

TAK WING CHAN AND BRENDAN HALPIN

## **Union Dissolution in the United Kingdom**

*ABSTRACT: This article uses recent panel data to explore the dynamics of divorce in the United Kingdom. The findings are consistent with the independence hypothesis, but reveal little impact of gender-role attitudes or domestic division of labor. The article also finds a robust effect of children in raising the risk of divorce.*

### **Trends of Family Formation and Dissolution**

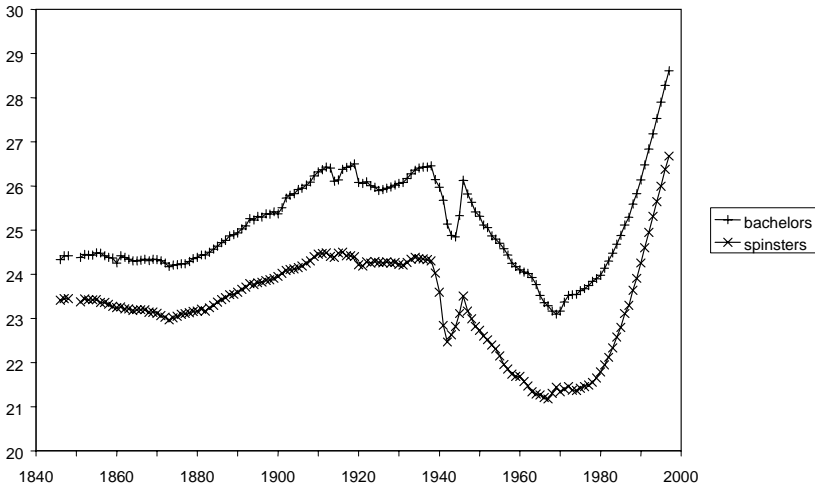
Broadly speaking, the recent trends of family formation and dissolution in Britain are in line with those observed in the United States and in Northern and Western Europe. Britons are postponing marriage, cohabitation before marriage has become the majority practice, and the divorce rate has risen dramatically. Let us consider these trends briefly in turn. As can be seen from Figure 1, after World War II, the trend of family formation was, at first, one toward ever more youthful marriage. This trend has been reversed. In 1970 the median age of first marriage for women was 21.3 years (23.2 for men). This has risen to 26.7 years in 1997 (28.6 for men).

Parallel to the postponement of marriage there has been a rapid rise in cohabitation. Cohabitation is not a new phenomenon. But “before the 1970s, it was largely statistically insignificant and probably socially invisible outside the local community” (Kiernan and Lelièvre 1995: 129).<sup>1</sup> In the past, the majority of cohabiters were previously married. Recent estimates, based either on official statistics or academic surveys, suggest that about 70 percent of the

---

Tak Wing Chan is affiliated with the Department of Sociology at the University of Oxford. Brendan Halpin is affiliated with the Department of Government and Society at the University of Limerick.

Figure 1. Median Age of First Marriage in England and Wales



first marriages formed in the early 1990s were preceded by a period of consensual union between the partners (Haskey 1995; Ermisch and Francesconi 2000). However, consensual unions tend not to last for very long. Their median duration is about two years.

Figure 2 shows that the divorce rate has been rising sharply since the 1960s, though the increase seems to have slowed down in recent years. Incidence of divorce in England and Wales is now the highest in Europe, and Haskey (1996) estimates that, if the divorce rate were to stay at the mid-1990s level, two in five marriages would eventually end in divorce. Over this period of increased marital instability, there have been two main pieces of divorce legislation, both liberal in spirit. The Divorce Reform Act of 1969, which went into force in 1971, introduced irremediable breakdown of marriage as a ground for divorce. The Matrimonial and Family Proceedings Act of 1984 reduced the minimum period after marriage before a petition of divorce can be filed from three years to one year.

### *Women in the Educational System and the Labor Market*

Over the period in question, the gender gap in educational attainment has almost disappeared (Chan and Halpin 2000: table 1). In fact, since 1993, the educational participation rate of young women (aged sixteen to eighteen) has caught up to about 75 percent of that of young men (UK ONS 2000, table

Figure 2. **Divorce Rate in England and Wales** (persons divorcing per 1,000 married population)

3.10).<sup>2</sup> In 1997–98, there were more women than men enrolled in further and higher education (UK ONS 2000, table 3.12).

The closing of the gender gap in educational attainment is mirrored by a smaller change in the gender wage gap. Using data from the UK Family Expenditure Survey, Davis and Joshi (1998) estimate that women's hourly wage rate was 59.6 percent that of men in 1968. As a result of equal pay legislation and other social changes, this narrowed to 70.1 percent in 1977. Since then, the gender wage gap has widened again and then stabilized around the 67 percent level.

There are many more women who are economically active than before. The female labor-force participation rate was 37.5 percent in 1961. It rose to 53.8 percent by 1998 (Gallie 2000: 292). This increase is particularly remarkable in two respects. First, it is most striking among married women, 53.1 percent of whom were economically active in 1991, compared to only 29.4 percent in 1961. Second, the increase is driven mainly by the growth of part-time jobs. The proportion of female employees working part-time rose from 34 percent in 1971 to 46 percent in 1998. In fact, between 1971 and 1997, the absolute number of women holding full-time jobs declined (Gallie 2000: 296).

### ***Gender Roles and the Domestic Division of Labor***

Over the same period, there are other changes in gender relations that may be relevant to family formation and dissolution. In a review of surveys of social

attitudes dating from the early 1980s, Scott, Alwin, and Braun (1996) show that, for both men and women, support for female labor-force participation has remained consistently high, and “pro-feminist” ideology has gained wider acceptance. They also show significant cohort differences in gender role attitudes, with younger birth cohorts being much more liberal than older ones. Furthermore, since they estimate that the bulk of the overall change in gender role attitudes is due to cohort replacement, they predict that the pace of change will be slow.

In terms of the domestic division of labor, most researchers agree that, despite increased labor-force participation among women, there has been little change in the relative performance by men and women of domestic tasks (e.g., Warde and Hetherington 1993). This means that working wives now have to take up a “second shift” (Hochschild 1989). However, many of these claims are based on small-scale studies that are often not systematically comparable with one other. Using three British time-use diary datasets that cover the period 1975–97, Sullivan (2000) shows that, notwithstanding continuing gender inequality in housework, there has been a significant increase in men’s contributions. In other words, there is some evidence that the gender gap in this area is also narrowing, especially in couples in which both the husband and wife are employed full-time.

### **Independence and Marital Instability**

As in the other articles in the issues of the *International Journal of Sociology* on this topic, the main objective here is to test the independence hypothesis of Becker, Landes, and Michael (1977). Becker et al. argue that couples would stay married if their joint utility from marriage exceeded the sum of their utilities when separated. Thus, the likelihood of divorce is partly a function of the expected gain from marriage as compared to being single—the greater the gain, the smaller the probability of divorce.

Gain from marriage in turn depends on a host of other factors. In particular, the division of labor between the partners with regard to market and nonmarket activities (i.e., paid work and homemaking) will raise the expected gain, because it allows trading between spouses with comparative productivity advantages in different domains. One implication of this argument is that because women with high wage rates have relatively less to gain from marriage, they should have a higher divorce rate.

As we have seen, in part due to the closing of the gender gap in educational attainment and in part due to changes in the law, women’s wage rates have been rising relative to men’s. This argument—often referred to as the independence hypothesis—provides a plausible explanation of the rise in marital in-

stability. Furthermore, as Becker et al. point out, since couples know that they now face a considerable risk of divorce, they become reluctant to invest in marriage-specific capital—capital that will lose much of its value in the event of divorce. Examples of marriage-specific capital include the couple's own children, and work performed exclusively in the nonmarket sector. In other words, the rise in women's labor-force participation and the decline in fertility are at once causes and effects of increased marital instability.

The argument of Becker et al. may also explain other observed regularities related to divorce. For example, they point out that the search for an optimal marriage partner is costly, and people with high search costs tend to marry early. That is, they have an incentive to accept a less-than-optimal match in order to economize on search costs. It follows that the expected gain from marriage for people who marry young tends to be lower. Accordingly, they should have higher divorce risks.

While we shall test several implications of the theory of Becker et al., the focus of this article is the independence hypothesis, mainly because its empirical status is still contentious. In a recent review, Oppenheimer (1997) suggests that the evidence for the independence hypothesis is mixed: positive evidence comes mainly from studies that use aggregate-level data, while those that use individual-level data have largely reported contradictory findings.

It should be noted that many criticisms of the independence hypothesis are themselves articulated within some sort of economic calculus. For example, one of Oppenheimer's arguments is that given the job insecurity and other inherent uncertainty faced by couples in small nuclear families, it would be unwise for them to adopt an extreme form of division of labor between paid work and homemaking. If, say, the only breadwinner (usually a male) loses his job, then the family will find itself in severe difficulty.

Some researchers (e.g., Mason and Jensen 1995) have gone further and argued that individual choice about family formation and dissolution cannot be accounted for fully by economic considerations alone, and that measures of values and attitudes should be included in the analyses. This is because the terms in which the net benefits of marriage are evaluated may well differ over time or across societies. For example, while marriage may be valued for its financial significance to the individuals in some societies, companionship has become much more important in others.<sup>3</sup>

Because we use panel data in this article, we can incorporate into our analysis relatively detailed information on the gender role attitudes of both partners as well as a measure of the domestic division of labor (see the following section). Naturally, we expect women with more traditional gender role attitudes to have lower divorce rates. We will also test the hypothesis that it is not attitude

per se, but difference between the partners' attitudes that affects divorce risk.

It is not clear that the housework arrangement would, by itself, affect the divorce risk. Following the argument of Becker et al., we expect couples to choose whatever degree of specialization between paid work and homemaking, and, related to this, whatever housework arrangement, gives them the highest gain from marriage. Some housework arrangements will involve relatively equal contribution from husband and wife, while others will be more traditional. However, one might expect "independent" women to be unhappy, and thus to have higher divorce rates, if they also have to shoulder a heavy housework load. In other words, we shall test for an interaction effect between women's independence and the domestic division of labor.

This postulated interaction effect can be understood as follows. The argument of Becker et al. is actually gender-neutral. It suggests that specialization between the partners will increase the expected gain from marriage, and, hence, promote marital stability. But it does not matter whether it is the man or the woman who specializes in paid work (or homemaking). That is, marriages with a female breadwinner and a househusband would be just as stable as those in the traditional male breadwinner and housewife mold. We may then take couples in which an "independent" wife burdened with a heavy housework load as cases that lack specialization. To the extent that this is true, expected gain from marriage would be low, and we can expect high divorce risk. This represents a further, perhaps more stringent test, of the independence hypothesis.

### Data, Variables, and Models

The data we use come from the British Household Panel Study (BHPS). The BHPS is an annual panel that began in 1991. Its sample, which is representative of the British population, covers 10,264 respondents from 5,511 households in 1991. From the first eight waves of the BHPS (i.e., 1991-98), we have constructed a dataset with up to seven wave-on-wave transitions for each respondent. This allows us to track their marital status at discrete yearly intervals. We focus on women who were in their first marriage. They remain in the risk set until this marriage is dissolved (divorce or separation) or censored. Our strategy is to use covariates at time  $t - 1$  to predict their marital status at  $t$ , using the discrete-time logistic regression model:

$$\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x_1 + \dots + \beta_k x_k + \frac{b \sqrt{b^2 + 4ac}}{2a}$$

where  $p$  is the probability of divorce at  $t$  given that the respondent was married at  $t - 1$ ,  $X_s$  are the covariates, and  $\beta_s$  are the parameters to be estimated.

Because first marriages are likely to be different from subsequent ones, we restrict our analyses to the former. Our analyses cover all first marriages observed during the panel period, irrespective of when they began. We have information about the starting date of all marriages. But many of the key covariates we use are available for the panel period only. In effect, we are dealing with a sample of survivors, which may introduce bias into our estimates.<sup>4</sup>

### *Covariates*

Our covariates come from wave  $t - 1$ , and thus default to being time-varying, though some, such as age at marriage, are naturally constant. Some covariates are not available for every wave, for example, gender role attitudes and reported domestic division of labor. These are treated as if they remain unchanged, until the next observation. That is, we copy forward from the last available observation. This also applies to missing data on some other variables, for example, highest educational qualifications. Our covariates can be categorized roughly into four groups: (1) sociodemographic variables, such as age, educational qualifications, number of children, and household income; (2) measures of women's independence; (3) gender role attitude and domestic division of labor; and (4) match between spouses.

Most of our covariates are fairly standard variables, and hence require little elaboration. But we shall briefly explain how we have constructed several derived variables. First, in relation to domestic division of labor, we rely on a set of four questions (asked in Wave 1 and Waves 4–8 of the BHPS): “Could you please say who mostly does these household jobs here. Is it mostly yourself, or mostly your spouse/partner, or is the work shared equally? (1) grocery shopping, (2) cooking, (3) cleaning/vacuuming, and (4) washing and ironing.” The variable “task” refers to how many times a respondent said she mostly did the task. In other words, this variable ranges from 0 to 4, with higher values denoting that the woman was shouldering a greater burden of domestic work.

To measure the respondent's and her spouse's gender role attitudes, we use a set of six attitudinal questions (listed in Appendix A). The variable “attitude” refers to how many times the respondent (or her spouse) said that she (he) agreed or strongly agreed with the traditional view expressed in these items. This variable ranges from 0 to 6, and higher values denote a more traditional gender role attitude.

We use three variables to test the independence hypothesis. The first test is based on a comparison of the spouse's educational qualifications, measured according to a fourfold classification scheme (see Appendix B). Becker et al. point out that because highly qualified women tend to marry highly qualified men, the gain from such marriages are inclined to be high. But the stabilizing

effect associated with such gains may be offset by the high wage rate that highly qualified women command in the labor market. Thus, the authors explicitly state that the effect of education on divorce is ambiguous. However, it should be clear that divorce risk should be higher for hypogamous marriages, that is, marriages in which the woman is better qualified than the man, as the independence effect dominates in such cases. This effect should be strongest at the extreme—where women with degrees are married to unskilled men. But since such cases account for only 0.26 percent of the person-years in the sample, we have constructed a dummy variable for marriages between women with A-level or above qualifications and men with O-level or below qualifications.

Our second test of the independence hypothesis is based on the respondent's and her spouse's labor supply—the number of hours they expected to work in a normal week.<sup>5</sup> We construct the variable “difference in hours worked” by subtracting the spouse's reply from the respondent's. Thus a high value denotes a greater degree of relative labor supply, and so a greater degree of independence.

Third, we have followed Sørensen and McLanahan (1987) and constructed a variable called “pay comparison,” which is calculated on the basis of the respondent's and her spouse's usual gross monthly wage, as follows:<sup>6</sup>

$$\text{pay comparison} = \frac{\text{wife's pay} - \text{husband's pay}}{\text{wife's pay} + \text{husband's pay}}$$

This variable ranges from  $-1$  (in cases where all income comes from the spouse, thus denoting a low degree of independence) to  $1$  (when the opposite is true, denoting a high degree of independence).

Finally, the variable “household income” refers to total annual income from all household members, adjusted by household size and housing cost. Basic descriptive statistics can be found in Table 1.

## Results

We report the results of our analysis in Table 2. Let us first consider column 1 of that table. The first variable is a dummy for marriages that began before 1991 (these are cases for which we have incomplete information), and we use this as a control variable. Not surprisingly, the estimate is negative and significant—marriages that began before 1991 were more stable than others. This is partly because such marriages are a sample of survivors, because only those marriages that survived until at least 1991 have a chance of appearing in our sample. But it is possible that this covariate captures some of the nonlinear period effect as well (see the variable “year of marriage”).

One would expect the risk of divorce to be relatively high in the first few years of marriage, as some newlyweds discover that they are not really com-

Table 1

**Descriptive Statistics**

Variable name	Range	Mean	s.d
Duration	1–64	24.67	14.28
Duration-squared <sup>a</sup>	0.01–40.96	8.12	7.96
Year of marriage	30–97	70.11	14.23
Age at marriage	16–60	23.09	4.21
Household income	0.45–3.89	1.33	0.37
Difference in hours worked	–99–99	–2.03	33.18
Pay comparison	–1–1	–0.18	0.61
Attitude	0–6	1.76	1.63
Difference in attitude <sup>b</sup>	–6–6	–0.34	1.96
Task	0–4	2.87	1.17
			proportion (%)
None <sup>c</sup>			58.1
One child			15.0
Two+ children			26.8
Wife: A-level or above, husband: O-level or below			11.3
Others <sup>c</sup>			88.7
Husband at least three years younger than wife			5.9
Husband from two years younger to four years older <sup>c</sup>			73.0
Husband five to nine years older than wife			17.3
Husband at least ten years older than wife			3.9
Husband better qualified than wife			37.0
Same qualification <sup>c</sup>			41.0
Husband less qualified than wife			22.0

<sup>a</sup>duration × duration / 100.

<sup>b</sup>wife's attitude score – husband's attitude score.

<sup>c</sup>reference category.

patible with each other, and then for the divorce rate to decline with duration of marriage, as marriage-specific capital accumulates. This is borne out by the positive linear term and the negative quadratic term of marriage duration in our model. We also see evidence of substantially higher divorce risks for marriages formed in recent years. Other things being equal, the odds of divorce for a marriage formed in 1995 is nine times higher than for one formed in 1975 ( $e^{0.11 \times (95-75)}$ ).

In line with the argument of Becker et al., women who marry late have a

Table 2

**Transitions to Divorce: Parameter Estimates**

	(1)	(2)	(3)
Constant	-0.22 (4.75)	0.42 (4.72)	0.91 (4.89)
Pre-1991	-0.85* (0.38)	-0.87* (0.38)	-0.87* (0.39)
Duration	0.31** (0.06)	0.30** (0.06)	0.27** (0.06)
Duration-squared	-0.63** (0.11)	-0.62** (0.10)	-0.57** (0.11)
Year of marriage	0.11* (0.05)	0.10* (0.05)	0.10 † (0.05)
Age at marriage	-0.18** (0.03)	-0.18** (0.03)	-0.19** (0.03)
Household income	-9.93** (0.48)	-9.88** (0.47)	-9.99** (0.50)
One child	1.67** (0.32)	1.72** (0.32)	1.86** (0.34)
Two+ children	3.80** (0.32)	3.94** (0.32)	4.07** (0.33)
Degree	-0.55 (0.44)	-0.57 (0.43)	-0.73 (0.45)
A-level	-0.33 (0.29)	-0.23 (0.26)	-0.33 (0.27)
O-level	-0.17 (0.26)	-0.15 (0.26)	-0.20 (0.26)
Difference in education	0.26 (0.31)		
Difference in hours worked		0.01** (0.00)	
Pay comparison			0.49** (0.15)
Number of divorces	169.00	170.00	160.00
Number of splits	12,757.00	12,931.00	12,299.00
Initial log-likelihood	-898.60	-905.30	-855.80
Final log-likelihood	-521.80	-519.90	-487.70

Notes: Standard errors in parentheses; \*\* $p < 1$  percent; \* $p < 5$  percent; †  $p < 10$  percent.

lower risk of divorce. The effect is quite strong: each year of delay reduces the odds of divorce by a factor of 0.84 ( $e^{-0.18}$ ). Household income also has a large stabilizing effect on marriage (though note the limited range of this variable; see Table 1).

Our estimates of the effect of children are inconsistent with both theoretical expectations and the results of most empirical work: children destabilize the marriages in our sample. We shall return to this anomalous but robust result below. The next three dummy variables show a gradient in the effects of educational qualifications—the more qualified the woman, the lower the divorce risk. These qualification effects are not statistically significant, but marginally significant for women with degrees.

Now we come to our first test of the independence hypothesis. Hypogamous marriages (where a woman with A-level qualifications or a degree is married to a man with O-level or no qualifications) seem to have higher divorce risks than other marriages, though this estimate is not statistically significant. Our second test uses the variable “difference in hours worked.” Consistent with the independence hypothesis, the effect is positive and significant. For each hour of excess paid work done by the woman, the odds of divorce increased by 1 percent ( $e^{0.01} - 1$ ).<sup>7</sup>

Finally, using “pay comparison” as a measure of women’s independence (column 3), our result is again consistent with the independence hypothesis. An increase of one standard deviation of this variable raises the odds of divorce by 35 percent ( $e^{(0.49 \times 0.61)} - 1$ ).

### ***Gender Role Attitudes, Domestic Division of Labor, and Match Between Partners***

In Table 3, we report further parameter estimates for variables relating to gender role attitudes, domestic division of labor, and aspects of homogamy. The models reported in this table also contain the covariates from column 3 in Table 2. But since there is no qualitative difference between the new estimates of these parameters and what we have seen already, they are not included here (except the estimates for “pay comparison”).

The coefficient for gender role attitude is not statistically significant, though it is in the expected direction. Also, as expected, domestic division of labor has no effect on divorce risk. Furthermore, there is no evidence that educationally heterogamous marriages differ from homogamous ones in divorce rates. What matters is the age difference between the partners. Couples in which the husband was at least three years younger than the wife have a greater risk of divorce, and those in which the husband is at least five years older have smaller risks.

Table 3

**Transitions to Divorce: Further Parameter Estimates**

	(1)	(2)	(3)	(4)
Pay comparison	0.51** (0.18)	0.53** (0.18)	-0.17 (0.47)	0.04 (0.32)
Attitude	-0.10 (0.08)	-0.09 (0.09)	-0.10 (0.08)	-0.10 (0.08)
Difference in attitude		-0.03 (0.08)		
Task	-0.04 (0.10)	-0.05 (0.10)	-0.02 (0.10)	-0.00 (0.10)
Task * pay comparison			0.24 (0.15)	
Task * difference in hours worked				0.01+ (0.00)
Husband better qualified than wife	0.09 (0.30)	0.10 (0.30)	0.09 (0.29)	0.14 (0.30)
Husband less qualified than wife	0.08 (0.030)	0.14 (0.30)	0.07 (0.30)	0.06 (0.31)
Husband at least three years younger	1.25** (0.43)	1.29** (0.43)	1.24** (0.43)	1.29** (0.43)
Husband between five and nine years older	-0.59+ (0.33)	-0.63+ (0.34)	-0.59+ (0.33)	-0.57+ (0.33)
Husband at least ten years older	-1.15+ (0.68)	-1.52+ (0.81)	-1.14+ (0.68)	-1.15+ (0.68)
Number of divorces	123.00	120.00	123.00	122.00
Number of splits	12,008.00	11,707.00	12,008.00	11,900.00
Initial log-likelihood	-685.90	-669.00	-685.90	-680.20
Final log-likelihood	-361.50	-355.90	-360.20	-356.90

Notes: Standard errors in parenthesis; \*\* $p < 1$  percent; \* $p < 5$  percent; + $p < 10$  percent.

In column 2, we add the covariate “difference in attitude” to the model. But it has no effect on divorce rate.<sup>8</sup> In column 3, we add an interaction term of “gender role attitude by pay comparison.” This has two effects. First, the main effect of our independence measure (“pay comparison”) becomes insignificant. Second, in line with our expectation, a high level of independence together with a heavy housework load raises the divorce risk (though this estimate

is marginally insignificant,  $t$ -value = 1.59). We test the interaction effect with another measure of independence (“difference in hours worked”) in column 4. Again, the main effect of pay comparison becomes insignificant, while the interaction term has the expected effect, and is statistically significant at the 10 percent level.

### *The Destabilizing Effects of Children*

We shall now return to the anomalous finding that children destabilize marriages. As noted above, this finding is inconsistent with theoretical expectations. As Becker et al. observe, children are marriage-specific capital. Consequently, they should reduce the risk of divorce. In fact, the stabilizing effect of children has been confirmed by most empirical findings in the UK (Berrington and Diamond 1999) and elsewhere (Tzeng and Mare 1995; Weiss and Willis 1997).

However, upon further examination and calculations, we come to the conclusion that the effect of children reported here is genuine rather than an artifact or mistake. Our confidence is based on two considerations. First, at least one other recent paper that uses the BHPS data reports the same findings that we do (Böheim and Ermisch 1999). Second, we conducted a set of similar though more limited analyses with another British dataset—the Family and Working Lives Survey 1994–95 (FWLS)—and have obtained roughly similar results.

The FWLS (Rohwer 1996) is a retrospective life history survey, funded by the UK Department for Education and Employment. Its sample ( $N = 11,237$ ) is representative of the British population between the ages of sixteen and sixty-nine. As a retrospective study, the FWLS contains no information on past gender role attitudes, income history, and the like. However, there is detailed information on the main respondent’s and spouse’s life histories in the realms of work, family formation and dissolution, fertility, housing, and education.

As in our analyses of the BHPS data, we consider all women in their first marriage. The dependent variable is again time until divorce or separation. However, because of the retrospective nature of the FWLS data, our analysis in this subsection differs slightly from the analyses reported above. First, we employ a continuous-time event history framework, using specifically the Cox model:

$$h(t) = h_0(t)\exp(\beta_1 X_1 + \dots + \beta_k X_k);$$

where  $h(t)$  is the instantaneous hazard rate of divorce,  $h_0(t)$  is the baseline hazard rate,  $X_s$  are the covariates, and  $\beta_s$  are the parameters to be estimated.

Table 4

**Transitions to Divorce: Family and Working Lives Survey Data**

	(1)	(2)
Age at marriage	-0.058** (0.005)	-0.057** (0.005)
Marriage cohort	0.840** (0.033)	0.694** (0.046)
Number of children	0.094** (0.024)	-0.219** (0.076)
Cohort * children		0.097** (0.022)

Notes: Standard errors in parentheses; \*\* $p < 1$  percent.

We also have a much more limited set of covariates: age at marriage, number of children, marriage cohort (1 = 1950s or before, 2 = 1960s, . . . , 5 = 1990s). The results are reported in Table 4.

This is a crude analysis, but the results are nonetheless instructive. Age at marriage has the expected negative coefficient, and the more recent marriage cohorts have higher dissolution rates. Controlling for these, the effect of children is destabilizing (column 1), which is consistent with what we saw with the BHPS data.

Adding the interaction term “children by cohort” to the model (column 2) leads to a change of sign of the main effect of children. But taking into account both the main effect and the interaction terms, it seems that something has changed over time, possibly around the 1980s. While children used to reduce the risk of divorce, this is no longer true. A small numerical example will make this clear. Consider the overall effect of having one child for two marriage cohorts:

$$1950s: -0.219 + 1 \times 0.097 = -0.122$$

$$1990s: -0.219 + 5 \times 0.097 = 0.266$$

Thus, holding age at marriage constant, the effect of having a child for the 1950s cohort depresses the risk of divorce by about 11 percent ( $e^{-0.122} - 1$ ), but in the 1990s cohort it raises the risk by about 30 percent ( $e^{0.266} - 1$ ). What are the social changes that lead to this reversal of the children effect? How are we to understand the impact of having children on the family? These are intriguing questions that we shall explore further in another article.

## Summary and Discussion

In this article, we use recent panel data to explore the dynamics of divorce in the UK. Our findings are consistent with the independence hypothesis, but show little impact of gender-role attitudes or of the domestic division of labor. We also find an unexpected but robust effect of children in raising the risk of divorce.

The effect of economic independence on the divorce rate in contemporary society may be expected to be rising or falling according to how one characterizes modern marriage. On the one hand, it may be more “personal” than in the past, with more emphasis on emotional—and indeed romantic—and less on economic considerations. On the other hand, the relative distribution of economic power is changing radically as women assume a much more significant role in the labor market. One may argue that calculatingly economic marriage is becoming less common, in comparison with a time when property—in the form of agricultural land and petty bourgeois capital—was much more important. However, our analyses suggest that considerations of personal fulfillment may be operating in parallel with factors of economic exchange. Our three measures of women’s independence—their educational attainment, hours worked, and wage rate—show estimates in the expected direction, and the latter two are statistically significant. Thus, contrary to the results summarized by Oppenheimer, we have positive evidence for the independence hypothesis using individual-level data.

Though the economic arguments are persuasive, and, in our analysis, empirically supported, they provide a sociologically thin account of marriage. Norms and attitudes, and the gendered domestic division of labor, are absent from the theory (though it clearly speaks of an ungendered division of labor). These are factors that can have quite direct effects on what happens in a marriage and on its likelihood of survival. However, in our analysis gender-role attitude and housework pattern do not affect divorce rate, controlling for women’s independence and other demographic variables. There is one exception, in the form of an interaction between independence and housework task: Women with high wage rates have particularly high divorce risks if they also take up a heavy load of domestic tasks. Intuitively this makes sense, in that women in this situation are by definition experiencing stress, and unfairness, and may therefore be more willing to divorce for rather concrete reasons. However, this finding is also open to an economic interpretation as a lack of specialization, a failure to find an optimal balance between the inputs of the respective partners. That is, not only is the arrangement unfair but it is also inefficient, making alternatives such as divorce relatively more attractive. This finding is thus consistent with the independence hypothesis.

The surprising finding of this article is that for the UK in recent cohorts, children destabilize marriage. We believe that this result is robust, though we are uncertain how to interpret it. Have attitudes toward children changed? Have the role and situation of women changed so much that motherhood has become relatively more difficult? Has the role of men changed, so that fatherhood is something that a greater proportion of men are inclined to run away from? Or is it simply that divorce has become so commonplace and acceptable for younger cohorts that it is being resorted to in response to any familial stress (and though children may indeed be “marriage-specific capital” they are an expensive and sometimes stressful investment).

We are more inclined to seek the answer in changes in the timing of fertility in interaction with the changing timing and nature of partnership, than in profound changes in the moral disposition of the British population. The timing of first birth varies strongly across cohort, as does the timing of first marriage, the prevalence of cohabitation, and the frequency of divorce. We suspect, however, until further work is done, we have no evidence that these quite profound changes in the nature of partnership as a life-course phenomenon lie at the base of the unexpected correlation between parenthood and divorce in the UK.

## Appendixes

### *A. Gender Role Attitudes Questions, Asked in Waves 1, 3, 5, and 7*

Do you personally agree or disagree:

A pre-school child is likely to suffer if his or her mother works.

All in all, family life suffers if the woman has a full-time job.

A woman and her family will all be happier if she goes out to work.

Both the husband and wife should contribute to the household income.

Having a full-time job is the best way for a woman to be an independent person.

A husband’s job is to earn money, a wife’s job is to look after the home and family.

### *B. Classification Scheme for Educational Attainment*

#### *Level*

Degree	First degree, higher degree
A-level	Teaching qf, other higher qf, Nursing qf, A-levels
O-level	O-levels, Commercial qf, Apprenticeships
No qual.	CSE grade 2–5, Other qf, no qf

## Notes

1. In 1996 the conservative government introduced the Family Law Act, which, among other things, mandates an “information meeting” and a period of reflection and consideration for couples contemplating divorce. Attendance at such a meeting would be compulsory if one partner opposed the divorce or if there were disputes over children or finance. This part of the act has not yet been implemented yet, pending the completion of research on a pilot scheme in selected areas.

2. Defined as participation in full-time education, government-supported training, employer-funded training, or another education and training program.

3. We hasten to add that Becker’s framework can accommodate such considerations. In fact, within his framework, it is the utility of the output of a household production function that is maximized. And Becker et al. are quite explicit that such output includes companionship, quality of the children, and so forth.

4. In a separate set of analyses not reported here, we studied first-time marriages formed during the panel period only, discarding the person-year information where we did not observe the start of the partnership. This is the approach adopted by Tzeng and Mare (1995). The problem with this approach is that we end up with a very small  $n$ , and hence unreliable estimates. There are 240 women who got married for the first time during the panel period, reporting 673 person-years, with only nineteen events of marital dissolution.

5. This referred to their main job, and excluded overtime and meal breaks. Those who were not working were given the value zero.

6. In cases where the respondent (or her spouse) is unemployed or economically inactive, we impute the value zero for wage.

7. Since the estimates of the common covariates in columns 1, 2, and 3 are very similar, we do not discuss them in the text.

8. We also tested several specifications for possible nonlinear effects of “attitude” and “difference in attitude,” and none was significant.

## References

- Becker, Gary S.; Elisabeth M. Landes; and Robert T. Michael. 1977. “An Economic Analysis of Marital Instability.” *Journal of Political Economy* 85: 1141–87.
- Berrington, Ann, and Ian Diamond. 1999. “Marital Dissolution Among the 1958 British Birth Cohort: The Role of Cohabitation.” *Population Studies* 53: 19–38.
- Böheim, Rene, and John Ermisch. 1999. “Breaking up. Financial Surprises and Partnership Dissolution.” ISER Working Papers, 1999–9. Colchester, University of Essex.
- Chan, Tak Wing, and Brendan Halpin. 2000. “Who Marries Whom in Great Britain?” ISER Working Papers, 2000–12. Colchester, University of Essex.
- Davis, Hugh, and Heather Joshi. 1998. “Gender and Income Inequality in the UK 1968–1990: The Feminization of Earnings or of Poverty.” *Journal of the Royal Statistical Society* 161 (Series A): 33–61.
- Ermisch, John, and Marco Francesconi. 2000. “Cohabitation in Great Britain: Not for Long, but Here to Stay.” *Journal of the Royal Statistical Society* 163 (Series A): 153–71.

- Gallie, Duncan. 2000. "The Labour Force." In *Twentieth-Century British Social Trends*, ed. A.H. Halsey and Josephine Webb, pp. 281-323. London: Macmillan.
- Haskey, John. 1995. "Trends in Marriage and Cohabitation: The Decline in Marriage and the Changing Pattern of Living in Partnership." *Population Trends* 80: 5-15.
- . 1996. "The Proportion of Married Couples Who Divorce: Past Patterns and Current Prospects." *Population Trends* 83: 25-36.
- Hochschild, Arlie. 1989. *The Second Shift*. New York: Avon Books.
- Kiernan, Kathleen E., and Eva Lelièvre. 1995. "Great Britain." In *The New Role of Women: Family Formation in Modern Societies*, ed. Hans-Peter Blossfeld, pp. 126-49. Boulder, CO: Westview Press.
- Mason, Karen Oppenheim, and An-Magritt Jensen. 1995. "Introduction." In *Gender and Family Change in Industrialized Countries*, ed. Mason and Jensen, pp. 1-14. Oxford: Clarendon Press.
- Oppenheimer, Valerie Kincade. 1997. "Women's Employment and the Gain to Marriage: The Specialization and Trading Model." *Annual Review of Sociology* 23: 431-53.
- Rohwer, Götz. 1996. "A Practical Introduction to the Family and Working Lives Survey." Max Planck Institute for Human Development, Berlin.
- Scott, Jacqueline; Duane F. Alwin; and Michael Braun. 1996. "Generational Changes in Gender-role Attitudes: Britain in a Cross-national Perspective." *Sociology* 30: 471-92.
- Sørensen, A., and S. McLanahan. 1987. "Married Women's Economic Dependency, 1940-1980." *American Journal of Sociology* 93: 659-87.
- Sullivan, Oriol. 2000. "The Division of Domestic Labor: Twenty Years of Change?" *Sociology* 34: 437-56.
- Tzeng, Jessie M., and Robert D. Mare. 1995. "Labor Market and Socioeconomic Effects on Marital Stability." *Social Science Research* 24: 329-51.
- UK ONS (United Kingdom Office of National Statistics). 2000. *Statistics of Education*. London.
- Warde, Alan, and Kevin Hetherington. 1993. "A Changing Domestic Division of Labor? Issues of Measurement and Interpretation." *Work, Employment and Society* 7: 23-45.
- Weiss, Yoram, and Robert J. Willis. 1997. "Match Quality, New Information, and Marital Dissolution." *Journal of Labor Economics* 15: S293-S329.

