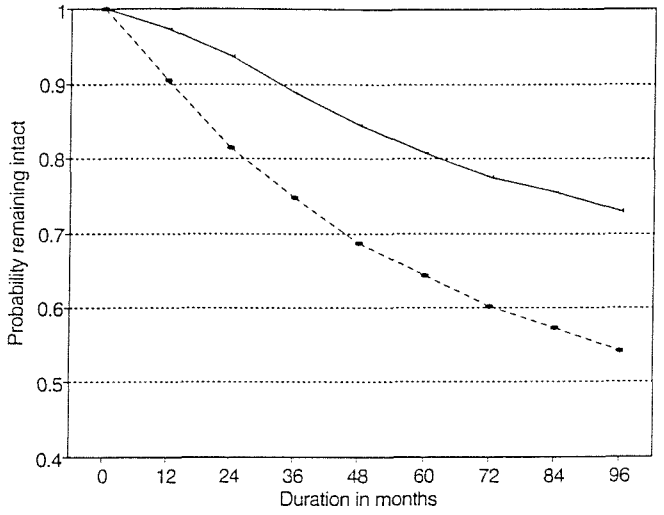
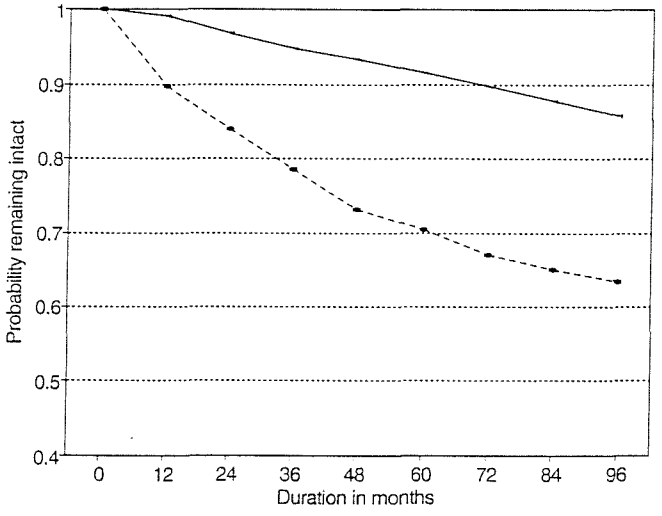


Figure 6.1b: Cumulative probabilities of first partnership remaining intact according to partnership type and age at entry. Women.

a) 16-19

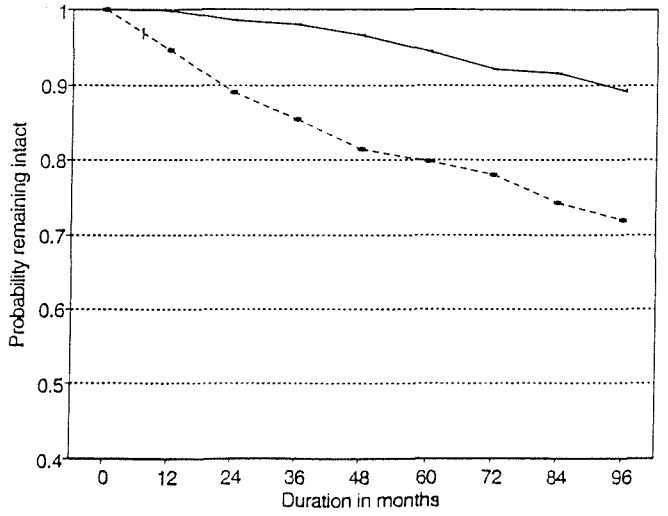


b) 20-24



Marriage Cohabitation

c) 25-32



were more likely to dissolve than those which began as marriage. Among men who began their first partnership in their early twenties, around 85 per cent of those who married directly were still living with their partner eight years later, compared with 60 per cent of those whose partnership began as cohabitation. The figures for women are similar (87 per cent versus 64 per cent). These percentages are consistent with those reported by Ermisch and Francesconi (1996) for the 1950-62 birth cohort. For men, it would seem that the differential stability of marriages and cohabitations was particularly great among teenage partnerships contracted in the late 1970s but has reduced among partnerships entered into at older ages/more recently.

The higher levels of dissolution of cohabiting partnerships are likely to be a result of the selection effect, discussed in Chapter 5 in relation to premarital cohabitors, whereby those who cohabit have particular demographic and socio-economic characteristics which put them at a higher risk of partnership dissolution. Further multivariate analyses of first partnership dissolution might be employed to model these differences. However, given our findings from the previous chapter, we anticipate that partnerships beginning as cohabitation would remain at a higher risk of dissolution even when other factors are controlled. Analyses from the BHPS suggest that when the age and childbearing status of cohabiting and married couples are taken into account cohabiting couples remain around three times more likely to split up (Buck and Ermisch, 1995).

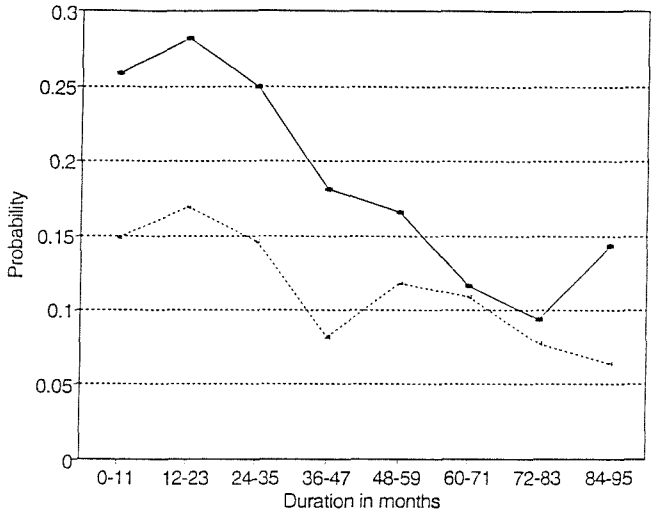
In the remainder of this chapter we concentrate on the outcome of cohabiting first partnerships in the NCDS cohort. Figure 6.2 shows the conditional probability of marriage and separation in the first eight years of cohabitation for men and women born in 1958 according to age at entry. The probability of marriage is highest within the first three years and then declines. The risk of separation is more constant over time, a pattern found previously for France by Leridon (1990), although among men there is a tendency for the risk of separation to decrease at longer partnership durations. In the following section we investigate whether this decrease persists once the socio-demographic characteristics of those who remain cohabiting at each duration are controlled.

Figure 6.3 gives the proportion of cohabitations which have translated into marriage, are still going, or have ended, at each duration, according to age at entry. After eight years

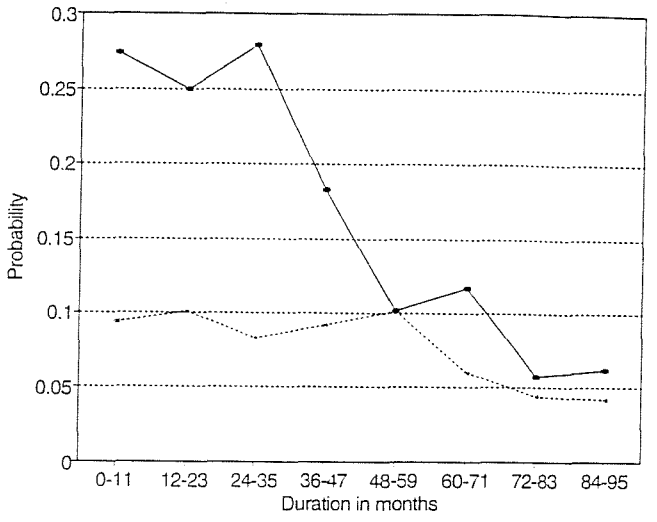
Figure 6.2: Probabilities of marriage and separation following entry into a cohabiting first partnership, according to age at entry.

a) Men

aged 16-23



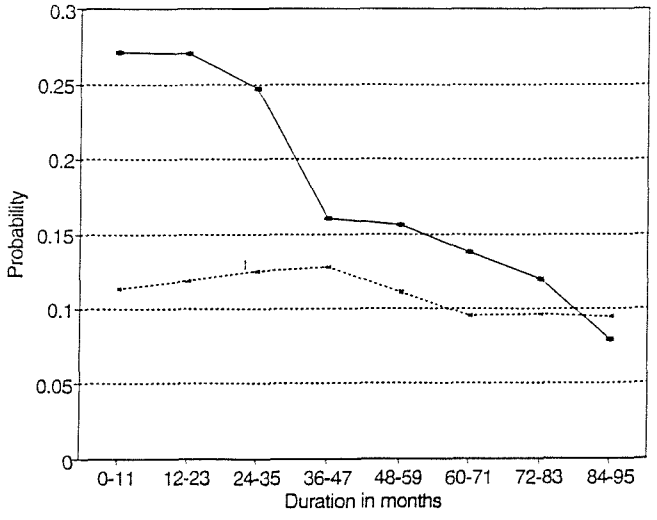
aged 24-32



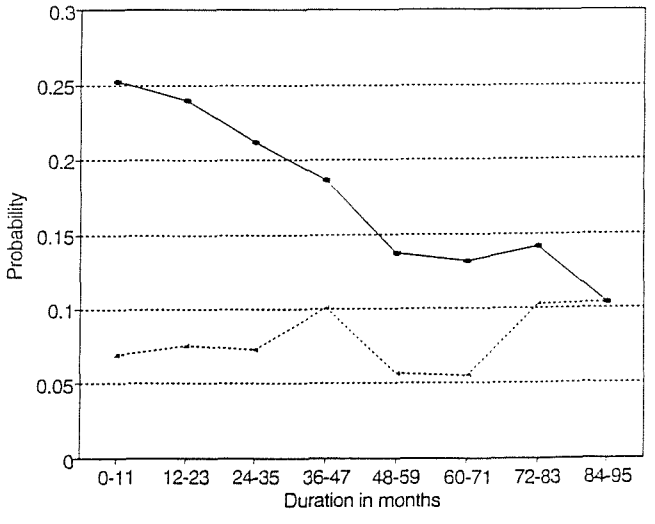
Separation — Marriage

b) Women

aged 16-23



aged 24-32



Separation — Marriage

just over 60 per cent have translated into marriage, around one quarter have dissolved and only around one in ten continue. These estimates are comparable with those calculated for the 1950-62 birth cohort using data from the BHPS (Ermisch and Francesconi, 1996). There are some small differences according to age/period of entry. Cohabitations begun at younger ages during the late 1970s and early 1980s were more likely to have translated into marriage or to have broken down, compared to those entered into at older ages. For example, 15 per cent of cohabitations entered into by women aged 16-23 years continued at five years duration, as compared with 21 per cent of those begun at age 24 or above.

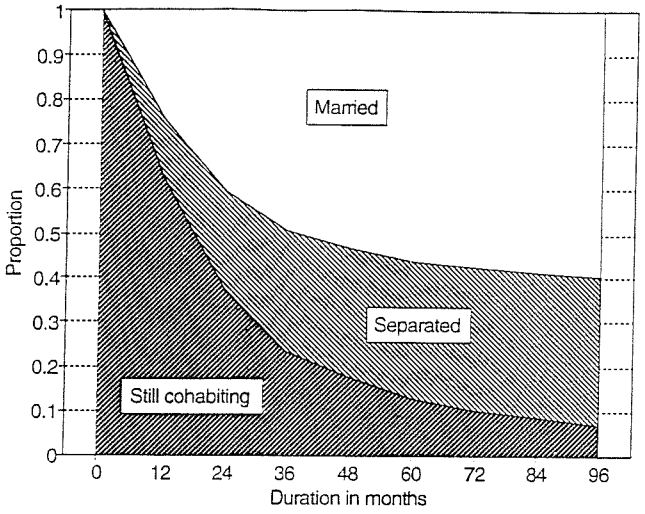
Similar patterns are seen for cohabiting first partnerships in other developed countries such as the United States, where estimates from the NSFH (Bumpass and Sweet, 1989) indicate that 60 per cent of cohabitations started between 1975-1984 translated into marriage within ten years. However, in the United States, cohabitation was typically of short duration - most of the cohabitations which translated into marriage did so within the first couple of years, and only a tiny minority (two per cent) continued after ten years (Bumpass and Sweet, 1989). In Canada, more recent estimates for cohabitations up to 1990 suggest that 12-15 per cent of all cohabitations continue beyond 10 years, whilst around 50 per cent marry and 40 per cent separate (Wu and Balakrishnan, 1995). Cohabitation appears to be more long lasting in the Netherlands. According to Manting (1994) around 40 per cent of cohabiting first partnerships continue after five years.

Data from other countries suggest there have been cohort changes in the propensity for cohabitations to translate into marriage or to dissolve (Blossfeld and Rohwer, 1995; Haskey, 1995; Bumpass, 1997; Toulemon, 1997). In Britain, the median duration of premarital cohabitation has increased from one year for those who first married in the early 1970s to about two years for those who first married in the early 1990s (Haskey, 1995). Estimates from the second round of the NSFH show that the propensity for cohabitors to marry has also declined in the United States (Bumpass, 1995). In France, early analyses made by Leridon (1990) suggested that cohabitations entered into in the 1970s quickly translated into marriage - within two years more than half had married. Those began in the early 1980s were more fragile - after 10 years 32 per cent had split up compared to 24 per cent 10 years earlier (Toulemon, 1997). Toulemon (1997) suggests that one third of cohabitations entered into in the 1990s in France may be continuing ten years later.

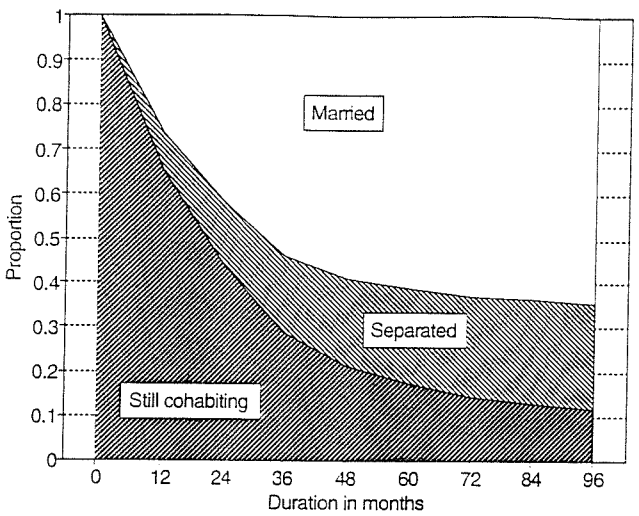
Figure 6.3: Proportion of cohabiting first partnerships still continuing, separated and translated into marriage by duration, according to age at entry.

a) Men

aged 16-23

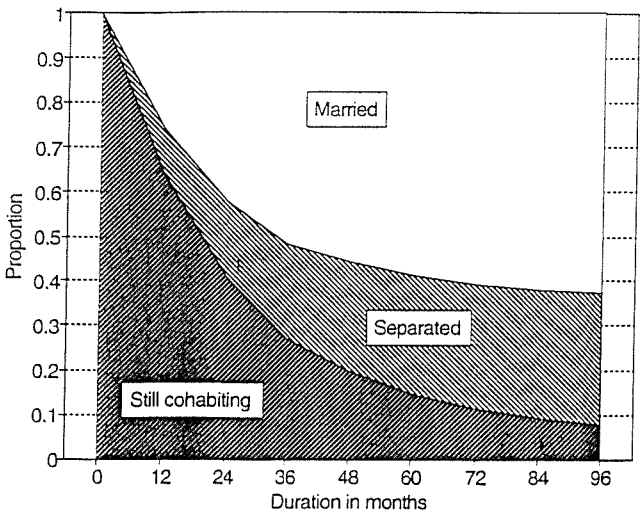


aged 24-32

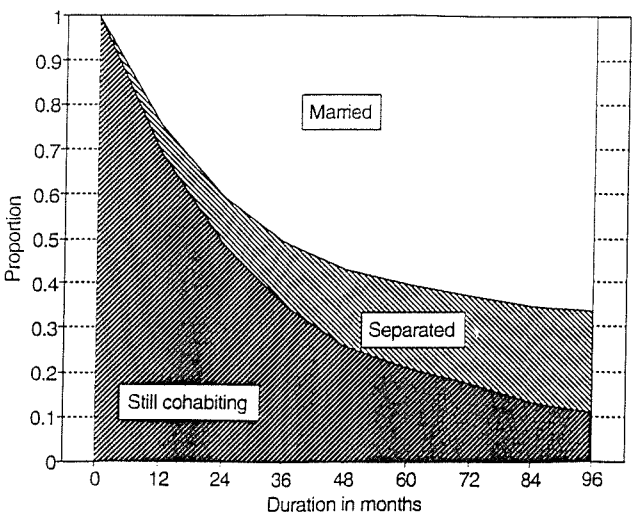


b) Women

aged 16-23



aged 24-32



The patterns shown in Figures 6.2 and 6.3 result from a combination of processes occurring within different subgroups of the population. For many individuals cohabitation acts as a fairly short transitional stage prior to marriage - the median duration of premarital cohabitation for NCDS cohort members who married their first cohabiting partner was around 15 months. Many of these individuals will have already planned their marriage when they started to live together. For couples who purchase a house in preparation for their married life, moving into the house prior to the actual wedding may save money and inconvenience. The actual marriage date may be dictated by socio-economic factors exogenous to the couple. For example, it may be influenced by such arbitrary factors as the availability of the wedding venue. Other individuals may consciously choose to live together as a trial marriage. Attitudinal data suggest that in Britain there is widespread support for living together prior to marriage for a trial period (Scott, 1990; McRae, 1993). As described by Lewin (1982), for such couples the marriage process is more of a "rite of confirmation" more than a "rite de passage".

Some may not intend to marry at all but start living together as an alternative to marriage. Included within the latter group are those who for some reason are unable, or unwilling to marry. Couples where one of the partners remains legally married to someone else are an example. Finally, there may be those who view their relationship as neither a prelude to marriage or an alternative to it. These individuals may not consciously reject marriage altogether but have postponed it to some point in the future. For such couples the convenience of an informal partnership, with the protection afforded by modern contraceptives against unwanted pregnancy, mean that it is a practical alternative to remaining single (Oppenheimer, 1988; Rindfuss and van den Heuvel, 1990; Manting 1994). This heterogeneity in the nature of cohabitation must be borne in mind when researchers investigate the socio-economic and demographic factors associated with its outcome.

6.2 Factors Influencing the Outcome of Cohabiting First Partnerships

Studies in Britain (Ermisch and Francesconi, 1996), Canada (Wu, 1995; Wu and Balakrishnan, 1995), France (Toulemon, 1997), Germany (Blossfeld et al., 1993) the Netherlands (Manting, 1994), Sweden (Bernhardt and Hoem, 1985), and the United States (Manning and Smock, 1995) have attempted to identify the family background and current lifecourse factors associated with the outcome of cohabitation. It remains unclear whether the factors encouraging marriage among the single, non-cohabiting population discussed in Chapters 3 and 4 also act to encourage marriage among cohabiting couples. Similarly, it is not known whether the factors affecting the stability of marriages discussed in Chapter 5 also influence the stability of cohabiting relationships in Britain. Below we put forward some hypotheses based upon recent empirical findings from other developed countries and our literature review of factors influencing entry into and exit from first marriage. We see marriage and partnership breakdown as competing risks and use a discrete-time multinomial logistic regression hazards model to estimate the probability of marriage relative to continuing to cohabit, and the probability of partnership breakdown relative to continuing to cohabit, in each monthly interval up to five years' duration[22].

6.2.1 Selection of background covariates

As in our analyses of first marriage dissolution, we use a lifecourse approach to group the covariates into a) parental and family background factors, b) the respondent's own lifecourse characteristics and c) characteristics of the partnership.

Parental and family background characteristics

Given the inter-generational association in marital instability discussed in Chapter 5 we might expect to find an association between parental separation and an increased likelihood that cohabiting partnerships will break down. The empirical evidence, however, is less consistent (Manting, 1994). There also seems to be conflicting evidence concerning the

[22] Five years is chosen as our limit since in some sub-groups of the population only a very small number of cohabitations continue after this time point.

relationship between family background structure and the propensity for cohabitors to marry. Thornton (1991) finds no effect, suggesting that in the United States the experience of parental separation encourages premarital cohabitation rather than direct marriage, but has little impact on the propensity of cohabiting couples to marry. In the Netherlands, cohabiting women who experienced parental separation were also no less likely to marry than other women (Manting, 1994). Manning and Smock (1995), on the other hand, found lower rates of marriage among white cohabiters who had lived in a single parent family than those who had lived in a two parent family. Our hypothesis then is that *parental separation has only a weak effect on the outcome of cohabiting partnerships, with men and women whose parents separated prior to age 33 being slightly less likely to marry and more likely to separate from their cohabiting partner.*

Evidence from the United States (Thornton, 1991) suggests that the inter-generational association in the timing of family formation observed for never-partnered men and women persists among cohabiting couples so that *respondents whose mothers began family formation at a younger age are more likely to marry their cohabiting partner than those whose mothers began family formation at later ages.*

We include a variable describing whether the respondent's mother experienced a conception prior to marriage. Earlier we argued that parental experience of a premarital conception indicates an acceptance of pre-marital sexual activity, and such parents may be more approving of cohabitation. We hypothesize that *respondents whose mothers had experienced a premarital conception are less likely to marry and more likely to continue cohabiting.*

Evidence from the United States and Sweden suggests that parental socio-economic background has little association with the propensity to marry among white cohabitors (Bernhardt and Hoem, 1985; Manning and Smock, 1995). In the following analyses we include father's social class, mother's age at leaving school, and parental housing tenure in our model. Our expectation, however, given our findings regarding the effect on direct entry into marriage, is that *parental socio-economic status may be negatively associated with the propensity to marry but that the effect will become insignificant when the respondent's own socio-economic characteristics are entered into the model.*

Bernhardt and Hoem (1985) found that in Sweden, geographical region of upbringing was more important than socio-economic background in influencing the rate of marriage among cohabiting partnerships. Marriage rates for cohabiting couples were high in areas where they were high for the never partnered. In our analyses of partnership formation we saw that cohort members who grew up in the South of Britain were more likely to cohabit, whilst those who came from Scotland and the North tended to marry directly. We hypothesize, therefore, that *cohabiting couples brought up in Scotland and the North are more likely to marry compared to those from the South and South East.*

Respondent's lifecourse characteristics

Previous research in Britain has observed an association between emotional and behavioural disorders in adolescence and later partnership dissolution (Kiernan, 1986; Maughan and Hagell, 1996). Earlier we found that men and women born in 1958 who at age 16 were identified on the Rutter Behavioural Scale (Rutter, 1967) as having behavioural problems were more likely to experience marital dissolution. To some extent this relationship is mediated through a tendency for those with such problems to marry at an early age (Maughan and Hagell, 1996). Therefore, in the following analyses we hypothesize that *men and women who were reported to have behavioural problems in adolescence will be more likely to marry their partner or to separate from them and will be less likely to continue to cohabit.*

Recent work on data from the BHPS has yielded inconsistent relationships between the respondent's current socio-economic characteristics and the outcome of cohabitation (Ermisch and Francesconi, 1996). Manting (1994) analysing data from the Netherlands, and Manning and Smock (1995) using data from the United States, both found that neither educational attainment nor unemployment were significant predictors of marriage for female cohabitors, whilst Blossfeld and colleagues (1995) concluded that among German cohabiting women, it was those with intermediate levels of education who were most likely to delay marriage. Manning and Smock (1995) did find, however, that full-time employment was a key predictor of marriage among white American men. These authors suggest that a certain level of economic security is required for marriage. If this were the case in Britain then we would expect marriage rates to be higher among those with higher levels of education and those in higher occupational social classes. However, studies in

Canada (Wu and Balakrishnan, 1995), Germany (Blossfeld et al., 1993), the Netherlands (Manting, 1994) and the United States (Manning and Smock, 1995) have all highlighted the role of educational enrolment in delaying marriage among cohabiting couples. Manting (1994) notes that educational enrolment continues to be a period of uncertainty during which individuals avoid long-term commitments. We saw in Chapter 4 that teenagers who left school at age sixteen were far more likely to marry at a young age than those who remained in further and higher education. We would expect, therefore, that *among younger cohabitors there will be a negative relationship between educational attainment and social class, and the propensity to marry, whilst at older ages marriage rates will be positively related to socio-economic status.*

In Chapter 4 we found the cohort member's housing history to be an important determinant of entry into cohabitation. Those who had lived independently from the parental home were much more likely to cohabit and less likely to marry directly. We suggested that those who have lived independently from the parental home value their independence more than those who have not. If this is the case then we would expect to see *lower rates of marriage, and higher rates of separation among respondents who lived independently prior to cohabiting with their partner.*

In the earlier chapters religiosity was found to be a key predictor of entry into marriage and of marital stability. Wu and Balakrishnan (1995) found no significant effect of religious affiliation on the risk of separation among Canadian cohabitors, but did conclude that cohabitors with a religious affiliation were more likely to marry. Manting (1994) found that religious affiliation was also associated with marriage among Dutch cohabiting women, and that those who with a religious affiliation were less likely to separate. In the following analyses we test the hypothesis that *cohort members who report regular attendance at religious meetings are more likely to marry and less likely to separate from their partner.*

Characteristics of the partnership

To investigate factors promoting the decision to marry or to separate, information concerning both partners is required. Wu and Balakrishnan (1995) found that the partner's marital status was an important factor affecting the outcome of cohabitation in Canada.

The NCDS provides detailed socio-economic and demographic information only for the respondent's current partner. We can, however, piece together information about the legal marital status of former partners. No information is available for those partnerships which are not current and which were not recalled in the "Your Life Since 1974" questionnaire. Many of these missing partnerships were ones recalled at age 23 but not at age 33. These tended to be closed periods of cohabitation experienced whilst the cohort members were in their teens. It is not surprising that we find a higher percentage of missing information concerning the partner's marital status for partnerships begun before age 20 and for those which have ended.

Female cohort members are more likely to cohabit with a partner who is not single than male cohort members. Cohort members who began their partnership at a later age are similarly more likely to be cohabiting with a partner who is not legally free to marry. These patterns are also observed in General Household Survey data (Haskey, 1995). We might hypothesize that *cohort members whose partners are single are more likely to marry than those whose partners are divorced. Cohort members whose partners are married to someone else or separated (but not divorced) are the least likely to marry.* As the data refer to the partner's status at the *start* of the partnership we would expect to find an interaction between this variable and duration spent cohabiting whereby the *effect of having a partner who is legally married or separated is stronger at short durations.*

A number of studies have found the age at which the respondent began cohabiting to be associated with greater partnership stability (Manting, 1994; Wu and Balakrishnan, 1995; Manning and Smock, 1995; Ermisch and Francesconi, 1996). Manting (1994), analysing the outcome of first unions in the Netherlands, concludes that age at partnership formation has the same, positive effect on the stability of both marital and cohabiting partnerships. In NCDS data age at entry is confounded with calender year of entry. Partnerships begun more recently might be more fragile (Ermisch and Francesconi, 1996). However, the age effect is likely to be dominant and we expect to find a similar pattern to that seen for first marriages whereby *partnerships entered into at younger ages will be less stable than those begun at older ages.*

The impact of age at cohabitation on the propensity for cohabitors to marry is less

consistent. In the Netherlands no relationship is found (Manting, 1994), whilst in Canada the positive effect is only marginally significant for men (Wu and Balakrishnan, 1995). The relationship is likely to be non-linear. Manning and Smock (1995) find that the propensity for cohabitors to marry rises to a peak among those in their twenties, before falling off. We suggest that cohabiting partnerships begun at the youngest ages may be more of a casual boyfriend/girlfriend variety (especially among those who remain in full-time education) and hence more likely to break down than translate into marriage, whereas those entered into at prime marriageable ages have a better prospect of marriage. At the same time there may be a period trend for cohabitations entered into more recently to be less likely to translate into marriage (Ermisch and Francesconi, 1996). The result of these different forces is likely to be *higher rates of marriage among partnerships begun when the cohort members were in their early twenties.*

Previous work has highlighted the role of childbearing in promoting marriage among cohabiting couples (Blossfeld et al., 1993; Manting, 1994; Manning and Smock, 1995; Wu and Balakrishnan, 1995). In many developed countries there remains a strong desire to legitimize extra-marital conceptions through marriage. Research from the Netherlands and Germany suggests that the risk of marriage is particularly high for pregnant cohabiting women but drops around the time of the birth (in the Netherlands, but not in Germany). In both countries those who remain cohabiting six months after the birth exhibit lower levels of marriage (lower than those of never pregnant cohabitors in the case of the Netherlands) (Blossfeld et al., 1993). Similar findings are available from France (Toulemon, 1997) and Canada (Wu and Balakrishnan, 1995). This suggests that it is the prospect of parenthood, rather than the actual birth which encourages marriage.

The presence of children has long been found to be associated with marital stability. There is little reason to suppose that the same will not be true of cohabiting couples, although Wu (1995) suggests that cohabiting couples may be less socially integrated than married couples and hence less able to cope with stressful situations arising from childrearing. Manting (1994) finds no evidence of a difference in the stabilizing effect of children between married and cohabiting couples in the Netherlands. Wu (1995) finds that cohabiting couples with children are less likely to separate than childless couples, but that neither the number, the sex or the age of the children is relevant. The stabilizing effect

of children on cohabiting partnerships has also been observed in Germany (Blossfeld et al., 1993) and the United States (Manning and Smock, 1995). Not surprisingly, particularly low rates of separation have been noted among cohabiting couples where the woman is currently pregnant (Blossfeld et al., 1993; Manning and Smock, 1995).

In the following analyses we employ a time-varying pregnancy/fatherhood status variable similar to that used in our analyses of entry into first partnership. Cohort members are identified according to whether they have never had a pregnancy/fathered a child[23], are 0-2 months pregnant, 3-8 months pregnant, have a child born within the partnership and who is aged under one, or have at least one child born within the partnership who is aged over one year. We consider those who have had a live birth prior to partnership formation as a separate fixed category. Among the latter respondents it may well be the case that their cohabiting partner is not the other biological parent of their child. We hypothesize that *rates of marriage increase following a conception, particularly during the second trimester, and fall once again around the time of the birth and thereafter. Rates of separation will be very low among couples where the woman is currently pregnant, and lower among those who have children than those who are never pregnant.*

[23] Recall that we use pregnancy as a shorthand for 'pregnancies that result in a live birth'.

Table 6.1: Summary table of variables included in model of outcome of cohabiting first partnerships and their significance at the five per cent level.

Variable	Men	Women
Whether parents separated by 33	✓	X
Age of mother at her first birth	✓	X
Whether mother had a pre-marital conception	X	X
Father's social class at age 7	X	X
Housing tenure at age 7	X	X
Age mother left school	X	✓
Behavioural/emotional problems at age 16	X	✓
Region of residence at age 16	X	X
Occupational social class at age 23	X	X
Highest educational qualification at age 23	✓	✓
Level of religious practice at age 23	✓	✓
Whether lived independently before partnership	✓	✓
Age at start of partnership	✓	✓
Legal marital status of partner	✓	✓
Pregnancy/childbearing status	✓	✓

Note: Variables significant at the five per cent level are shown by ✓, whilst variables included in the original model but not found to be significant as X.

6.2.2 Results

Table 6.1 shows the variables included in the analyses together with their significance at the five per cent level. Many socio-economic variables such as father's social class, parental housing tenure, the geographical region where the respondent grew up, and the respondent's social class are not found to be significantly associated with the outcome of cohabitation once other factors are controlled. A number of interactions are found. The impact of educational attainment differs according to age at entry into cohabitation and there is some evidence that the effect of having a child which was born prior to partnership formation changes according to the duration of cohabitation. Tables 6.2 and 6.3 present the parameter estimates of the multinominal logistic discrete-time hazards model, for men and women respectively. The first column gives the log odds ratio of marrying relative to continuing to cohabit, whilst the second shows the log odds ratio of separating relative to continuing to cohabit. The estimated monthly probabilities of being in each of the response categories associated with a particular level of an independent variable, holding other factors constant, are accumulated over five years as described in section 4.4.2 (Table 6.4). We discuss first the effect of variables associated with the partnership itself, before describing how past and current lifecourse experiences are related to the outcome of cohabitation.

The tendency for marriage rates to be higher during the first few years of cohabitation persists, although the effects are significant only for men. Once the socio-economic characteristics of those left cohabiting at each duration are included in the analysis, the risk of separation appears constant for women but shows no consistent pattern for men. As expected, men and women who begin cohabiting with a partner currently married or separated but not divorced are less likely to marry than respondents with a never married partner. Contrary to our expectations, however, the effect of the partner's marital status is not seen to change according to duration, at least not within the first five years of cohabitation. We do find, however, that the probability of marriage following the birth of a child in the cohabiting partnership is significantly higher for men whose partners were previously married.

As in other developed countries, experience of a conception is strongly associated with

marriage. Marriage rates are highest in the second and third trimesters of pregnancies and are much lower among those who remain cohabiting following the birth. In Table 6.4 we compare the probability of marriage within five years for couples who were never pregnant, with couples whom we assume experience a conception occurring at exactly twelve months. 57 per cent of women who do not experience a conception marry within five years as compared to 78 per cent of those who become pregnant after one year.
The effect of pregnancy and childbearing on the risk of separation is less consistent. Men whose partners become pregnant or give birth to a child within the partnership are significantly less likely to experience partnership dissolution. However, neither being pregnant nor having a child is found to be associated with greater partnership stability among female cohabitors. To some extent this gender difference may arise from a bias in the reporting of past fertility by male cohort members. If men are more likely to report fathering a child when they cohabit for a longer duration with its mother, then the relationship between childbearing and partnership stability will be over-estimated.

In comparison with their effect on the timing and type of first partnership formation, parental demographic characteristics appear to have little impact on the outcome of first cohabitation. Whilst parental separation was strongly associated with entry into cohabitation for both genders, it is only among male cohabitors that we see an association between parental separation and the outcome of cohabitation. Men whose parents separated prior to age 33 are significantly less likely to marry their partner and more likely to separate from them. It must be said, however, that the differences are small with 55 per cent of men whose parents remained together marrying their partner, as compared with 48 per cent of those whose parents split up.

Table 6.2: Parameter estimates from discrete-time model of outcome of cohabiting first partnerships within the first five years. Men.

Variable		Marry	Separate
Intercept		-4.13 **	-4.95 **
Duration of cohabitation	0-11 mths	0.76 **	-0.09
	12-23 mths	0.75 **	-0.24
	24-35 mths	0.76 **	-0.31
	36-47 mths	0.06	-0.54 **
	48-59 mths	0.00	0.00
Whether parents separated	No	0.00	0.00
	Yes	-0.13	0.24 *
	Not known	-0.94 *	0.17
Mother's age at first birth	Under 20	0.00	-0.47 **
	20-24	0.09	-0.40 **
	25 and over	0.00	0.00
Highest qualification	Degree	0.00	0.00
	A Level	-0.30 **	0.06
	O Level	-0.32 *	0.65 **
	CSE	-0.11	0.58 *
	None	-0.47 **	0.52 *
Religious activity	None	0.00	0.00
	Weak	-0.05	0.08
	Strong	0.23 **	-0.02
	Not known	-0.22	0.27
Lived independently prior to partnership	No	0.00	0.00
	Yes	-0.10	0.55 **
	Not known	-0.26 **	0.29 *
Age at start of cohabitation	16-19	-2.07 **	0.91 **
	20-24	-0.46 **	0.57 **
	25-32	0.00	0.00
Partner's legal marital status at start	Never married	0.00	0.00
	Married/separated	-0.53 **	0.18
	Divorced/widowed	-0.32 **	-0.27
	Not known	0.20	1.28 **
Pregnancy/ childbearing status	Never pregnant	0.00	0.00
	Pregnant 0-2 months	0.91 **	-1.02 *
	Pregnant 3-8 months	1.70 **	-2.48 **
	Child aged less than 1 year	-0.10	-1.70 **
	1+ child aged 1 year or more	0.00	-1.25 **
	Child born before partnership	-0.76	-1.48
Age at start 16-19 * 1+ child aged 1 year or more		0.69	1.10
Age at start 16-19 * A level		1.40 **	-0.31
Age at start 16-10 * O level		1.99 **	-0.28
Age at start 16-19 * CSE		1.85 **	-0.65
Age at start 16-10 * None		2.33 **	-0.53
Age at start 20-24 * A level		0.57 **	-0.02
Age at start 20-24 * O level		0.69 **	-0.57
Age at start 20-24 * CSE		0.19	-0.59
Age at start 20-24 * None		0.74 **	-0.46
Duration 0-11 mths * Child born prior to partnership		0.98 *	1.34
Duration 12-23 mths * Child born prior to partnership		1.08 *	1.51

** Denotes statistical significance at the five per cent level and * denotes significance at the ten per cent level
-2 log likelihood = 13146.96, d.f.= 82, N cases= 1713, N person months = 38894.

Table 6.3: Parameter estimates from discrete-time model of outcome of cohabiting first partnerships within the first five years. Women.

Variable		Marry	Separate
Intercept		-4.23 **	-4.88 **
Duration of cohabitation	0-11 mths	0.21	-0.28
	12-23 mths	0.24	-0.27
	24-35 mths	0.10	-0.10
	36-47 mths	-0.10	-0.12
	48-59 mths	0.00	0.00
Mother's age at leaving school	Under 15	0.23 **	-0.27 **
	15 and over	0.00	0.00
	Not known	0.03	-0.26 **
Behaviour at age 16	Normal	0.00	0.00
	'Emotional disorder'	-0.15	-0.08
	'Conduct/mixed disorder'	-0.33 **	0.19
	Not known	0.05	0.06
Highest qualification	Degree	0.00	0.00
	A Level	0.19	0.15
	O Level	0.25 *	0.37 *
	CSE	0.07	0.14
	None	-0.13	0.09
Religious activity	None	0.00	0.00
	Weak	0.05	-0.53 **
	Strong	0.37 **	-0.28 **
	Not known	-1.00	0.34
Lived independently prior to partnership	No	0.00	0.00
	Yes	-0.07	0.49 **
	Not known	-0.38 **	0.13
Age at start of cohabitation	16-19	-0.47	0.86 **
	20-24	0.09	0.31 **
	25-32	0.00	0.00
Partner's legal marital status at start	Never married	0.00	0.00
	Married/separated	-0.82 **	-0.46 **
	Divorced/widowed	-0.40 **	-0.03
	Not known	0.16	1.33 **
Pregnancy/ childbearing status	Never pregnant	0.00	0.00
	Pregnant 0-2 months	1.03 **	-0.43
	Pregnant 3-8 months	1.61 **	-0.26
	Child aged less than 1 year	0.15	-0.29
	1+ child aged 1 year or more	-0.27	-0.16
	Child born before partnership	-1.30 **	-0.96
Partner marr/sep * Child aged less than 1 year		0.94 **	-0.16
Partner div/wid * Child aged less than 1 year		0.79 **	1.11
Partner marr/sep * 1+ child aged 1 year or more		1.17 **	0.45
Age at start 16-19 * A level		0.60	-0.20
Age at start 16-19 * O level		0.53	-0.60
Age at start 16-19 * CSE		0.57	-0.27
Age at start 16-19 * None		1.02 **	-0.72 *
Duration 0-11 mths * Child born before partnership		1.30 **	1.11
Duration 12-23 mths * Child born before partnership		1.04	0.96
Duration 24-35 mths * Child born before partnership		1.52 **	-0.01

** Denotes statistical significance at the five per cent level and * denotes significance at the ten per cent level
-2 log likelihood = 12478.69, d.f.= 78, N cases = 1585, N person months = 39061.

The age of the respondent's mother at first birth is also only found to be significant for men, with those whose mothers began childbearing at age 25 or above being more likely to separate from their first cohabiting partner and less likely to continue cohabiting. Parental socio-economic status is also indirectly related to the outcome of cohabitation. When parental demographic and socio-economic factors are entered on their own into the analysis, father's social class is associated with the outcome of cohabitation, the effect interacting with age at entry into cohabitation. Men whose fathers were in unskilled occupations and who began cohabiting in their teens are more likely than others to marry their partner, whilst those cohabiting in their late twenties and early thirties with poorer social class backgrounds are less likely to marry or separate and more likely to continue cohabiting. These effects become insignificant, however, when the respondent's own socio-economic circumstances, particularly their level of education, are included in the model.

Among women, only one indicator of parental socio-economic background, the age at which the respondent's mother left school, is found to be associated either directly or indirectly with the outcome of cohabitation. The data suggest that women whose mothers left school before age 15 are significantly more likely to marry rather than remain cohabiting, as compared to other groups. Consistent with the earlier findings of Maughan and Hagell (1996), women who were observed at age 16 by their teachers to have anti-social and disruptive behaviour are seen to be less likely to marry their cohabiting partner and more likely to separate from them within five years.

Educational differentials in the outcome of cohabitation are consistent between men and women and are generally in line with our hypotheses. When entered as a main effect, without allowing for any interactions, educational attainment is not associated with the outcome of cohabitation. This is reflected in the similarity of the probabilities of marriage and separation presented in Table 6.4 where we estimate the effect of education averaged over all of the age at entry groups. Further analyses reveal large counteracting effects at different ages identified by the significant interactions shown in the lower section of Tables 6.2 and 6.3.

Table 6.4: Estimated probabilities of marriage or separation from cohabiting first partnerships within the first five years. Men and women.

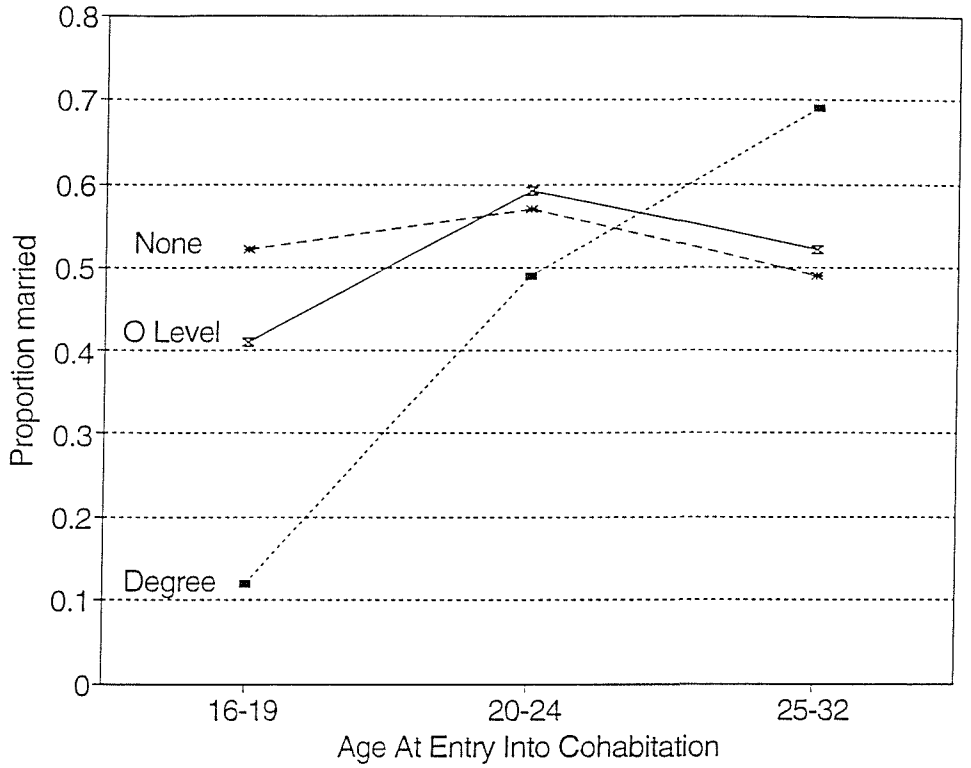
Variable		Men Marry	Separate	Remain cohabiting	Women Marry	Separate	Remain cohabiting
Whether parents separated	No	0.55	0.28	0.17			
	Yes	0.48	0.36	0.16			
	Not known	0.27	0.43	0.29			
Mother's age at first birth	Under 20	0.54	0.26	0.20			
	20-24	0.56	0.26	0.17			
	25 and over	0.49	0.37	0.14			
Mother's age at leaving school	Under 15				0.52	0.31	0.17
	15 and over				0.62	0.23	0.15
	Not known				0.56	0.25	0.19
Behaviour at age 16	Normal				0.58	0.25	0.17
	'Emotional disorder'				0.53	0.25	0.21
	'Conduct/mixed disorder'				0.45	0.33	0.21
	Not known				0.59	0.26	0.16
Highest qualification	Degree	0.50	0.29	0.22	0.49	0.28	0.23
	A Level	0.55	0.27	0.18	0.60	0.25	0.14
	O Level	0.54	0.33	0.13	0.60	0.27	0.13
	CSE	0.55	0.31	0.15	0.56	0.26	0.17
	None	0.53	0.32	0.15	0.55	0.23	0.20
Religious activity	None	0.51	0.31	0.18	0.49	0.32	0.19
	Weak	0.49	0.33	0.18	0.56	0.21	0.24
	Strong	0.59	0.27	0.14	0.64	0.22	0.14
	Not known	0.42	0.40	0.18	0.21	0.53	0.26
Lived independently prior to partnership	No	0.59	0.23	0.18	0.62	0.20	0.18
	Yes	0.49	0.36	0.14	0.54	0.31	0.15
	Not known	0.48	0.32	0.20	0.48	0.27	0.25
Age at start of cohabitation	16-19	0.36	0.45	0.19	0.56	0.29	0.14
	20-24	0.55	0.30	0.15	0.57	0.26	0.17
	25-32	0.58	0.24	0.18	0.57	0.21	0.22
Partner's legal marital status at start	Never married	0.56	0.27	0.17	0.62	0.22	0.16
	Married/separated	0.38	0.37	0.24	0.39	0.21	0.40
	Divorced/widowed	0.49	0.25	0.27	0.49	0.26	0.25
	Not known	0.42	0.56	0.03	0.46	0.51	0.03
Pregnancy/ childbearing status	Never pregnant	0.54	0.30	0.17	0.57	0.26	0.17
	Before partnership	0.54	0.20	0.26	0.50	0.21	0.29
	Experienced conception at exact 12 months duration	0.73	0.15	0.12	0.78	0.19	0.03

Figure 6.4 shows for men with degree level qualifications, O level, or no qualifications, the proportion who would a) marry and b) separate after five years of cohabitation according to their age when they started cohabiting. Among teenage cohabitors, high levels of educational attainment (and hence current educational enrolment) are associated with a delay in marriage and a greater risk of separation: around one half of men with no qualifications married their partner within five years, compared to the one in ten of those men who went on to higher education. In contrast, there is little difference according to education in the propensity of cohabitors in their early twenties to marry - over half married their partner within five years. Among older cohabitors, we see a cross-over in the effect of socio-economic status with men and women possessing higher levels of education most likely to marry their partner. Those with no educational qualifications who begin cohabiting in their late twenties and early thirties are less likely to marry and more likely either to separate from their partner or remain cohabiting after five years.

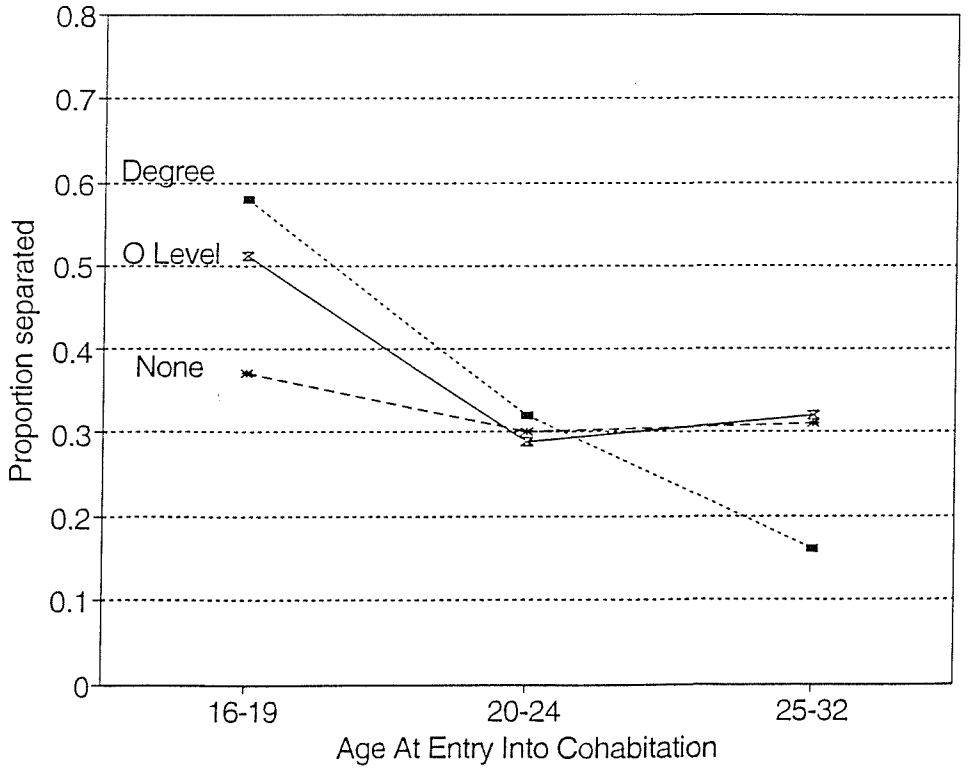
Religiosity as measured by frequency of attendance at religious meetings is associated with a higher probability of marriage, and, among women at least, a lower probability of separation. Almost two thirds of women who report weekly attendance at a religious meeting will have married their partner within five years, compared to one half of those who report no religious affiliation. For all cohabitors we find an effect of previous independence from the parental home. As predicted, those with such experience are more likely to separate, relative to continuing to cohabit, as compared to their peers who began cohabiting immediately on leaving home. Since those with no experience of independent living are less likely to separate, they are more exposed to the risk of marriage and so a higher proportion marry within five years.

Figure 6.4: Proportion of cohabiting first partnerships which a) translate into marriage and b) end in separation after five years, according to highest educational qualification and age at entry. Men.

a)



b)



6.2.3 Discussion

Just as first marriage rates are highest at different ages for different educational groups, the propensity for cohabitors to marry follows a different age pattern according to socio-economic status. Educational enrolment delays entry into first partnership, especially direct marriage. Among cohabitors, educational enrolment also delays marriage and is associated with greater partnership instability. Men and women in full-time education may find cohabitation a convenient alternative to remaining single, whereas for some disadvantaged teenagers born in 1958, it was perhaps a temporary stage prior to marriage (or a temporary alternative to it). The outcome of cohabitation is more uniform for those in their early twenties (the age when rates of direct entry into marriage were greatest), with the majority translating into marriage within five years. Among older cohabitors marriage rates remain high for more socio-economically advantaged men and women but are lower for disadvantaged individuals who are more likely either to separate or continue cohabiting. Further analyses using time-varying economic activity and occupational status data are needed to discover whether the latter group is prevented from marriage by a lack of economic security.

What is clear from our study is that entry into parenthood has a strong impact on the transition to marriage. Using a time-varying covariate to capture changes in childbearing status within each one month interval we have demonstrated that it is the experience of a conception, rather than the presence of a child, that encourages cohabitors to marry. Although we are not able to tell from these data which of the premarital conceptions reflect a true anticipation of marriage, and which marriages were the result of an unintended pregnancy, the experience of a conception is likely to have hastened the marriage of some cohabitors in order to legitimize the birth. It would be interesting to know the extent to which the conceptions experienced by cohabiting couples were planned or mistimed. Recent research from Norway (Kravdal, forthcoming) suggests that at least one third of births to cohabiting couples between 1986-1988 were mistimed (including unwanted births). One might speculate that the effect of a conception on the outcome of cohabitation would differ markedly according to the childbearing intentions of the couple, and whether the conception was planned to occur at that particular time.

Consistent with earlier findings from the Netherlands and Germany we note that those who remain cohabiting following the birth of their child have much lower marriage rates. This may be the result of a selection effect whereby those who remain cohabiting following the birth of a child have less traditional attitudes towards marriage. There may also be couples unable to marry for reasons that we have not been able to explore in our analysis.

With increasing numbers of children being born to cohabiting couples, recent policy attention has inevitably turned towards the stability of cohabiting partnerships (Kravdal, forthcoming). Evidence from the 1958 cohort suggests that the presence of children may not provide additional stability to cohabiting partnerships, as they have been found to do in Canada (Wu, 1995). We are unable to determine whether the findings for men reflect a reporting bias; reliable estimates for recent cohabitors are required before any conclusive statements can be made.

In general, our analyses suggest that factors encouraging direct marriage of never-partnered men and women also foster marriage among cohabitors, although some determinants such as religiosity have a stronger association with direct marriage than with marriage among cohabiting couples. However, not all of the covariates found in the previous chapter to be associated with marital stability have a corresponding impact on cohabiting partnerships. Whilst age at partnership formation is positively associated with partnership stability for both married and cohabiting couples, the effect of children on partnership stability is insignificant for female cohabitors. Also, though previous experience of non-family living has no influence on marital stability, it is associated with a greater likelihood of cohabitation dissolution. To some extent these differences may relate to the changing focus of our analysis: in Chapter 5 we looked at dissolution among all first marriages, irrespective of whether the marriage was the first partnership experienced by the respondent, whereas here we have confined our attention to first partnerships which were cohabiting at the start.

Clearly, we have not been able to include a number of attitudinal and socio-economic variables likely to be associated with the decision to marry or separate. Future analyses require detailed prospective data concerning the couple's attitudes towards marriage and separation, their childbearing intentions, and their current socio-economic and housing

circumstances. Moreover, data from a number of different birth cohorts are necessary to examine how period changes in the role of cohabitation have influenced the outcome of cohabiting partnerships. Our analyses have nevertheless explored, for the first time in Britain, the relationships between childbearing and the outcome of cohabitation. Given the importance of experiencing a conception on translation to marriage it is pertinent now to examine the antecedents of childbearing in cohabiting partnerships.

6.3 The Antecedents of Childbearing within Cohabiting First Partnerships

In this section we examine the family background and early lifecourse factors associated with the transition to parenthood of cohabiting women. Whilst considerable research, mostly in the United States, has investigated the family background and early lifecourse determinants of experiencing a premarital conception or a premarital birth, less work has been undertaken to examine the factors influencing the fertility of cohabiting couples. Prior research has generally found that it is never married women from disadvantaged socio-economic backgrounds, those whose parents separated, and those brought up in a single mother family who are most likely to experience a premarital pregnancy or birth (see, for example, Yamaguchi and Kandel, 1987; McLanahan and Bumpass, 1988; Kahn and Anderson, 1992; Russell, 1994; Wu, 1996). Evidence from Canada (Wu, 1996) and the United States (Loomis and Landale, 1994) suggests that similar factors may be associated with childbearing among cohabiting couples.

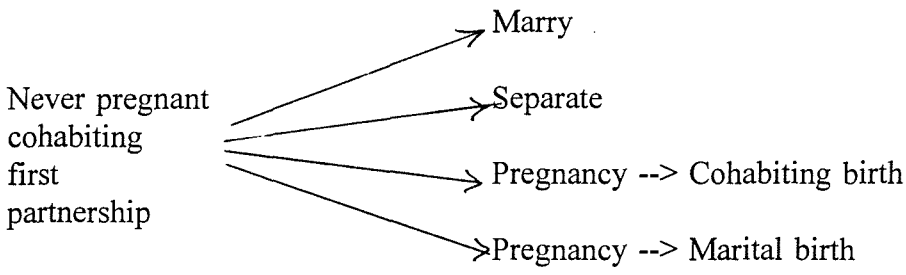
Our investigation is made complex by the fact that many couples marry prior to the birth. In the United States data from the 1987/88 NSFH have been extensively used to analyse the role of cohabitation in the legitimation of extra-marital conceptions. Researchers have compared first marriage rates among pregnant single and cohabiting women in order to test hypotheses concerning the role of cohabitation in family formation (Manning, 1993; Manning and Landale, 1996). Manning (1993) argues that since teenage white cohabitors are no more likely to marry following a premarital conception than teenage single women, cohabitation acts as an alternative to remaining single. Older white Americans, however,

are significantly more likely to marry upon becoming pregnant than their single counterparts, suggesting that cohabitation is a stage in the marriage process. These patterns contrast with the situation in France, where Toulemon (1997) suggests that cohabiting pregnant women, especially those who have already been cohabiting for two years or more, are less likely to marry than their single counterparts. In France cohabitation may act more as an alternative to marriage.

It would be interesting to undertake similar analyses for recent birth cohorts in Britain, for example, using data from the BHPS. In the remainder of this chapter, however, we follow Leridon (1990) in examining pregnancy as a third outcome (alongside marriage and separation) of cohabiting first partnerships. Our aim is to investigate the factors associated with experiencing a pregnancy whilst cohabiting and whether the couple marry prior to the birth.

6.3.1 First lifecourse event experienced following entry into cohabitation

In the following analyses we restrict our attention to female cohabitors who were never pregnant when they first began cohabiting. We analyse the propensity of respondents to take each of the four lifecourse trajectories shown below: they may marry before experiencing a pregnancy; they may separate either before experiencing a pregnancy or, in the case of eight women, after becoming pregnant (these groups have been combined); they may experience a pregnancy and give birth whilst continuing to cohabit (a cohabiting birth); or they may experience a pregnancy and marry prior to the child's birth (a marital birth).



Data from the 1958 birth cohort suggest that there are large socio-economic differentials in the propensity to experience these different lifecourse trajectories. In Table 6.5 we present the percentage of women who experienced each trajectory by age 33, according to their social class background. A similar proportion of women from each social class background married their partner prior to experiencing any other event (around 50 per cent). Differentials can be seen, however, in the propensity to experience a conception whilst cohabiting: one quarter of women whose father was in a semiskilled or unskilled occupation became pregnant whilst cohabiting, as compared with only one in ten of the women whose father was in a professional or intermediate occupation. Roughly equal numbers of conceptions were legitimized through marriage. Next we undertake regression analyses to investigate whether these differentials persist once later lifecourse factors and censoring are controlled.

Table 6.5: First lifecourse event experienced by age 33 among never pregnant women following entry into a cohabiting first partnership, according to father's social class.

Father's Social Class	Row % Marry	Preg--> birth	Preg--> marry	Sep-arate	Still going	Sample (100%)
I and II	55	4	5	28	8	338
IIIn	51	8	6	29	6	136
IIIm	51	8	10	25	6	236
IV and V	49	13	11	22	5	494
Total	51	8	8	26	6	1402

6.3.2 Regression analysis of first event experienced following entry into a cohabiting first partnership

We use a discrete-time hazards multinomial logistic regression model to estimate the probability that cohabiting women marry, separate, experience a pregnancy which results in a cohabiting birth, or experience a pregnancy which is legitimized through marriage, relative to the reference category of continuing to cohabit within the first five years. Cohabitors contribute one month time intervals of exposure until the time they first experience one of these events, or are censored by the age 33 survey. Note that cohabitors who experience childbearing as their first event are censored at the time when they conceive. All variables are considered as fixed at the start of cohabitation. Since the effects of a number of covariates were found in the previous section to differ according to age at entry into cohabitation, we choose to split up the cohabitors into those who started to live with their partner in their late teens and early twenties (in the late 1970s), and those who began cohabiting in their mid-twenties (during the early 1980s). For the younger age group we include covariates based upon information collected at age 16 or before, whilst for the older age group we include their religiosity (as measured at age 23), whether or not they lived independently from the parental home prior to partnership formation, and their highest educational qualification. In order to focus the time-period when the older cohabitations were taking place we exclude those who began cohabiting at age 28 or above (after 1985). This group only constitutes ten per cent of cohabiting first partnerships among female cohort members. Tables 6.6 and 6.7 present the parameter estimates for the two age groups. Few interactions are found to be significant. Tables 6.8 and 6.9 show for the two age groups the estimated probabilities associated with the different categories of each covariate of experiencing each event within five years, holding other variables at their average level.

A number of family background and early lifecourse factors are found to be related to the propensity of younger cohabitors to experience a pregnancy resulting in a live birth. As anticipated, young cohabiting women from poorer socio-economic backgrounds are significantly more likely to become pregnant. For example, eight per cent of women whose fathers were in a semiskilled or unskilled occupation became pregnant and married their partner prior to the birth, compared to just three per cent of women

Table 6.6: Parameter estimates from discrete-time model of first lifecourse event within five years of entry into a cohabiting first partnership. Never pregnant women aged 16-21 at start of cohabitation.

Variable		Marry	Separate	Preg--> Cohabiting Birth	Preg--> Marital Birth
Intercept		-3.91 **	-3.77 **	-7.44 **	-7.94 **
Duration of cohabitation	0-11 mths	0.18	-0.33	0.86	1.70 *
	12-23 mths	0.28	-0.11	0.35	1.00
	24-35 mths	0.18	0.05	0.55	0.55
	36-47 mths	-0.10	-0.31	0.40	0.73
	48-59 mths	0.00	0.00	0.00	0.00
Mother's age at first birth	Under 20	0.04	-0.36	0.65 **	0.62 **
	20 and over	0.00	0.00	0.00	0.00
Mother's age at leaving school	Under 15	0.12	-0.38 **	-0.45	-0.04
	15 and over	0.00	0.00	0.00	0.00
	Not known	-0.06	-0.22	-0.61	0.43
Father's social class	I+II	0.00	0.00	0.00	0.00
	IIIn	0.20	-0.19	0.45	0.73
	IIIm	0.22	-0.30	0.74	1.21 **
	IV+V	0.18	-0.71 **	0.76	0.85
	Not known/applicable	-0.17	-0.42	0.65	0.73
Region of residence at age 16	Scotland & North	0.00	0.00	0.00	0.00
	Midlands & Wales	-0.21	-0.31	-0.73 *	-0.18
	South	0.12	-0.14	-0.81 *	-0.48
	SE & London	-0.25	0.53	-0.25	-1.15 **
	Not known	-0.22	0.31	0.31	-0.34
Behaviour at age 16	Normal	0.00	0.00	0.00	0.00
	'Emotional disorder'	-0.12	-0.31	1.33 **	0.15
	'Behavioural/mixed disorder'	0.02	0.29	1.31 **	0.20
	Not known	0.16	-0.19	0.99 **	0.40
Age at start of cohabitation	16-18	0.12	0.07	0.75 **	0.24
	19-21	0.00	0.00	0.00	0.00
Partner's legal marital status at start	Never married	0.00	0.00	0.00	0.00
	Married/separated	-0.83 **	-0.71 **	0.94	0.52
	Divorced/widowed	-0.50 **	-0.43	0.48	-0.20
	Not known	-0.15	1.32 **	-0.61	0.45

** Denotes statistical significance at the five per cent level and * denotes significance at the ten per cent level
-2 log likelihood = 6346.7, d.f.= 92, N cases = 730, N person months = 14620.

Table 6.7 Parameter estimates from discrete-time model of first lifecourse event within five years of entry into a cohabiting first partnership. Never pregnant women aged 22-27 at start of cohabitation.

Variable		Marry	Separate	Preg--> Cohabiting Birth	Preg--> Marital Birth
Intercept		-4.07 **	-4.34 **	-8.29 **	-7.64 **
Duration of cohabitation	0-11 mths	0.23	-0.47	0.18	-0.23
	12-23 mths	0.21	-1.20 **	-0.34	-0.82
	24-35 mths	-0.06	-0.48	-0.16	-0.35
	36-47 mths	-0.38	-0.27	0.60	-0.28
	48-59 mths	0.00	0.00	0.00	0.00
Mother had premarital conception	No	0.00	0.00	0.00	0.00
	Yes	0.15	-0.08	0.74	0.82 *
	Not known	-0.13	-0.40	0.94	0.17
Mother's age at leaving school	Under 15	0.26 *	-0.10	-1.46 **	0.69 *
	15 and over	0.00	0.00	0.00	0.00
	Not known	-0.03	-0.56	0.29	-1.74 *
Parental housing tenure	Owner occupied	0.00	0.00	0.00	0.00
	Public rented	-0.16	0.10	1.22 **	-1.21 **
	Other/not known	-0.09	0.69 **	0.46	-0.82
Father's social class	I + II	0.00	0.00	0.00	0.00
	IIIn	-0.24	0.13	0.70	0.01
	IIIm	-0.24	-0.04	-0.60	0.02
	IV + V	-0.50 **	0.00	0.46	0.31
	Not known/applicable	-0.08	-0.66	0.23	0.19
Region of residence at age 16	Scotland & North	0.00	0.00	0.00	0.00
	Midlands & Wales	0.05	-0.23	-0.41	-0.55
	South	0.12	0.31	-0.38	-0.97
	SE & London	0.55 **	-0.72	1.47 *	-0.42
	Not known	-0.28	0.44	-0.91	0.44
Highest qualification	Degree	0.00	0.00	0.00	0.00
	A Level	0.22	0.05	0.56	2.38 **
	O Level	0.09	0.08	0.22	2.69 **
	CSE	0.13	-0.35	0.66	3.36 **
	None	-0.24	-0.20	1.52 *	2.82 **
Religious activity	None	0.00	0.00	0.00	0.00
	Weak	0.38 *	-0.45	-0.76	0.20
	Strong	0.31 **	0.08	-0.06	-0.02
Age at start of cohabitation	22-24	0.09	0.09	0.67	0.52
	25-27	0.00	0.00	0.00	0.00
Partner's legal marital status at start	Never married	0.00	0.00	0.00	0.00
	Married/separated	-0.94 **	0.20	0.22	-0.34
	Divorced/widowed	-0.17	0.20	0.91 *	-0.93
	Not known	0.30	1.15 **	1.97 **	-0.63
Age at start 22-24 * SE & London		-0.60 *	0.84	-1.76 *	-0.95

** Denotes statistical significance at the five per cent level and * denotes significance at the ten per cent level
-2 log likelihood = 4580.3, d.f.= 120, N cases = 584, N person months = 12913.

with a professional or intermediate social class background (Table 6.8). Women from more advantaged social class backgrounds are similarly less likely to experience a birth whilst cohabiting compared to less advantaged women.

After controlling for socio-economic background there remains a strong intergenerational association in the propensity to enter parenthood at a young age. Figure 6.5 shows that female cohabitors whose mothers had their first birth as a teenager are around twice as likely to experience a conception as other cohabiting women in their teens and early twenties. The effect is similar for conceptions which result in a cohabiting birth and those which are legitimized through marriage. Thus, 11 per cent of respondents whose mother began childbearing in her teens married their partner following a conception compared to six per cent of respondents with mothers who began family formation at a later age. Region of residence was not found to be significant in our earlier models of the outcome of cohabitation which considered only marriage and separation as competing risks. Yet Tables 6.6 and 6.7 suggest that respondents brought up in Scotland and the North are more likely to marry following a premarital conception and that older women who were living at age 16 in London and the South East are significantly more likely to have a cohabiting birth.

Particularly interesting is the tendency of teenagers with behavioural and emotional problems at age 16 to experience a cohabiting birth. For example, of women who began cohabiting whilst aged between 16 and 21, 14 per cent of those exhibiting disorderly behaviour in school, and 11 per cent of those with emotional problems (tending to be nervous, afraid and tearful), had a cohabiting birth within five years compared to just four per cent of children with 'normal' behaviour. Behavioural and emotional problems in adolescence were not found to be associated with an increased propensity to experience a conception which translated into marriage.

Large educational differentials are found in the outcome of cohabitation among women who began to cohabit in their mid-twenties. As shown in Table 6.9 and plotted in Figure 6.6, women with degree level qualifications are significantly less likely to experience a conception whilst cohabiting and are more likely to continue cohabiting as a childless couple.

Figure 6.5: Percentage distribution of first event experienced within five years, according to their mother's age at first birth.
Women aged 16-21 at entry into cohabitation.

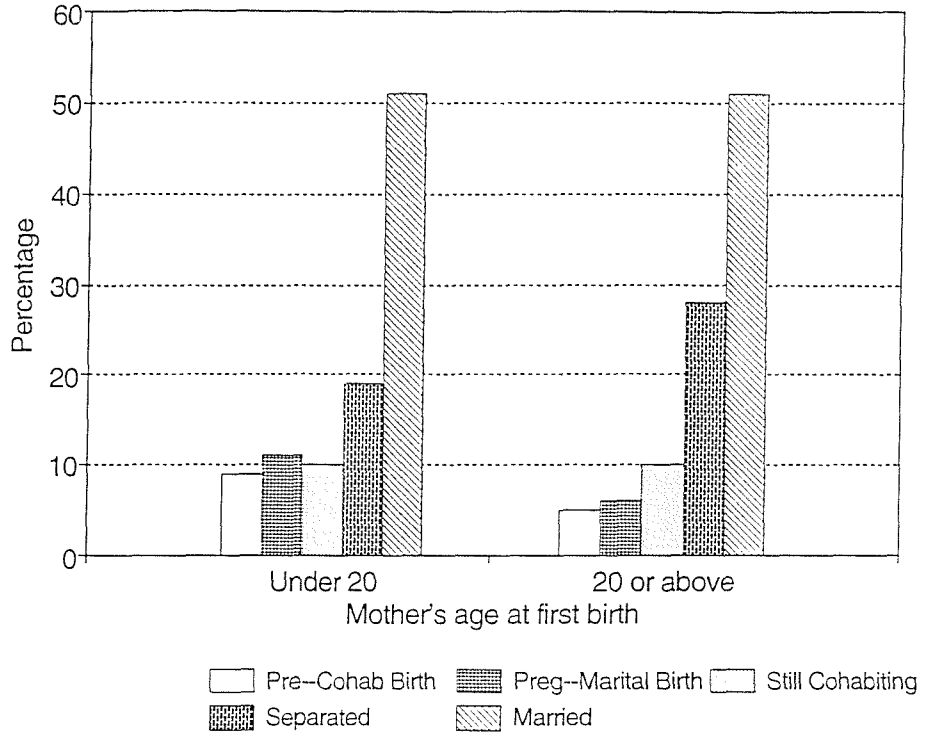


Figure 6.6: Percentage distribution of first event experienced within five years, according to highest educational qualification.
Women aged 22-27 at entry into cohabitation.

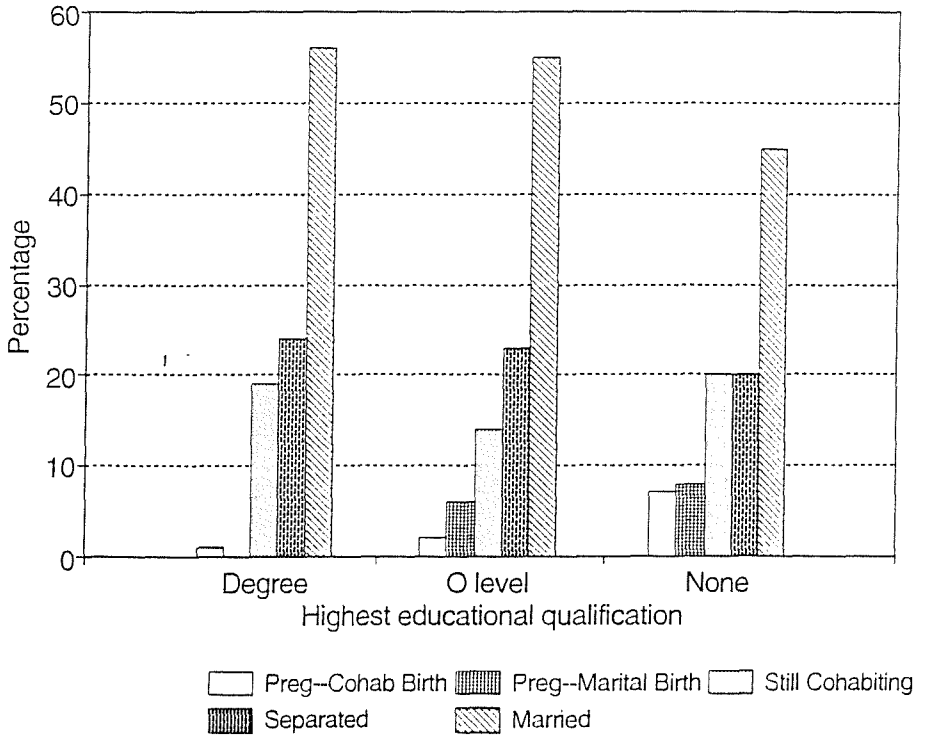


Table 6.8: Estimated probabilities of experiencing alternative lifecourse events within five years of entry into a cohabiting first partnership. Never pregnant women aged 16-21 at start of cohabitation.

Variable		Marry	Separate	Preg--> Cohabiting Birth	Preg--> Marital Birth	Still Cohabiting
Mother's age at first birth	Under 20	0.51	0.19	0.09	0.11	0.10
	20 and over	0.51	0.28	0.05	0.06	0.10
Mother's age at leaving school	Under 15	0.57	0.22	0.05	0.06	0.10
	15 and over	0.48	0.30	0.07	0.06	0.09
	Not known	0.49	0.26	0.04	0.10	0.11
Father's social class	I+II	0.47	0.37	0.03	0.03	0.10
	IIIn	0.53	0.28	0.04	0.07	0.08
	IIIm	0.52	0.24	0.06	0.10	0.08
	IV+V	0.56	0.18	0.07	0.08	0.11
	Not known/applicable	0.44	0.28	0.06	0.07	0.15
Region of residence at age 16	Scotland & North	0.51	0.23	0.07	0.10	0.08
	Midlands & Wales	0.50	0.21	0.04	0.10	0.15
	South	0.60	0.21	0.03	0.06	0.09
	SE & London	0.42	0.41	0.06	0.03	0.08
	Not known	0.42	0.32	0.10	0.07	0.08
Behaviour at age 16	Normal	0.51	0.28	0.04	0.07	0.11
	'Emotional disorder'	0.46	0.21	0.14	0.08	0.12
	'Behavioural/mixed disorder'	0.44	0.31	0.11	0.07	0.06
	Not known	0.54	0.21	0.09	0.09	0.08
Age at start of cohabitation	16-18	0.51	0.25	0.08	0.08	0.08
	19-21	0.51	0.27	0.04	0.07	0.11
Partner's legal marital status at start	Never married	0.57	0.23	0.05	0.06	0.09
	Married/separated	0.34	0.16	0.16	0.13	0.22
	Divorced/widowed	0.45	0.20	0.10	0.06	0.19
	Not known	0.34	0.55	0.02	0.08	0.02

Women with below degree level qualifications are all significantly more likely to marry following a premarital conception. It is women with no educational qualifications who are most likely to become a parent whilst cohabiting. For example, within five years, seven per cent of women with no educational qualifications have a birth and continue to cohabit, in contrast with just one per cent of women with degree level qualifications.

Once the respondent's level of education is included in the model the effects of father's social class on the risk of experiencing a pregnancy become insignificant, although

respondents whose father had a semiskilled or unskilled occupation remain significantly less likely to separate from their partner compared to women from more advantaged social backgrounds. Once other factors are controlled, growing up in local authority or other publicly rented accommodation is associated with a greater probability of experiencing a cohabiting birth, but a lower probability of marrying following a conception.

A persistent intergenerational association in the propensity to experience a premarital pregnancy is seen among older cohabitants. For example, six per cent of women whose mother had a premarital conception are estimated to marry following a premarital conception compared to three per cent of women whose mothers did not experience a premarital pregnancy.

Among older cohabitors, whether or not they had lived independently from the parental home prior to partnership formation was not found to be significantly associated with the risk of pregnancy. Since the variable is no longer found to be associated with an increased risk of separation in our expanded competing risks model it has been removed from Table 6.8.

6.3.3 Discussion

The competing risks framework allows us to examine factors associated with the propensity to experience alternative events following entry into a cohabiting first partnership. In the 1958 cohort the most common event was marriage (without any preceding conception). Within five years one half of the younger cohabitors and slightly more of the older cohabitors married their partner. At younger ages rates of direct marriage are higher for those from poorer social backgrounds, whereas at older ages marriage rates are higher among women from more privileged backgrounds. Interestingly, however, it is women with intermediate levels of education, especially those with A level or equivalent qualifications who are most likely to marry their partner directly. For these individuals cohabitation is a fairly short, childfree stage.

Table 6.9: Estimated probabilities of experiencing alternative lifecourse events within five years of entry into a cohabiting first partnership. Never pregnant women aged 22-27 at start of cohabitation.

Variable		Marry	Separate	Preg--> Cohabiting Birth	Preg--> Marital Birth	Still Cohabiting
Mother had premarital conception	No	0.56	0.22	0.02	0.03	0.17
	Yes	0.59	0.18	0.04	0.06	0.13
	Not known	0.53	0.16	0.05	0.04	0.21
Mother's age at leaving school	Under 15	0.61	0.19	0.01	0.08	0.12
	15 and over	0.52	0.24	0.03	0.04	0.16
	Not known	0.56	0.16	0.05	0.01	0.22
Parental housing tenure	Owner occupied	0.59	0.17	0.01	0.06	0.16
	Public rented	0.54	0.21	0.05	0.02	0.19
	Other/not known	0.51	0.32	0.02	0.02	0.12
Father's social class	I + II	0.62	0.20	0.02	0.03	0.13
	IIIn	0.52	0.25	0.05	0.03	0.15
	IIIm	0.55	0.23	0.01	0.04	0.17
	IV + V	0.45	0.26	0.04	0.05	0.20
	Not known/applicable	0.63	0.12	0.03	0.04	0.18
Region of residence at age 16	Scotland & North	0.54	0.21	0.03	0.06	0.16
	Midlands & Wales	0.59	0.17	0.02	0.04	0.18
	South	0.57	0.26	0.02	0.02	0.13
	SE & London	0.61	0.17	0.04	0.02	0.16
	Not known	0.42	0.33	0.01	0.09	0.15
Highest qualification	Degree	0.56	0.24	0.01	0.00	0.19
	A Level	0.60	0.21	0.02	0.04	0.12
	O Level	0.55	0.23	0.02	0.06	0.14
	CSE	0.57	0.15	0.02	0.12	0.14
	None	0.45	0.20	0.07	0.08	0.20
Religious activity	None	0.50	0.23	0.03	0.04	0.20
	Weak	0.66	0.13	0.01	0.04	0.16
	Strong	0.59	0.22	0.02	0.03	0.14
Age at start of cohabitation	22-24	0.55	0.23	0.02	0.04	0.16
	25-27	0.59	0.18	0.02	0.03	0.18
Partner's legal marital status at start	Never married	0.61	0.18	0.02	0.04	0.15
	Married/separated	0.31	0.31	0.03	0.04	0.30
	Divorced/widowed	0.54	0.23	0.04	0.02	0.17
	Not known	0.54	0.34	0.08	0.01	0.03

A significant proportion of cohabitors marry after becoming pregnant. We might surmise that these individuals did not view cohabitation as an appropriate setting for childbearing (and hence not as an alternative to marriage). Those who marry following a premarital conception are not confined to any particular social group but tend to come from less advantaged social backgrounds than those who marry directly. In the 1958 cohort women with degree level qualifications appear to be particularly unlikely to have taken this route.

A lower proportion continue to cohabit after becoming pregnant. This trajectory is most common for women from poor socio-economic backgrounds. Teenage cohabitors who become a parent whilst cohabiting are more likely to have had behavioural or emotional problems in adolescence. This is consistent with Russell (1994), who, using data from an earlier round of NCDS, found maladjustment (as measured at age 11) to be associated with a greater likelihood of a premarital conception before age 23. There is some evidence that attitudinal factors influence the propensity of older cohabitors to have a child whilst cohabiting. Cohabitors with a family history of pre-marital fertility appear more likely to become parents outside of marriage. Further studies are needed to establish whether parents who themselves experienced a premarital conception have more liberal attitudes towards extramarital sexual intercourse and childbearing which they transmit to their offspring. Significant regional differentials are also apparent. Older cohabitors living in London and the South East were more likely to have a cohabiting birth, whilst cohabitors in Scotland and the North were more likely to experience a conception and then marry prior to the child's birth.

Some couples with children will have chosen to remain cohabiting, whilst others may have been unable to marry. Respondents cohabiting with a previously married partner are less likely to marry within five years and more likely to continue to cohabit, and begin childbearing outside of marriage. The significant interactions between partner's marital status and the propensity to marry following the birth of a child suggests that some women have to wait until the father of their child is legally divorced before they are able to marry them. These analyses demonstrate the importance of considering the characteristics of both individuals in the couple.

In conclusion, we suggest that cohabiting first partnerships among the 1958 cohort comprised a wide range of situations. For young, highly educated cohabitors - especially those currently in education, cohabitation acted primarily as an alternative to remaining single. Among cohabitors with intermediate education levels, cohabitation was most often a transitionary phase or trial marriage. Many men and women with low levels of education who cohabited in their teens and early twenties also experienced cohabitation as a temporary phase prior to marriage, with marriage often following a premarital conception. A significant minority, more often from socio-economically disadvantaged backgrounds, became parents whilst cohabiting. For them, cohabitation appears to have been an alternative to marriage.

Chapter 7 Conclusions

In this thesis we have described the main trends in partnership formation and dissolution in Britain over the last thirty years and identified for one specific cohort some of the individual level factors associated with alternative partnership trajectories. Using a lifecourse perspective and the methodology of discrete-time logistic regression hazards models we have investigated the determinants of entry into first marriage and cohabitation, the factors affecting the outcome of cohabiting first partnerships, and the predictors of first marriage dissolution among men and women born in Britain in 1958. Since our substantive findings are discussed at length within each chapter we confine ourselves below to considering some of the more important findings and common themes which have emerged. We discuss areas for further work and make some suggestions for future data collection.

7.1 Review of Research Findings

7.1.1 Parental and family background characteristics

The prospective nature of the NCDS has allowed us to look at the pathways through which parental and family background factors work through their influence on later lifecourse factors to influence an individual's demographic behaviour. Parental socio-economic status strongly influences respondents' own experience of education and hence the timing of first partnership formation and the propensity to have a conception before partnership formation or whilst cohabiting. But, parental socio-economic factors become insignificant when we take into account cohort members' own characteristics, particularly their educational level. Similarly, parental socio-economic status is negatively related with the risk of first marriage dissolution, but this association is mediated through respondents' age at marriage and other demographic characteristics.

Parental demographic characteristics were found to be more persistent in their association with their offspring's partnership trajectories. As found previously in both Britain and the

United States there appears to be intergenerational continuity in demographic behaviour. For example, the age at which the respondent's mother began family formation was consistently associated with the age at which the respondent entered a partnership, and the propensity to experience a pre-partnership conception. There are likely to be strong cultural norms as to the "correct age" at which marriage and family formation should begin, shared by parents and their children. Women whose parents experienced a premarital conception were themselves more likely to cohabit, to become pregnant prior to partnership formation, or to experience a pregnancy whilst cohabiting. Such parents are likely to be more accepting of sexual relations prior to marriage, and of cohabitation (Thornton, 1991). Work in the United States has shown how parental attitudes towards family formation can influence their children's behaviour independently of the offspring's own attitudes (Axinn and Thornton, 1983).

As observed in other countries, there is a strong intergenerational association in marital instability. By utilising a lifecourse approach we have shown how this univariate association is mediated through the propensity of respondents who experience parental separation to marry at a young age, premaritally cohabit, and experience premarital childbearing. Once these factors are controlled, the effect of parental separation on the risk of marital breakdown is reduced for men and disappears altogether for women. Explanations for the remaining association include the lack of appropriate marital role models available to children of separated parents (McLanahan and Bumpass, 1988; Amato, 1996), the fostering of a lower commitment towards marriage and more liberal attitudes towards marital dissolution (Glenn and Kramer, 1987; Thornton, 1991; Amato. 1996; Axinn and Thornton, 1996).

7.1.2 Education and the postponement of partnership formation

Our analyses have confirmed level of education as the most important determinant of the speed with which men and women enter partnerships, especially marriage. We saw in Chapter 1 that 25 per cent of women and eight per cent of men married in their teens. Our individual level analyses of the NCDS cohort have demonstrated that it was men and women with the lowest levels of education, many of whom left school at age 16, who were

most likely to marry as teenagers. These less educated women also tended to be those who married following a conception.

Those with intermediate levels of education delayed marriage to their early twenties. Overall, marriage rates were highest among this group. Our analyses suggest that women with O level qualifications are the most conservative in their partnership behaviour, tending to marry their partner directly without cohabiting or experiencing a conception beforehand.

Men and women with the highest levels of education delayed partnership formation until their mid and late twenties, when they tended to cohabit with their partner first, rather than marrying directly. Whilst there is a cultural norm in Britain for students to remain unmarried, cohabitation appears to be more compatible with full-time education. In Chapter 6 we presented evidence to suggest that among those pursuing full time education these cohabitations are mostly childless and of short duration, often ending in separation.

Once men and women have left full-time education the relationship between educational attainment and partnership formation is positive. Contrary to Becker's (1981) economic theory of marriage, increases in women's education do not appear to be associated with increased non-partnering, but instead with a delay in partnership formation to later ages. This said, the probability of forming a partnership was significantly lower among the small group of women with professional occupations who had remained single until age 25. Recent analyses by Dale and colleagues (1997) suggest that one fifth of female cohort members with higher level academic qualification who remained childless at age 33 report not wanting to have children. These women may have forsaken family life in order to pursue their careers.

Marriage rates are significantly lower among those with no qualifications, and especially unemployed and economically inactive men, who remain single in their late twenties and early thirties. A selection effect is probably operating whereby these individuals tend to be the least 'attractive' as potential spouses. Cohabitation appears to act as a substitute for marriage for some members of this group.

7.1.3 Attitudinal and cultural influences on the propensity to cohabit

Analyses of the 1958 cohort suggest that cultural and attitudinal factors are important in determining whether individuals marry directly or cohabit with their first partner. Rates of cohabitation were significantly lower, and marriage rates higher, for those who regularly attended religious services. Similarly, among cohabiting men and women those with greater levels of religiosity tended to marry their partner within a short time. These findings are not surprising given that religious teachings usually expound the virtues of marriage and warn against extramarital sexual relations. Religiosity also acts as a proxy for other unmeasured attitudes towards marriage and the family. Ideally more direct measures of these attitudes are required, preferably collected at a number of time points through a respondent's life. In the NCDS a great deal of attitudinal information was collected at age 33, but rather little is available for their parents or for themselves at earlier ages. Without such information we cannot tell the extent to which attitudes present at age 33 are the outcome of earlier lifecourse experiences.

Other indications that the 'decision' to cohabit may be affected by cultural factors include persistent social class and regional differentials. For the first time in Britain we have shown that, among similarly qualified men, those in professional occupations are significantly more likely to marry directly, whilst those in managerial and other intermediate occupations are more likely to cohabit. We speculate that these differences result from the selection of certain individuals into the professions, and the expectations on the part of professional bodies themselves of more traditional family behaviour. Men in junior non-manual occupations and women with intermediate levels of education exhibit the most conservative patterns of partnership formation, being most likely to marry without having cohabited or experienced a premarital conception. Further studies are required to investigate why this is the case.

Regional differentials in the propensity to enter into a cohabiting first partnership correspond to observed differences in the prevalence of cohabitation (Haskey and Kiernan, 1989; Berrington, 1991). We have found that men and women brought up in the Southern and Eastern regions of England, especially London and the South East, are significantly less likely to marry and more likely to cohabit or remain single. These findings suggest

that the previously observed higher proportions of single men and women in London and the South East (Berrington and Murphy, 1994) cannot be wholly accounted for by selective in-migration. Whilst the increased cost of housing in the South of Britain may go some way to explain the popularity of cohabitation in the South, we suspect that these regional differentials also reflect more long standing cultural differences in patterns of partnership formation and entry into parenthood (Coward, 1987).

In our preliminary analyses in Chapter 3 we saw that cohabitation rates were highest among those with degree level qualifications. In Chapter 4 we showed that these educational differentials were attenuated once the respondent's experience of non-family living was controlled, suggesting that it may not be increased education *per se,* but the movement away from the parental home to enter higher education, which encourages cohabitation. This finding requires verification using other data, for example that for the 1970 cohort. We suggest, however, that those who live away from the parental home, especially those in shared housing, have more opportunity to drift into informal cohabitation. Moreover, respondents living in the parental home will be more exposed to (generally more conservative) parental attitudes towards family formation. Evidence from the United States (Goldscheider and Waite, 1987; Axinn and Barber, 1996) suggests that experience of non-family living may itself encourage less traditional attitudes towards marriage and family formation.

The selection of individuals with less traditional family attitudes into cohabitation goes some way in explaining the univariate association we observe between premarital cohabitation and the risk of subsequent divorce discussed below.

7.1.4 The influence of early marital factors on the risk of marital dissolution

By age 33 one quarter of ever married women and one fifth of men had experienced the dissolution of their first marriage. Our analyses in Chapter 5 suggest that demographic factors, especially age at marriage, the timing of childbearing, and previous cohabitation, are the strongest predictors of first marriage dissolution. Using a lifecourse framework we have demonstrated that many family background and current socio-economic factors are

associated with the risk of dissolution through their impact on these early marital variables. For example, we find a strong univariate relationship between respondents' social class and marital stability. However, once we control for age at marriage, men and women from unskilled manual occupations are no more likely to experience marital dissolution than those in professional occupations. Similarly, once age at marriage is taken account of, the risk of dissolution is similar across most educational groups. These findings highlight the importance of distinguishing the gross effect of a covariate, when that factor is considered in isolation, from the net or direct relationship which exists when other intervening variables are controlled. Since different empirical studies of marital dissolution tend to include various numbers and types of covariates, care must be taken when comparing results.

Our analyses have extended earlier work in Britain by investigating the role of previous cohabitation on the risk of first marriage dissolution. Previously a univariate association between experience of premarital cohabitation and subsequent marital instability was observed. We have shown that this association does not result from the longer time spent in a partnership among those who premaritally cohabit, but that it largely stems from a selection effect whereby couples who cohabit prior to marriage have other socio-demographic characteristics which place them at a higher risk of marital dissolution. When such factors as religiosity and experience of a premarital conception are taken into account, premarital cohabitors are only slightly more likely to experience marital dissolution than those who married directly. It remains unclear whether the association would disappear completely if all differences in the background characteristics of cohabitors and non-cohabitors were controlled. Previous research from the United States suggest not. Axinn and Thornton (1992) find evidence that the experience of cohabitation itself fosters less traditional attitudes towards marriage.

The risk of first marriage dissolution is particularly high for those who cohabited with someone else before their spouse. A number of explanations can be put forward for this pattern. First, as noted above, those who cohabit tend to have other socio-demographic characteristics which make them prone to dissolution. Secondly, the experience of cohabitation, and especially the dissolution of a cohabiting partnership, might give rise to less traditional views of marriage and divorce. Finally, some individuals may be

particularly susceptible to partnership dissolution. They may possess personality traits which make maintaining a long term relationship difficult. Investigation of this individual heterogeneity in the risk of partnership dissolution would be very illuminating.

As in most previous studies of marital dissolution, age at marriage was seen to be the strongest predictor of dissolution for the NCDS cohort. There is little direct evidence as to which of the alternative explanations put forward in Chapter 5 are correct. In terms of our own analyses we note that those who marry in their teens are usually the most socio-economically and educationally disadvantaged. The models presented include measures of respondents' social class, educational qualifications and employment status as measured at age 23. These variables may not be very effective in describing the difficult economic and social realities faced by these young couples in their early years of marriage. Our analyses suggest that there may be individual personality characteristics which are associated both with early marriage and with marital instability. Women born in 1958 who were reported to have 'anti-social' behaviour in adolescence had a higher risk of both marrying at an early age and experiencing marital instability. Previous research by Quinton and colleagues (1993) suggests that as a result of assortative mating such women tend to be selected into unsupporting relationships.

As would be expected, the presence of children is associated with greater marital stability. However, like Murphy (1985), we find that the timing of childbearing is more important than the number of children in influencing the risk of marital dissolution. Those who marry following a premarital conception or a premarital birth are significantly more likely to experience marital breakdown than those who begin childbearing inside marriage. Among those who had a child prior to marriage, the risk of dissolution appeared to be particularly high in the first few years of marriage. The presence of a young child probably places additional strains on the marital relationship at a time when the couple are having to adjust to their new roles. More work is required to establish whether these problems are heightened if one partner is not the biological parent of the child, or if the marriage was the result of an unplanned conception.

Our findings concerning the role of premarital childbearing on the risk of marital dissolution refer to a cohort in which marriage remained the predominant setting for

childbearing. Traditionally, a premarital conception has often led to a hastily arranged marriage between a couple who may not have otherwise entered into a coresidential union. The situation today is likely to be quite different, with an increasing number of premarital conceptions, and indeed premarital births, occurring to cohabiting couples.

7.1.5 The outcome of cohabiting first partnerships

The full partnership histories collected in the NCDS provide one of the first opportunities to explore the dynamics of cohabitation in Britain. For the 1958 birth cohort, cohabitation remained a short lived experience, with only one in ten cohabitations continuing after eight years. In Chapter 6 we investigated the outcome of cohabiting first partnerships in terms of whether they translated into marriage or ended in separation. Overall, our findings suggest that current life course factors such as the legal marital status of the respondent's partner, the respondent's age, educational attainment and childbearing status are more important than parental and family background factors in determining whether a couple marries or separates. For example, parental separation was strongly associated with entry into cohabitation, but only weakly related to its outcome. It would seem that parental separation delays marriage through encouraging increased premarital cohabitation, but does not result in a rejection of marriage altogether. Some couples are not able to marry. We have shown how cohabitants living with a partner who was legally married to someone else at the start of the relationship, were far more likely to remain cohabiting after five years and to become parents whilst cohabiting.

The majority of respondents married their partner within eight years (almost one half had done so after just three years). Factors encouraging marriage among never partnered respondents, such as religiosity and experiencing a pregnancy, also tended to encourage marriage among cohabitors. As is the case for never married men and women, marriage rates were found to be highest in the second trimester of pregnancy, and lower among the select group who remained never married following the birth. Within educational groups, marriage rates of cohabiting couples peak at the same age as for never-married couples. Once again we find a selection effect whereby those socio-economically disadvantaged men and women who are cohabiting in their late twenties and early thirties are much less likely

to marry. It remains unclear whether these individuals are cohabiting through choice or whether a lack of economic security or other reason prevents them from marrying.

Around one quarter of couples separate within eight years. Partnerships begun at younger ages appeared to be more fragile than those begun at older ages, as do marriages. Men and women who cohabited as students were particularly likely to separate from their partner. We have found no consistent evidence as to whether the presence of children provides stability to cohabiting couples.

Among the 1958 cohort there were large socio-economic differentials in the first event experienced following entry into cohabitation. Women from poorer social backgrounds were more likely to marry their partner following a premarital conception, or to have a child within their cohabiting partnership. Those from privileged backgrounds were more likely to remain in a childless cohabiting partnership after five years, or to have separated. Those from intermediate social class backgrounds were most likely to marry directly.

Our findings suggest that, for the 1958 cohort at least, cohabiting first partnerships were primarily an alternative to remaining single for young highly educated cohabitors - especially those who remained in education - but a transitionary, childless stage prior to marriage for those with intermediate levels of education. Cohabitors from socio-economically disadvantaged backgrounds were more likely to marry following a conception or to become parents whilst cohabiting. For these cohabiting couples with children cohabitation may have acted more as an alternative to marriage.

7.2 Recommendations for Future Data Collection

7.2.1. Data from birth cohort studies

There are obvious advantages in using birth cohort studies to examine demographic behaviour. The NCDS collected a wealth of socio-economic, demographic, and health data. In this project we have used information collected not only from the respondents themselves, but also from their parents and teachers. The relatively large sample size of the NCDS has meant that we have been able to compare patterns of partnership formation and dissolution among relatively small population sub-groups, such as those with poor reading ability and those with emotional and behavioural problems in adolescence with the general population. The lifecourse perspective argues that events early on in life have an impact on subsequent behaviour in adulthood. Of particular importance to research adopting this approach is the availability of prospective data. In the NCDS, many characteristics of the respondent (their socio-economic circumstances in childhood for instance), are measured prior to partnership and family formation.

Adequate funding for further sweeps of the NCDS is essential in order to examine the pathways through which men and women negotiate middle age and beyond. In terms of demographic research, areas for future work include: the determinants of marital stability at longer marriage durations; the circumstances of those who remain living with their parents into their early 40s (and the directions of support within such households); the factors associated with voluntary childlessness; and the determinants of re-partnering and childbearing following first marriage dissolution. Of related interest are the socio-economic and health implications in middle age, of different partnership and family formation trajectories.

There are clearly a number of disadvantages in using data from a single birth cohort study such as NCDS. First, like any long running prospective study, sample attrition is a serious issue. Our analyses are generally based upon respondents who were present at both the age 23 and 33 interviews. It is well known that those lost to the NCDS survey tend to be more socio-economically disadvantaged. In Chapter 2 we showed that they also tend to be those with more complex partnership histories (being more likely to cohabit and to experience

partnership dissolution). As a result, our lifecourse analyses underestimate the level of cohabitation and partnership breakdown experienced by the entire population of those born in Britain in 1958. We are unable to say whether the determinants of partnership formation and dissolution among those lost-to-follow up are substantially different from those included in our analyses.

The second limitation extends from the fact that when analysing data from a single birth cohort, we are unable to differentiate age from calender period. The 1958 cohort are in many ways a transitionary group who were making their way to adulthood during a period of declining first marriage rates and increasing rates of cohabitation and extra-marital childbearing. Cohort members who entered their first partnership at older ages were far more likely to cohabit and less likely to marry directly. This pattern may not represent an age effect but period changes in the acceptability of informal unions.

7.2.2 Data collection methods

The calender approach used in the NCDS to collect partnership history data has in general worked well. However, comparisons of the age 23 and age 33 partnership data for the overlap period between age 16 and 23 suggest that dates of cohabitation are reported less reliably than dates of marriage. Cohabitation, like leaving home, is a fuzzy demographic event, which tends not to have clear start and end points. We found a tendency for periods of premarital cohabitation to be reported as being of longer duration at age 33 than was the case ten years earlier. This pattern probably reflects the increased acceptability of cohabitation in more recent years.

Multivariate analyses of the reliability with which respondents reported dates of marriage and periods of premarital cohabitation suggested that recall errors were more numerous among men, those with less education, that they increased according to time since the event, when partnership histories are more complex, when the respondent is reporting on a union which has since broken down, and when the period of premarital cohabitation is very short. Interestingly, the presence of a current partner during the family section of the interview was not found to be associated with either the reliability of reporting of the date

of first marriage or the reporting of premarital cohabitation.

On the basis of these findings we put forward the following recommendations regarding future data collection within the NCDS and similar studies. We recognise that many of these have significant resource implications.

1. The time interval between survey rounds should be kept to a minimum, less than ten years, and preferably less than five.

2. No attempt should be made to collect retrospective event history data for more distant time periods for which data from earlier rounds already exist. There are likely to be significant inconsistencies between these data which lead to the question of which version is 'correct'. Where histories overlap there will inevitably be some 'seaming problems' which have to be dealt with.

3. Sufficient funding must be made available in the data collection phase to ensure that the data are as complete and accurate as possible. Ideally, missing, out of range and logically inconsistent responses should be picked up and investigated when the survey is in the field. Prior to the general release of the dataset some further data editing and cleaning should be carried out such that 'definitive' partnership, fertility, housing and employment histories are available. In the case of the NCDS age 33 data, different researchers have employed different cleaning and editing rules with the result that alternative versions of event histories are being used in current research. We can, however, take heart from the fact that the parameter estimates from the models of entry into first partnership did not differ substantially according to whether age 23 or age 33 partnership data were used.

4. Careful consideration should be given as to the benefits of collecting full pregnancy/fatherhood histories, especially from men. Comparisons of NCDS data with national abortion figures suggest that terminations have been underreported by around fifty per cent. From a demographic perspective, the interview time and respondent load associated with collecting information about conceptions which did not result in a live birth may not be justifiable. When cohort members reported a

live birth, the precision with which they reported the date of birth was generally good. However, comparison of the effect of experiencing a conception in our hazards models of partnership formation for men and women, suggests an underreporting of paternities by men. Men are more likely to know about, and recall, paternities where they then go on to coreside with the mother. We recommend that extra effort is made in the question wording and interview environment to encourage men to recall children with whom they no longer coreside.

7.3 Areas for Further Research

7.3.1 Implications of increased non-family living

Current educational and labour force trends will continue to increase the age at which young people make their transition to stable work. Young people are increasingly likely either to stay on in school to take A levels, to attend vocational courses at colleges of further education, or to undertake Government sponsored training. The expansion in higher education has been awe-inspiring, particularly during the early 1990s, with one in three entering higher education in 1995/6 as compared to one in six in the late 1980s and one in twenty in the 1960s (ONS, 1998). Given these trends it would seem likely that entry into coresidential partnerships will continue to be delayed to later ages in the foreseeable future. More young people will therefore remain not in a partnership, either living within the parental home, or independently in non-family households (Berrington and Murphy, 1994).

In the work reported here we found an association between experience of non-family living in young adulthood and entry into cohabitation. Detailed prospective data concerning young adults' attitudes and aspirations towards marriage and family formation are required to test the hypothesis that independent living encourages less traditional attitudes towards the family.

Other research questions regarding the trend towards non-family living which need to be

addressed include: how do those living in shared accommodation differ from those who live alone? What are the forms of social and financial support that exist both within these households, and between household members and persons outside of the household? How are sexual relationships both within the household and with persons outside managed?

7.3.2 Understanding partnership instability

It seems likely that high levels of partnership instability will persist in the future, the implications of which give rise to a research agenda of their own. For mothers, partnership breakdown is often associated with a decline in living standards and the risk of poverty, whilst for fathers, partnership dissolution raises issues concerning their responsibilities and rights relating to non-coresident children. Given the generally weaker position of cohabiting couples than married couples in family law (Barnes, 1996), these problems may be exacerbated if the couple had been cohabiting rather than married.

In terms of understanding why some partnerships are less stable than others, a broader theoretical perspective is required. Surveys such as NCDS provide detailed information on respondents' social backgrounds, for example their level of education and social class. It would seem, however, that the risk of marital dissolution cuts across educational and social class boundaries. More information regarding individuals' personality characteristics, attitudes and aspirations are needed to examine the mechanisms through which marrying at a young age, experiencing a premarital conception and so on, influence interpersonal behaviour and hence the risk of partnership dissolution.

Apart from childbearing patterns, no data concerning events following entry into first marriage have been included in our analyses. Given the effort which was required to clean and edit the NCDS partnership and housing histories, we have not attempted to incorporate the age 33 employment histories. Such time-varying information is required to explore the ways in which changes in individuals' economic circumstances, for example being made redundant, affect partnership stability. Further analyses examining the impact of antisocial working hours, poor housing, and poor health status on the risk of marital dissolution might also be useful.

Furthermore, we should not forget that a married or cohabiting partnership consists of more than one individual. New research investigating the joint effect of couples' circumstances on the outcome of partnerships is required.

7.3.3 The changing role of cohabitation

The relevance of our findings, particularly those concerned with the outcome of first cohabitation, to current cohabiting couples in Britain is unclear. We know that premarital cohabitation has now become the norm, with those who marry their partner directly an increasingly select group. Cohabitation has thus contributed to the postponement of marriage to older ages. The role of cohabitation among young adults is more than just a trial marriage, however. Some individuals who live together have no plans to marry and view their arrangement as a practical alternative to remaining single, whilst others see their relationship as functionally equivalent to marriage. It would seem likely that Britain has experienced the trend documented for other countries such as France and the United States where cohabiting couples are now less likely to marry and are more likely to separate than was the case for the NCDS cohort.

Increasingly, cohabitors are becoming parents. We know very little about these recent patterns of childbearing. How many of these conceptions are planned, mistimed or unwanted? Is it still the case that childbearing within cohabiting partnerships is more common among those from poorer social backgrounds? What social and cultural factors encourage cohabitors to marry prior to the child's birth? How have these social pressures changed over the last two decades?

The relative stability of marital and cohabiting partnerships remains of critical interest to academic researchers and policy makers. Future work must identify whether cohabiting partnerships are inherently more unstable than marriages, or whether cohabiting couples have other unmeasured socio-demographic and attitudinal characteristics which make them more prone to partnership dissolution.

Appendix A: Survey Instruments Used at Age 33

Questionnaire title	Face to face or self completion	Respondent	Information collected
Your Life Since 1974	Self completion	Cohort member	Event history questionnaire asking for events/activities on partnerships, children, jobs and housing since age 16
Cohort Member	Face to face	Cohort member	More detailed information on current/last and previous jobs, education and training courses, all marriages and cohabitation, pregnancies and childbearing, housing, experience of homelessness, rent arrears, health history, health behaviour, citizenship,religiosity
What Do You Think?	Self completion	Cohort member	Attitudes for example concerning marriage, women's roles, children and family, social support, political attitudes, environmentalism, racism
Partner-Your Life Since 1974	Self completion	Partner of cohort member	Event history questionnaire asking for events/activities on partnerships, children, jobs, housing since age 16
Mother Questionnaire	Face to face	Mother figure of cohort member's natural or adopted children	Details of family life, for each child: health history, separations from mother, experience of being in care, daycare, schooling history
Your Child	Self completion	Mother figure of cohort member's natural or adopted children	Mother's assessment of child's motor and social development
Child Interview	Face to face	Natural or adopted children of cohort member	Age specific assessment tests for example concerning vocabulary, verbal memory, recognition, maths, plus interviewer's observations

Appendix B: Description of Explanatory Variables

Variable		Percentage distribution in population reporting at age 23 and 33 Men	Women
Variables collected at birth			
Age of cohort member's mother at first birth MAGE			
1	Under 20	0.17	0.18
2	20-24	0.49	0.49
3	25 and over	0.35	0.33
Whether cohort member's mother had premarital conception INT2			
0	No	0.72	0.72
1	Yes	0.23	0.23
2	Not known	0.05	0.05
Cohort member's mother's age at leaving school MUM			
1	Not known	0.16	0.16
2	Under 15	0.41	0.40
3	15 and over	0.43	0.45
Variables collected at age 7			
Cohort member's father's social class FSOC			
1	Not known/applicable	0.14	0.13
2	I + II	0.19	0.18
3	IIIn	0.09	0.10
4	IIIm	0.39	0.39
5	IV + V	0.20	0.20
Cohort members housing tenure TEN			
1	Owner/occupier	0.40	0.39
2	Council rented	0.34	0.36
3	Other	0.14	0.15
4	Not known	0.12	0.11

Appendix B: Description of Explanatory Variables (Cont).

Variable		Percentage distribution in population reporting at age 23 and 33 Men	Women
Variables collected at age 16			
Region of residence REGION			
1	Scotland, the North	0.34	0.36
2	Midlands, Wales	0.22	0.21
3	Southern and Eastern England	0.20	0.19
4	London and the South East	0.14	0.14
5	Not known	0.10	0.11
Teacher rated behaviour NEURO			
1	'Normal'	0.62	0.66
2	'Emotional disorder'	0.04	0.04
3	'Conduct disorder'	0.07	0.04
4	'Mixed behaviour'	0.01	0.01
5	Not known	0.26	0.25
Reading ability READ			
1	'Poor'	0.13	0.12
2	'Average/Good'	0.64	0.66
3	Not known	0.23	0.22
Variables collected at age 23			
Age left school AGELSCH			
1	Before age 17	0.69	0.70
2	Age 17 and after	0.31	0.30
Highest educational qualification QUALF			
1	Degree or above	0.12	0.10
2	A Level/nursing/teaching qualifications	0.33	0.21
3	O Level/craft qualifications	0.17	0.18
4	CSE/apprenticeship/foreign/other qualifications	0.17	0.24
5	None	0.22	0.27

Appendix B: Description of Explanatory Variables (Cont.)

Variable		Percentage distribution in population reporting at age 23 and 33 Men	Women
Variables collected at age 23 cont:			
Economic activity ECACT			
1	Employed	0.86	0.66
2	Unemployed (includes Government Schemes)	0.10	0.07
3	Inactive e.g. homemaker, carer, illness	0.01	0.25
4	Student	0.03	0.02
Occupational social class SOCLASS			
1	I	0.04	0.01
2	II	0.13	0.15
3	IIIn	0.14	0.41
4	IIIm	0.32	0.07
5	IV	0.12	0.15
6	V	0.04	0.01
7	Not known/applicable	0.22	0.20
Level of religious practice RELIG			
1	No religious affiliation	0.47	0.29
2	Weak (less than monthly attendance)	0.41	0.51
3	Strong (at least monthly attendance)	0.11	0.19
4	Not known	0.01	0.01
Variables collected at age 33			
Whether cohort member reported their parents as having permanently separated SEP			
0	No	0.87	0.85
1	Yes	0.13	0.14
2	Not known	0.01	0.01
Whether first spouse was formerly married PMARR			
0	No	0.87	0.85
1	Yes	0.06	0.10
2	Not known	0.06	0.06

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