Parental Divorce and Partnership Dissolution in Adulthood: Evidence from a British Cohort Study[1]

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[1]Short title: Parental Divorce and Partnership Dissolution

ABSTRACT

From a longitudinal survey of a British cohort born in 1958 this study finds that by age 33 off-spring whose parents divorce are more likely to have dissolved their first partnerships. This finding persists after taking into account age at first partnership, type of first partnership (marital, pre-marital cohabiting union and cohabiting union), and indicators of class background and childhood and adolescent school achievement and behaviour problems. Some of these factors are associated with partnership dissolution in their own right, but the association between parental divorce and second generation partnership dissolution is largely independent of them. Demographic factors, including type of and age at first partnership were important links between parental divorce and partnership dissolution. Moreover, the estimated effects of parental divorce were substantially reduced when the demographic variables were taken into account, suggesting that cohabitation and early partnership may be important pathways through which a parental divorce, or the unmeasured characteristics correlated with it, affect partnership dissolution.

INTRODUCTION

Amongst British children born since the 1950s divorce has replaced death as the main cause of family disruption and the rate of divorce has been increasing such that 1 in 4 children born during the 1970s had experienced the break up of their parents' marriage by the time they were aged 16 years (Kiernan and Hobcraft 1997). There is evidence that children who experienced parental divorce are in their turn more likely to experience the break-up of their own marriages (Bumpass and Sweet 1972, Pope and Mueller 1976, Kiernan 1986, McLanahan and Bumpass 1988). The mechanism behind this finding has not been unravelled and there is uncertainty as to whether there is a causal relationship between the divorces of parents and those of their children or whether it is an indirect effect mediated through other factors, such as lower educational attainment, or proneness to marry at young ages which in turn is related to divorce . In some studies, this association has been found to be largely mediated through age at first marriage (Bracher et al 1993, Bumpass et al 1991) in that children who experienced parental divorce are more likely to marry at a young age and youthful marriage is an important pre-cursor of divorce. One of the most consistent and robust findings in research on divorce is that youthful marriages are more likely to terminate than marriages contracted at older ages and the legacy of early marriage can persist up to high durations of marriage (Murphy 1985, Hoem 1991). However, with the rise of cohabitation that has occurred across many Western countries in recent decades, the full extent of partnership breakdown is no longer captured by the dissolution of marital unions. Moreover, with the growth of cohabitation a complex interplay between type and timing of first partnership and the probability of subsequent partnership dissolution has emerged, which needs to be taken into account when interpreting the relationship between parental divorce during childhood and partnership dissolution in adulthood.

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The partnership behaviour of children who experience divorce during childhood tends to differ in a number of ways from that of children without such an experience. Children with experience of divorce are more likely to cohabit and cohabit at a younger age than their contemporaries raised with both parents (Thornton 1991, Kiernan 1992, Cherlin et al 1995). However, in contrast to earlier research, these recent studies using information on younger generations of people have not found that children with divorced parents are any more likely to marry at younger ages. Additionally, there is ample evidence for a range of countries that cohabiting unions are more fragile than marital unions (for example, Hoem and Hoem 1992, Leridon 1989, Bumpass and Sweet 1989) and that couples who cohabit prior to marriage have a higher rate of divorce than those who marry directly (Haskey 1992, Bennett et al 1988, Klijzing 1992). In response to these recent developments this study, which uses information from a British cohort followed from birth to age 33 years (National Child Development Study), examines the association between the timing of first partnership and subsequent dissolution, alongside the effects of different partnership trajectories namely; marrying directly, marriage preceded by a period of cohabitation and cohabitations that did not convert into marriages, as well as the interaction between timing and type of first union. We also ascertain the extent to which the age at which children experience parental divorce affects their subsequent partnership behaviour.

METHOD

Sample

The data for this analysis come from the National Child Development Study (NCDS), a longitudinal study of children who were born in Great Britain during the first week of March 1958. Interviews were conducted with 17,414 mothers, who represented 98 per cent of all births in that week (Shepherd 1985). Follow-up interviews were conducted with parents and teachers at 7, 11, and 16. At ages 16,

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23, and 33, the birth cohort members themselves were interviewed and they are the subjects of our analyses. At age 33, retrospective life history information was obtained, including information on the formation and disruption of marital and cohabiting unions. The cohort members were also asked whether their parents had ever permanently separated or divorced and, if so, how old they had been when the dissolution occurred. Prior to the age 33 interview, parental separation had to be inferred from the relationship of the child to the mother and father figure in the household at the time of the interviews at ages 7, 11 and 16 years. Unfortunately, no information on remarriage was collected at the age 33 interview, consequently we are unable to examine the different family trajectories that children can follow on divorce such as length of time spent in lone-parent families and time spent in step-families which may have differential impacts on the lives of children (Kiernan 1992).

In this paper, we restrict our analyses to the 10,324 cohort members for whom information is available at ages 7 and 16, from whom union history information was obtained at 33, and who had entered into a first partnership.[1] We define a partnership as either a marital or a cohabiting union. By age 33, 91 per cent of the cohort members who were interviewed had entered into a first partnership. Sixty per cent of these partnerships began as marriages, and 40 per cent began as cohabitations. By age 33, similar proportions of men and women had entered their first partnership (88 and 93 per cent respectively) and severed their first partnership (29 and 32 per cent respectively). Cohort members who had experienced parental divorce were more likely to have a dissolved first partnership than those without such an experience. For example, 29 per cent of women whose parents had not divorced had experienced the break-up of their first partnership as compared with 44 per cent of those who experienced parental divorce during childhood (prior to age 17 years) and the analogous proportions for the men were 26 per cent and 44 per cent.

Measures

From the information collected on this cohort sample as they grew up we were able to examine a range of background characteristics some of which are not readily available in cross-sectional surveys and others that are difficult to collect retrospectively. The background information included in our analyses was: social group of the family at the time of the 7 year old interview; financial circumstances of the family, and measures of the child's educational performance and behaviour at the time of the 7 and 16 year old interviews.

At age 7, information from parents and teachers allowed us to construct, using confirmatory factor analysis, two latent-variable measures (see Cherlin **et al** 1995). The first was class background, a combination of father's occupation (manual versus non-manual), whether the father stayed on at school beyond the minimum school-leaving age, and whether the mother stayed in school past the minimum age. The second was school achievement, a combination of a score on a standardized reading achievement test, a score on a standardized mathematics test, and a score on a 5-item scale of teacher's assessments of "oral ability", "awareness of the world around", "reading", "creativity", and "number work" (alpha reliability .89).

In addition, at the age 7 interview, parents were asked to rate the children's behaviour problems using most of the items from the Rutter Home Behaviour Scale (Rutter et al. 1970). The scale was designed to identify two broad groupings of behaviour problems in children: externalizing disorders, in which the child exhibits under-controlled behaviour such as aggression or disobedience, and internalizing

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disorders, which the child exhibits over-controlled behaviour such as anxiety or depression. An 18-item summated scale had an alpha reliability of .71. A higher score indicates more behaviour problems.

At age 16, parents were again asked to rate behaviour problems using similar items from the Rutter Home Behaviour Scale; and school achievement information was again collected. A 22-item scale of behaviour problems was constructed that had an alpha reliability of .75. A school achievement latent variable with a reliability of .91 was constructed. In addition, there was sufficient economic information to determine at the age 7 and 16 interviews whether the cohort member's family had experienced financial hardship. A categorical measure was included which indicated whether the member's family was experiencing financial difficulties at neither time, age 7 only, age 16 only, or both times.

In the analysis that follows the school achievement, behaviour problems, and class background variables are entered as a set of three variables with four categories. In the case of school achievement and social class the reference category in the models was the lowest scoring group or class and the reference category for the behaviourial problems was those in the highest group. The reference category for the financial circumstances variable was no reported financial hardship at age 7 or age 16 years. In addition, a binary variable was included which has the value of 1 if data on the age 7 or age 16 variables was missing.

We also included two standard demographic indicators of the probability of union dissolution among the cohort members. The first is the subject's age at the time of entering into her or his first partnership. As we noted above a range of studies have shown that, in general, the earlier a person enters into a first partnership, the more likely is the eventual disruption of that partnership and there

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is some evidence that the effect is strongest for unions entered into during the teenage years. Consequently we included in our models the natural logarithm of age at first partnership. The logarithmic transformation is appropriate when the effects of a variable are stronger at lower values than at higher values which is the case with age at first partnership. Before taking the natural logarithm, we also subtracted 14 from age at first partnership (the earliest age at first partnership was 15). Our measure, then, is $\log_e (a - 14)$, where a is age at first partnership.

The second demographic indicator differentiated between three types of first unions namely: those which began as a marriage (60 per cent of first partnerships); those which began as cohabiting unions but subsequently converted into marriages (25 per cent of first partnerships); and cohabiting unions that had not converted into a marriage by the time of the interview (15 per cent). This subdivision reflects the finding that unions that begin with cohabitation have higher dissolution probabilities than do unions that begin as marriages and moreover allows us to examine whether different types of partnerships vary with respect to rates of dissolution. In the NCDS, within the set of first partnerships that began as cohabiting unions 72 per cent of those that had not converted into marriages and 23 per cent of those which had, had ended by age 33. The proportion of first partnerships that began as marriages that had terminated by age 33 was also 23 per cent. First partnerships that commenced with marriage are the reference category in our subsequent analyses. Table 1 shows the distributions of the variables used in the analyses.[2]

Table 1 about here

Statistical Model

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Multivariate analyses of the determinants of the duration of first partnerships were conducted using proportional hazard models estimated by the widely-used Cox partial-likelihood method (Cox 1972). Hazard models are appropriate when the outcome variable is the duration of time until an event (in this case, the dissolution of a marital or cohabiting union) occurs and when there is censoring, i.e., the event has not yet occurred for everyone by the time of the interview. In the NCDS, 30 per cent of the first partnerships had ended by age 33; consequently, the other 70 per cent were still at risk of dissolving at a later stage in their lives. The hazard models use two pieces of information to construct the outcome variable: (1) the duration of the partnership at the last time the subject was observed to still be in a first partnership, and (2) whether at this last observation the partnership had dissolved (which was true for 30 per cent of the cases) or had been intact when the study ended (which was true for 70 per cent).

The proportional hazard model is expressed as follows:

$$h(t) = e^{\alpha} e^{(\Sigma \beta x)},$$

where $h(t)$ is the instantaneous hazard rate (in this case, the hazard of dissolution) at duration t, α is a constant to be estimated, and $\Sigma \beta x$ ($= \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k$) is a vector of covariates and associated parameters to be estimated. In exponentiated form, $exp(\beta_k)$, the coefficients can be interpreted as increases (if greater than 1.0) or decreases (if less than 1.0) in the relative risk of partnership dissolution for a one-unit increase in variable x_k. For example, an exponentiated coefficient of 1.50 indicates that for every one-unit change in the associated variable, the risk of dissolution increases by 50 per cent. The proportional hazard model assumes the relative risks of dissolution associated with particular

covariates remain constant throughout the period under observation. Figure 1 which is discussed in the next section, shows that this assumption is plausible for the key covariate, age at parental divorce.

RESULTS

Figure 1 about here

Figure 1 shows Kaplan-Meier estimates (Kalbfleisch and Prentice 1980) of the survival probabilities (that is, the probabilities of still being intact) of first partnerships over time by age of the cohort member at the time of parental divorce. These non-parametric estimates do not control for any other variables. As can be seen, from the beginning of the unions through to the end of the study at age 33, the probability that a partnership is still intact is highest for those cohort members whose parents had never divorced. About three-fourths of these partnerships were intact at 33. The next-highest probability of being intact is for subjects whose parents divorced when the subject was 20 or older; about two-thirds of these partnerships were still intact at 33. The lowest probabilities of still being intact were for cohort members whose parents divorced before they were age 20. Among this latter group, the survival probabilities according to the age at dissolution were similar and the probabilities of still being intact at age 33 were all in the range 55 to 58 per cent.

The pattern to be seen in Figure 1 suggests that parental divorce is associated with a higher risk of first partnership dissolution amongst the NCDS cohort members. Parental divorces that occurred during adulthood (operationalized here as at age 20 or older) apparently have the least effect on partnership dissolution. Parental divorces that occurred during childhood or adolescence (under age 20) had a greater effect on partnership dissolution. This pattern might be expected, since parental divorce may

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have a greater effect on children's behaviour if it occurs when the children are still living with the parents rather than after the child reaches adulthood and leaves home. Moreover, many of the post-age-20 divorces took place after the cohort members' first unions began. Among the group that experienced divorce prior to age 20, further analyses suggested that amongst the periods depicted here that there is no particular one during which the effect of parental divorce is substantially higher or lower than at other periods. This result, which was confirmed with statistical tests in our multivariate models (see the discussion below of Models 1 and 2), suggests that the effects of divorce are of comparable magnitude throughout the childhood and adolescent years. It would not support a notion that there is a particular age-range during which children are particularly vulnerable (or resistant) to the effects of parental divorce, at least with respect to their own subsequent partnership dissolution.

We next present semi-parametric hazard models that allow for statistical tests of significance and which can control for the effects of multiple variables. The results for women and men are presented in Tables 2 and 3, respectively. Model 1 in each table includes as right-hand-side variables only the set of dummy variables indicating age at parental divorce. (The reference category is no parental divorce.) As can be seen, parental divorce in any age group, including age 20 and over, is associated with a significantly higher risk of partnership dissolution, compared to no parental divorce. The estimated hazard ratio (e^{β}) parameters imply that a parental divorce raises the risk of partnership dissolution by 40 to 90 per cent.

Tables 2 and 3 about here

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Nevertheless, the coefficients for parental divorce after age 20 are lower than for divorce in any other age group for both women and men. In Model 2, we constrain the effects of divorce to be identical for all ages from 0 to 19. Likelihood ratio tests indicate that this simpler model fits the data nearly as well as the unconstrained Model 1 (for women $\chi^2(3)$ = .04, p =0.99 and for men, $\chi^2(3)$ = 1.42, p = 0.70). Therefore we accept the hypothesis that the effects of parental divorce on children's subsequent partnership dissolution are similar across the age groups from 0 to 19 years.

In Model 3, we next enter the set of childhood (age 7) and adolescent (age 16) measures of behaviourial problems, school achievement, social class, and financial status. If these variables reduce the apparent effects of parental divorce, then we might conclude that part of the effect of parental divorce is to alter school achievement, behaviour problems, or family socioeconomic status. Alternatively, it could be that both parental divorce and the childhood characteristics are influenced by unmeasured risk factors that also lead to greater partnership dissolution in adulthood. The results for Model 3 show that although some of the childhood variables are significantly associated with a greater risk of partnership dissolution, the estimated coefficients for parental divorce remain significant and do not decline much in magnitude. A likelihood-ratio test comparing Models 2 and 3 showed that in both Table 2 and Table 3, the set of variables entered in Model 3 added significantly to the fit. For women $\chi^2(20)$ = 58.6, p<.001 and for men, $\chi^2(20)$ = 37.4, p<.02. Men and women with lower behaviour problem scores at age 16 have reduced risks of partnership dissolution. Also, men and women with higher school achievement scores at age 7 have enhanced risks of partnership dissolution; additional analyses (not shown) showed that these men and women were more likely to have a dissolved union if it started as a cohabitation rather than as a marriage. This latter finding is similar to that reported by Ermisch and Francesconi (1996) for the 1950-1962 birth cohorts of men and women included in the British

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Household Panel Study. However, for the purposes of this study we note that these characteristics do not account for much of the seeming effects of parental divorce.

In Model 4, we temporarily exclude the childhood variables and add in the two demographic variables: age at entry into first partnership and type of first partnership namely whether the partnership was initiated by marriage or cohabitation and within the cohabiting set whether it converted into a marriage or not. Both factors are highly significant predictors of partnership dissolution. We note that the risk of dissolution is substantially higher amongst cohabiting unions that did not convert to marriages and that the rate of dissolution amongst marital unions entered directly or preceded by a period of cohabitation are among the women not significantly different from one another and are marginally so among the men. However, the magnitudes of the coefficients for parental divorce are reduced much more than was the case when childhood characteristics were introduced. For both men and women, parental divorce after age 20 is no longer statistically significant, indicating that its seeming effect was due to its association with early partnerships and cohabiting unions. Still, parental divorce before age 20 remains a significant predictor of adult children's partnership dissolution.

In Model 5, we include both the childhood and adolescent set of variables and the demographic set of variables. Although both sets of variables retain their significant direct effects on partnership dissolution, the coefficients for the effects of parental divorce are very similar to Model 4, in which only the demographic variables had been added. Thus, age at first partnership and type of first partnership account for more of the influence of parental divorce on partnership dissolution than do the direct effects of the childhood and adolescent variables. The childhood and adolescent variables could have

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additional indirect effects that work through modifying age at first partnership and type of first partnership.

Both the demographic variables also have substantial main effects themselves. For men, beginning a first partnership at age 24 rather than age 20 is associated with an 93 per cent reduction in the risk of dissolution; for women the same postponement is associated with an 92 per cent reduction.[3] For men, beginning a first union by marrying directly is associated with a reduction of 90 per cent in the risk of dissolution compared to beginning the first union by cohabiting and not subsequently marrying that partner; and for women the corresponding reduction is 87 per cent. Reading directly from the estimated hazard ratios in Model 5, we find that the estimated hazard ratio for women for cohabiting and not subsequently marrying (compared to marrying directly) is 7.74. The reciprocal $(1 \div 7.74 = .13)$ implies an $[(1.00 - .13) \times 100 =]$ 87 percent reduction in risk for marrying directly (compared to cohabiting and not subsequently marrying).

The magnitudes of the effects of the childhood and adolescent variables in Model 5 are generally smaller than the effects of the demographic variables. Men who were in the highest quartile of school achievement at age 7 have a 22 per cent higher risk of dissolution than do those in the lowest quartile and women in the uppermost social group at age 7 have a 26 per cent higher risk of dissolution than those in the lowest social group. The child and adolescent variables were of course measured many years before age at first partnership and type of partnership were ascertained. As mentioned above, it may be that some of the effects of childhood experiences work indirectly by influencing the subsequent path of an individual's life.

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After the childhood, adolescent, and demographic variables are taken into account in Model 5, a parental divorce before age 20 is associated with a 41 per cent increase in the risk of first partnership dissolution for men and a 16 per cent increase for women. How large are these differences in absolute terms? Adjusted estimates derived from our model show that for men at age 33, 49 per cent of those whose parents divorced before age 20 are expected still to be in their first partnership, compared to 63 per cent of those whose parents did not divorce before age 20. The analogous estimates for women were 57 per cent and 63 per cent respectively. We also estimated We also investigated the possibility of interaction effects among parental divorce, age at first partnership, and type of first partnership (not shown). The set of interactions made a significant improvement in the fit over Model 5 for men for men, $\chi^2(3) = 19.8$, p<0.0001 but not for women, $\chi^2(3) = 5.00$, p=0.17. None of the interactions were significant for the women. Among the men the interaction of parental divorce and type of first partnership was significant. This suggests that, beyond the greater risk that parental divorce and cohabiting first partnerships that did not convert into marriages each carry separately, having both a parental divorce and this type of first partnership intensifies the risk. Also among the men, having both an early partnership and a cohabiting partnership that did not convert into a marriage also carried an additional risk.

DISCUSSION

We find evidence that the 33-year-old members of a British cohort born in 1958 are more likely to have dissolved their first partnerships if their parents had divorced before the cohort members were aged 20. This finding persists even when age at first partnership, type of first partnership (marital, pre-marital cohabiting union and cohabiting union), and indicators of class background and childhood and adolescent school achievement and behaviour problems are taken into account. Our best estimate is

that the direct effect of parental divorce before age 20 increased the risk of partnership disruption by 16 per cent for women and 41 per cent for men. We do not have an explanation as to why the effects of parental divorce are stronger for men than women. However, there is some evidence that points to boys having a greater vulnerability to parental divorce than girls. Hetherington, 1988 and 1989 shows that only a minority of children continue to have psychological problems after the initial crisis period following separation, but those who do are more likely to be boys. Additionally, studies of British and American children have shown that amongst younger children the effects of parental divorce on subsequent cognitive and behaviourial outcomes tend to be larger for boys than girls (Cherlin et al 1991 and Morrison and Cherlin, 1995). Our estimates also confirm previous findings that off-spring whose parents divorce are more likely to have their marriages end in divorce. We extend these findings to all first partnerships, whether marital or cohabiting.

What is more, few previous studies have had the extensive childhood and adolescent information that the NCDS contains. We were able to examine whether previous findings on the inter-generational transmission of marital instability were merely due to the correlation between parental divorce and unmeasured family background characteristics. We find that the association is not due simply to class background, financial circumstances, school achievement, and behaviour problems in childhood and adolescence. Some of these factors are predictive of partnership dissolution in their own right, but the association between parental divorce and partnership dissolution is largely independent of them. Of course, there could be other unmeasured factors that account for our findings, such as other personality characteristics that children obtain from their parents through either genetic inheritance or childhood socialization, economic difficulties that are too subtle to be reflected in our gross measures of financial

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well-being and parents' education and occupation, or greater acceptance of union dissolution because of experiencing the parents' divorce.

Previous demographic research led us to expect that type of first partnership and age at first partnership would be key links between parental divorce and partnership dissolution. We did find strong associations between these demographic variables and partnership dissolution. Among men, experiencing both early partnership and cohabitation carried an additional, multiplicative risk. Moreover, the estimated effects of parental divorce were substantially reduced when the demographic variables were taken into account, suggesting that cohabitation and early partnership may be important pathways through which a parental divorce, or the unmeasured characteristics correlated with it, affect partnership dissolution. As to whether these pathways are truly causal and why they exist, we cannot be sure. We know from other studies of the NCDS that parental divorce, and particularly parental divorce followed by remarriage, was associated with early home-leaving (Kiernan 1992). Early home-leaving is likely to be associated with early first partnerships, and possibly with cohabiting first partnerships as well. In addition, young adults whose divorced parents were dating or living with new partners outside of marriage may themselves be more likely to cohabit outside of marriage.

Nevertheless, the association between parental divorce and first partnership dissolution remains statistically significant, if reduced, after all of these factors are taken into account. Consequently, the complete story of the ways in which these events are linked is still not fully known and awaits further investigation.

1. Previous articles that followed the cohort through age 23 attempted to adjust for the possible sample-selection bias inherent in retaining only the subset of children who were interviewed at age 23. The use of a standard two-step correction procedure (Heckman, 1979; Maddala, 1983) did not alter the results (Cherlin et al., 1995). We have not included a sample-selection correction in the analyses we report in this article.

2. Cases with missing information on parental divorce or first partnership were excluded from the analyses. When the values of other variables were missing, we substituted the gender-specific mean values. We also included in our Cox regressions two dummy variable indicators of missing data. The first ("Information missing on financial hardship at 7 or 16") was equal to 1 if any values were missing for the financial hardship variables for that observation; as Table 1 shows, about 35 percent of the observations had missing financial hardship information. The second ("Information missing on any other variables") was equal to 1 if values were missing for any other variables for that observation; about 17 percent of the observations had missing values on at least one other variable.

3. Because of the complex construction of the age at first marriage variable, $\log_e$ (age - 14), these figures are more easily calculated from the β coefficients themselves than from the exponentiated, $exp(\beta)$ coefficients in Tables 2 and 3. For women, the estimated coefficient for $\log_e$ (age - 14) in Model 5 is -4.85. For men it is -5.34. Therefore for an individual woman:

    $[h(t)$ for age = 24] / $[h(t)$ for age = 20]
    = $[exp(-4.85 \cdot \log_e(24-14))]$ / $[exp(-4.85 \cdot \log_e(20-14))]$
    = .084,

which is a reduction of [(1.00 - .084) x 100 =] 91.6 percent. For men, the corresponding calculation, substituting -5.34 for -4.78, yields an 93.3 percent reduction.

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Figure 1. Estimated survival probabilities of first partnerships by age at parental divorce for members of a British birth cohort.

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Source: National Child Development Study

Table 1. Distributions of variables used in the proportional hazard analyses, at age 33, of first partnerships amongst members of a British birth cohort.

	Women	Men
No Parental divorce	.843	.852
Parental divorce at ages 0-5	.029	.029
Parental divorce at ages 6-10	.029	.023
Parental divorce at ages 11-15	.038	.039
Parental divorce at ages 16-19	.026	.024
Parental divorce at ages 0-19	.122	.114
Parental divorce at ages 20-33	.034	.035
Class background -- 1st quartile	.264	.268
Class background -- 2nd quartile	.232	.217
Class background -- 3rd quartile	.226	.263
Class background -- 4th quartile	.276	.250
Age 7 school achievement -- 1st quartile	.281	.216
Age 7 school achievement -- 2nd quartile	.319	.148
Age 7 school achievement -- 3rd quartile	.175	.275
Age 7 school achievement -- 4th quartile	.225	.360
Age 7 behaviour problems -- 1st quartile	.310	.290
Age 7 behaviour problems -- 2nd quartile	.230	.293
Age 7 behaviour problems -- 3rd quartile	.234	.158
Age 7 behaviour problems -- 4th quartile	.226	.258
Age 16 school achievement -- 1st quartile	.297	.220
Age 16 school achievement -- 2nd quartile	.183	.174
Age 16 school achievement -- 3rd quartile	.229	.265
Age 16 school achievement -- 4th quartile	.291	.341
Age 16 behaviour problems -- 1st quartile	.157	.468
Age 16 behaviour problems -- 2nd quartile	.297	.249
Age 16 behaviour problems -- 3rd quartile	.320	.107
Age 16 behaviour problems -- 4th quartile	.225	.176
No reported financial hardship at ages 7 and 16	.865	.873
Financial hardship at age 7	.043	.037
Financial hardship at age 16	.070	.069
Financial hardship at both ages 7 and 16	.021	.021
Information missing on financial hardship at 7 or 16	.344	.359

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Information missing on any other variables	.171	.172
Logarithm of (age at first partnership - 14)	5.50	5.59
First partnership began as a marriage	.636	.564
First partnership begun as cohabitation and converted to marriage	.233	.265
First partnership begun as cohabitation and not converted to marriage by age 33	.130	.171

Source: National Child Development Study

Table 2. Estimated hazard ratios (e^β) from a Cox proportional hazard model of partnership dissolution for women.

	Model 1	Model 2	Model 3	Model 4	Model 5
Parental divorce at ages 0-5[a]	1.62**				
Parental divorce at ages 6-10	1.79**				
Parental divorce at ages 11-15	1.51**				
Parental divorce at ages 16-19	1.77**				
Parental divorce at ages 0-19[a]	--	1.66**	1.48**	1.17*	1.16*
Parental divorce at ages 20-33	1.44**	1.44**	1.38**	1.19	1.18
Class background -- 2nd quartile[b]			1.00		1.08
Class background -- 3rd quartile			1.03		1.13
Class background -- 4th quartile			1.10		1.26*
Age 7 school achievement -- 2nd quartile[c]			1.13		1.08
Age 7 school achievement -- 3rd quartile			1.16		1.07
Age 7 school achievement -- 4th quartile			1.25*		1.13
Age 7 behaviour problems -- 1st quartile[d]			.909		.947
Age 7 behaviour problems -- 2nd quartile			.900		.945
Age 7 behaviour problems -- 3rd quartile			.907		.975
Age 16 school achievement -- 2nd quartile[c]			1.13		1.09
Age 16 school achievement -- 3rd quartile			.945		1.02
Age 16 school achievement -- 4th quartile			.971		1.03
Age 16 behaviour problems -- 1st quartile[d]			.583**		.863
Age 16 behaviour problems -- 2nd quartile			.780**		1.11
Age 16 behaviour problems -- 3rd quartile			.852*		1.07
Financial hardship at age 7[e]			1.01		1.03
Financial hardship at age 16			1.07		.940
Financial hardship at both ages 7 and 16			1.16		1.24
Information missing on financial hardship at 7 or 16			1.06		1.03
Information missing on other variables			1.08		.954
Logarithm of age at first partnership				.00907**	.00786**
First partnership begun as cohabitation and converted to marriage[f]				.949	.941
First partnership begun as cohabitation and not converted to marriage by age 33				7.77**	7.74**
Log-likelihood	-14031.0	-14031.7	-14002.4	-13310.1	-13296.4
n	5304	5304	5304	5302	5302

a -- reference category is no parental divorce
b -- reference category is lowest quartile of class background
c -- reference category is lowest quartile of school achievement
d -- reference category is highest quartile of behaviour problems
e -- reference category is no financial hardship at age 7 or age 16
f -- reference category is first partnership begun directly as marriage
+ = significant at the .10 level   * = significant at the .05 level   ** = significant at the .01 level

Source: National Child Development Study

Table 3. Estimated hazard ratios (e^β) from a Cox proportional hazard model of partnership dissolution for men.

	Model 1	Model 2	Model 3	Model 4	Model 5
Parental divorce at ages 0-5[a]	1.93**				
Parental divorce at ages 6-10	1.87**				
Parental divorce at ages 11-15	1.89**				
Parental divorce at ages 16-19	1.86**				
Parental divorce at ages 0-19[a]		1.89**	1.77**	1.35**	1.41**
Parental divorce at ages 20-33	1.45**	1.45**	1.41**	1.01	.992
Class background -- 2nd quartile[b]			1.07		1.09
Class background -- 3rd quartile			1.02		1.00
Class background -- 4th quartile			1.08		1.12
Age 7 school achievement -- 2nd quartile[c]			1.08		1.10
Age 7 school achievement -- 3rd quartile			1.11*		1.16
Age 7 school achievement -- 4th quartile			1.21*		1.22*
Age 7 behaviour problems -- 1st quartile[d]			.974		1.06
Age 7 behaviour problems -- 2nd quartile			.976		.986
Age 7 behaviour problems -- 3rd quartile			1.11		1.11
Age 16 school achievement -- 2nd quartile[c]			.932		.991
Age 16 school achievement -- 3rd quartile			1.01		1.12
Age 16 school achievement -- 4th quartile			.863		.968
Age 16 behaviour problems -- 1st quartile[d]			.767**		.993
Age 16 behaviour problems -- 2nd quartile			.705**		.868
Age 16 behaviour problems -- 3rd quartile			.827*		.969
Financial hardship at age 7[e]			1.28		.937
Financial hardship at age 16			1.12		1.27*
Financial hardship at both ages 7 and 16			1.18		.693+
Information missing on financial hardship at 7 or 16			1.16*		1.08
Information missing on other variables			.963		.911
Logarithm of age at first partnership				.00592**	.00479**
First partnership begun as cohabitation and converted to marriage[f]				1.14+	1.14+
First partnership begun as cohabitation and not converted to marriage by age 33				9.88**	10.2**
Log-likelihood	-11454.6	-11454.6	-11435.9	-10690.3	-10672.2
n	4863	4863	4863	4860	4860

a -- reference category is no parental divorce
b -- reference category is lowest quartile of class background
c -- reference category is lowest quartile of school achievement
d -- reference category is highest quartile of behaviour problems
e -- reference category is no financial hardship at age 7 or age 16
f -- reference category is first partnership begun directly as marriage
u+ = significant at the .10 level.   * = significant at the .05 level   ** = significant at the .01 level

Source: National Child Development Study

Figure 1. Kaplan-Meier estimates of the probabilities of still being intact for first partnerships over time, by age at parental divorce, National Child Development Survey, 1973 to 1991.

Age at parental divorce:

——No divorce   · - · Divorce age 0-19   —— Divorce age 20-33