The Probability of Divorce in Canada, 1981-1995

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Abstract

Significant variations in divorce rates have been documented across Canada's provinces and territories. In this research note I examine the extent to which geographic probabilities of divorce have been changing over the period, 1981-1995, based on an index developed by Pressat, the probability of divorce among the currently married. The results point to a general persistence of provincial and territorial differences in divorce risk. There is also a notable (though irregular) east-west gradient in divorce probabilities. This requires further study and analysis.

Résumé

Les taux de divorce semblent subir d'importantes fluctuations partout au Canada. D'après un indice élaboré par Pressat, j'examine ici à quel point les probabilités géographiques se sont modifiées de 1981 à 1995. Les résultats indiquent le maintien général des différences provinciales et territoriales du risque de divorce; ainsi qu'un gradient notable (bien qu'irrégulier) est-ouest. Ce phénomène nécessite une étude et une analyse plus poussées.

Key words: divorce, geographic differences, probability

Introduction

Significant variations in divorce rates have been noted across Canada's provinces and territories (Makabe, 1980; Trovato, 1986; 1993; Dumas and Belanger, 1997). Recently, Goyder (1993) has argued that divorce rates (as well as suicide and homicide rates) across Canada have been following a convergent trend since the early part of the 1920s. In this study I examine the extent to which provincial and territorial divorce probabilities have been converging over a more recent period in Canadian history, between 1981 and 1995. I analyze published Vital Statistics data on divorces by duration of marriage.

The Probability of Divorce

Pressat (1974) developed an index of divorce based on published tables of the distribution of divorces in a given year by duration of marriage. He assigned to each duration-specific divorce frequency a corresponding number of marriages contracted in the years corresponding to the duration of marriage of those divorcing. To illustrate, if in year *i* there had been 10 divorces of marital duration *zero*, then the corresponding marriage cohort for these 10 cases are unions contracted in the same year, *i*. Furthermore, if there are 100 divorces in year *i* of marital duration *one*, the marriages responsible for these divorces would be those which occurred in year *i-1*; similarly, for divorces of marital duration *two*, the corresponding marriage cohort would be those marriages

which took place in year *i-3*, and so forth. The probability of divorce among the currently married p_i, based on divorces granted in year *I* is:

$$\sum d_{ij} / \sum_{j=0}^{j=30+} a_{ij}M_k \quad \text{where,}$$

$\sum d_{ij}$ = the sum of divorces in year *i* over marital durations *j*; and $a_{ij}M_k$ = the sum of the product of duration-specific relative frequencies of divorces multiplied by the corresponding number of marriages M_k (where $k = i\text{-}j = 0, 1, 2, 3, 4,..., J$); and $\sum a_{ij} = 1.000$).

The underlying assumption of P_i is that currently married couples all share the same probability of ever divorcing. Its advantage over more conventional measures (i.e., Crude and General Divorce Rates) is that it takes into account the varying contribution of marital duration to the probability of divorce. (The Crude and the General Divorce Rates are insensitive to duration effects.) The derived probabilities with this measure tend to be close to those obtained using more involved methodologies such as the multiple decrement approach. For instance, for the 1970-72 period, Adams and Nagnur (1981:28) found that the probability of divorce in Canada was 25 percent. The present index computed for the same period gives a probability of 22.5 percent. Given the close correspondence between the two measures, a case can be made in favour of the simpler index, given its ease of computation ---keeping in mind however, that p_i does not take into account the effects of widowhood and remarriage on the probability of divorce.

Data

Divorces by duration of marriage for the ten provinces and two territories were taken from published Canadian Vital Statistics tabulations (Statistics Canada, various years) for 1981, 1991 and 1995. Duration of marriage in these tabulations range from zero (i.e., marriage and divorce occurring in the same year), increasing in single years from 1 to 9, and then in five-year intervals up to 30+ (i.e, 0, 1, 2,..., 9, 10-14, 15-19,..., 30+). The numbers of marriages contracted in the years corresponding to the divorces by marital duration were also taken from Vital Statistics tables.

Observations

Table 1 shows the distribution of divorces in Canada in 1981, 1991, and 1995 by duration of marriage. In each of these time periods the majority of divorces occur to couples that have been married between 10 and 14 years, though the average duration of marriage has remained fairly constant, at around 12 years

Table 1
Distribution of Divorces by Duration of Marriage and
Summary Measures of Divorce for Canada: 1981, 1991 and 1995

Duration	1981 N	1981 %	1991 N	1991 %	1995 N	1995 %
0	163	0.24	81	0.11	320	0.42
1	1,282	1.90	1,010	1.31	2,058	2.68
2	2,517	3.72	3,323	4.32	3,824	4.98
3	3,263	4.83	4,493	5.83	4,544	5.92
4	4,420	6.54	4,647	6.03	4,934	6.43
5	4,873	7.21	4,502	5.85	4,861	6.33
6	4,809	7.12	4,430	5.75	4,361	5.68
7	4,545	6.73	4,022	5.22	3,996	5.21
8	4,090	6.05	3,900	5.06	3,506	4.57
9	3,670	5.43	3,699	4.80	3,270	4.26
10-14	13,271	19.64	14,993	19.47	13,573	17.68
15-19	7,668	11.35	10,993	14.28	10,158	13.24
20-24	5,534	8.19	8,191	10.64	8,237	10.73
25-29	3,709	5.49	4,282	5.56	5,003	6.52
30+	3,760	5.56	4,438	5.76	4,106	5.35
Total	67,574	100.00	77,004	100.00	76,751	100.00

Average Duration: 12.08 (SD = 8.3)   12.81 (SD = 8.4)   12.49 (SD = 8.5)

CDivR (per 1,000):   2.78   2.74   2.62

Note: Mean duration of marriages were computed by assigning mid-points to the grouped duration categories (30+ received a mid-point of 32). CDivR is the Crude Divorce Rate per1,000 population. Table compiled from published data in Canadian Vital Statistics for years corresponding to 1981, 1991 and 1995 (Statistics Canada. Catalogues 84-213-XPD; 84-213 Annual and 84-204).

(see bottom of Table 1). Between 1981 and 1995 the Crude Divorce Rate in Canada declined slightly, from 2.78 per 1000 population, to 2.62. However, as reflected in Table 2, between 1981 and 1991 the probability of divorce had actually increased, from 37 to 40 percent, remaining at this level in 1995.

As shown in Figure 1, between 1981 and 1995, a rise in the probability of divorce is noticeable in virtually all 12 geographic areas of the nation (except in Alberta, British Columbia and Nova Scotia, where some reductions took place recently). In the early 1980s, Alberta, British Columbia, Yukon and Quebec led in divorce probabilities; however, by 1991 the rank order of provinces/territories changed somewhat, with British Columbia leading, followed by Quebec and then Alberta. Newfoundland, Prince Edward Island, New Brunswick, Manitoba, and Saskatchewan have generally represented low divorce area in Canada. In 1995, the highest probabilities of divorce were found in the Yukon (53%) and Quebec (48%), followed by British Columbia (44%) and Alberta (40%). On the whole, these trends suggest a continuation of an irregular east-west pattern in divorce incidence (see correlations, bottom of Table 2).

Conclusion

Recently, Goyder (1993) has proposed that Canada's provinces are increasingly becoming homogeneous in terms of their social and demographic features. Insofar as divorce probabilities are concerned, the present results tend to contradict this view. Substantial differences in the probability of divorce still exist across Canada's provinces and territories. The high divorce levels currently prevailing in Quebec, British Columbia, Alberta, and the Yukon, plus the apparent persistence of an irregular east-west gradient in divorce probabilities require further study.

Table 2
Probability of Divorce among the Currently Married
for Canada, Provinces and Territories: 1981, 1991 and 1995

Province	1981		1991		1995	
	p_1	Rank	p_1	Rank	p_1	Rank
Newfoundland	0.1362	12	0.2261	12	0.2427	12
Prince Edward Island	0.2077	11	0.2830	11	0.2650	10
Nova Scotia	0.3380	5	0.3288	7	0.3334	7
New Brunswick	0.2346	10	0.2919	9	0.2613	11
Quebec	0.4009	4	0.4505	2	0.4797	2
Ontario	0.3348	6	0.3843	4	0.3939	5
Manitoba	0.2766	7	0.3266	8	0.3202	8
Saskatchewan	0.2463	9	0.2889	10	0.3124	9
Alberta	0.5297	1	0.4485	3	0.3974	4
British Columbia	0.5053	2	0.4694	1	0.4442	3
Yukon	0.4448	3	0.3385	6	0.5336	1
Northwest Territories	0.2675	8	0.3420	5	0.3801	6
Canada	0.3721		0.4007		0.4031	

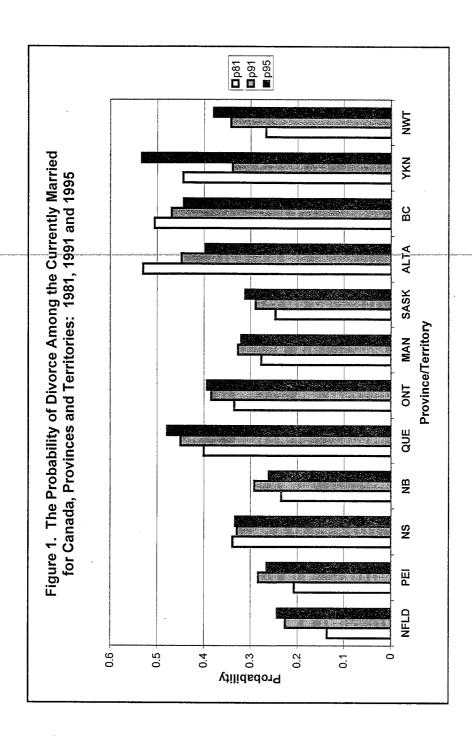Zero Order Correlations:
Probability (1981, 1991) = .892 (p < .05)
Probability (1991, 1995) = .734 (p < .05)
Probability (1981, 1995) = .811 (p < .05)
East-West index (Nfld = 1, NWT = 12) with Probability 1981 = .589 (p < .05)
East-West index (Nfld = 1, NWT = 12) with Probability 1991 = .498 (ns)
East-West index (Nfld = 1, NWT = 12) with Probability 1995 = .665 (p < .05)

Figure 1. The Probability of Divorce Among the Currently Married for Canada, Provinces and Territories: 1981, 1991 and 1995

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