Parental Divorce in Australia, Cohorts Born 1900-1975*

M. D. R. Evans and Jonathan Kelley
Melbourne Institute of Applied Economic and Social Research
The University of Melbourne

Melbourne Institute Working Paper No. 22/04

ISSN 1328-4991 (Print)
ISSN 1447-5863 (Online)
ISBN 0 7340 3164 5

September 2004

*The research supported herein was supported by FaCS SPRC grant 025 to the Melbourne Institute of Applied Economic and Social Research

Melbourne Institute of Applied Economic and Social Research
The University of Melbourne
Victoria 3010 Australia
Telephone **(03) 8344 2100**
Fax **(03) 8344 2111**
Email **melb-inst@unimelb.edu.au**
WWW Address **http://www.melbourneinstitute.com**

Abstract

This paper examines the sources of parental divorce in Australia using respondents' retrospective reports of parents' behaviour in the IsssA-Pool database, a pooled series of representative national samples of Australia conducted between 1984 and 2002 (N=19,601 valid cases for this analysis). We analyse the probability of divorce using logistic regression models. The results include a very large effect of time, with people reaching age 14 before the Family Law Act took effect being much less likely to grow up in divorced families, even net of a wide variety of other social and economic changes over time. Important also are several indicators of family traditionalism: Parents from the Mediterranean countries and parents who are faithful church-goers have more stable marriages. The effects of gender and of size of place are ambiguous: they are marginally significant statistically, and small, to boot. Parental social class has little, if any, effect, except that parents at the top and bottom ends of the income distribution are probably less likely than those in the middle to divorce. Family size and religious denomination do not have significant effects on the probability of divorce in these models. Finally, there is a very large connection between maternal employment and parental divorce; we cannot disentangle the causality here, but can establish a (large) upper bound on the effect of maternal employment on divorce.

1. Introduction

1.1. Why study parental divorce?

Parental divorce is worthy of study for both theoretical and policy-related reasons. In the theory domain, many accounts of modernisation stress the increasing individuation of modern societies. A corollary of this theory is that the capacity to form lasting social connections atrophies during modernisation especially among those least connected with traditional ways of life. This suggests that people leading more traditional lives will be less likely to divorce. In terms of policy issues, parental divorce poses problems of the protection and social support of children. Research shows that parental divorce, on average, harms children's education in Australia, net of a variety of parental socioeconomic characteristics (Evans, Kelley, and Wanner 2001; Evans, Kelley, and Headey 2001). Studying parental divorce can help illuminate who is at risk, and can help social service agencies better understand the people they aim to help. Finally, studies of divorce can be used as a tool enabling researchers studying the effects of divorce separate out the effects of divorce per se from the effects of the underlying characteristics that often generate divorce. In particular, the estimated logistic regression coefficients from models predicting divorce can be used to construct indices of adverse selection for marital stability which can, in turn, be used in models predicting out comes of interest such as children's well-being or education.

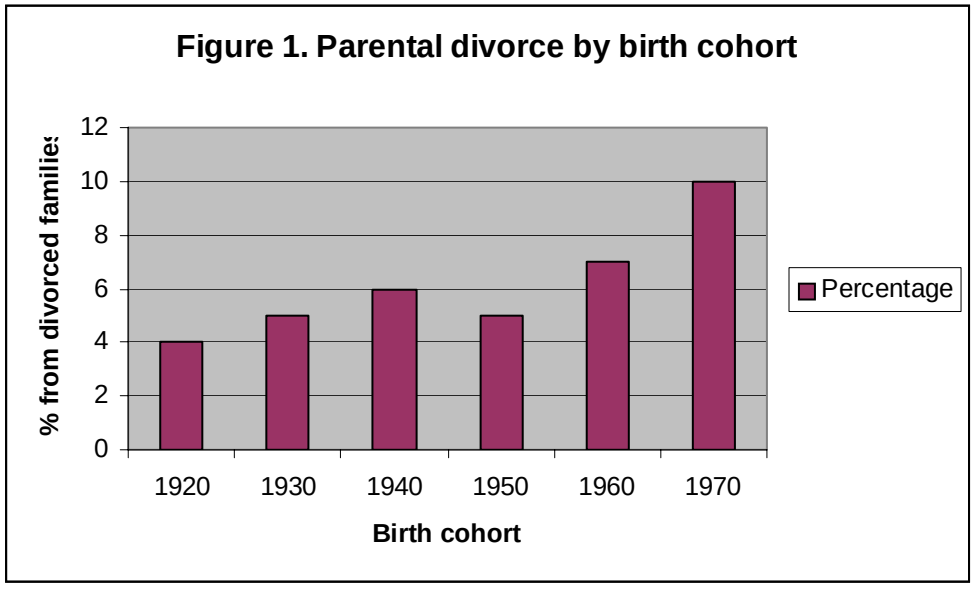
1.2. Institutional setting: Availability of divorce

According to Fogarty's succinct summary (Fogarty 2001), divorce in Australia was originally an individual colony and then a state matter, but the Federal government, as part of its general centralising tendencies over the first century after Federation, gradually established jurisdiction over much of family law, including divorce. The Federal government began to legislate on divorce in 1945, at first on very specific matters. During the 1950s, West Australia introduced the first no-fault divorce law in Australia (albeit requiring 5 years separation). In the late 1950s, several parliamentarians campaigned energetically for a federal no-fault divorce law, again contingent upon 5-years separation, which snowballed into more elaborate legislation setting forth rules concerning the division of property, child custody, and maintenance. This ultimately came into effect as the Matrimonial Causes Act 1959, but the state courts administered this federal law. In the early 1970s,

Federal Parliament once again moved to weaken the matrimonial contract, and to extend its jurisdiction over all property and child protection issues involved in marriage or divorce. The result was the Family Law Act which came into operation in 1976, and made no-fault divorce on the basis of 12 months separation the only available grounds for divorce and extensively widened the powers of the Federal government in the matrimonial property and child protection areas.

Divorce rates rose steeply following the legislative change (Bracher, Santow, Morgan, and Trussell 1993), as they have also in America following similar changes (Morgan and Rindfuss 1985).[1] The lifetime risk of divorce was about 10% of marriages up to the 1960s, rising dramatically to about 40% for the marriages of the late 1970s and has drifted gradually upward since, with the possibility of a recent plateau (Carmichael, Webster, and McDonald 1997) Current divorce levels are well within the usual range for Western European nations, but still substantially below American levels. There is also widespread public support for divorce in Australia, albeit less than in the USA (Evans 1992).

Of course, marriages with children have a lower divorce rate, but that, too, has climbed very steeply (Figure 1).



Source: IsssA-Pool-Debut database, Details are in the “Data” section.

[1] This paper focuses only on the disruption of legal marriages, but there are also interesting issues concerning the dissolution of consensual unions in Australia (Carmichael and Mason 1998).

1.3. Prior findings on divorce

Aside from the large effect of *time* per se (Morgan and Rindfuss 1985), divorce has proven difficult to predict. A careful study of diversity in divorce levels in the United States where divorce is a state matter, found that, net of many other aggregate characteristics, the onset of no-fault divorce had a large and significant positive effect on the divorce rate (Nakonezny, Shull, and Rodgers 1995). On the other hand, a study of the Netherlands found that the effects of divorce law reform were only temporary (Poppel and Beer 1993). Because Australia is more like the US, it seems reasonable to anticipate that our pattern will parallel theirs and that the onset of no-fault divorce (represented here by the Commonwealth's Family Law Act taking force in 1976) will significantly elevate the parental divorce rate, even net of many changes in population composition, such as rising education, declining fertility and the like. A prior analysis did not find a significant effect of time in Australia, but that was based on a continuous, linear specification (Evans, Kelley, and Headey 2001), and we expect that the changing institutional context is better captured by contrasting the pre- and post- Family Law Act experiences.

Indeed, economic, social structural, and demographic characteristics have significant effects in prior research, but explain relatively little of the probability of divorce (Gottman 1994; Jalovaara 2001; Waite and Lillard 1991). Accordingly, it is reasonable to predict some significant effects, but also to expect the explained variance to be low.

There are general theoretical arguments that social integration, which tends to be stronger in traditional life styles, protects against divorce (Bellah, Masden, Sullivan, Swidler, and Tipton 1985; Glenn and Shelton 1985). In support of these arguments, prior research has found large differences in divorce rates among ethnic groups in Australia, even net of social composition (Khoo and Zhao 2001), so it seems reasonable that this will hold among parents, as well as in the population at large. Accordingly, it seems likely that parents born in the *Mediterranean* region will be less likely to divorce. This general hypothesis also leads to the expectation that parents who are frequent church-goers are less likely to divorce, an hypothesis which has been previously supported in US data (Clydesdale 1997).

By contrast, denomination differences appear to be non-existent, net of frequency of church attendance in the US (Lehrer and Chiswick 1993), and it seems reasonable to take that as the working hypothesis for Australia, as well.

One could argue that *education* should enhance marital stability because it requires the skills of taking the long view and because it makes people more desirable marriage partners by enhancing their earnings and their capacity to help their children get ahead in life. On the other hand, the "consider the alternatives" approach to the risk of divorce (South and Lloyd 1995; Udry 1981). The linkage of parental education to divorce is rather ambiguous in prior research internationally (Amato and Rogers 1997; Jalovaara 2001; White 1990), and a prior analysis in Australia reports a non-significant effect (Evans, Kelley, and Headey 2001), so we include it here, but without expectations for strong effects.

Other characteristics related to social stratification also tend to have little power predicting divorce (Waite and Lillard 1991) and prior research on Australia has found a non-significant effect of occupational status (Evans, Kelley, and Headey 2001), so we anticipate little or no effect of *father's occupational status* and *parental income*. But one analysis has found that especially low incomes seem to elevate the risk of divorce (Carmichael, Webster, and McDonald 1997), and another suggests that especially high incomes may reduce the risk of divorce (Hoffman and Duncan 1995), so we will also investigate some possibilities of non-linearities in income effects.

Prior findings on the effects of respondent's gender on parental divorce are rather mixed (Andersson and Woldemicael 2001; Morgan and Rindfuss 1985). Accordingly, we include gender in the models, but with no very strong expectations about its effect. Similarly, we expect that the number of respondent's siblings will not substantially affect the risk of divorce. It has long been clear in the US that the first child affects divorce risks, but that subsequent children do not (Koo and Janowitz 1983; Waite, Haggstrom, and Kanouse 1985), so it seems reasonable to take as a working hypothesis the view that the number of children will not affect parents' probability of divorce in Australia.

Prior research has abundantly documented a strong positive correlation between divorce and female employment in the US, but the causal direction of the relationship remains ambiguous (see the excellent summaries in (Brines and Joyner 1999; White 1990)). Rather well-designed studies continue to produce both results that seem to favour the view that divorce risk is a major cause of maternal employment (Hsu 1998) and that female employment is a major

cause of divorce (South 2001). We cannot resolve this issue here, because the causality issues are very complicated involving not only temporal priority of behaviours, but also anticipatory action, and the possibility of deeper causes such as attitudes and values that influence both employment and divorce and generate their apparent connection. But we can take some preliminary steps by anticipating that there will be a very large connection in Australia, and moreover can proceed to establish an upper bound on the effect of maternal employment on divorce, as will be discussed in the methods section, below

2. Data, Methods, and Models

2.1. Data

This article uses data from IsssA-Pool-Debut, the pooled International Social Science Surveys/Australia, 1984-2002, Australia's leading academic survey. There are 27,386 cases, including panel respondents in the IsssA-Pool-Main database. This analysis is based on the smaller IsssA-Pool-Debut file of 19,823 initial interviews (when parents' marriage histories were collected).

The IsssA surveys, conducted annually except for a few years, are from simple random samples of Australian citizens drawn by the Electoral Commission from the compulsory electoral roll, a public document. They are conducted by mail using a modification of Dillman's Total Response Method (Dillman 1993). Assessments of sample representativeness have found that the sample is representative of the population[2], save for small under-representations of very young adults and very elderly seniors (Bean 1991; Kelley and Evans 1999; Sikora 1997). First, a personally addressed preliminary letter announces the survey, then the survey itself arrives in the post some weeks later. For non-respondents, this is typically followed by four follow-up mailings, two with fresh copies of the questionnaire, over a six to 12 month period. Completion rates (defined as completions as a percentage of the sum of completions and refusals) run around 60 to 65 per cent, which compares favourably with recent experience in Australia, the USA, and many other industrial nations --

[2] The population being defined as English-speaking Australian citizens over age 18 who are resident at the address they provided to the Electoral Office and who are capable of answering a self-completion questionnaire. The citizenship limitation is not likely to be substantively important, because prior research shows that the key difference between citizen and non-citizen immigrants is in how long they have resided in Australia, with few other differences being significant (Evans 1988).

for example, the well-regarded International Crime Victim Survey averaged 41 per cent in 14 nations ((van Dijk, Mayhew, and Killias 1990).

Benchmarking information comparing the IsssA surveys to the Census (on the limited range of variables available in the Census) shows that the survey closely resembles the population as a whole but with under representations of very young adults whose frequent movements elude the electoral rolls and of the very old, some of whom are troubled by dementia and other conditions that make survey completion difficult (Bean 1991; Evans and Kelley 2002). Further details are in (Kelley and Evans 1999).

2.2. Measurement

Parental divorce. The dependent variable is whether or not a respondent's parents had divorced by the time respondent was age 14. The contrast group is non-divorced families. These are mostly intact married couples, but they also include situations where a parent died and situations where a parent never married.

Reached age 14 after the Family Law Act. This is a dichotomous indicator of whether respondent reached age 14 (the reference point for the parental divorce equation) before or after the Family Law Act of 1976 was enacted. We have operationalised that as being born before or after 1962.

Because there is little prior research on the impact of family background, we draw on largely on variables that have been shown to have long term impacts in other domains of social life: gender, number of siblings, ethnicity, urban residence, denomination, church attendance, father's occupation, and parents' education.

Gender. Male is scored 1, female zero. *Number of siblings* is a count of brothers and sisters, with only children scored 0.

Mediterranean descent. This is probably the key ethnic distinction in Australia (Evans and Kelley, 1991). It is defined as having parents from Cyprus, Greece, Italy, Malta, Portugal, Spain, Former Yugoslavia, Slovenia, Croatia, Macedonia, Serbia & Montenegro, or Southern Europe (nfd).

Urban residence is the natural log of the approximate population size of the place of residence at age 14, based on a direct question.

Parents' education is defined as mother's education if only that is known; or father's education if only that is known; or the average of the two if both are known. Education is

from a direct question with 8 or 9 categories (depending on the survey), recoded into approximate years of schooling.[3]

Father's occupational status. The effects of father's occupational status are the focus of a vast tradition of sociological research stemming from the Blau-Duncan paradigm (1967), initially for the USA (Duncan, Featherman, and Duncan 1972; Featherman and Hauser 1978) and subsequently for many other countries, including Australia (Broom, Jones, McDonnell, and Williams 1980), leading to a "normal science" of social stratification. There are many available measures of occupational status in this tradition, mostly highly correlated. We use Kelley's Worldwide Status Scores (Evans and Kelley 2002; Kelley 1990), which are conceptually similar to Duncan's SEI scores and, in the United States, interchangeable with them. They are based on Treiman's (Treiman 1977) 14 category classification, which is, in turn, based on the major groups of the International Labour Office's International Standard Classification of Occupations (International Labour Office 1968) with further distinctions within major groups based on Treiman's prestige scores. Occupational status refers to present occupation for those currently employed, or to past occupation for those not now employed, or to spouse's occupation if no other information is available. Occupations were initially coded into the 4-digit Australian Standard Classification of Occupations; and thence recoded into Worldwide Status Scores. These scores range from 0 to 100.

Catholic denomination is based on a direct question; it is scored Catholic = 1, all others zero.

Church attendance is the log of number of services attended per year (counting one per year for the lowest category). The raw figures are from a direct question, coded into approximate number of services attended per year.

Mother's work intensity is the mean of three questions about whether respondent's mother was employed full time (scored 1), half time (scored 0.5), or not at all (0) at three life-cycle stages: when respondent was a pre-schooler; when respondent was 6 to 9 years old; and when respondent was 10 to 14.

Parents' income. We have no direct measure of parents' income because survey respondents are not generally able to provide reliable information on their parents' income. They do,

[3] The categories for parents' education were recoded into mean years of schooling using data on the actual mean years of schooling for respondents (for whom we have very detailed education questions) in the corresponding categories. Specifically: None= 0 years; Only a few years of primary=3.9 years; Finished primary=6 years; Left school about age 14 or 15 = 8.9 years; A little more than that=10.1 years; Finished secondary= 12 years; Some further study beyond that = 13.2 years; University or CAE graduate= 15.7 years.

however, provide reliable information on their parents' education, occupation, supervision, labour force participation and the like. We estimated parents' income from those known facts in the following way. (1) First, we estimated the impact of education, occupation. supervision, labour force participation and the like on the (log of) family income of contemporary families by OLS regression. (2) Next, we assumed that this relationship held equally in the past, and so predicted their parents' income on the basis of their parents' education, occupation, labour force participation, and the like. The resulting estimate is provides a plausible but by no means perfect proxy for family income, and we used this proxy in some analyses.

The estimating equation is:

Variable	B	SE B	Beta	T
EDUCQ	.025630	.003443	.161275	7.444
OCCSTATQ	.003600	3.9070E-04	.206906	9.215
SUPER3Q	.236724	.022586	.201801	10.481
SELFEQ	.017019	.033738	.013528	.504
OWN2Q	.103667	.042383	.065266	2.446
GOVTQ	-.065521	.018814	-.064779	-3.483
LNURBANQ	.006583	.002547	.045702	2.585
SEDXWRKQ	.031160	.001593	.343437	19.557
(Constant)	10.222974	.042726		239.270
Adjusted R Square	.37628			
Standard Error	.38213			
n=3247 varying somewhat with missing data				

where SEDXWRKQ is a measure of the spouse's education and employment. Parents' income was then estimated from the corresponding equation for parents' characteristics, and adding a random component with mean zero and standard deviation equal to the standard error in the estimating equation:

```
P_LnIncQ = FAEDYR2Q* .025630 +FASTATQ * .003600 + FASUPR3Q * .236724
  + FaSelfEQ*.017019 + FaOwn2Q *.103667 +FaGovtQ* -.065521
  + LnUrb14Q *.006583 + mEdXWrkQ *.031160  +   10.222974
  + .38213 * NORMAL(1)
```

The result then reflects what parents' income would have been if they had lived under the economic conditions of 1984-2001, in year 2000 dollars. That will somewhat over-estimate parents' incomes (because of productivity growth in the interval between the reference year for parents' characteristics and the survey date), but nonetheless put parents in roughly their correlative relative income rank. The distribution:

Variable	Mean	Std Dev	Label
P_LNINCQ	10.84	.47	Est parent ln income, R age 14 (w random)

An alternative would be to use a measure based on the possessions (house, car, VCR etc) which we have in several of our surveys. We did not do that because, other things being

equal, older families are much less likely to have these possessions than younger families (cars, for example, were rare in the past and VCRs non-existent). Since age is linked to education and other key variables, that produces a serious bias.

2.3. Models and methods

The initial model was:

Parental_divorce= f (Time, Gender, Parents' education, Fathers' occupation, Size of place of residence, Parent's church_going, Mediterranean parents, Parents Catholic, number of siblings) + e_i

Results for this model are given in Table 2, below.

On the basis of preliminary analyses, we simplified this by omitting several variables that had no significant effect on the probability of divorce, specifically number of siblings and (surprisingly) Catholic denomination. This led to the reduced model:

Parental_divorce= f (Time, Gender, Parents' education, Fathers' occupation, Size of place of residence, Parent's_church_going, Mediterranean_parents) + e_i

Results for this model are given in Table 1, below.

The most vexing modelling issue is how to incorporate maternal employment. If maternal employment is included in the model, it has a highly significant connection to divorce, but we have doubts about which way the causality goes – to what extent it is wife's employment that increases the risk of divorce and to what extent it is the loss of a husband (or its anticipation) that leads women to increase their workforce participation. We flag it here, because it is an issue that deserves future research attention. This is an issue which simple temporal ordering will not solve, for example because a deteriorating marital relationship could encourage a woman's labour force participation, which would then precede, but not cause, the divorce. Only longitudinal measurement of the quality of marriage and perhaps of pre-existing traits not measured here that predispose women both to work and to divorce (for example, an individualistic psychological orientation) will ultimately solve the problem. For the moment, we estimate some models including mother's employment intensity in which the causal effect is posited to flow entirely from mother's employment intensity to divorce. This is probably unrealistic: in fact, it seems likely that the divorce risk also encourages workforce engagement, but taking that into account can only reduce or leave unaffected the size of the impact of maternal employment on divorce.

In other words, the data that we have to hand enable us to estimate an upper bound on the size of the effect of maternal employment on divorce and we expect future research using reciprocal causation models to find smaller effects.

The relevant models include:

Parental_divorce= f (Time, Gender, Parents' education, Fathers' occupation, Size of place of residence, Parent's church_going, Mediterranean parents, Parents Catholic, number of siblings, maternal empoyment intensity) + e_i

The results are in Table 2, and some related results are in Appendix Table 1.

Because these are retrospective data, they do not include direct questions on parental income while respondent was growing up, as it is well-known that children's reports of the parents' income are wildly inaccurate. Nonetheless, the question of income is an important one, both in the theoretical sense of what people do with their resources and in the practical sense that most social policy these days is made with income, so knowing what income does to people's behaviour can lead to better informed policy. Accordingly, we made estimates of parental earnings using other variables that were available in the dataset. We first included these estimates specified as the natural log, because that is the standard practice in much of sociology and economics and because it had a higher correlation with divorce than did the strictly linear formulation.

Parental_divorce= f (Time, Gender, Parents' education, Fathers' occupation, Size of place of residence, Parent's church_going, Mediterranean parents, Parents Catholic, Number of siblings, Maternal employment intensity, Parents' income (ln)) + e_i

This failed to have significant effects in any of the models that included maternal employment (Table 2 and Appendix Table 1). In examining the results, we noticed signs of even more extreme curvilinearity, so we respecified income in quartiles, contrasting the central two quartiles with the top quartile and the bottom quartile using dummy variables.

Parental_divorce= f (Time, Gender, Parents' education, Fathers' occupation, Size of place of residence, Parent's church_going, Mediterranean parents, Parents Catholic, Number of siblings, Maternal employment intensity, Top income quartile, Bottom income quartile) + e_i

This worked rather better, with the results suggesting that parental divorce is rarer at the top and bottom of the income distribution than in the middle.

3. Results

3.1. The reduced model

We begin by looking at some key influences in the reduced model. After that, variables that failed to have a significant influence are discussed. Finally, we turn to a consideration of some "problematic" variables about which there are some problems of causal direction, as noted above, but on which we can nonetheless make some progress.

Table 1. Reduced logistic regression model of effects on parental divorce. N=19601

Variable (units)	B	S.E.	Wald	df	Sig	R	Exp(B)
Born after 1962 (0 or 1)	-0.594	0.073	66.881	1	0.000	-0.085	0.552
Male (0 or 1)	-0.196	0.061	10.298	1	0.001	-0.030	0.822
Parents' education (years)	0.033	0.014	5.966	1	0.015	0.021	1.034
Father's occupational status (0 to 100)	-0.004	0.001	6.904	1	0.009	-0.023	0.996
Parents' church-going (ln times/ year)	-0.234	0.019	158.541	1	0.000	-0.132	0.791
Size of place (ln population)	0.047	0.009	26.703	1	0.000	0.052	1.049
Parents born in Mediterranean countries	-1.033	0.233	19.759	1	0.000	-0.044	0.356
Constant	-2.572	0.169	231.056	1	0.000		
Gain in log likelihood (per df) due to model	49.50						

Source: IsssA-Pool Debut file, 1984-2002.

3.2. Institutional influence

The logistic regression analyses estimate that the advent of easy no-fault divorce has very substantially increased the risk of parental divorce, even net of many other social changes (Table 1). This model includes time as a dichotomous indicator – whether respondent reached age 14 (the reference point for the parental divorce equation) before or after the Family Law Act liberalising divorce took effect in 1976. We have operationalised that as being born before or after 1962. This large and significant effect is very robust: it is significant at better than the .01 level in a wide array of alternative models. (see Table 2 and Appendix 1).[4]

The effect in the reduced model is probably slightly biased upward by the omission of maternal employment.

[4] Further alternative models explored the possibility of a linear time change, but in fact the "shift factor" specification for time was preferable, at least for these cohorts.

As noted above, we cannot seriously here estimate an effect of maternal employment, because of problems of causal direction, but we can estimate an upper bound on the effect by including it in the model and making the probably unrealistic assumption that all the causal influence flows from maternal employment to divorce. In those models, the effect of time is around 0.44, which is about 75% of its size (about 0.59) in the models omitting maternal employment (Table 2). In either set of models it is clearly an influential variable. The dichotomous specification means that it can be used in making selectivity indices for models which include a continuous measure of time, without severe colinearity problems.

The model does not fit very well, nor do a wide variety of alternative specifications.[5] This does not mean that there is anything wrong with the estimates of the coefficients and effects in the table (Goldberger 1991), but it does mean that there is probably a very large random component and possibly some unmeasured structured variables causing divorce. Because no other analysis has ever achieved a good fit of a divorce model, either in Australia (Kelley, Evans, and Headey 2001) or abroad (Goldscheider and Waite 1991; Morgan and Rindfuss 1985) or abroad, it seems likely that most of the unexplained variance is random.

3.3. Church-going

Parental church-going has a very substantial negative effect on the probability of divorce (Table 1), showing that the more respondent's parents went to church, the less likely they were to divorce. Another aspect of religion, Catholic denomination, was included in the earlier models (Table 2), but failed to reach significance, even at the .05 level, and so was omitted from the reduced model. The effect of church attendance is very robust at around 0.20 to 0.25 in the full array of alternative models we estimated (Table 2 and Appendix 1).

It should be noted that it is possible that the negative association between divorce and church attendance comes about because some divorced people were stigmatised at church and so stopped attending worship services. If so, then the causal flow assumed here is incorrect and should allow for reciprocal causation between church-going and divorce. In that event, the coefficient estimated here would be an upper bound on the corresponding effect in a reciprocal effects model. Panel data could help resolve this issue in future research.

---

[5] Fit statistics are in the table, but to give a more intuitive sense of the fit we also computed R-squared for these models estimated by OLS and found that they explain about 1 and one half percent of the variance.

Table 2. Logistic regression coefficients of variables predicting parental divorce. Models 1 through 4 are nested. Models 5 and 6 augment model 4 by alternative specifications of income. N= 19,601.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Born after 1962 (0 or 1)	-0.594	-0.593	-0.595	-0.436	-0.434	-0.435
Parents born in Mediterranean countries)(or 1)	-1.033	-1.034	-1.021	-1.301	-1.273	-1.203
Male (0 or 1)	-0.196	-0.196	-0.195	-0.207	-0.203	-0.144
Parents' education (years)	0.033	0.033	0.033	0.012	0.015	0.047
Father's occupational status (0 to 100)	-0.004	-0.004	-0.004	-0.001	0.000	-0.001
Parents' church-going (ln times/ year)	-0.234	-0.234	-0.232	-0.194	-0.194	-0.234
Size of place (ln population)	0.047	0.047	0.048	0.028	0.027	0.033
Siblings (#)	---	0.000	0.000	0.062	0.062	0.098
Parents Catholic (0 or 1)	---	---	-0.035	-0.137	-0.139	-0.018
Maternal employment	---	---	---	1.625	1.633	1.488
Estimated income: bottom quartile	---	---	---	---	-0.327	---
Estimated Income: top quartile	---	---	---	---	-0.348	---
Estimated income, log						-0.009
Parents born in Mediterranean countries	-1.033	-1.034	-1.021	-1.301	-1.273	-1.203
Constant	-2.572	-2.571	-2.568	-3.157	-3.081	-3.683
Gain in log likelihood (per df) due to model	49.50	43.31	38.52	62.76	54.24	39.28

Note: Unshaded coefficients are significant at the .001 level, light grey shading indicates that .001<p<.05,, dark shading means p>.05.

Source: IsssA-Pool Debut file, 1984-2002.

3.4. Mediterranean parents

Another factor that has quite a striking effect on divorce is having parents who migrated to Australia from the Mediterranean region (Table 1). Respondents growing up in such families were less likely than children from mixed or non-Mediterranean immigrant families to experience parental divorce. The size of the Mediterranean effect in the reduced model may be somewhat downward biased by the omission of maternal employment: the coefficients for having Mediterranean parents in the models omitting maternal employment are only about 77% the size of this coefficient in the models including maternal employment.

3.5. Respondent's gender

With the investigation of the effects of gender, we move from the realm of variables with clear and robust effects variables whose effects are less certain. Respondent's gender has a small association with parental divorce, such that girls are a little more likely than boys to report parental divorce, but the effect is only marginally significant –

it meets the 0.5 standard but not the .001 standard (which might be regarded as more appropriate, given the large sample size) in the main models (Table 1 and 2), and fails even the 0.05 standard in some of the alternative models (Appendix 1). Nonetheless, a similar effect has also been observed in the United States (e.g. Morgan and Rindfuss 1985), which makes it less likely to be chance. Perhaps the fairest verdict at this point would be "unproven".

3.6. Parents' education

Parents' education has a marginally significant (better that 0.5, worse than .001) increasing the likelihood of parental divorce in all the models that do not include maternal employment, but it fails significance tests at the .05 level in several of the models that do include maternal employment. Accordingly, it seems reasonable to propose the hypothesis that there is a genuine, positive, total effect of parents' education, but that it operates largely indirectly, through maternal employment. This could be tested in future path analyses.

3.7. Father's occupational status

Father's occupation has an even shakier claim to influencing divorce, although it cannot be dismissed entirely. This is our best measure of the "permanent income" of the family, since it is much more stable than annual income and is the main source of income. Father's occupational status has a negative effect which is significant at the .05 level, but not the .001 level on the probability of parental divorce in our reduced model (Table 1), and also in a range of other models that do not include maternal employment (Table 2 and Appendix 1). It fails to reach significance at the .05 level in models that include maternal employment.

3.8. Size of place

Size of place – the size of the city or town where one grew up – has a highly significant effect on parental divorce in our reduced model (Table 1). This is also true of the nested models not including maternal employment (Table 2), but significance declines into the more dubious range (better than .05, worse than .001) when maternal employment is included in the model (Table 2 and Appendix 1). This suggests that there is a total effect of size of place, but that it is in part indirect through the greater opportunities for maternal employment that are available in larger towns and cities. We also experimented with an alternative specification – replacing the ln population size variable with a dummy variable for metropolitan.

Non-metropolitan. This has attractions, because it would make selectivity indices of adverse selection for use in models of life satisfaction, children's education, and the like, less highly correlated with continuous measures of urbanicity in models where those measures are anticipated to have substantive effects. Nonetheless, it does not have anything to recommend it from an empirical point of view: a model including it performs worse than the corresponding model with a continuous specification (Appendix 1, Panel D), and it fails to be significant at the .05 level.

3.9. Number of siblings

The number of siblings that respondent had probably does not affect the likelihood that the parents would divorce. Number of siblings did not have a significant effect (at the .05 level) on parental divorce in the preliminary models omitting maternal employment (Table 2) so it was not included in the reduced model of Table 1. It has marginally significant effects (better than .05, worse than .001) and strongly significant effects (.001 or better) in some of the models that include maternal employment (Table 2 and Appendix 1). This suggests the hypothesis that there is some complicated causality involved, for example with large families deterring maternal employment, but nonetheless, aside from that straining a marriage in ways that make it more likely to break up than a smaller family where the mother worked a similar amount.

3.10. Parents' income

There are mixed results of estimated parental income (and recall that there are also ambiguous result for father's occupation, which could be considered a measure of permanent income). The continuous measure of parental income is not even marginally significant in models that include measures of maternal employment (Table 2 and Appendix 1), although it has a significant positive effect on divorce when maternal employment is excluded (Appendix 1). It would be reasonable to interpret these results as indicating that income proxies for one of its important causes, maternal employment, when that is excluded from the model but has little or no causal force of its own. This might be a premature assessment, however. We also experimented with a categorical specification – specifically being in the top quartile of the estimated parental income distribution, being in the middle of the parental income distribution (i.e. the middle two quartiles – this was the reference category), and being in the bottom quartile.

This specification performs better and yields significant effects even when maternal employment intensity is in the model: Those in the top and bottom income quartiles are significantly less likely to divorce than are those in the middle.

4. Discussion

It is striking and important that the introduction of the Family Law Act had such an important effect increasing parental divorce, even in net of many other social changes – rises in education, rises in maternal employment, declining fertility and others. It remains possible that the law was simply adjusting to a massive shift in social needs, but it is also possible that the law has exerted an independent influence increasing the divorce rate.

Our results also suggest the importance of a traditional way of life in averting divorce. We find strong and robustly significant effects of parental church attendance and of having parents who are migrants from the Mediterranean region. Note that these are not proxies for Catholicism: despite the Catholic church's strong attempts to discourage divorce, equally devout Protestants and Catholics are equally likely to divorce. This make it seem likely that the "effective ingredient" of religion in reducing the risk of divorce is the shared social networks of fellow-worshippers, and perhaps, the fact the valorisation of the nuclear family that is embedded in the liturgies of most varieties of Christianity.

We find weak or null social-stratification-related effects, as have most researchers before us. Success at climbing the social ladder seems to be entirely

We find a strong connection between parental divorce and maternal employment. It is beyond the scope of this paper to tease out the causal mechanisms involved, but we note that the association is very strong. An important challenge for future research will be establishing to what degree maternal employment increases the risk of divorce, to what degree divorce intensifies maternal employment, and to what degree both are symptomatic of some deeper cause, such as an individualistic orientation. The importance of attitudes as influences on the likelihood of marrying (Sassler and Schoen 1999), makes it seem likely that we need to examine these for divorce, as well.

5. Appendix: Alternative models of divorce

5.1. Alternative models of divorce

To further explore the effects of alternative specifications and combinations of variables we estimated a variety of alternative models (Appendix Table 1).

Appendix Table 1. Alternative estimates of divorce.

Variable	Coef-ficient	St. errror	Wald	Signi-ficance	Exp(B)
Panel A					
Born before 1962 (0 or 1)	-0.371	0.080	21.2	0.000	0.69
Gender (Male=1)	-0.216	0.068	10.2	0.001	0.81
Parents' education (years)	0.029	0.014	4.1	0.042	1.03
Father's occupation (0 to 100)	-0.001	0.002	0.2	0.670	1.00
Mother's work intensity index	1.556	0.085	333.9	0.000	4.74
Parents Catholic	-0.177	0.084	4.4	0.035	0.84
Parents' church-going (ln days/year)	-0.206	0.021	95.6	0.000	0.81
Constant	-2.868	0.160	321.2	0.000	
Panel B					
Born before 1962 (0 or 1)	-0.389	0.081	23.3	0.000	0.68
Gender (Male=1)	-0.210	0.068	9.6	0.002	0.81
Parents' education (years)M	0.032	0.014	5.0	0.026	1.03
Father's occupation (0 to 100)	-0.001	0.002	0.6	0.429	1.00
Mother's work intensity	1.584	0.087	329.4	0.000	4.87
Parents Catholic	-0.215	0.085	6.4	0.011	0.81
Parents church-going (ln days/year)	-0.204	0.021	93.1	0.000	0.82
Siblings (#)	0.065	0.019	11.9	0.001	1.07
Size of place (ln)	0.026	0.010	6.2	0.013	1.03
Constant	-3.341	0.203	269.7	0.000	
Panel C					
Born before 1962 (0 or 1)	-0.382	0.081	22.4	0.000	0.68
Gender (Male=1)	-0.203	0.068	9.0	0.003	0.82
Parents' education (years)M	0.036	0.014	6.3	0.012	1.04
Father's occupation (0 to 100)	0.000	0.002	0.0	0.910	1.00
Mother's work intensity$	1.607	0.089	326.8	0.000	4.99
Parents Catholic	-0.209	0.085	6.1	0.014	0.81
Parents church-going (ln days/year)	-0.207	0.021	95.7	0.000	0.81
Siblings (#)	0.065	0.019	12.0	0.001	1.07
Size of place (ln)	0.024	0.010	5.5	0.019	1.02
Parents in top income quartile	-0.363	0.093	15.2	0.000	0.70
Parents in bottom income quartile	-0.242	0.102	5.6	0.018	0.79
Constant	-3.320	0.211	247.1	0.000	

Appendix Table 1, continued

Panel D

Born before 1962 (0 or 1)	-0.525	0.102	26.6	0.000	0.5918
Gender (Male=1)	-0.145	0.083	3.0	0.083	0.8654
Parents' education (years)M	0.064	0.019	11.4	0.001	1.0661
Father's occupation (0 to 100)	-0.002	0.002	0.9	0.336	0.9983
Parents Catholic	0.000	0.105	0.0	1.000	0.9999
Parents church-going (ln days/year)	-0.280	0.027	104.9	0.000	0.7555
Siblings (#)	0.043	0.023	3.4	0.066	1.0437
Lived in metropolitan area at 14	0.135	0.088	2.4	0.125	1.1439
Parents income estimate (ln)	0.219	0.101	4.7	0.031	1.2442
Constant	-5.233	1.063	24.2	0.000	

Panel E

Born before 1962 (0 or 1)	-0.527	0.102	26.8	0.000	0.5906
Gender (Male=1)	-0.139	0.083	2.8	0.095	0.8699
Parents' education (years)M	0.065	0.019	11.6	0.001	1.067
Father's occupation (0 to 100)	-0.003	0.002	2.2	0.140	0.9973
Parents Catholic	-0.018	0.105	0.0	0.865	0.9823
Parents church-going (ln days/year)	-0.275	0.027	100.4	0.000	0.7597
Siblings (#)	0.048	0.023	4.2	0.041	1.0488
Size of place (ln)	0.039	0.013	9.6	0.002	1.0401
Parents income estimate (ln)	0.203	0.101	4.0	0.045	1.2252
Constant	-5.445	1.065	26.1	0.000	

Panel F

Born before 1962 (0 or 1)	-0.307	0.104	8.8	0.003	0.7358
Gender (Male=1)	-0.140	0.084	2.8	0.096	0.8692
Parents' education (years)M	0.072	0.019	14.2	0.000	1.0742
Father's occupation (0 to 100)	-0.001	0.002	0.1	0.718	0.9993
Mother's work intensity$	1.477	0.114	169.5	0.000	4.3817
Parents Catholic	-0.101	0.106	0.9	0.338	0.9038
Parents church-going (ln days/year)	-0.250	0.028	81.3	0.000	0.7788
Siblings (#)	0.093	0.024	15.2	0.000	1.097
Size of place (ln)	0.028	0.013	4.8	0.029	1.0286
Parents income estimate (ln)	-0.131	0.105	1.5	0.214	0.8775
Constant	-2.672	1.086	6.0	0.014	

Appendix Table 1, continued

Panel G					
Born before 1962 (0 or 1)	-0.307	0.104	8.8	0.003	0.7358
Gender (Male=1)	-0.140	0.084	2.8	0.096	0.8692
Parents' education (years)M	0.072	0.019	14.2	0.000	1.0742
Father's occupation (0 to 100)	-0.001	0.002	0.1	0.718	0.9993
Mother's work intensity$	1.477	0.114	169.5	0.000	4.3817
Parents Catholic	-0.101	0.106	0.9	0.338	0.9038
Parents church-going (ln days/year)	-0.250	0.028	81.3	0.000	0.7788
Siblings (#)	0.093	0.024	15.2	0.000	1.097
Size of place (ln)	0.028	0.013	4.8	0.029	1.0286
Parents income estimate (ln)	-0.131	0.105	1.5	0.214	0.8775
Constant	-2.672	1.086	6.0	0.014	
Panel H					
Born before 1962 (0 or 1)	-0.358	0.105	11.7	0.001	0.6993
Gender (Male=1)	-0.138	0.084	2.7	0.103	0.8715
Parents' education (years)M	0.053	0.020	7.3	0.007	1.0548
Father's occupation (0 to 100)	-0.001	0.002	0.2	0.664	0.9992
Mother's work intensity$	1.520	0.114	177.7	0.000	4.5709
Parents Catholic	-0.034	0.106	0.1	0.751	0.9669
Parents church-going (ln days/year)	-0.238	0.028	74.1	0.000	0.7879
Siblings (#)	0.089	0.024	13.9	0.000	1.0928
Size of place (ln)	0.031	0.013	5.7	0.017	1.0316
Parents income estimate (ln)	-0.135	0.105	1.6	0.201	0.874
Parents Mediterranean migrants (0 or 1)	-1.205	0.317	14.4	0.000	0.2997
Constant	-2.438	1.091	5.0	0.025	

5.2. Fit

Appendix Table 2. Fit: Baseline deviance minus model deviance, where deviance = -2 log likelihood.

	df	Deviance
Panel A	7	575
Panel B	9	592
Panel C	11	611
Panel D	9	193
Panel E	9	200
Panel F	10	366
Panel G	10	366
Panel H	10	387

References

Amato, P. R. and S. J. Rogers. 1997. "A longitudinal study of marital problems and subsequent divorce." *Journal of Marriage and the Family* 59:612-624.

Andersson, Gunnar and Gebremariam Woldemicael. 2001. "Sex composition of children as a determinant of marriage disruption and marriage formation: evidence from Swedish register data." *Journal of Population Research* 18:143-153.

Bean, Clive S. 1991. "Comparison of National Social Science Survey with the 1986 Census." *NSSS Report* 2:12-19. Available at www.international-survey.org.

Bellah, Robert N., Richard Masden, William Sullivan, Ann Swidler, and Steven Tipton. 1985. *Habits of the Heart*. Berkeley: University of California Press.

Bracher, Michael, Gigi Santow, S. Philip Morgan, and James Trussell. 1993. "Marriage dissolution in Australia: models and explanations." *Population Studies* 47:403-25.

Brines, Julie and Kara Joyner. 1999. "The Ties That Bind: Principles of Cohesion in Cohabitation and Marriage." *American Sociological Review* 64:333-355.

Broom, Leonard, F.L Jones, Patrick McDonnell, and Trevor Williams. 1980. *The Inheritance of Inequality*. London: Routledge & Kegan Paul.

Carmichael, Gordon and Christine D. Mason. 1998. "Consensual partnering in Australia: a review and 1991 census profile." *Journal of the Australian Population Association* 15:131-54.

Carmichael, Gordon, Andrew Webster, and Peter McDonald. 1997. "Divorce Australian style: a demographic analysis." *Journal of Divorce and Remarriage* 26:3-37.

Clydesdale, Timothy. 1997. "Exploring the effects of religion and income change, 1965-1982." *Social Forces* 76:605-635.

Dillman, Don A. 1993. "The Design and Administration of Mail Surveys." *Annual Review of Sociology* 17:225-49.

Duncan, Otis Dudley, David Featherman, and Beverly Duncan. 1972. *Socioeconomic Background and Achievement*. New York: Seminar Press.

Evans, M. D. R., J. Kelley, and R. A. Wanner. 2001. "Educational attainment of the children of divorce: Australia, 1940-90." *Journal of Sociology* 37:275-297.

Evans, M. D. R., Jonathan Kelley, and Bruce Headey. 2001. "Does parental marital conflict impair their children's education?" *Australian Social Monitor* 4:71-78.

Evans, M.D.R. 1988. "Choosing to Be a Citizen - the Time-Path of Citizenship in Australia." *International Migration Review* 22:243-264.

Evans, M.D.R. and Jonathan Kelley. 2002. *Australian Economy and Society 2001: Education, Work, and Welfare*. Sydney: Federation Press.

Featherman, David and Robert M. Hauser. 1978. *Opportunity and Change*. New York: Academic Press.

Fogarty, John. 2001. "The establishment of the Family Court." *Family Matters* 60:90-99.

Glenn, Norval D. and Beth Ann Shelton. 1985. "Regional Differences in Divorce in the United States." *Journal of Marraige and the Family* 47:641-652.

Goldberger, Arthur S. 1991. *A Course in Econometrics*. Cambridge MA: Harvard University Press.

Goldscheider, Frances K. and Linda J. Waite. 1991. *New Families, No Families?* Berkeley: University of California Press.

Gottman, J. 1994. *What Predicts Divorce? The Relationship Between Marital Process and Marital Outcomes*. New Jersey: Lawrence Erlbaum.

Hoffman, Saul D. and Greg J. Duncan. 1995. "The Effect of Incomes, Wages, and AFDC Benefits on Marital Disruption." *The Journal of Human Resources* 30:19-41.

Hsu, Mei. 1998. "Determinants of marital dissolution and female labor supply." *Journal of Population Studies* 18:143-60.

International Labour Office. 1968. *International Standard Classification of Occupations*. Geneva: International Labour Office.

Jalovaara, Marika. 2001. "Socio-economic status and divorce in first marriages in Finland 1991-93." *Population Studies* 55:119-133.

Kelley, Jonathan. 1990. "The Failure of a Paradigm: Log-Linear Models of Social Mobility." Pp. 319-46 in *John Goldthorpe: Consensus and Controversy*, edited by J. Clarke, S. Modgil, and C. Modgil. London: Falmer Press.

Kelley, Jonathan and M.D.R. Evans. 1999. "Australian and international survey data for multivariate analysis: The IsssA." *The Australian Economic Review* 32:298-303.

Kelley, Jonathan, M.D.R. Evans, and Bruce Headey. 2001. "Marital strife and divorce in Australia." *Australian Social Monitor* 4:60-62.

Khoo, Siew-Ean and Zhongwei Zhao. 2001. "A DECOMPOSITION OF IMMIGRANT DIVORCE RATES IN AUSTRALIA." *Journal of Population Research* 17:68-77.

Koo, Helen and B Janowitz. 1983. "Interrelationships between fertility and marital dissolution." *Demography* 20:129-145.

Lehrer, Evelyn L. and Carmel U. Chiswick. 1993. "Religion as a Determinant of Marital Stability." *Demography* 30:385-404.

Morgan, S. P. and R. R. Rindfuss. 1985. "Marital Disruption - Structural and Temporal Dimensions." *American Journal of Sociology* 90:1055-1077.

Nakonezny, Paul A., Robert D. Shull, and Joseph Lee Rodgers. 1995. "The Effect of No-Fault Divorce Law on the Divorce Rate Across the 50 States and Its Relation to Income, Education, and Religiosity." *Journal of Marriage and the Family* 57:477-488.

Poppel, Frans van and Joop de Beer. 1993. "Measuring the Effect of Changing Legislation on the Frequency of Divorce: The Netherlands, 1830-1990." *Demography* 30:425-441.

Sassler, Sharon and Robert Schoen. 1999. "The effect of attitudes and economic activity on marriage." *Journal of Marriage and the Family* 61: 147-59.

Sikora, Joanna. 1997. "International Survey of Economic Attitudes in Australia, Finland and Poland: Comparison with the Census." *WwA: Worldwide Attitudes* 1997.12.31:1-8. Available at www.international-survey.org.

South, S. J. 2001. "Time-dependent effects of wives' employment on marital dissolution." *American Sociological Review* 66:226-245.

South, S. J. and K. M. Lloyd. 1995. "Spousal Alternatives and Marital Dissolution." *American Sociological Review* 60:21-35.

Treiman, Donald J. 1977. *Occupational Prestige in Comparative Perspective*. New York: Academic Press.

Udry, J Richard. 1981. "Marital alternatives and marital disruption." *Journal of Marriage and the Family* 43:889-898.

van Dijk, J.J.M, Pat Mayhew, and M. Killias. 1990. *Experiences of Crime Across the World: Key Findings from the 1989 International Crime Survey*. Boston: Kluwer Law & Taxation.

Waite, L. J. and L. A. Lillard. 1991. "Children and Marital Disruption." *American Journal of Sociology* 96:930-953.

Waite, Linda J., Gus Haggstrom, and David Kanouse. 1985. "The consequences of parenthood for the marital stability of young adults." *American Sociological Review* 50:850-857.

White, L. 1990. "Determinants of divorce: a review of research in the eighties." *Journal of Marriage and the Family* 52:904-912.