University of Alberta

The Effect of Premarital Cohabitation on Marital Stability Over Duration of Marriage

by

Ronald A. Budinski 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment

of the

requirements for the degree of Master of Arts

in

Demography

Department of Sociology

Edmonton, Alberta

Spring 2003

University of Alberta

Library Release Form

Name of Author: *Ronald A. Budinski*

Title of Thesis: *The Effect of Premarital Cohabitation on Marital Stability Over Duration of Marriage*

Degree: *Master of Arts*

Year this Degree Granted: *2003*

1203, 1285 Richmond Road
Ottawa, Ontario
K2B 7Z4

October 30, 2002

University of Alberta

Faculty of Graduate Studies and Research

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *The Effect of Premarital Cohabitation on Marital Stability Over Duration of Marriage* submitted by Ronald A. Budinski in partial fulfillment of the requirements for the degree of Master of Arts in Demography.

Dr. Frank Trovato

Dr. Herbert Northcott

Dr. Doug Wiens

Date: October 23, 2002

Abstract

Research has found that premarital cohabitors are more likely to divorce or separate than their non-cohabiting counterparts. This study investigates the possibility that the difference in marital stability between cohabitors and non-cohabitors may change over marital duration. Using 1995 General Social Survey data, tests were conducted with Proportional Hazards Models to compare the marital dissolution risks of cohabitors and non-cohabitors, while controlling for a set of marital instability predictors. Both groups had virtually identical dissolution risks when controlling for all predictors, but dropping birth cohort-related and contraceptive use covariates produced a slightly greater dissolution risk for cohabitors. Further tests to differentiate between short- and long-term unions indicated that premarital cohabitors have a greater dissolution risk in the first ten years of their union, while non-cohabitors have a greater hazard than cohabitors after ten years of marriage. Results, and suggestions for further study are discussed.

Acknowledgements

I would like to thank my supervisor, Dr. Frank Trovato, for his helpful advice and feedback throughout the course of my writing this thesis. I would also like to thank Dr. Zheng Wu of the University of Victoria, for his advice on use and recoding of data from the1995 General Social Survey, for use in SPSS 10.0

Table of Contents

List of Tables

Page

List of Figures

Page

Chapter 1:
Introduction and Statement of the Problem

The transformation of conjugal unions in favour of cohabitation has been fairly recent, but swift in Western society. Although cohabitation was practiced even before the start of the twentieth century, it was a rare occurrence and was socially disapproved of right up until the late 1960s. Its growing popularity as a legitimate form of union between a man and a woman has almost made it an expected stage in the marriage process in Canada, or (increasingly), a marital substitute for those who are reluctant to commit to the legal and social bindings of marriage. As a result, cohabitation has garnered much attention among social scientists and demographers. In virtually all research on the subject, premarital cohabitation has been found to lead to greater marital instability. Marriages between cohabitors tend to end in separation or divorce of the couple at a higher rate than the marriages of non-cohabitors. However, we would not expect all marriages between cohabitors to end this way (at least immediately), just as we would not expect all marriages between non-cohabitors to remain intact. Would those cohabiting couples that have managed to keep their marriages together after so many years while the other cohabiting couples have since dissolved theirs, still be more likely to experience marital dissolution than the non-cohabitors? In other words, is the effect of premarital cohabitation on marital instability just as powerful several years into the marriage as it is early on in the marriage? If not, does the cohabitation effect dissipate after several years of marriage, once the couple is firmly established, or does it lead to even greater likelihood of marital separation as the marriage lengthens?

The purpose of this study is to determine if in fact a marital duration-dependent effect of premarital cohabitation exists. If it does, what are the explanations for it? Are there other factors associated with marriage that may affect the marriages of cohabitors and non-cohabitors differently, at different durations? There are a few possible outcomes,

consistent with the research discussed: (1) premarital cohabitation is negatively associated with marital stability, and the probability of marital disruption is greater for cohabitors than for non-cohabitors at any point of time in marriage; (2) probability of dissolution is greater for cohabitors only at early durations; the "risk gap" between cohabitors and non-cohabitors declines with time spent in marriage, until a point is reached where there is no significant difference; (3) probability is greater for cohabitors only at later durations; there is no significant difference in early durations; (4) probability is not significantly different for cohabitors and non-cohabitors at any duration; (5) premarital cohabitation is positively associated with marital stability, and the probability of marital disruption is greater for non-cohabitors, at any marital duration. Determining outcomes of marriages between cohabitors helps us to understand how the cohabiting relationship is evolving and growing in Western society. Theories of marriage and family, as well as government policies, may require revisions over time as a new type of relationship spreads throughout various demographic and socio-economic subgroups.

Cohabitation, or the common-law union (CLU)[1], as it is generally known in Canada, rose out of the social and economic transformations that have characterized the "modern" period in Western society. It has been described in the 1996 Canadian census form as "...(referring) to two people who live together as husband and wife but who are not legally married to each other." (Wu 2000, p. 34). Definitions may vary across countries or time; some may be more restrictive than others. Regardless, cohabitation is a form of union in which the partners resemble a married couple in terms of place of residence and sexual activity, but without the legal legitimacy of marriage.

Numerous studies have documented the rise in cohabitation rates in Canada (e.g. Balakrishnan, Lapierre-Adamcyk, and Krotki 1993; Le Bourdais, Neill, and Vachon 2000; Pollard and Wu 1998), the United States (e.g. Bumpass and Sweet 1989; Graefe

[1] In this study, the abbreviation CLU and the term "cohabitation" are used interchangeably to mean the same thing.

and Lichter 1999; Smock 2000), and other Western countries (e.g. Berrington 2001; Bennett, Blanc and Bloom 1988). Researchers have indicated the tendency of cohabitation to be short-lived (Balakrishnan et al. 1993; Burch 1989; Seltzer 2000; Teachman and Polonko 1990), and have found evidence that premarital cohabitation tends to lead to a less stable marriage (Axinn and Thornton 1992; Balakrishnan, Rao, Lapierre-Adamcyk, and Krotki 1987; Bennett, Blanc and Bloom 1988; DeMaris and Rao 1992; Lillard, Brien, and Waite 1995; Schoen 1992; Teachman and Polonko 1990; Thomson and Colella 1992).

In addition to documenting the rise of common-law relationships in Western society, sociologists and demographers have also investigated the social, cultural, and economic changes resulting in and arising from the sudden growth in this new form of living: the increasing affluence in Western society, the changing function of the family, the sexual revolution, the increasing economic independence of women, the impact of cohabitation on marriage, divorce, and childbearing, and its implications for the future of the family. Recent trends indicate that as cohabitation becomes more socially acceptable, it is itself changing in meaning over time, becoming more like formal marriage, and an appropriate setting in which children may be conceived and brought up (Seltzer 2000).

Some previous studies have touched on the possibility that premarital cohabitation may have a varying effect upon marital stability over the course of a marriage, but discussion has been rather limited, since it was not the focus question of these studies. Results have also been inconclusive. Using data from a Swedish survey on women conducted in 1981, Bennett et al. (1988) found that the hazard of marital dissolution for cohabitors was greater than it was for non-cohabitors until the first eight years of marriage, and only small and insignificant differences between the risks for both groups after this time. This contradicted the results of Teachman and Polonko (1990), who took their data from the National Longitudinal Study of the High School Class of 1972, conducted in the United States in 1986. Their study found that premarital cohabitation

had little effect before the first ten years of marriage, and after this time, cohabitors were more likely to experience marital dissolution than noncohabitors. When controlling for duration, however, the authors found no significant differences in marital disruption between the two groups. Using the same data, Lillard et al. (1995) showed that, for both cohabitors and non-cohabitors, the risk of marital disruption rises quite significantly during the first few years of marriage, then increases at a slower rate. Also using American data, in this case the 1987-88 National Survey of Families and Households, Schoen (1992) noted that the differential risk of dissolution is greater for cohabitors during the early years of marriage only, while DeMaris and Rao (1992) found that marital dissolution is much more likely among cohabitors than non-cohabitors at *any* marital duration.

The majority of this research is American. What little Canadian research has been done on the issue has also led to inconclusive results. In his study, White (1987) took his data from the 1984 Family History Survey conducted on Canadian men and women and found, contrary to almost all other studies on the subject, that premarital cohabitation has a *positive* effect on marital stability. The positive effect remained even when controlling for marital duration. Wu (2000) used a different source for his analysis, the 1990 General Social Survey, and found not only that premarital cohabitation increases the risk of marital disruption, but also that its effect becomes *stronger* with marital duration. Balakrishnan et al. (1987) indicated that the cohabitation effect on marital stability is negative, based on data conducted on Canadian women of ages 18-49 for the Canadian Fertility Survey. Using a reference group of non-cohabitors, the authors found that the proportion of marriages ending in dissolution was higher at all marital durations for cohabiting than for non-cohabiting women, though the difference with the reference group seems to increase proportionally with time spent in marriage.

Since it was not the purpose of these authors to focus specifically on the possibility of a variable risk of marital dissolution over time, due to premarital cohabitation,

explanations for this phenomenon have been brief, and as varied as the results. For example, Bennett et al. suggested that after a certain number of years in marriage, those cohabiting women who have a propensity to divorce had already done so, leaving the more stable cohabitors remaining in marriage. Morgan and Rindfuss (1985) extended this selectivity hypothesis to all marriages by stating that as a marriage cohort ages, a selection process occurs so that the strongest marriages survive, thus reducing the probability of marital disruption over time. In addition, the amount invested into the marriage by each spouse increases with time, which makes disruption less likely to occur. White (1987) argued that cohabitation might aid marital stability, even in the early years of marriage, because it delays the age at marriage and provides couples more time to mature. Teachman and Polonko (1990) stated that marital structures of cohabitors are more complex than those of non-cohabitors, but do not explain their finding that differences in marital stability between the two groups is not significantly large until ten years of marital duration.

A need therefore exists to more fully explore the effect of premarital cohabitation on marital stability, by marital duration. The previous studies have brought conflicting results that have not been sufficiently explained. In addition, much of the research in this area has been based on data collected in the United States. The two Canadian studies by Balakrishnan et al. (1987), and White (1987), have only touched on the subject of marital duration-dependent effect of cohabitation. Further investigation is warranted using the most up-to-date Canadian data on marriage and cohabitation.

Of the five possible outcomes of marital dissolution risk between cohabitors and non-cohabitors, outlined on page 2, the most logical would appear to be the second, bearing in mind the selection process that "weeds out" the weaker, less committed marriages. Most studies on cohabitation and the characteristics of cohabitors would contradict the final two outcomes, that cohabitation has either no effect, or a positive effect, on marital stability. Using previous research as a guide, we would expect that

cohabitors have a greater risk of marital disruption than non-cohabitors do. A greater risk would lead to shorter marriages on average for cohabitors, selecting the more unstable marriages for dissolution early on and leaving the stronger marriages to continue. Cohabitors who have managed to reach longer marital durations would have invested much time and effort and demonstrated a strong commitment to marriage, so that after a certain number of years of marriage they may not face a significantly higher risk of dissolution than non-cohabitors would.

Chapter 2:
Background: Changes In Family Formation Since the Start of the Industrial Revolution

2.1 Introduction

The rise in the incidence of cohabitation is but one of several family-related transformations that took place in Western countries during the post-Second World War period of the twentieth century, particularly from the 1960s on. The roots of change go all the way back to the industrial revolution during the previous century.

The pre-industrial family unit was also an economic unit in the largely agrarian economy, combining both production and consumption (Nett 1993). The sexual division of labour within the family was distinct. The "private sphere" – women's sphere – existed within the family home, and consisted of taking care of the home and children. All matters pertaining to outside the home – hunting, warfare, politics, work, and property – existed in the public sphere occupied by men, and in which women were basically excluded (Conway 2001). Nevertheless, there was no great divide between the sphere of production and the sphere of home, as husbands, wives, and children all contributed their part toward the family's economic production of goods. Children's labour, in fact, was vital to the family's economic well-being at that time, and even into the twentieth century. Children themselves were considered to be basically "miniature adults".

As industrialization expanded, however, production in the new economy shifted from the family to the factory. Most of the new jobs were located in urban areas, forcing families to migrate to cities. Western societies became increasingly urbanized and are still continuing to do so today. At first, all family members were forced to participate in the industrial work system. But poor working conditions and discontent among the working class brought reforms. Thereafter, the factories became the domain of the sole family breadwinner. The public and private spheres separated but the sexual division of labour

remained as it had been. Husbands and fathers, the acknowledged heads of the household, were required to find work outside the home in the public sphere to support their families, while the notion of motherhood as the primary female vocation relegated wives and mothers to the home, dependant on their husbands (Conway 2001). The function of children as economic contributors to the family changed during this time as well. Childhood came to be idealized as a period of innocence. Parents tried to protect their children by removing them from the trials of the industrial work system. Those who had the means sought to provide their children with better education and an enriched lifestyle. Eventually education became compulsory. Children became less and less involved in work at home, the cost of raising a child increased, and their value to the family changed from economic to emotional (Nett 1993). The industrial nuclear family, consisting of husband as sole breadwinner, wife as homemaker and family caregiver, and children, was evident by the start of the twentieth century.

Up until the middle of the twentieth century, the industrial nuclear family was the established norm that all families in Western countries either aspired to, or were. Parents brought their children up to remain in the family home until the time that they were able to marry, and marriage was the only acceptable conjugal union between a man and a woman. Any other path toward family formation was frowned upon. Having lost its economic role as producer, by the 1920s the industrial family was being courted by marketers as a consumer unit, heralding the rise of the consumer society (Nett 1993).

Industrialization had brought new medical technologies, treatments, and improved sanitary conditions, increasing life expectancy, reducing infant mortality, and generally allowing people to remain healthier throughout their lives. As a consequence, families began to get smaller as parents realized that it was no longer necessary to conceive several children just so that a few of them could survive. The transformation of children from economic asset to economic liability was also an important factor in reducing family size. A trend toward marriage at a later age also began to occur, especially during the

great depression, when family formation, as it tends to happen during economic downturns, was delayed or put on hold. However, these trends suddenly reversed following the Second World War, with the start of the baby boom.

The sustained period of economic hardship created by the Great Depression, and later the Second World War, had reduced aspirations toward family formation, furthering the trend toward delayed marriage and fewer children. But the unprecedented economic expansion following the war had brought new prosperity to people of all economic groups, and family was back in vogue. Marriage rates increased, marriages began to occur earlier in young people's lives, and couples were suddenly having more children. New urban suburbs sprouted up in every city to house the multiplying families.

During the early years of the post-war baby boom, the industrial nuclear family was still the imposed norm, and in fact was reaching its zenith (Conway 2001). The glorification of the family and reversal of the family trends begun early in the century was to last less than three decades, however, as social and economic transformations took shape in Western society during the 1960s. These transformations reflect more of a sudden continuation of trends that had their start late in the previous century, rather than new developments. It is therefore the baby boom era with its high marriage and fertility rates and early age at first marriage that is the aberration, not the period that followed (Oppenheimer 1994; Oppenheimer and Lew 1995).

2.2 Marriage

Marriage as an institution has been losing out in popularity to other forms of family formation behaviours over the last four decades. It is no longer a necessary condition for other life course events such as sex, new living arrangements, and parenting (Bumpass 1990). Despite changes in marital and sexual behaviour, however, few young adults believe that remaining single is preferable. Most believe in the importance of marriage and intend to marry at some point in their lives. They are, however, having second

thoughts about entering what is supposed to be a permanent union early in their adult lives, and are willing to postpone marriage until later on in life, maybe even indefinitely, if they feel they are not ready to commit to it (Oppenheimer 1994). Young people are also much more likely than older cohorts to exit a marriage when they believe it is not right for them.

Numerous studies have documented the decline of marriage rates and increasing age at first marriage in Canada, the United States, and Europe (Balakrishnan et al. 1993; Bumpass 1990; Bumpass, Sweet, and Cherlin 1991; Cherlin 1990; Dumas and Péron 1992; Espenshade 1985; Lesthaeghe 1983; Moore and Stief 1991; Norton and Moorman 1987; Rao 1990; Teachman 1982; Teachman et al. 2000; Trovato 1988). Oppenheimer (1994) notes that cohorts reaching maturity during the baby boom era married at an earlier age on average than late nineteenth- and early twentieth-century cohorts, while the marriage formation behaviour of recent cohorts is beginning to resemble that at the turn of the century.

The trend toward reduced marriage rates and postponed marriage first occurred in Scandinavian Europe before spreading to the rest of Europe and North America. First-marriage rates in some European countries began to decline around 1965, dropping significantly by the late 1970s to levels between 50 and 75 percent of what they had been in 1960 (Lesthaeghe 1983). The swift decline had its origin in Sweden. There, the first marriage rate dropped from 956 per 1000 in 1965 to 624 only five years later. By the early 1970s, the decline became more pronounced in the other Scandinavian and Germanic countries, spreading to England and France a short time later. Only Eastern European countries appeared to be immune to the trend (Dumas and Péron 1992).

In Canada, the average number of first marriages declined drastically since 1972, and the proportion married declined from 95% in 1965 to 86% in 1986 (Rao 1990). The number of marriage ceremonies conducted in 1997 declined 24% from the peak in 1972 (Statistics Canada 1999). Additionally, the average age of brides at first marriage

increased by more than two years between 1971 and 1986, from 22.2 to 24.6 (Balakrishnan et al. 1987), and to 27.4 years by 1997 (Statistics Canada 1999).

The decline in marriage rates for Canada would not have been so precipitous, were it not for Quebec. Studies on Canadian demographic behaviours have shown that Quebec differs significantly from the rest of Canada in family formation behaviour and is a strong influence on the decline in marriage rates for the country as a whole (Balakrishnan et al. 1993; Dumas and Bélanger 1997; Dumas and Péron 1992; Hobart 1996; LeBourdais et al. 2000; Marcil-Gratton, LeBourdais and Lapierre-Adamcyk 2000; Pollard and Wu 1998; Wu 2000; Wu and Balakrishnan 1995). Figure 2.1 presents crude marriage rates for Canada and the Provinces for 1960, 1975, and 1999. The graph clearly indicates the significant decline in marriage in Quebec throughout the period; Quebec rates have dropped to become the lowest in the country. The decline in crude marriage rates for Canada as a whole and for Quebec alone, from 1960 to 2000, is indicated in Figure 2.2. The rate for Quebec fell below the Canadian rate around 1965 and has remained below ever since, with the gap between the two rates widening over time. Quebec's crude marriage rate has remained approximately 2 points below the Canadian rate since the late 1980s. The *total first marriage rates* for Quebec, Canada, and Canada less Quebec, are indicated in Figure 2.3. The low rates in Quebec exert a strong downward influence on the rates for all of Canada. Quebec has in fact had total first marriage rates far lower than any other Canadian province throughout all the years indicated on the chart.

Marriage is not only in decline in Canada. In the United States, the rate of first marriage during the mid-1990s was even lower than the unusually low rates that occurred during the great depression. The percentage of White and African-American women ever married declined by about 32 percentage points between 1975 and 1998, and married couples declined as a percentage of all households, from over 70% in 1970 to 53% in 1998 (Teachman et al. 2000). The rate of first marriage among all women peaked at 140 per 1000 women in 1944 and has continually declined ever since, reaching 80 in 1984

Figure 2.1. Crude Marriage Rates, Canada and Provinces, 1960, 1975, and 1999

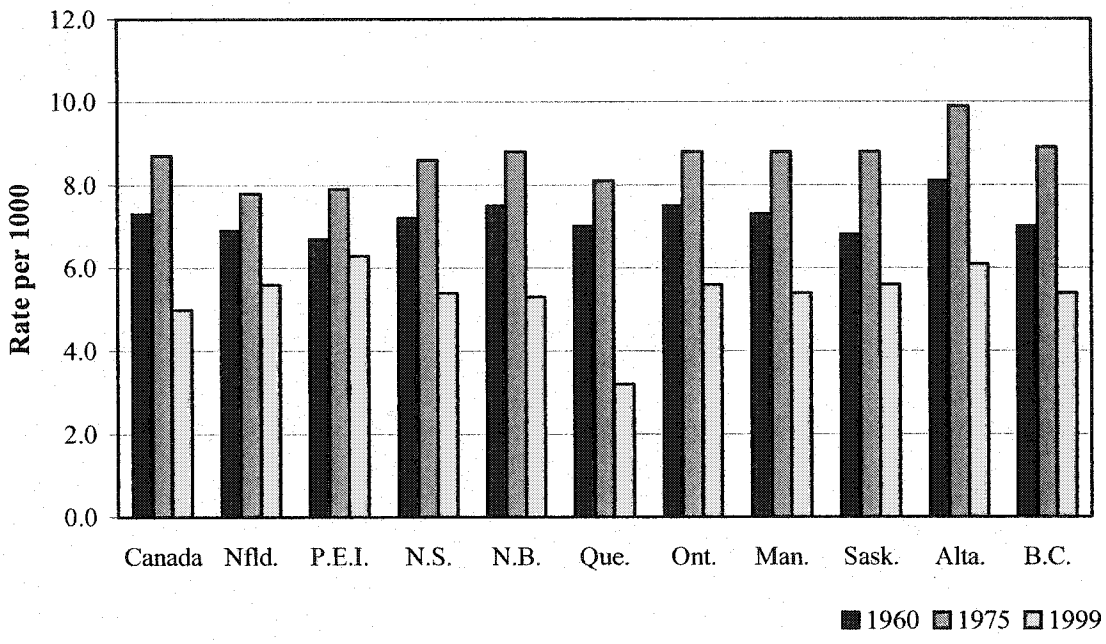
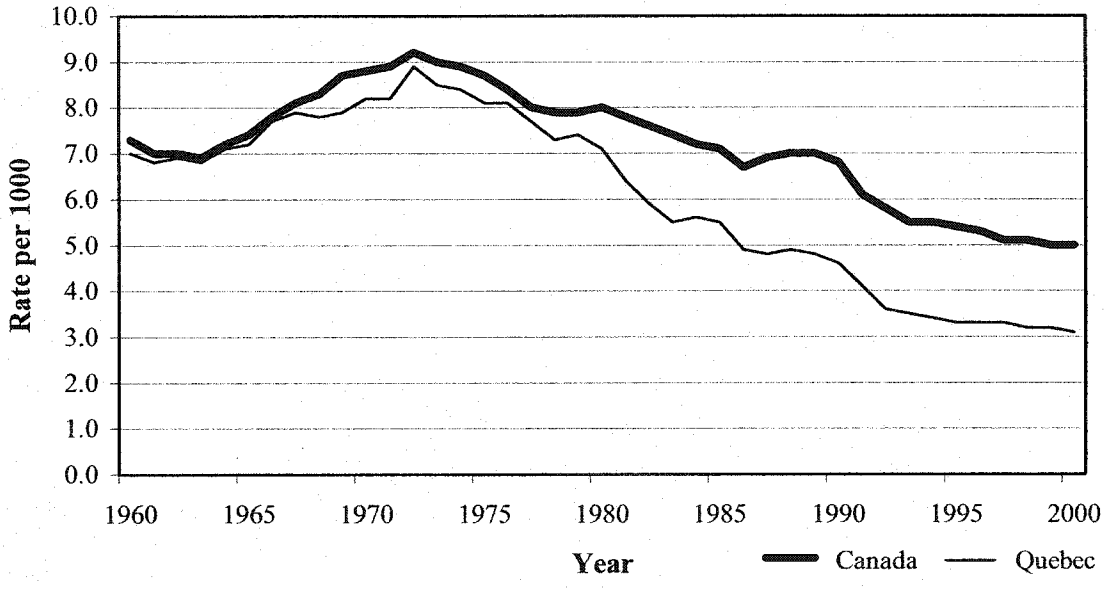
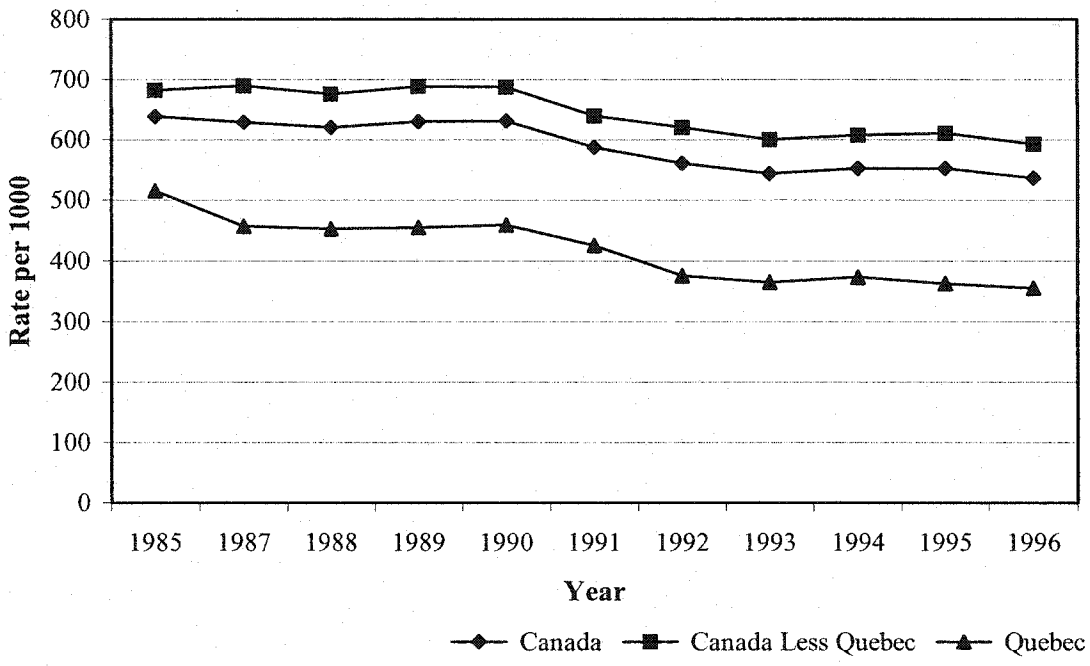


Figure 2.2. Crude Marriage Rates, Canada and Quebec, 1960-2000



Sources: Statistics Canada. *Vital Statistics Vol. II: Marriage and Divorce* Cat. No. 84-205; *Annual Demographic Statistics* Cat. No. 91-213

Figure 2.3. First Marriage Rates, Females: 1985-1996



Sources: Statistics Canada. *Vital Statistics Vol. II: Marriage and Divorce* Cat. No. 84-205; *Annual Demographic Statistics* Cat. No. 91-213

(Norton and Moorman 1987). In addition, the proportion of women in their early twenties who were still single increased from 28 to 58 percent between 1960 and 1985, while those proportions for women in their mid- to late twenties increased from 10 to 26 percent during that time (Goldscheider and Waite 1991). The median age at marriage for young American adults has also increased by more than three years between the 1950s and the 1980s (Cherlin1990).

By the 1960s, young people were no longer remaining in the family home up until marriage. In increasing numbers, they were leaving home and experiencing a variety of living arrangements until they could find the right marital partner. Axinn and Barber (1997) note,

> ... time spent away from parents provides an opportunity for individuals to interact with people holding attitudes and values that are not characteristic of the past. Thus, independent living in early adulthood would provide an opportunity to interact with

> individuals who hold different family formation values than parents, and this social interaction could produce changes in individuals' family formation values. (p.597)

An important role for marriage had been reduced, changing young people's attitudes toward the desirability of marriage and creating a greater tolerance toward singlehood and non-marital, coresidential unions (Goldscheider and Waite 1986). For recent cohorts, marriage was falling out of favour as the next phase in the life course after adolescence and departure from the parents' home. Most young people still expected to eventually marry, however, but they were more willing to delay marriage and live independently for some time before that than their parents had been.

2.3 Divorce

Along with changes in attitude toward marriage came an increased tolerance toward divorce. While younger cohorts have tended to be reluctant to enter into a marital union, at least until several years into adulthood, they have been much more willing than their elders to leave a marriage if they feel it is not working out.

Rising marital instability is not as new as is believed. Like the change in marital behaviours, divorce as a solution to marital woes had been gaining momentum since early in the twentieth century. Writing in reference to the American context, which we could safely extend to other Western countries, Oppenheimer (1994, p. 31) states that "... the trend toward increased marital instability is of long standing in American society; furthermore marriages contracted during the baby boom era were more stable than marriages contracted earlier as well as later and hence, once again, the baby boom era shows itself to be atypical in a historical context." However, starting around the late 1960s and continuing into the 1970s and early 80s, divorce rates climbed dramatically in Western countries just as marriage rates were declining. The possible relationship between the two trends has been noted. With high dissolution rates in mind, individuals

may question whether entering into marriage is worthwhile if it is such a fragile and unstable relationship.

The initial jump in divorce rates may be partially attributed to demographic factors, due to the substantial rise in the number of short-term marriages associated with early members of the baby boom cohort, who came into marriageable age from the late 1960s through the 1970s (Teachman et al. 2000). Marital dissolution, nevertheless, is most common among recent birth cohorts, particularly those born during the baby boom and afterwards. It is not uncommon now for some people in younger cohorts to have entered and exited more than one marriage while their parents have continued to remain married to each other.

Attitudes toward divorce may have been influenced by the propensity of young people to live on their own before marriage, where they may become more individualistic, less family-oriented, and more self-sufficient. This independent living would allow them to develop skills necessary for running a household on their own. A departure from marriage would therefore seem less daunting to these people than to those who never lived independently (Goldscheider and Waite 1991). Additionally, a previous experience with divorce or separation could increase tolerance toward divorce, as some studies have indicated (Axinn and Barber 1997; Balakrishnan et al. 1993), which would explain why second and subsequent marriages are less stable than first marriages (Castro-Martin and Bumpass 1989). The trend toward smaller families may also make divorce easier for couples, since their "investment" into the family is smaller than those couples with several children.

Undoubtedly, one of the major factors increasing the incidence of marital dissolution in Canada has been the liberalization of divorce laws in 1968 and 1985. As Figure 2.4 indicates, crude divorce rates in all provinces in Canada still remained at low levels in 1960, but had jumped dramatically by 1975, after the first Divorce Act of 1968. The sudden surge in divorce is more clearly indicated in Figure 2.5. Quebec, which had

Figure 2.4. Crude Divorce Rates, Canada and Provinces, 1960, 1975, and 1999

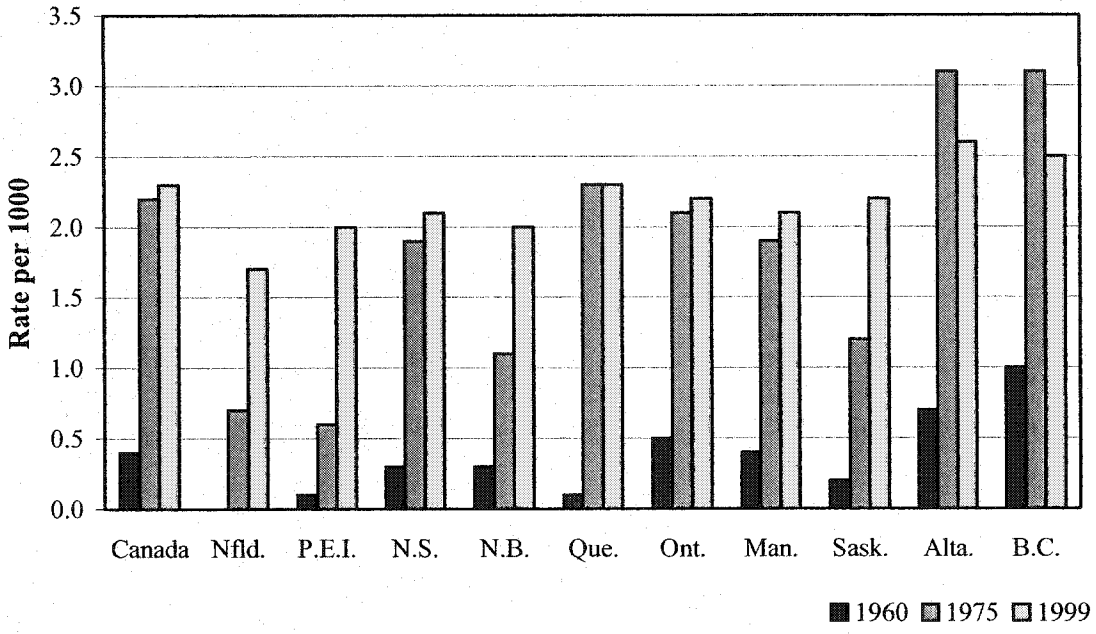
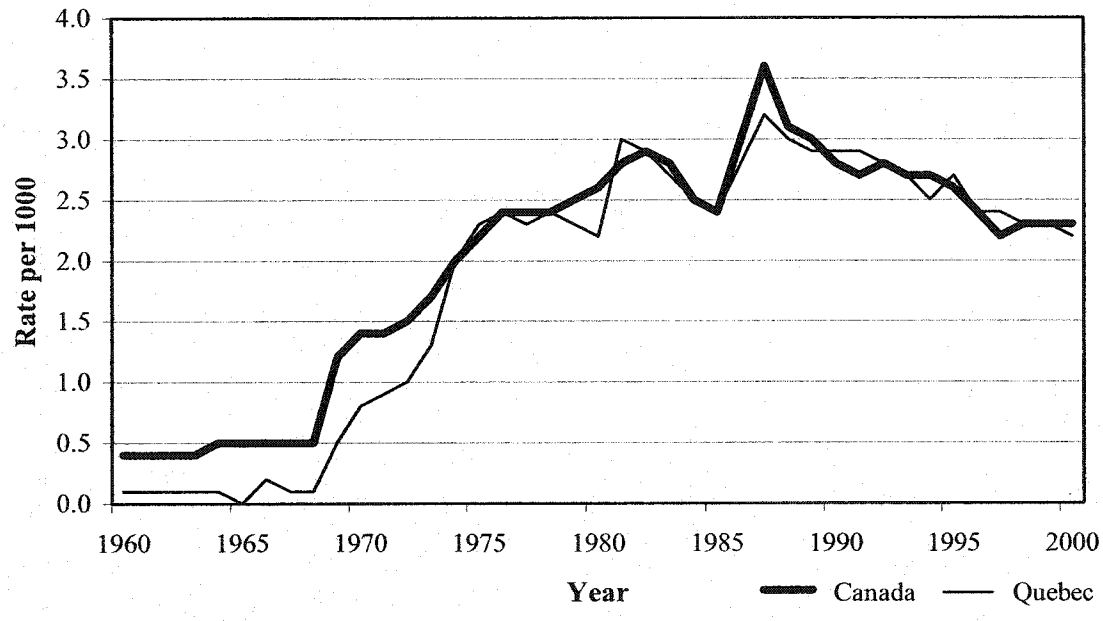


Figure 2.5. Crude Divorce Rates, Canada and Quebec, 1960-2000



Sources: Statistics Canada. *Vital Statistics Vol. II: Marriage and Divorce* Cat. No. 84-205; *Annual Demographic Statistics* Cat. No. 91-213.

had lower crude divorce rates than Canada as a whole until about the mid-1970s, has more or less fallen in step with the rest of the country since then. There has been some leveling off and even decline in the incidence of divorce since the skyrocketing rates of the 1970s and 1980s, but rates still remain much higher than they had been prior to the first change in divorce laws in 1968. In 1998, the number of marriages in Canada ending in divorce rose for the first time in four years (Statistics Canada 2000), although it is still too early to determine if this is the start of another upward trend.

Likewise in the United States, the divorce rate doubled between the early 1960s and the mid-1970s, and has been relatively stable since (Cherlin 1990). Countries in Western Europe experienced a surge in divorce rates beginning around 1970, and in some, rates have almost doubled only eight years later (Lesthaeghe 1983).

Based on 1998 Canadian divorce rates, 36% of all marriages are expected to end in divorce within 30 years of marriage, and 39% are expected to end within 50 years. As marriage has been starting later in people's lives, so too has divorce (Statistics Canada 2000). According to recent American rates, Castro-Martin and Bumpass (1989) estimate that more than one-half, and as many as two-thirds, of first marriages will end in separation or divorce. Denmark has led the way in Europe, with divorce rates of 251 per 1000 marriages in 1970 to 398 by the end of the 1970s. During the same period, rates for England and Wales more than doubled, from 162 in 1970 to 367 by 1979-80.

When marital dissolution does occur, it tends to happen fairly early into the marriage. In Canada, the likelihood of divorce peaks around the fifth year of marriage (Statistics Canada 2000). The longer a couple stays married past this peak, the more stable their marriage becomes, as the couple's knowledge of each other, and investments such as children, friends, and material goods accumulate (Goldscheider and Waite 1991).

The rapid rise in divorce rates seems to have ended almost twenty years ago, and rates have stabilized or even declined slightly since then, but still remain at very high levels, compared to what they were prior to 1968. There remains a large proportion of

marriages that are dissolved, leading to new family forms that were rare only forty years ago, such as one-parent and blended families. The number of divorces is most likely down along with the number of marriages, as young people today experiment with other family forms such as cohabitation before committing to marriage, but recent trends do not point to a surge in the rate of stable marriages.

2.4 Remarriage

Since divorce has become so prevalent in Western countries, it would seem to follow that remarriage would also be on the rise. Some American studies have in fact shown that remarriage is becoming more prevalent, and a larger proportion of marriages are second or higher rank, but this differs by race and by age group (Espenshade 1985; Norton and Moorman 1987). Others have contradicted these findings, though, stating that remarriage rates declined in the 1970s and 80s (Bumpass 1990; Cherlin 1990), that the *overall* proportion of ever-married women age 20 to 54 who have been married more than once has declined since 1975 (Norton and Moorman 1987), that the *number* of remarriages has declined since 1972 and an increase in the interval between divorce and remarriage has occurred (Teachman 1982), that the percentage of women remarrying after divorce has declined even as divorce has increased (Teachman et al. 2000), and that the *total* remarriage rate in Western Europe has declined since 1970 and has not kept pace with the divorce rate (Lesthaeghe 1983). In Canada, the rate of remarriage has been in decline, from 162 per 1000 (for divorced women) in 1961 to 77 per 1000 in 1986. Remarriage does make up a larger proportion of all marriages in Canada, however (Ram 1990). Confusion over the differing results notwithstanding, the trend in Western countries is that (1) remarriages make up a larger proportion of all marriages than they had in the past, due to the greater pool of divorced persons, (2) any increase in remarriage is due to the rise in divorce rates rather than a greater propensity to remarry (Espenshade 1985), and (3) remarriage has been declining in popularity just as marriage in general is in

decline, due to the growing popularity of alternative conjugal unions. Remarriage rates and timing may also differ by a person's demographic and socioeconomic characteristics such as gender, age, race, religion, and occupation and earnings (Sweeney 1997), so it is difficult to determine if there is a long-term remarriage trend in development. The important point is that remarriage in recent decades differs from remarriage in the past in that it mainly involves persons who have experienced a previous divorce, rather than those who had lost a spouse to death. Also important is the fact that stability of remarriages may differ from that of first marriages. While Castro-Martin and Bumpass (1989) state that second marriages are less stable than first marriages, arguing that remarriage is selective of individuals who hold more positive attitudes toward divorce or who possess characteristics that are less conducive to marital stability, Clarke and Wilson (1994) find evidence that remarriages are more likely to end in divorce than first marriages only in the early years of marriage, but the rates tend to converge with time.

2.5 Fertility

One of the main functions of the family is the bearing, raising and socializing of children. As previously noted, families have been getting smaller as infant and child mortality has declined and the financial burden of children on families has increased. This trend has been evident in Western countries since before the start of the twentieth century, but was temporarily reversed in those countries that experienced a baby boom, such as Canada, the United States, and Australia. Never before, though, has fertility fallen below replacement levels for a sustained period of time as it has in many Western countries since the 1960s. Chafetz (1995) writes,

> Declines in first births were reported among younger cohorts of women between 1970 and 1980; and unlike age at marriage, these rates also declined between 1960 and 1970 in virtually every industrial nation. Over the two decades, first births among women in the 20-24 age group declined by 113.5 per 1000 in

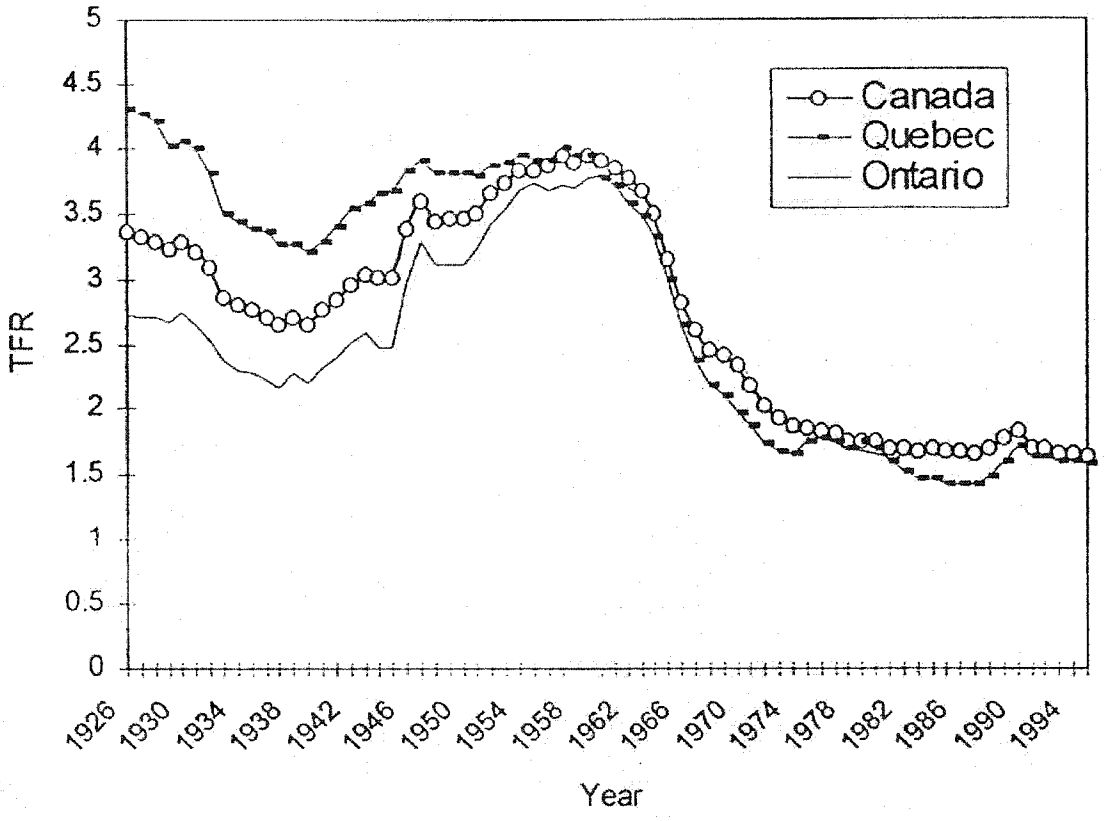
> Italy, 65.7 in West Germany, 45.5 in France, 38.8 in Great Britain, 38.3 in Canada, 34.2 in Norway, 28.4 in the United States, 23.8 in the Netherlands, 21.3 in Japan, and 4.3 in Portugal, computed from UN data. (p. 71)

The *Total Fertility Rate* (TFR) in Canada, the average number of children a woman could expect if the prevailing age-specific birth rates remained constant, peaked at 3.9 per woman in 1960. Ten years later, the TFR dropped to 2.33, lower than the rate had been for women during the Great Depression. And in 1975, the TFR dropped for the first time below 2.1, the minimum rate required for replacement of the population, to 1.86, and has continued dropping through the 1980s. There was a slight increase in 1990, as the TFR increased to its 1975 level, but since then it has continued its decline, reaching 1.55 in 2000.

Quebec again stands out from the other Canadian provinces. Figure 2.6 shows Total Fertility Rates for Canada, Quebec, and Ontario from 1926 to 1995. The TFR in Quebec had been more then 1.5 points higher than the Canadian rate in 1926, but by 1962, the two rates had converged. By the mid-1960s, Quebec's TFR had dropped below Canada's, where it has remained ever since.

Many countries in Europe have experienced even lower TFRs than Canada has, and are currently in danger of population decline. Former Eastern bloc countries have had particularly low rates. In 2000, the TFR measured at 1.2 in Russia, Slovenia, Latvia, and.Estonia, and 1.1 in Bulgaria and the Czech Republic. Elsewhere in Europe, the TFR values for 2000 were 1.3 for Germany and Greece, and 1.2 for Spain and Italy. Caution should be taken in interpreting the TFR, as it is a period measure and is influenced by period conditions such as the economy and job prospects. The *Cohort Completed Average Fertility* (CCF) reflects the reproductive experience of actual cohorts of women over their reproductive years, and is not as strongly influenced by period fluctuations. Nevertheless, the CCF for Canada has also been in decline since the mid-1970s, when the last of the "Baby Boom mothers" cohort, those women born during the

Figure 2.6. Total Fertility Rates, 1926-1996



Source: Trovato (2002). "Explanations of Quebec's Fertility Transition". (By permission of author).

Great Depression, completed their reproductive period. The CCF dropped from its peak of 3.26 in 1975-80 to 1.97 in 2000, and appears to be converging with the TFR.

Despite lower rates of birth, sexual relationships are beginning at increasingly younger ages, as normative barriers have weakened (Bumpass and Sweet 1989). The sexual revolution changed young peoples' attitudes about premarital sexual activity — it does not carry the social stigma that it had before the 1960s. As a consequence, rates of premarital births have increased substantially as a proportion of all births, due to the combined shifts toward increased premarital sexual activity and fewer births within marriage.

2.6 Cohabitation

With marriage rates in decline and divorce on the rise, it began to appear by the 1970s that families were in trouble. The industrial nuclear family that had become the standard was in danger of becoming a minority. The sexual revolution that began in the 1960s had broken down old rules and changed attitudes about relationships, allowing men and women to experiment with new types of relationships without fear of stigmatization. Young people, however, were not suddenly rejecting nuptiality and embracing singlehood and a life of living alone; most still wished to eventually marry and to form a coresidential union during young adulthood. But with the shift in attitudes among the young generation toward individualism, secularism, and self-actualization, the basis for disapproval of cohabitation became severely weakened (Bumpass 1990).

The growing prevalence of cohabitation was, in part, a response to the sudden rise in the divorce rate and an increasingly common attitude that viewed marital unions as fragile (Axinn and Thornton 1992). As the divorce rate climbed, so too did the rate of cohabitation. The increase may even be partly due to more honest reporting of its incidence; cohabitors are more likely to report their union in surveys and censuses when there is less social stigma attached to it (Glick and Spanier 1980; Seltzer 2000).

Once again, Scandinavian Europe was the origin of this new trend in family formation, which then spread to Western Europe, Canada, the United States, Australia, and New Zealand (Lapierre-Adamcyk and Charvet 2000). For example, cohabitation rates began to increase in Sweden during the 1960s. Unmarried cohabiting couples comprised only 1% of all Swedish couples in 1960, up to 7% in 1970, and 15% in 1979 (Bennett et al. 1988).

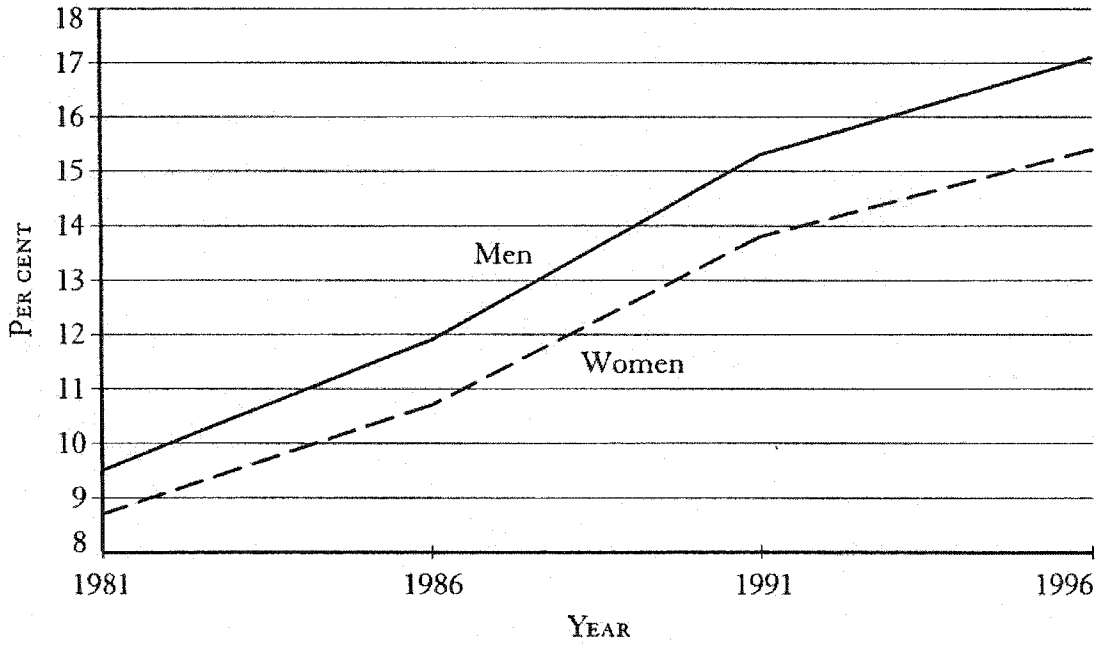
Sharp increases in cohabitation rates began by the early 1970s in other Western countries. Only 8% of first marriages in the United States were preceded by cohabitation in the late 1960s, but by 1985-86, this proportion had increased to 49% (Bumpass 1990), and to more than half by the early 1990s (Seltzer 2000). Bumpass and Sweet (1989) have

estimated that almost half of the adult population of the United States has cohabited at some time by their early 30s. Among those under age 35 who had separated or divorced, the proportion is estimated to be two-thirds. Cohabitation has increased across educational groups and races in the United States (Seltzer 2000).

The rise in the incidence of cohabitation in Canada followed in the wake of rising divorce rates and falling marriage rates. Although cohabitation was on the increase by the 1970s in Canada, the phenomenon was not considered to be significant enough to warrant measurement among the population until the 1981 census. Figure 2.7 shows the cohabitation rates for men and women age 15 and over in Canada from the census years 1981 through to 1996. The rate has continued a steady climb since the first measurement was taken in 1981, though there was some moderation during the 1990s. There also appears to be a clear gender difference, with men opting for cohabitation more than women do, and the difference between the two sexes has grown over time, from 0.8% in 1981 to 1.7% in 1996. The rates account for both premarital and post-marital cohabitation, however, and must be interpreted with caution; never-married women actually enter *premarital* cohabitation at a faster rate than men do, but men enter *post-marital* cohabitation at a faster rate (Wu 2000).

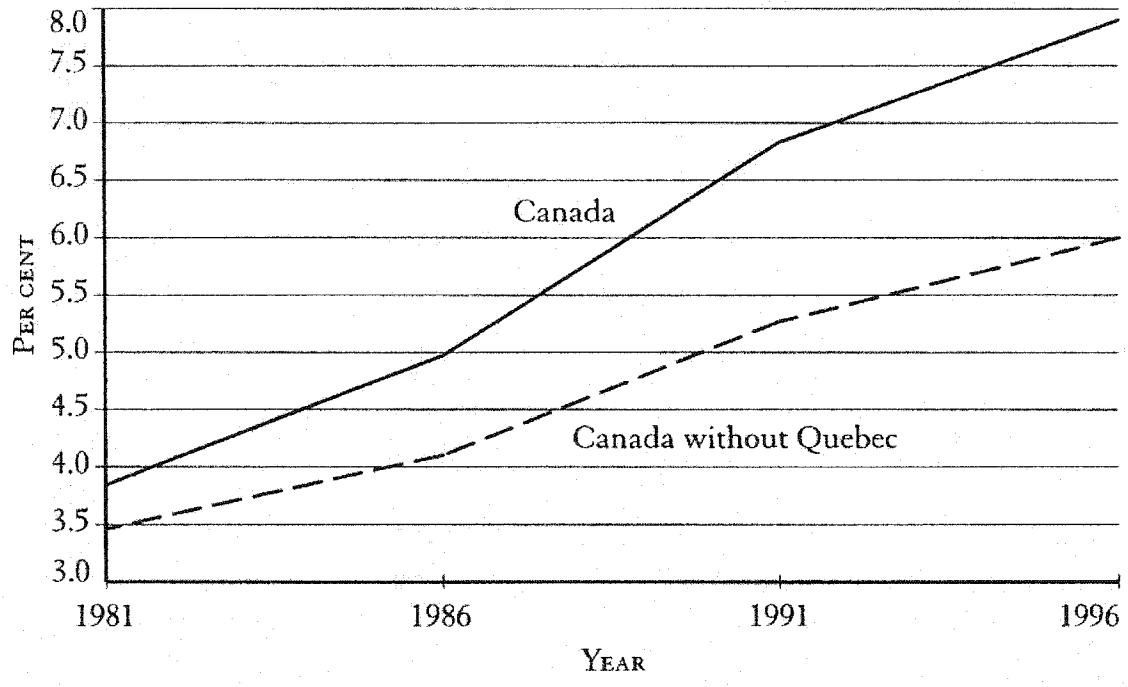
As a distinct society in Canada, Quebec is leading the country in cohabitation just as it has done with declining rates of marriage and fertility, as Figure 2.8 indicates. According to the 1995 Canadian General Social Survey (GSS), cohabitation was the union of choice among 57% of Canadians who entered their first union between 1990 and 1994, compared to only 15% who entered in the early 1970s. In Quebec, this proportion was considerably higher, at 80% (LeBourdais et al. 2000). Data from the 1996 census indicates that 12% of current unions in Canada are cohabitations, while in Quebec, cohabitation accounts for 24% of all unions (Pollard and Wu 1998). The most recent data, from the 2001 census, shows that almost 30% of couples in Quebec choose cohabitation

Figure 2.7. Cohabitation Rates for Men and Women, Canada.



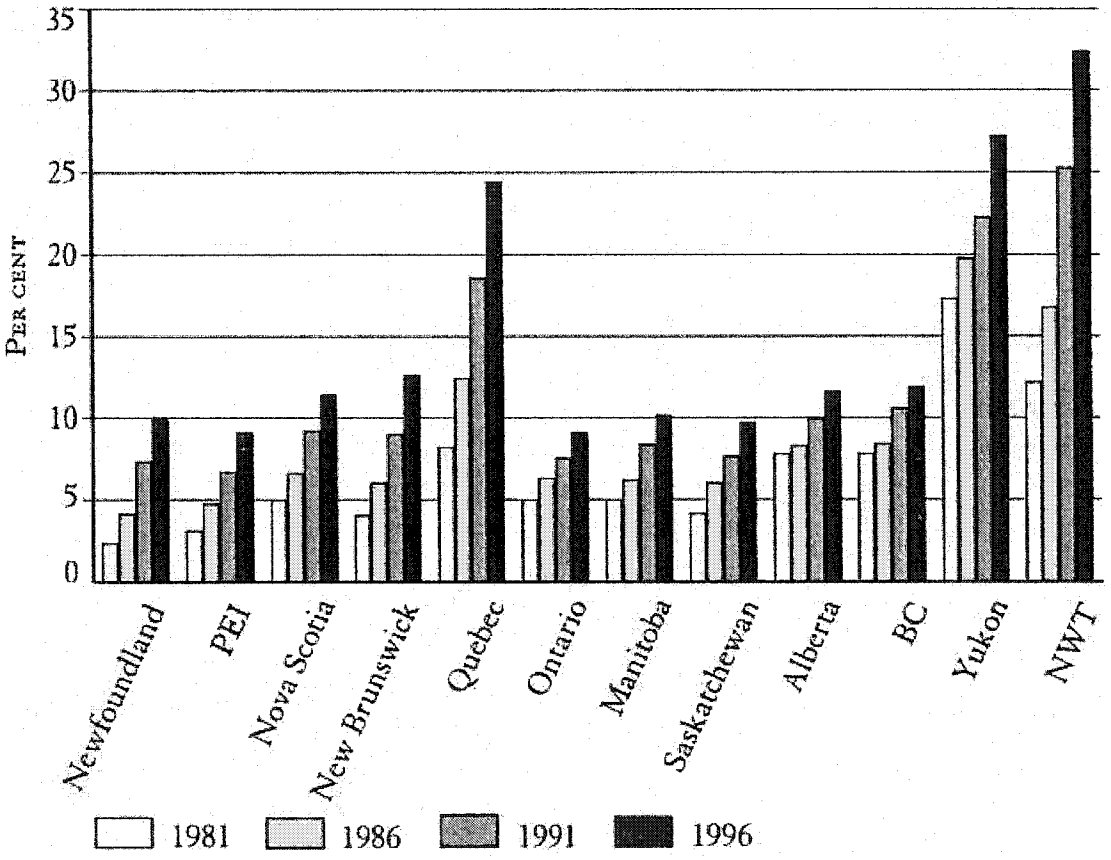
Source: Wu (2000). *Cohabitation*. Don Mills, Ontario: Oxford University Press

Figure 2.8. Cohabitation Rates, Canada and Canada Without Quebec.



Source: Wu (2000). *Cohabitation*. Don Mills, Ontario: Oxford University Press

Figure 2.9. Cohabitation as a Percentage of All Unions



Source: Wu (2000). *Cohabitation*. Don Mills, Ontario: Oxford University Press

Table 2.1. Percentage of Cohabitors by Age Group, Canada

	Age Group							
Year	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**
1981	1.7	8.2	7.6	5.7	4.2	3.2	2.4	1.9
1986	1.6	9.5	10.4	7.8	5.9	4.8	3.7	2.1
1991	1.8	11.6	14.0	10.9	8.5	6.8	5.8	4.4
1996	1.6	11.8	16.9	14.1	11.2	9.0	7.3	6.1

Source: Wu (2000). *Cohabitation* . Don Mills, Ontario: Oxford University Press

instead of marriage, compared with 12% in the rest of Canada, and only 8% in the United States (Peritz 2002).

Figure 2.9 gives the percentage of all unions that are cohabitations, for Canada, the Provinces, and the Territories. To account for differences in distribution by age, age-specific cohabitation rates for the four census years are given in Table 2.1. Both the graph and the table show that cohabitation has been growing in popularity among Canadians since it first began to be measured. Distinct age and regional patterns are also evident.

Initially, it appeared that young people were not rejecting the formation of conjugal unions, because cohabitation was, for the most part, making up for the decline in marriages, cohabitation was beginning at almost as early an age as marriages once had, and most of these cohabitations translated eventually into marriage (Berrington 2001; Bumpass 1990; Bumpass and Sweet 1989; Bumpass et al. 1991; Dumas and Bélanger 1997; Rao 1988). More recently, union formation is declining as the increasing rate of cohabitation is no longer enough to offset the declining marriage rate, and a smaller number of cohabitations are ending in marriage of the couple (Seltzer 2000). One likely reason would be the increase in post-marital cohabitation, which occurs mainly among older adults, those who have likely been through a previous divorce and who are no longer as eager to enter into another marriage (Burch 1989).

As the union of choice, cohabitation is favoured mainly by young adults rather than by their elders (Rao 1990). Canadian census data shows this to be true; the highest rates are distributed among young adult age groups, in which most first unions begin. Cohabitation is least common among older teenagers, most of whom are not ready to form any sort of union, and the oldest age groups. Interestingly, though, the greatest relative rate increase from 1981 to 1996 occurred in the two oldest age groups shown, whose percentages have more than tripled over the period. Early baby boomers, those born from the mid-1940s to the mid-1950s, were the first age cohort to be socialized to accept cohabitation as a legitimate union, and had entered into middle age during the

1990s. As this cohort ages, cohabitation rates of older age cohorts will increase. Since most individuals in this cohort have been married at some point, it would seem that post-marital cohabitation has been making inroads in Canada in recent years, and may eventually become as common as premarital cohabitation.

Researchers have documented several reasons why couples would choose to cohabit rather than marry. Cohabitation integrates several positive features of married life without including those that restrict the individual. For example, cohabiting relationships are normally not begun with a commitment to permanency (Rindfuss and Vandenheuvel 1990). They are not legally sanctioned, making them easier to dissolve if need be. Cohabitation allows the couple to maintain some degree of independence, such as in their personal activities or financial affairs, that they would not have if they were married. Yet many components of marriage are present in cohabiting unions, such as sharing of home, economic resources, sexual intimacy, and (increasingly in recent years) childbearing. In short, cohabitation would appear to be the best of both worlds to many couples, providing the freedom and independence associated with singlehood, and the emotional, sexual, and economic advantages of marriage.

Cohabitation may also be a reaction to the declining marital rates and rising divorce rates, and the sense that marriage is an increasingly fragile union (Axinn and Thornton 1992; Lillard et al. 1995; Moore and Stief 1991; Rao 1988). Cohabitors have been found to perceive themselves as poor marriage material, and their relationship as being lower in quality than those of married couples (Thomson and Colella 1992). They may instead see themselves as more self-reliant and independent, less dependent on a marital relationship for support and intimacy (Newcomb and Bentler 1980).

Yet many cohabiting couples have plans to marry. By the beginning of the 1990s, approximately 75% of cohabitors in the United States expected to marry their partner, and approximately 60% of cohabitations actually did end in the partner's marriage (Bumpass 1990; Bumpass and Sweet 1989; Cherlin 1990). Cohabiting couples in Canada are less

likely than their American counterparts to make the transition to marriage, but on the whole are still more likely to marry than to separate. In Quebec, however, the likelihood of CLUs ending in *either* marriage or separation is lower than it is for the rest of the country (Pollard and Wu 1998; Wu and Balakrishnan 1995). Here, cohabitation more closely follows the European model, particularly the Scandinavian countries. In certain European countries such as Sweden, where the dramatic increase in cohabitation rates first began, the relationship resembles formal marriage. It tends to be a more permanent, longer-lasting relationship that is less likely to translate into marriage than cohabitation in the United States (Berrington 2001). Whereas most CLUs translate into marriage in Canada and the U.S., the opposite is true in Sweden; most cohabiting couples either remain in the relationship or separate (Wu and Balakrishnan 1995). Cohabitation is also a more common setting for childbearing in Sweden than in the two North American countries (Rindfuss and Vandenheuvel 1990).

The cohabitation trend does not appear to be letting up, according to recent data in Western countries. With increased incidence, the relationship is losing its "deviant" stigma, and in fact most young adults now hold positive attitudes toward cohabiting relationships (DeMaris and Rao 1992). What appears to be a snowballing effect is what has made cohabitation as common as it is today: as its incidence increases, social approval toward it grows, making it easier for those who are willing to try it out, further increasing the ranks of cohabitors in virtually all segments of society.

Chapter 3:
Theoretical Perspectives on Marriage and Family Formation

3.1 Introduction

Family formation behaviours in Western industrialized countries began to shift in the nineteenth century, but change at that time was moderate compared to the accelerated family transformations since the 1960s. For example, we have seen that cohabitation was rare, and considered socially unacceptable up until the 1960s. In the course of only a few years between the 1960s and 1970s, however, the incidence of cohabitation and its acceptability in Western society made a sudden and dramatic surge. What, then, are the underlying causes for such a profound shift in the way people choose to form relationships and start families, and why has such a shift occurred throughout Western society at the time that it did? How does cohabitation fit into the relationship of this shift? A large body of research by social scientists has tried to answer these questions, and the knowledge gained has been put to good use in predicting future prospects for marriage, cohabitation, and the family. The research evidence has found several possible determinants of family change that can be roughly divided into two categories: economic and social/cultural.

3.2 Microeconomic Theories

In the literature, the most popular economic explanation for the shift in family formation behaviours is the rising economic independence of women, due to increased female participation in the paid labour force. Back in 1931, 3.5% of married women in Canada worked outside the home at a paying job. This proportion increased to 11% by 1951, and to 50% by 1991. Between 1970 and 1993, almost 75% of growth in employment in Canada was due to women working outside the home (Baker and Lero 1996). In the mid-1970s, the proportion of American women who wanted to combine

marriage, a career, and children was 52%; by the mid-1980s, it had increased to 63%. And the proportion of women who did not want a career after marriage declined during the same period from 38 to 26 (Chafetz 1995). More than half of all married women surveyed in the 1981 Current Population Survey in the United States were in the labour force (Espenshade 1985).

How then has greater economic freedom for women affected change in family formation, and more specifically, contributed to the rise in cohabitation? In much of the literature, sociologists have argued that the rise in women's economic independence has resulted in the retreat from or delay of marriage by women, the lowering of marital quality and increasing marital instability, fertility declines, and the rise in the number of cohabiting relationships (Bumpass 1990; Chafetz 1995; Espenshade 1985; Goldscheider and Waite 1986; Lapierre-Adamcyk and Charvet 2000; Le Bourdais, Neill, and Vachon 2000; Oppenheimer 1988, 1994; Pollard and Wu 1998; Waite and Spitze 1981). The general argument, based on a microeconomic model of the family, is that women's employment and economic autonomy contradicts the specialization of sex roles within the traditional family. According to sociologist Talcott Parsons (1949), sex-role segregation is necessary for the stability of marriage. The economic role of provider for the family through paid labour outside the home is assigned to the husband. The role of the wife is to look after the home and the children. In this way, the husband-wife roles are complementary and mutually exclusive. Therefore, a married women engaged in work outside the home upsets the balance of the sex roles by creating competition between the spouses (Oppenheimer 1982; Parsons 1949).

A market analogy approach to studying changes in marriage and family was further advanced in the work of Gary Becker (1981), with his "Gains to Marriage" theory. Becker applied an economic theory of trade to the social institution of marriage, based on Parsons's idea of gender specialization of division of labour. Single men and women, Becker argues, are potential trading partners who enter marriage for the purpose of

benefiting from a mutual trade of services. Marriage is, in his view, basically an economic contract between a man and a woman:

> Specialization of tasks, such as the division of labor between men and women, implies a dependence on others for certain tasks. Women have traditionally relied on men for provision of food, shelter, and protection, and men have traditionally relied on women for the bearing and rearing of children and the maintenance of the home. Consequently, both men and women have been made better off by a "marriage," the term for a written, oral, or customary long-term contract between a man and a woman to produce food, and other commodities in a common household. ... The biological differences between men and women in the production and care of children, and the specialized investments in market and household skills that reinforce the biological differences, explain why the institution of marriage has been important in all societies (1981, pp. 43-4)

In this micro-economic theory, marriage is most attractive and stable when each partner has mutually exclusive attributes that they can exchange (Smock and Manning 1997). Becker's theory implies that the rising economic power of women leads to lower rates of marriage, fewer children on average per family, and higher rates of divorce and cohabitation. Gains within marriage are reduced for women because they are no longer dependent on husbands for economic support. Their time spent in household and child care becomes more valuable, and the sexual division of labour within the home becomes less advantageous. Greater economic freedom also means women have the means to support themselves independently, allowing them more time to spend choosing a marriage partner, and in deciding when or even if they are to be married. The result is a reduction in the attractiveness of marriage and childbearing, and more positive attitudes toward divorce (Becker 1981). With a reduction in marital gains and increased economic autonomy, cohabitation becomes an increasingly attractive option for young women who may not be as willing to enter directly into a long-term union so early in their adult years.

Both sexes have had to reevaluate assumptions regarding sex roles within the family and in society at large, as a result of women sharing the workplace with men (Teachman et al. 2000). Thornton (1989) notes a divergence of what men and women want out of

marriage. The traditional sex roles in marriage may be less satisfactory for women than they are for men. Chafetz (1995) states that when both spouses in a marriage provide income, the power inequity between them diminishes ("upsetting the balance" as per Parsons), and the incidence of irresolvable conflict increases as women no longer need to defer to their husbands. The result is increased marital instability. As more women work outside the home, marriage will become even less stable. With doubts that marriage and the security it provides can last, young women will feel compelled to provide for their own economic security by continuing their education and joining the work force in even greater numbers (Bumpass 1990; Chafetz 1995).

In addition, work is becoming increasingly technical and specialized, and women are finding that higher education is becoming a prerequisite for the workplace. Chafetz (1995) argues that women can more easily pursue further educational investment toward good employment and maximize their returns if they remain unmarried and child-free. The eventual returns of their investment in skills and experience, promotions, pay raises, and prestige appear to be incompatible with the traditional roles and obligations of women in the family unit, in which they are expected to perform the bulk of housework and childcare. Therefore participation in the paid labour force increases opportunity costs of marriage, childbearing and child rearing for women (Chafetz 1995; Cherlin 1990; Goldscheider and Waite 1986; Westoff 1983). If women must continue their education in order to find good employment, then age at first marriage and first birth will be pushed further back in their childbearing years, leading to smaller average families and thus a further decline in the birth rate. Cohabitation may be considered by some women as a temporary replacement for marriage, at least until their education is complete and their career is on track.

Logical as it may seem from an economic point of view, Becker's "gains to marriage" theory has not received much empirical support. Using American data, the research of Oppenheimer and Lew (1995) found no evidence that women's economic

independence discourages first marriages. Both Brown (2000) and Smock and Manning (1997) showed that women's economic situation has little effect on the transition to marriage among cohabitors. However, based on Canadian data, Wu and Pollard found a positive relationship between women's economic circumstances and the stability of cohabitation, noting that in this respect cohabitation in Canada differs from cohabitation in the United States. An important assumption in Becker's theory is that individuals marry for purely rational reasons, in a way that maximizes their economic gains. The theory does not account for such "irrational" purposes of marriage as affection, companionship, and sexual partnership. It also presumes that marital and family decisions are only in the hands of women, in that women's economic power serves only as a deterrent to their own marital intentions; men's positive or negative views on their partner's economic independence appear to matter little for marriage formation. In fact, studies have indicated not only that the male opinion does matter, but that female economic independence actually helps to make women more attractive as marriage partners, due to their educational attainment and additional income (Goldscheider and Waite 1986; Oppenheimer 1994; Oppenheimer and Lew 1995; Waite and Spitze 1981; White and Rogers 2000). Perhaps most importantly, though, Becker's theory does not take into account the effect of the *male* economic situation on marriage and family formation.

This issue of the impact of men's economic circumstances on the family has not received much attention in the literature, yet some studies have found that it is worthwhile to address. For example, White and Rogers (2000) found that men's earnings are just as important, if not more important, than women's, as predictors for family formation. Marriage is more likely among men and women with better education, job prospects, and higher earnings. Clarkberg (1999) found the same positive relationship between men's and women's income and likelihood of cohabitation, but also found that cohabitation is positively related to job instability. Both Brown's (2000) study and Smock

and Manning's (1997) study on the relationship between cohabitors' economic circumstances and the transition to marriage, showed no influence of cohabiting women's circumstances on either marriage or separation, but cohabiting men's earnings were found to be positively related to the likelihood of marrying rather than continuing to cohabit. In contrast, men's personal earnings were found to increase the probability of separation from cohabitation but decrease the probability of the CLU ending in marriage, according to Wu and Pollard (2000).

Such studies show that the economic circumstances of men should no longer be ignored in social research on the family, especially in light of the fact that those circumstances have been deteriorating considerably for young men, and men with little education, for at least thirty years. This deterioration was occurring just as women's economic circumstances were improving.

In the work of Richard Easterlin (1978, 1987), he hypothesized that fluctuations in relative cohort size influences young men's labour market status, which consequently affects their marriage timing and fertility. In times of a large cohort entering the labour market, such as the 1960s and 1970s when the baby boom cohort reached working age, young men face increased competition for jobs. Advancement is more difficult, and pay is poorer. Young men adapt to these circumstances by delaying marriage and children. Smaller cohorts experience a much easier time in the labour force, and consequently, marriage occurs earlier and fertility is higher.

Easterlin's theory is tied in with the economy because, he argues, smaller cohorts are born during times of economic decline, and these cohorts are socialized through childhood to have low economic expectations. As economic conditions improve and the young men of the cohort enter working age with their attitudes shaped in childhood, they find their labour market position favourable and their economic situation greatly improved. In turn, they are more willing to enter into marriage and family formation at an early age. This, according to Easterlin, describes the Great-Depression era cohort who

experienced the post-Second World War economic expansion and drove the birth rate up during the late 1940s through the early 1960s.

The opposite situation occurs with large cohorts, as was the case with the baby boom. Being socialized at a time of economic prosperity, they find that traditional social institutions such as marriage are less important to them than they had been to their parents, but the pursuit of self-fulfillment *is* important. Marriage and fertility rates began to decline as the first members of the baby boom reached marriageable and working age, which also coincided with the beginning of the deterioration of young men's economic status. The baby boom was also the first cohort within which cohabitation rates began to increase.

Easterlin's theory assumes that marriage and family behaviours are cyclical. When economic conditions are poor, marriage and birth rates decline. When economic conditions improve, marriage and birth rates improve along with them. This process repeats itself again and again. By this theory, then, a surge in marriage and fertility rates and a decline in the number of CLUs would have occurred during the late 1980s and on, when the "baby bust", the small cohort that followed the baby boom, reached marriageable age. However, such an increase did not occur. In fact, marriage and fertility rates have declined further, while cohabitation rates continue to climb. Critics have argued that Easterlin's theory is based on too narrow a time period for it to claim a cyclical nature to marriage and family formation based on men's economic circumstances.

One of the most strident arguments against the overemphasis of women's rising economic fortunes on family formation can be found in the work of sociologist Valerie Oppenheimer. Oppenheimer believes that the economic prospects of young men are still the dominant force in determining marital timing and stability (Oppenheimer 1988, 1994; Oppenheimer, Kalmijn, and Lim 1997). The deterioration of these prospects since about the late 1960s provides the most likely explanation of the shift toward delayed marriage.

Oppenheimer's research has allowed her to dispute Becker's theory and the female-oriented independence hypothesis, arguing that the sex role specialization-trading model of marriage is too narrow a view on the nature of marital relationships (Oppenheimer 1994). Oppenheimer and Lew (1995) found no evidence that women's economic independence discourages first marriages, and argued that it may only predict delayed marriage rather than non-marriage. The authors also illustrate the dangers of extreme sex-role specialization within the family, such as a family's inflexibility and inability to cope with unexpected crises, if the husband or wife becomes ill or dies.

In her research, Oppenheimer (1988) found that differentials in marriage timing are partly due to variations in the degree of difficulty in *assortative mating*, in relation to the transformation to adult economic roles. Because marriages are formed with the intention of permanence, young couples wish to reduce as much uncertainty as they can regarding their current and long-run economic prospects, before committing to a marital union. A major source of uncertainty is found in the timing and prospects of a stable work career. For a potential marital couple, the male's potential earning prospect is generally the more important determining factor than the prospects of the female. Individuals will delay marriage until they can find the right partner whose prospects are compatible with the minimum standards they have set for themselves. Because the economic situation of young men has deteriorated so badly over the last three decades, their transition to a stable work career has been delayed, and consequently so has their marriage timing. The degree of uncertainty regarding attributes of a potential partner, which is difficult to predict in an early marriage, tends to diminish with age, with maturity and knowledge gained, and greater potential economic prospects. Oppenheimer (1988) notes that cohabitation may then serve as an outlet that allows young people to avoid the high-cost process of mate-searching during a period of social immaturity and economic uncertainty.

Oppenheimer does not totally discount the effect of women's rising economic power, but notes that it has various effects on marriage formation that tend to offset each

other, and the positive effects may outweigh the negative ones (Oppenheimer 1994). Certainly greater economic independence allows young women to establish higher minimum standards for a potential partner, thereby lengthening the search time and delaying marriage further. In addition, as women's attachment to the work force becomes more similar to that of men's, their social and economic attributes will come to be achieved rather than ascribed. Since achievement of positive attributes is a slow process, this could serve to delay marriage until a later age, as it has done for men (Oppenheimer and Lew 1995). However, greater economic independence may also serve to encourage marriage at an earlier age, because young women employed in the work force would be less dependent on the low earnings of young men. Working outside the home also allows opportunities to meet eligible partners and expand social networks. The income it provides can help create an attractive image as a potential marriage partner.

Because an ever-increasing number of women are joining the work force, Oppenheimer argues that women's economic function within the family is becoming more like that of men's. Their growing economic independence will increasingly tend to delay marriage to a later age, not because of conflicts in sex roles or declines in gains to marriage, as per Becker's theory, but because it increases uncertainty about women's attributes as potential marriage partners in the same way that it does for young men (Oppenheimer 1988, 1994; Oppenheimer and Lew 1995).

It is important to note that many of these studies have been carried out in the United States, using American data, and so the conclusions reached may not be easily applicable to other countries, or even subgroups within the United States. For instance, Oppenheimer et al. (1997) found that racial differences exist in the relationship between men's economic position and marriage timing. The authors report that the declining economic position of young men was especially acute for blacks, that young black men at all educational levels take longer than white men to establish a career, and that speed of career entry has a stronger effect for blacks than for whites. Also, unlike the American

situation, Canadian women's economic circumstances play an important role in the stability of cohabitation, according to Wu and Pollard (2000).

3.3 Sociological Theories

Every society has a set of social norms that the members are expected to subscribe to and follow. Social sanctions are meted out to those who do not do this. The industrial revolution of the nineteenth century did not just bring about economic changes in Western societies; social and cultural norms changed along with it. These norms are fluid; they change slowly over time, as societies go though social and economic transformations. But the changes wrought by the new economic system of the West seemed to transform social and cultural norms from one generation to the next. The change was especially acute during the twentieth century, as the world experienced two devastating world wars, a great economic depression, and the United States supplanted the old European powers as the new economic powerhouse.

It is therefore not surprising that a sociological explanation for the changes in marital and family formation behaviours since the 1960s has been developed, with a body of research supporting it (Cherlin 1990; Lesthaeghe 1983, 1998; Lesthaeghe and Surkyn 1988; Thornton 1989). The general idea proposed in these studies is that a social and cultural shift has been occurring in Western societies. The processes of individualization and secularism have taken hold, resulting in a shift from community-centred orientations toward individual self-orientation. The shift has broken down and transformed social and cultural norms. Consequently, Western culture has experienced such social transformations as the decline of religious authority, the rise of consumerism, the sexual revolution, and the movement for equality of women. In this context, the economic changes affecting marriage and family formation are just a part of a much wider transformation. Balakrishnan et al. (1993, p. 145) describe a "general process of institutional devaluation in progress" in which a wide variety of demographic behaviours

are increasingly practiced and tolerated, such as unmarried cohabitation, divorce, and devaluation of marriage.

A theory of cultural change, known as ideational theory, has been greatly advanced in the work of sociologist Ron Lesthaeghe. Lesthaeghe (1983, 1998) argues that the recent changes in family formation should not be considered as an independent phenomenon from the historical transformations of fertility and nuptiality in the nineteenth century and early part of the twentieth century. They are all manifestations of a long-term shift in the Western ideational system, in which individual autonomy is central. The ideational shift had its beginnings as far back as the time of the enlightenment in Western Europe and was further encouraged by the emergence of capitalism during the industrial revolution. The rise of the nuclear family signaled a change in orientation away from community, toward family and the well-being of children. In its more recent incarnation, i.e. the resumption of social and demographic transformations after the end of the baby boom, Lesthaeghe (1983) describes a shift toward a "post-materialist" Western culture, in which concern for self-fulfillment overrides concern for one's children's fulfillment (Cherlin 1990). A post-materialist culture is characterized by a rising level of affluence, allowing people's concerns to shift from fulfillment of basic survival needs to fulfillment of personal aspirations (Lesthaeghe and Surkyn 1988).

Values in a post-materialist culture shift toward declining trust in social and political institutions, declining religious influence and community responsibility, greater individual autonomy, increased consumerism, and greater tolerance for social, political, and demographic diversity (Lesthaeghe 1995). As a consequence, individuals have felt themselves freer to make their own choices regarding their marital or family intentions, without fear of a social backlash if these intentions do not follow traditional norms. The effect can be snowballing; as more people engage in non-traditional family behaviours, social acceptance of them grows, encouraging more people to follow. As the primary socializing unit, the family internalizes values and passes them on to the next generation.

But the shifts in values and attitudes during the 1960s and 1970s occurred so rapidly and so powerfully that the parental generation has had difficulty passing their own values on to their children, hence the "generation gap" of the time, as children began to be influenced more by their peers than by their parents. Therefore the decline in the institution of marriage, and the rise in alternatives such as cohabitation, would likely never have taken place in another setting different from that experienced in the West, when ideational change occurred during the 1960s.

Lesthaeghe's ideational theory is not, he believes, incompatible with economic theories. He acknowledges that economic trends play a part in changes to marital and family formation behaviours; his agreement in a sense with Easterlin that the steep decline in births in the West during the 1960s is in part due to declining relative income is one example (Lesthaeghe 1983). But individual goal attainment and cost-benefit analysis of demographic behaviours must be governed by an ideational system. Decisions regarding marriage and family must still be made within the boundaries of that system, and if widespread shifts in demographic behaviours have occurred, then the boundaries must have shifted as well. Hence, the decline in births occurred in an atmosphere of ideational change: new behaviours such as voluntary childlessness, abortion, contraceptive practice, and nonconformist sexual behaviour became increasingly tolerated around that time (Lesthaeghe 1983).

Thornton (1989) provides evidence of weakening norms and values and expansion of the range of individual choice concerning marriage and family life in the United States. He found that the normative imperative to marry, stay married, have children, and maintain a strict division of labour between the sexes declined dramatically since the 1960s. Of particular interest is the evidence that acceptance of behavioural changes in the family greatly increased during the decades of the 1960s and 1970s, but during the 1980s, a general flattening of the trend in attitudes occurred, with the exception of attitudes toward non-marital cohabitation and greater equality of sex roles. Thornton's study places

the behavioural changes occurring within the American family within the context of normative shifts taking place in American society during the 1960s and 1970s, including emphasis on individual autonomy and increasing tolerance of a broader range of behaviour.

Using data from the 1984 Canadian Fertility Survey, Balakrishnan et al. (1993) noticed that attitudes among Canadian women regarding marital and family formation behaviour tended to match the patterns occurring in the United States, but found differences exist between subgroups. For instance, the study found that most women value marriage but no longer consider it to be the only possible way of life. However, most unmarried women who were divorced, widowed, or in a CLU believe that marriage is of little or no importance for life as a couple, which implies that being in a stable marriage influences one's attitudes toward the institution of marriage. In addition, the authors found that tolerant attitudes toward cohabitation were found across subgroups and seemed to be converging, though acceptance was greater among women who were already cohabiting. An overwhelming majority of women believe that both spouses should share household and childcare-related work equally. Unmarried cohabiting women and single women living alone showed the largest percentages; married women showed the lowest, although a majority of these women were in agreement with the idea. The results of this study indicate that value changes in Canadian society have manifested themselves in more liberal attitudes toward marriage and family, and are not restricted to only certain subgroups. Differences exist, but even the most conservative subgroups of women have shown a tendency toward greater tolerance in attitudes.

Differences in attitudes also exist between Quebec and the rest of Canada. In their research on the divergence of marriage patterns in Quebec and elsewhere in Canada, Pollard and Wu (1998) substitute region as a broad proxy for cultural indicators. We have seen how Quebec differs significantly from the other provinces in almost every aspect of family formation: the retreat from marriage has been more pronounced in Quebec than

elsewhere, fertility has declined and divorce expanded more dramatically in Quebec, and the incidence of cohabitation is higher in Quebec than in the other provinces. Using ideational theory as a framework for their analysis, the authors argue that the Quebec/non-Quebec cultural divergence has led the two regions along separate ideational paths, resulting in diverging demographic behaviour. A primarily culturally homogeneous population, such as Quebec's, facilitates the spread of ideational change with greater ease, while the cultural differences between Quebec and the rest of Canada serve as a barrier to ideational diffusion. In this instance, region may serve as a proxy for culture. While they do not explain why cohabitation rates are much higher in Quebec than in the rest of the country, Pollard and Wu note that the large cohabiting population in Quebec and the relative stability of cohabitation in that province are important factors in the regional divergence of likelihood of marriage.

It is completely in keeping with the theory of ideational change that the popularity of cohabitation has grown so fast in such a short time, when only a few decades ago social opinion frowned on it. Cohabitation requires lower levels of commitment than marriage, allows more independence for both partners, and does not create the sense of "oneness" between the partners to the extent that marriage does. In short, cohabitation is an attempt to integrate certain features of marriage that do not constrain individual goal attainment (for example, the pooling of resources, exchange of affection and sexual intimacy) with the independent lifestyle associated with single life. It is an ideal relationship for Western societies that value individual self-orientation above orientation to the community at large.

Both ideational change and the rise in women's economic independence have motivated changing attitudes of marriage and family during the 1970s, according to Janet Saltzman Chafetz (1995). One of the movements arising out of the breakdown of traditional norms has been the feminist ideology and the drive for equality for women. Chafetz argues that feminism arose out of the expanding economic roles for women, as

educational and occupational opportunities opened for them during the 1960s. The altered consciousness among women created by these new opportunities was expressed in feminist ideology, which subsequently played a role during the 1970s in accelerating the change in marriage and family that had begun a few years earlier. Feminist activism helped develop changes in attitudes among women, reducing their inclination to marry and form families.

A feedback mechanism may be increasing the impetus for women to participate in the labour force, and creating more instability in marriage. Smock (2000) argues that feedback loops may exist in recent family trends. Changes in various domains of family life may be mutually reinforcing, with change in one domain maintaining and perhaps accelerating change in another domain. This idea could help explain the continuing growth in popularity of cohabitation. High levels of marital disruption may create the perception that marriage is fragile and fleeting. People would then be reluctant to commit to such a union, opting for cohabitation instead (see also Bumpass 1990; Rindfuss and Vandenheuvel 1990).

3.4 Summary

Most theories regarding the sudden change in marriage and family formation behaviours during the second half of the twentieth century may be categorized as either economic or sociological. Economic theories have not agreed whether it is men's or women's economic circumstances that are the more important factor in the retreat from marriage and the current popularity of cohabitation. Becker and others claim that women's increasing labour force participation increases their economic independence and upsets the balance of specialized sex roles, thereby reducing gains to marriage for women. Becker acknowledges that this factor may account for lower rates of marriage and higher rates of cohabitation, as the need for financial security is no longer an important reason for women to marry early in life. Easterlin, on the other hand, believes

that changes in marital and family formation behaviours are driven by relative cohort size and the economic prospects of young men. Much of the twentieth century has seen fluctuations in cohort size as a response to changes in men's economic prospects, leading to what Easterlin believes are cyclical shifts to and from marriage and fertility. Recent demographic behaviours are proving, however, that shifts in marriage and family formation behaviours are not cyclical, but are continuing on the same course that they have been on since the 1960s, despite smaller cohort sizes.

Oppenheimer agrees with Becker as far as the effect on marriage of women's participation in the work force goes, but states that it should be used to explain delayed marriage, not decline in marriage. Like Easterlin, Oppenheimer believes that young men's economic prospects are still more important determinants of marital formation than those of women, and the deteriorating economic conditions faced by young men since the late 1960s have created uncertainty in their transition to stable work careers. Marriage is increasingly postponed to a later age when young men's economic prospects become more stable and certain, and cohabitation therefore becomes a more attractive option when commitment to marriage is not viable.

The sociological explanation argues that economic factors influencing marital and family behaviours are part of a larger shift in Western culture and value systems toward greater individualism and secularism. Ideational change, as Lesthaeghe refers to it, entails greater personal autonomy and self-fulfillment, with a corresponding decline in community responsibility and institutional authority. The recent ideational shift in Western society is not an independent event, Lesthaeghe argues, but a continuation of the historical change that had its roots in the enlightenment and the industrial revolution, and was recently interrupted temporarily by the baby boom period. Economic growth has created rising affluence, shifting people's needs from basic survival to higher order needs. The reduced need for marriage, the decline in fertility and rise in divorce, as well as cohabitation, are manifestations of the breakdown in traditional norms and values related

to the family. New demographic behaviours within the family have been made possible because of changing mores and attitudes; the behaviours gain momentum and popularity as more people feel free to try them out without fear of social stigma. Cohabitation went from being a rare and socially discouraged event to being the relationship of choice among certain subgroups or in certain countries.

The economic and sociological theories regarding change in marriage and family need not be mutually exclusive. Sociologists have tended to make a case for one theory over another, but in all likelihood they are related. Western societies have been undergoing dramatic economic restructuring at least since the start of the industrial revolution, and more recently with women's rising position and young men's declining position in the economic sphere. All of this is functioning in tandem with changing mores and values. The definition of marriage and family is changing as well; cohabitation is as legitimate a family form now as marriage has been.

Chapter 4:
The Nature of Cohabitation and of Cohabitors

In less than thirty years, a large body of research has been developed on the nature of cohabiting relationships and on those who choose to cohabit. Since cohabitation is such a short-lived, unstable type of union, and has appeared to have such a detrimental effect on the stability of the marriage, social scientists have sought to determine what the differences are between marriage and cohabitation, or married couples and cohabiting couples, that help create such instability within cohabiting relationships. Generally, the consensus is that cohabitation is a special type of relationship: it is not marriage, but it is not like being single. It shares some common characteristics with marriage, but at the same time it is similar to single life. Cohabitors themselves are considered to be "special". Much of the literature elaborates on the idea that cohabitors are a select group of people, different in certain characteristics from individuals who enter directly into marriage. They are also different from single people in terms of other characteristics.

The truth is that cohabitation and cohabitors cannot be easily pigeonholed into certain definitions. We have seen that characteristics of cohabiting relationships vary across countries, and subgroups within countries. Cohabitation is more like formal marriage in Europe and Quebec. It tends to last longer, it is a more common setting for childbearing, and it usually ends in separation rather than marriage. At the other extreme, cohabitation in the United States is generally a short-term trial period before marriage. Non-Quebec Canada falls somewhere between these two examples.

Cohabitors, as well, are not all the same. Those who cohabit with the intention of marrying may differ from those who have no marital intentions. In addition, previously married cohabitors may differ from never-married cohabitors in certain characteristics, as does the nature of premarital cohabitation and post-marital cohabitation.

Research on cohabitation has discovered numerous aspects and facets to the relationship. The purpose of this chapter is to provide an overview of some of this research, illustrating some of these aspects, to provide an insight into the nature of cohabitation and cohabitors and how these differences with marriages may be associated with union instability.

The differences in European and North American patterns of cohabitation illustrate the two major conceptualizations of the relationship, identified in the literature: (1) a final stage in the process leading to marriage (or a form of "trial marriage"), and (2) a substitute for marriage (Rindfuss and Vandenheuvel 1990). A third conceptualization, one that is much less common and not often found in the literature, is that cohabitation is an alternative to being single (Rindfuss and Vandenheuvel 1990; Smock 2000). These definitions have been found to change over time as well as place.

The first view, that cohabitation is a prelude to marriage, is more common in the United States and, to a lesser degree, in Canada (Axinn & Thornton 1992; Bennett et al. 1988; Berrington 2001; DeMaris and Rao 1992; Pollard and Wu 1998; Rao 1988; Wu and Balakrishnan 1995). According to this view, couples who perceive the potential instability of a marital relationship may be willing to choose a CLU first, to "test the waters". This would allow them to evaluate their compatibility for a permanent relationship; unstable unions can be "weeded out" before they develop into marriage. Cohabitation for this purpose is not meant to replace marriage, but to enhance it. It is not considered a proper relationship for couples with children or those that wish to conceive. Cohabiting couples who make the transition to marriage, and who likely had intentions of marrying all along would hold to this conceptualization.

Marriage is less likely when the second definition applies: that cohabitation is a substitute for legal marriage. This definition is more common in countries such as Sweden, where the popularity of CLUs began to increase as far back as the mid-1960s. These types of CLUs also tend to be more stable, since couples generally form them for

convenience without any expectation of marriage or commitment. This is generally not the prevailing conceptualization of cohabitation in Canada and the United States, although cohabitation is evolving further along this line in both countries, with Canada ahead of the U.S. As cohabitation becomes further legitimated and entrenched in a society, it appears to eventually become a replacement for marriage. And although cohabitation is now widespread among almost all subgroups of the population, its incidence and definition varies across these subgroups within each country.

Quebec experienced the retreat from marriage and embrace of cohabitation before the rest of Canada did. Cohabitation is more common, more stable, more socially acceptable, and lasts longer in Quebec, compared to the other provinces (Lapierre-Adamcyk and Charvet 2000; LeBourdais and Marcil-Gratton 1998; Pollard and Wu 1998). Dumas and Bélanger (1997) report that Quebec is approximately ten years ahead of the rest of Canada in terms of distribution and evolution of CLUs. Because of the widespread incidence of cohabitation, cohabitors in Quebec are becoming more similar to those who marry, just as they already are in some European countries (LeBourdais et al. 2000). According to data from the 2001 census, almost two-thirds of Quebeckers under 35 who cohabit don't bother to marry (Peritz 2002).

In the United States, the purpose of cohabitation has been found to vary by race, particularly in relation to childbearing. American blacks have been found to be more likely than whites to cohabit, but less likely to turn it into a marriage (Smock 2000; Teachman et al. 2000). Generally, the presence of children in a cohabiting relationship increases the odds of it becoming a marriage. In the case of a non-marital pregnancy, however, cohabitation increases the odds of marriage before the birth of the child only among white women. Cohabiting black women who become pregnant are no more likely to marry before childbirth than are noncohabitors (Brien, Lillard, and Waite 1999; Manning 1993; Manning and Landale 1996; Manning and Smock 1995), while Hispanic women are much less likely to marry (Mahler 1996; Manning and Landale 1996).

Conversely, cohabiting women of all races are more likely than single women to experience a premarital pregnancy, but the odds are much greater for Puerto Ricans than for non-Hispanic whites and black women (Mahler 1996; Manning and Landale 1996). Loomis and Landale (1994) have found that the rate of childbearing in CLUs more closely approximates the rate of childbearing within legal marriage among black women than white women in the United States. The conclusion reached by these studies, therefore, is that cohabitation is a stage leading up to marriage only for white women; for black and Hispanic women, cohabitation is more of a substitute for marriage, or substitute for singlehood (Manning 1993), and an appropriate setting for childbearing (Brien et al. 1999; Loomis and Landale 1994).

Despite various differences across countries and population subgroups, researchers have noticed some common characteristics in the nature of cohabitation and cohabitors, which makes the relationship differ from formal marriage.

Stability and duration. Probably the most commonly noted difference between cohabitation and marriage is in the stability of the relationship. Cohabiting relationships are usually short-lived, and generally less stable than marriages (Burch 1989; Dumas and Bélanger 1997; Seltzer 2000; Smock 2000; Thornton 1988). The median duration of cohabitation in the United States is 1.3 years, and more than half of all U.S. cohabitations end in either marriage or separation of the couple within two years from the start of the relationship (Bumpass and Sweet 1989). Only about 10 percent of cohabitations last five years or more (Smock 2000). However, cohabitation among the previously married tends to be more stable, lasts longer, and is more likely to end in separation than cohabitation among the never-married (Bumpass et al. 1991; Glick and Spanier 1980).

In Canada, CLUs are only slightly more stable. Less than half of all CLUs in Canada last three or more years (Dumas and Bélanger 1997; Wu 2000). Wu and Balakrishnan (1995) found that nearly 90 percent of cohabitors surveyed in the 1990 Family and Friends Survey had ended their cohabitation by ten years, though the majority

had translated their relationship into marriage. In contrast, about 90 percent of marital unions had *survived* for ten years. The greater stability of Canadian CLUs is likely due to the influence of Quebec, where characteristics of cohabitation are closer to the European model than the North American model.

Some of the reasons that are believed to explain the relative instability of cohabitation include the selective characteristics of cohabitors that are not conducive to a stable union – the "selectivity" theory (Bennett et al. 1988; DeMaris and Rao 1992; Lillard et al. 1995; Nock 1995). Alternatively, time spent in a CLU may help to develop negative attitudes toward marriage and positive attitudes toward divorce – the "experience" theory (Axinn and Thornton 1992; Nock 1995; Schoen 1992). Mills and Trovato (2000) note the higher transaction costs of marital dissolution compared to dissolution of CLUs. Nock (1995) points to the lack of legal status of cohabitation as a predictor of its stability. Despite the growing popularity of cohabitation, cohabiting couples face more social disapproval and receive less social support for their relationship than married couples do (Seltzer 2000).

Research has provided evidence that cohabitation is becoming even less stable over time (Lapierre-Adamcyk and Charvet 2000; Seltzer 2000). According to Wu and Balakrishnan (1995), CLUs formed before 1970 have lasted longer than those formed after, but they were less likely to translate into marriage. This is a surprising development. If cohabitation in most of the Western world has been evolving from a marital prelude to a marital substitute, we would expect CLUs to become more stable over time, and last longer, just as they already do in Quebec and the Scandinavian countries. This may not be happening due to the propensity of recent cohorts to move in and out of several unions during their lifetime. Cohabitation may be losing stability over time, but unfortunately, so is marriage. Wu (2000) found, however, that the risk of separation rises during the early years of a CLU but levels off in later years, giving support for the idea that, at least for Canada, the purpose of cohabitation is still primarily

a prelude to marriage. The increasing instability could reflect a greater number of incompatible relationships that are dissolved before becoming marriages.

Attitudes toward marriage and divorce. Research on the stability of both cohabitation and marriages preceded by cohabitation has lent support to the selection and experience hypotheses. Judging by the greater likelihood of premarital cohabitors to experience a marital disruption more than non-cohabitors, Bennett et al. (1988) and Lillard et al. (1995) have suggested that cohabitation selects individuals who have a weaker commitment to the institution of marriage. Direct testing of this hypothesis has agreed; cohabitors tend to be less committed to marriage and more tolerant of divorce. The *experience* of cohabitation also tends to develop these attitudes. Furthermore, the number of months exposed to cohabitation is negatively related to enthusiasm for marriage (Axinn and Barber 1997; Axinn and Thornton 1992; Nock 1995; Thomson and Colella 1992). In addition, CLUs that were dissolved by separation had a positive impact on tolerance of divorce compared with CLUs that translated into marriage (Axinn and Barber). Results of these studies, taken together, appear to support both the selectivity and experience hypotheses of the effect of premarital cohabitation on marital stability.

Bennett et al. (1988) have suggested that some cohabitors who marry may have had a weak marital commitment, but were reluctantly forced into marriage due to outside pressure, leading to the strong possibility of marital dissolution. In such cases, cohabitation may be a more stable relationship for these individuals to stay in than marriage. Cohabitors who do have plans to marry obviously hold more positive attitudes toward marriage than those with no marital intentions, although even among the former, marital attitudes are not as positive as they are among persons who enter directly into marriage. However, there is evidence to suggest that cohabitors with intentions to marry are becoming more like directly-married individuals over time, in terms of their attitudes toward marriage and divorce. LeBourdais et al. (2000) noticed that in more recent cohorts

in Canada, the marital dissolution rates of premarital cohabitors are becoming closer to those of couples who did not cohabit before marriage.

Attitudes favourable to divorce and unfavourable to marriage among many cohabitors may have been developed in childhood. Research in Canada (Dumas and Bélanger 1997; LeBourdais and Marcil-Gratton 2000), the United States (Axinn and Thornton 1996), and Britain (Cherlin et al. 1995) has indicated that parental marital outcomes in childhood influence children's own demographic outcomes in adulthood. For example, children who had experienced their parents' divorce are more likely in adulthood to form a common-law union in adulthood (Axinn and Thornton 1996; Cherlin et al.; Dumas and Bélanger; LeBourdais and Marcil-Gratton), to engage in premarital sex and experience a premarital birth (Cherlin et al.; LeBourdais and Marcil-Gratton), and to experience marital dissolution themselves (LeBourdais and Marcil-Gratton), compared with children whose parents had remained married. Axinn and Thornton (1996) found a relationship between children's values regarding family formation and their mothers' experiences with divorce, remarriage, and widowhood, and argued that children's attitudes are not only *directly* influenced by the experiences of their mothers, but also *indirectly* by socialization of the mothers' own attitudes toward marriage, cohabitation, divorce, and premarital sex.

Fertility preferences and behaviours. Childbearing outside of marriage does not carry the social stigma it once did. There is an increasing acceptance in Western countries of cohabitation as a legitimate setting for the bearing of children, making the union more like marriage over time (Balakrishnan et al. 1993; Manning 1995). Still, some studies have indicated that cohabitors are more like single people than married people when it comes to fertility preferences and behaviours (Nock 1995; Rindfuss and Vandenheuvel 1990). Like attitudes toward marriage, Axinn and Barber (1997) note that enthusiasm for childbearing is lower among cohabitors than it is among married persons, and the cohabiting relationship itself helps to develop this attitude. Individuals who choose

cohabitation over marriage wish to maintain some of the freedoms of single life without taking on the legal bindings of marriage. They may be averse to having children for the same reason. Having children entails a long-term commitment to parenthood. Indeed, fertility rates among cohabiting women are lower than they are for married women (Balakrishnan et al. 1987, 1993; Manning 1995), although sexual activity has been found to be either higher for cohabiting couples or on par with married couples (Bachrach 1987; Rao and DeMaris 1995). Cohabitors have also been noted for more frequent contraceptive use than married couples (Balakrishnan et al. 1987, 1993). However, Manning and Landale (1996) have noted that cohabiting women are more likely than single women to experience a premarital pregnancy.

Some cohabitors may desire children but do not want them to be born outside of marriage. Studies in the United States show this to be true, despite society's changing attitude; a pregnancy often leads to marriage of the cohabiting couple (Brown 2000; Graefe and Lichter 1999; Manning 1995). This relationship applies primarily to white women in the United States, however; pregnancy seems to have little effect on the transition to marriage among black women (Loomis and Landale 1994; Manning and Smock 1995). Even in Sweden, where childbearing outside of marriage enjoys greater social acceptance, premarital pregnancy increases the likelihood of a CLU translating into marriage (Seltzer 2000). In their study of cohabitors in Canada, the Netherlands and Latvia, Mills and Trovato (2000) found that pregnancy increases the likelihood of cohabitors to marry only until the fifth month, after which the odds of marriage levels off, then declines after the birth of the child. Exceptions to the rule may occur, however. Wu and Balakrishnan (1995) reported that in Canada, the presence of children in a cohabiting relationship have a *negative* influence on both the transition to marriage and to separation.

Marriage, therefore, continues to be the union of choice for most couples that start a family. Cohabitors who commit to parenthood also tend to commit to marriage. There are

signs that this is changing, though, with the growing popularity of cohabitation. Pregnancy appears to be having a lesser effect on the transition to marriage among cohabitors in recent birth cohorts (Mills and Trovato 2000; Smock 2000). It is estimated that one third of all births outside of wedlock now occur within cohabitation in Great Britain (Berrington 2001) and the United States (Manning 1993). Currently, about 40 percent of cohabiting households in the United States contain children. As the meaning of cohabitation changes to become an alternative to marriage, fertility behaviours within cohabitation will become similar to those within marriage. As Manning (1993) has indicated, cohabiting black women in the United States are already treating pregnancy as they would if they were married. With time, the fertility preferences and behaviours of cohabiting couples and married couples will become more alike, across all population subgroups.

Gender roles. As women increase their representation in the workplace, they are discovering that their role within the family is becoming more like that of men. Still, women continue to carry out most of the domestic chores in the home – the traditional "women's work" – whether they work outside the home or not. There are signs that men are coming around to accept more egalitarian sex roles within the family, though, particularly younger men (Goldscheider and Waite 1991). Is there any difference between cohabiting and married couples in these attitudes toward egalitarian sex roles, and their practice?

Studies have found mixed results to this question. Seltzer (2000) states that cohabiting couples are more flexible than married couples in the degree in which they follow traditional gender-based division of labour. For example, housework is generally divided more equally between cohabiting couples than between married couples (Nock 1995). Smock (2000) disagrees, stating that there is little difference between cohabiting and married couples in their division of household labour. The study by Clarkberg, Stolzberg, and Waite (1995) found that cohabitation selects individuals who hold more

non-traditional, liberal attitudes toward sex roles: men for whom success at a career is not considered important, and women who value money and career success. With this in mind, we would therefore expect that gender roles tend to be more equal in cohabitation than in marriage. Diversions from the traditional roles of the sexes in a union could lead to union instability (Becker 1981).

Relationship assessment. Research in the United States on cohabitors' assessment of their relationship indicates that cohabiting couples do not feel as positive about their relationship as married couples do (Brown 2000; Nock 1995; Thomson and Colella 1992). Cohabitors express lower levels of happiness and interaction with their partners (Nock; Booth and Johnson 1988), and higher levels of disagreement and conflict (Brown; Booth and Johnson). Thomson and Colella found that cohabitors who marry report lower quality marriages, with greater likelihood of divorce, than those who enter directly into marriage. This effect was stronger for individuals who cohabited for longer periods of time before marriage. Relationship assessments and perceptions appear to be good predictors of the outcome of cohabitation (Brown; Thomson and Colella). Negative assessments lead primarily to dissolution of the CLU, although positive assessments do not influence entry into marriage. Couples with low expectations for entry into marriage were not likely to do so, but were more likely to separate.

There is a need for studies such as these in other Western countries. It would be interesting to see if cohabitors in Scandinavian countries, where cohabitation is much more similar to marriage than it is the United States, would assess their relationships differently, or if differences in relationship assessment exist between Quebec and non-Quebec Canada.

Mate selection, compatibility, and homogamy. The research of Schoen and Weinick (1993) and Blackwell and Lichter (2000) has revealed some differences in cohabitation and marriage in terms of characteristics looked for in a partner. These differences help explain why the relationships of cohabitors, whether or not they translate into marriage,

are less stable than those of non-cohabiting married couples. Being generally less committed to their relationship than married persons are, cohabitors' requirements in a potential partner tend to be less restrictive, which may indicate that cohabiting couples are not as well matched as married couples (Blackwell and Lichter), thus discrediting the idea that cohabitation is useful in helping couples to assess their compatibility with each other in preparation for marriage.

Schoen and Weinick describe cohabitation as a "looser bond" relationship, distinct from marriage. They argue that cohabitors place more emphasis on short-term and achieved characteristics, such as education and career status, and less on ascribed characteristics, such as age, religion, and race. Cohabitors therefore have a lesser propensity to choose a partner with the same age or religion and greater propensity to choose a partner with the same education, compared to married people. Blackwell and Lichter, however, found that both cohabiting and married couples are highly homogamous with respect to education and race. Cohabiting couples are, nevertheless, less homogamous in general than married couples.

Demographic, cultural, and socioeconomic characteristics. Cohabitors tend to be young. There is no doubt a cohort effect here; the more recent the cohort the individual comes from, the more likely he or she is to have ever cohabited (Bumpass and Sweet 1989; Burch 1989; LeBourdais and Marcil-Gratton 2000; Nock 1995; Schoen 1992). Few people who formed unions prior to the 1970s entered first into cohabitation before marriage. Currently, most people from older cohorts who are cohabiting are doing so after a previous divorce or separation (Burch 1989). Interestingly, some U.S. studies found that cohabitation rates are higher among the previously married than they were among the never-married (Bumpass and Sweet 1989; Bumpass et al. 1991; Graefe and Lichter 1999). In all likelihood, cohabitation will eventually become more like marriage, with all adult age groups represented, as the recent cohorts of today age and new cohorts continue the cohabiting trend.

Results of studies looking at the education levels of cohabitors have been mixed. In the United States, cohabitation rates increased among all education levels after 1970 (Cherlin 1990). Using American data, Bumpass et al. (1991) report that the trend toward increasing cohabitation has been led by the least-educated segment of the population, contradicting Lesthaeghe and Surkyn's hypothesis (1988) that social and cultural innovation begins among the highest social strata and then filters down to lower strata. Nock (1995) agrees with Bumpass et al., stating that cohabitors generally have fewer years of schooling than married individuals have. In Canada, Burch (1989) notes that there is little variation across education levels for the tendency to form CLUs. However, LeBourdais and Marcil-Gratton (2000) found that the risk of cohabitation in Canada decreases as education increases.

Religiosity appears to be related to the hazard of entry into cohabitation as well. As measured by frequency of church attendance, individuals with lower levels of religiosity are more likely to form cohabiting relationships, in Canada (Balakrishnan and Chen 1990) and the United States (Thornton, Axinn, and Hill 1992). In the latter study, reciprocal effects of religiosity, cohabitation, and marriage were noticed. Cohabitation itself reduces religiosity, while marriage increases religious participation. In Balakrishnan and Chen's study, religiosity was found to be associated with attitudes toward abortion, premarital sex and childbearing. In keeping with the selection hypothesis, which argues that attitudes of cohabitors are more liberal and unconventional, it is not surprising that individuals who are willing to enter into such a non-traditional union would be less likely to have their behaviours governed by a traditional institution like the Church.

Religious orientation does not seem to matter much; cohabitation is possible among almost all denominations, providing the orientation is weak (Wu 2000). Although Quebec, a predominantly Catholic society, has a much higher cohabitation rate than the rest of Canada, this is due to the declining influence of the Catholic Church in that society

since the Quiet Revolution, not because the risk of cohabitation is that much greater among Catholics.

Conclusion. The discussion has outlined some fundamental differences found in social research between cohabitation and marriage, cohabitors and non-cohabiting married people. Although the basic idea has been to show that cohabitation is unlike marriage, an important theme in some of the more recent research is that it *has been* becoming more like marriage over time. Cohabitation and marriage are converging in similarity, as cohabitation becomes widespread throughout the population and loses its exclusiveness. One important point to note is that while cohabitation may differ from marriage, it also differs from single life in certain ways. For example, research in the United States has found that cohabiting women differ significantly from single women in their sexual, contraceptive, and fertility behaviour, more than they differ from married women (Bachrach 1987; Manning 1993; Manning and Landale 1996). Future research will probably reveal that cohabitation is as different from single life as single life is from marriage. Cohabitors may no longer be a select group of individuals who are ill-suited to marriage.

Chapter 5:
Hypotheses, Data, and Methods

5.1 Hypotheses

This study is investigating the effect that premarital cohabitation has on the stability of subsequent marriage, and is particularly concerned with the possibility of a variable effect over time spent in marriage. As we have seen, previous research has provided strong evidence that couples that cohabit before marriage are more likely to divorce or separate than couples that did not cohabit. Results as to whether cohabitation has a stronger or weaker effect over time in marriage have been inconclusive, however. Logically, it would seem that cohabitors who have remained married many years would have more invested into the relationship, including time, material goods, and possibly children, than cohabitors who have only been together a short time. As Mills and Trovato (2000) reason, transaction costs of dissolution become greater than benefits when investment into the relationship increases. Therefore, the gap in the hazard of dissolution between cohabiting and non-cohabiting married couples is expected to lessen over time. This study therefore believes that (1) premarital cohabitation leads to a greater risk of marital dissolution than if cohabitation had not occurred, and (2) the effect of premarital cohabitation on marital instability weakens with time spent in marriage, to the point that it is no longer significant. At no point in marriage, however, does cohabitation lead to a *lesser* risk of marital dissolution than if cohabitation had not occurred.

5.2 Data

Analyses in this study use survey data from the 1995 General Social Survey, Cycle 10: The Family (GSS–95). The two objectives of the General Social Surveys are to collect information for the study of social trends in Canada, and to provide information

relevant to specific policy formulation, program development and evaluation. Each cycle of the GSS consists of three content components: Classification, Core, and Focus.

Classification content contains variables on socio-economic and demographic characteristics of individuals, for use in the analysis of Core and Focus data. Focus content addresses the second objective of the GSS, which provides information on specific policy issues of interest to federal departments and other policy interest groups. The Focus content for Cycle 10 is not relevant to this study. The first objective of the GSS, collecting information on social trends, is covered by Core content. In Cycle 10, this content relates to family, and includes items on marital and common-law union histories, child-bearing histories, fertility intentions, and attitudinal variables relating to gender roles and family. Cycle 10 is the first repeat of family content since Cycle 5, the 1990 General Social Survey (Statistics Canada 1997; Wu 2000).

The target population of GSS–95 was all persons 15 years of age and older in Canada, with the exception of residents of the Yukon and Northwest Territories, and full-time residents of institutions. Data were collected by the use of computer-assisted telephone interview (CATI) technology, which allows for better quality data than older data collection methods, by creating fewer processing steps by the interviewer. Unfortunately, this method excludes households without a telephone, although in 1995, these households represented less than 2% of the target population. Survey estimates have been weighted to account for individuals without telephones.

Data for GSS-95 were collected monthly throughout all twelve months of 1995, in order to evenly represent the seasonal variation in information gathered. The sample was allocated by first employing Random Digit Dialing (RDD), a telephone sampling method, to choose households. One person 15 years of age or over was then randomly selected from each household to complete the full survey questionnaire. In addition, the province of Quebec sponsored an additional sample of 1,250 respondents, which was added in May of 1995 and spread equally over the remaining months. In total, 10,749 respondents from

across the ten Canadian provinces completed the full questionnaire. The overall response rate was 81 percent. (Statistics Canada 1997; Wu 2000).

The data for GSS-95 were packaged into three files: the main file, the child file, and the union file. The main file consists of one record for each respondent, and includes variables representing characteristics of both the respondent and of the household. Also included is a weighting factor, which represents the number of persons in the population that the record represents. The child file consists of one record for each child of each respondent. The maximum allowable number of records per respondent is 10 for biological children, 5 for step-children, and 10 for adopted children. Respondents with no children are not represented in this file. The union file consists of one record for each union of each respondent. Unions are considered to be either marital, common-law, or common-law followed by marriage. Any case in which the partners cohabited first and later married is represented as one record in the data. The maximum allowable number of records per respondent is 9, with 4 for marriages, 4 for cohabitations, and the most recent union.

There is very little duplication of data across the three files. The bulk of the data used for analysis in this study is from the unions file, with several additional variables from the main file. No data from the child file were used.

5.3 Methods: The Cox Proportional Hazards Model

The statistical method used for analysis is the Proportional Hazards (PH) model, first developed by Cox (1972). The PH model has a distinct advantage over the more basic life table method: it is a continuous-time model, whereas the life table method assumes that time-dependent measures such as age or marital duration are divided into sets of discrete intervals (Teachman 1982).

There are two main functions in the PH model: the hazard function, and the survival function. The hazard function represents the probability of the event of interest occurring

at time t, while controlling for a set of k covariates. The hazard function is the PH model equivalent of ${}_nq_x$ in the life table, although it takes into account continuous time. One other advantage of the PH model is that it does not make the assumption of population homogeneity. The conditional probability of an event occurring is assumed to be the same for all individuals in the life table method — the same set of ${}_nq_x$ values applies. In the PH model, values of the hazard function, $h(t,\mathbf{X})$, differ by groups of individuals with dissimilar values of covariates (Teachman 1982). The core assumptions in the PH Model are that population heterogeneity is captured by the set of covariates in the model, and relative risks remain constant over time (Balakrishnan et al. 1987). When covariates are all time-independent, the hazard function can be written as

$$\begin{aligned} h(t,\mathbf{X}) &= h_0(t)\exp(\beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k) \\ &= h_0(t)\exp(\boldsymbol{\beta}\cdot\mathbf{X}), \end{aligned}$$

where $\boldsymbol{\beta}$ is a column vector of k coefficients and $\mathbf{X}$ is a row vector of k covariates. The quantity $h_0(t)$ is an arbitrary duration-dependent baseline hazard function associated with a baseline or reference group, in which all covariates in the model take the value of zero. $h_0(t)$ is the equivalent of the constant in least-squares regression, but one that takes different values at each time t (Teachman 1992). Specific values of the hazard function are not calculated unless the baseline function is specified. Therefore, for this analysis, the risk of marital dissolution for other groups can be estimated relative to the reference group, once the hazard function is calculated for various durations of the unions in question.

A hazard ratio may be used to compare the hazard estimate of one covariate category with another, holding all other categories constant. Typically, a reference category for each covariate is selected to compare all other categories in the covariate. In its simplified version, the hazard ratio may be written as

$$HR = \exp\left[\beta_i (X_i^* - X_i)\right],$$

where X_i^* represents the value of the category in covariate i to be compared, and X_i represents the value of the reference category for that covariate. Because it is easier to interpret ratios that are larger than the null value of 1, categories should be coded so that the reference category has the lowest expected hazard (Kleinbaum 1996). In our analysis, the values of X_i^* and X_i are 1 and zero, respectively, for all i, which simplifies the hazard ratio to e^{β_i}. From the hazard ratio, a simple transformation, $100 \cdot (e^{\beta_i} - 1)$ expresses the percentage difference in the hazard of the event of interest occurring for a specific category of covariate i compared with the reference category, holding all other variables constant (Wu 2000). If the hazard ratio is less than unity, the transformation may be calculated as $100 \cdot [(1/e^{\beta_i}) - 1]$.

If the hazard function defines probability of dissolution, the survival function represents the probability of a marital union surviving at least to duration t. The survival function can be derived[2] from the hazard function, and its equation is given by

$$S(t,\mathbf{X}) = [S_0(t)]^{\exp(\beta \cdot \mathbf{X})},$$

where $[S_0(t)]$ is the survival function calculated for a baseline or reference group (Balakrishnan et al. 1987; Kleinbaum 1997).

As mentioned, the PH model assumes that relative risks remain constant over time. In practice, however, certain covariates may interact with time, causing a variation in risk. It is possible to extend the PH model to allow for time-dependent covariates. The hazard function of the extended model can be written as

$$h(t,\mathbf{X}(t)) = h_0(t)\left[\sum_{i=1}^{p} \beta_i X_i + \sum_{j=1}^{q} \delta_j X_j(g(t))\right],$$

[2] For the mathematical derivation of the survival function, see Hinde (1999, pp. 62-76).

and consists of p time-independent covariates and q time-dependent covariates. The latter are interacting with time, specified as a time function $g(t)$. This function may simply be linear time t. Log t and t^2 are also common functions of t in time-dependent models. Another method is to divide time into specified intervals and assume that the hazard is constant only across each interval, so that in time interval (t_0 , t_1), $g(t)$ is equal to 1 when $t_0 < t < t_1$, and is zero otherwise.

One problem associated with survival analysis models is censoring. Right-censoring occurs when either (1) the individual does not experience the event of interest before the study ends, (2) the individual is lost to follow-up during the course of the study, or (3) the individual withdraws from the study before it is completed, due to death or some other cause (Kleinbaum 1996). Left-censoring occurs when the individual's risk period for the event starts before the beginning of the study period. In both right- and left-censoring cases, some information about individual survival time is known, but exact survival time is unknown (Kleinbaum). Cases may be censored either way, or both ways. Teachman (1982) states that an important property of any statistical technique being used to analyse data on marital histories and dissolution is its ability to handle truncated observations. There is still important information to be had from cases where survival time is not fully known. The PH model has the ability to include what information is known from censored cases.

All analyses and estimates are carried out on SPSS 10.0. This statistical software has the ability to calculate hazard coefficients and ratios by Cox's PH model, including the use of time-varying covariates. The union file of GSS-95 contains separate records for each marital or common-law union of each respondent. Because of obvious associations of age, marriage cohort, and second or higher ranked unions, only first unions are to be considered here, so that each of the 10,749 respondents has no more than one possible data record. The sample for this study excludes all respondents who have never been in a

marital union, including those who had cohabited but not married. A total of 7,187 data records, or 66.9% of the survey sample, remain for analysis.

Since retrospective data were collected in GSS-95, there is no possibility of left-censoring. Respondents were asked to recall all previous unions they had been involved in. There is also no issue with right-censoring due to loss of respondent to the study. Censored data does, however, include all cases in which the respondent had not experienced the event of interest at the time of the survey, i.e., the first marriage had not dissolved by separation or divorce. Cases in which a first marriage had ended due to death of the spouse are censored, since the total survival time until marital dissolution is unknown. There are 1,030 of such cases, or 14.3% of the 7,187 first marriages. In total, there are 5,756 (80.1%) censored cases and 1,431 (19.9%) non-censored cases.

There is a problem in the data, due to 396 cases in which no union duration was reported by the respondent. These cases are automatically dropped from the analysis by SPSS. These particular cases may be biased in favour of certain cohorts, and their elimination may bias the estimates. As they represent only 5.5% of the cases analysed, however, the effect of their elimination is believed to be slight. Table A4 (see Appendix A) provides means and standard deviations for each covariate, comparing the group of respondents who reported their union duration with the group that did not. The values are calculated from recoded data, with the reference category coded as zero and the category of interest coded as 1. For example, in the first covariate, *Marital Union Type*, marriage without cohabitation is coded as zero and marriage with cohabitation is coded as 1. The value of the mean for Marital Union Type is 0.12 for the group that reported duration, and 0.29 for the no-duration-reported group, implying that premarital cohabitors are slightly over-represented in the group that did not report union duration. Other characteristics of this group is that they tend to be older, have lower levels of education, had begun their union a longer time ago, and had entered it at a later age.

The dependent variable in the analysis is duration of union. Duration in GSS-95 is rounded off to the nearest tenth of a year. Cases in which the respondent cohabited with the marital partner before marriage are treated as a single union; the duration is then measured from the start of the cohabitation. The present study will continue to treat these cases as such, rather than as two separate unions, in keeping with the research of DeMaris and Rao (1992) and Teachman and Polonko (1990), who found conflicting results on the relationship between exposure time and marital instability.

The principal covariate, marital union type, consists of two categories: (1) "marriage only, no cohabitation" (reference), and (2) "marriage preceded by cohabitation". The full PH models control for several demographic, cultural, and socioeconomic variables. Age cohort is divided into four age groups, corresponding (in 1995) with pre-baby boom (50 and over), early baby boom (40-49), late baby boom (30-39), and post-baby boom (15-29). A related variable that may be used in place of age cohort is union cohort, specified as the decade in which the cohabitation or marriage began. The categories for this covariate are the first half of the 1990s, the 1980s, 1970s, 1960s, and before 1960 (reference category). There is likely to be a negative effect on marital dissolution for respondents whose union started during the 1970s and later, after the Divorce Act of 1968.

Covariates are also provided for age at start of union, age heterogamy, frequency of religious attendance, education level, presence of children in household, respondent's experience with parental marital breakdown, experience of spouse with previous cohabitation, contraceptive use, and Canadian region (i.e. Quebec and non-Quebec). Research has provided evidence that each of these variables is associated in some way with marital instability. For example, marriage at an early age may lead to instability due to immaturity (Morgan and Rindfuss 1985), restriction of sexual activity to one individual at a time in life of sexual experimentation (Booth and Edwards 1985), or uncertainty of employment and finances (Oppenheimer 1988). Studies of mate selection indicate that

age heterogamy is an important factor in the outcome of unions (Blackwell and Lichter 2000; Schoen and Weinick 1993). Frequency of church attendance has been used as a proxy for degree of religiosity in studies (Balakrishnan and Chen 1990; Thornton, Axinn, and Hill 1992), and is related to cohabitation and divorce. The presence of children has been found to have a stabilizing effect on unions (Manning and Smock 1995; Wu 1995). The experience of parent's marital dissolution may lead to specific demographic and family outcomes in adulthood, such as cohabitation and divorce (Cherlin et al. 1995; Dumas and Bélanger 1997; LeBourdais and Marcil-Gratton 2000). Commitment to childbearing implies commitment to permanence of the family unit. Conversely, contraceptive use, which tends to be higher among cohabitors than among married couples (Balakrishnan et al. 1987, 1993), could imply lack of commitment and predisposition to divorce. A spouse's previous cohabiting experience with another person may be detrimental to marriage; DeMaris and MacDonald (1993) found that serial cohabitation was associated with greater marital instability. The education effect has produced mixed results. However, education is related to earnings, and there is evidence that higher earnings have a negative effect on marital outcomes for women, while the opposite is true for men (Smock and Manning 1997). Finally, the differences in marital and family formation behaviours of Quebec and non-Quebec Canada have been illustrated (Dumas and Bélanger 1997; LeBourdais and Marcil-Gratton 2000; Pollard and Wu 1998). Quebec has surpassed the rest of Canada in cohabitation, decline in fertility, and the retreat from marriage.

The covariate for age at start of union consists of four categories: less than 20 years, 20-21 years, 22-24 years, and 25 years or older. Age heterogamy is collapsed from GSS-95 data to include five categories: no age difference between respondent and spouse, respondent 1-5 years older than spouse, 1-5 years younger, more than 5 years older, and more than 5 years younger. Education level is categorized as less than high school diploma, high school diploma, some post-secondary, diploma from college or technical

school, and university degree. Canadian region is divided into Quebec and non-Quebec. Frequency of religious attendance is categorized into once or more per week, once or more per month, once or more per year, and not at all. The remaining covariates, Children Present in Household, Parents Had Separated or Divorced, Respondent and Spouse Using Contraceptive, and Spouse Had Previously Lived Common-Law With Another Person, are all simple dichotomous yes/no variables.

Dichotomous covariates are coded as zero or 1, with the reference category in all covariates being coded zero. Dummy variables are used for covariates with more than two categories. In most cases, the reference was selected to be the category with the lowest expected hazard, based on previous research on the determinants of marital dissolution. Table A2 in Appendix A provides Pearson correlations for all covariates to be used in the PH models.

Chapter 6:
Results

6.1 Descriptive Statistics

Crosstabulations and frequencies were computed for covariates on SPSS 10. Descriptive statistics use standardized weighted data.[3] Standardization of weights is computed by dividing the value of the weights provided in the GSS-95 variable WGHTFNL by the average of these weights for all cases used in the analysis (i.e. all cases in which a first marriage is reported).

Figure 6.1 indicates the distribution among the GSS-95 sample of ongoing first marriages and first marriages ended by separation or divorce, for premarital cohabitors and non-cohabitors. Separate graphs are provided for each sex. The figure shows that the majority of marriages were ongoing at the time of the survey, even those that had been preceded by cohabitation. Nevertheless, divorce or separation appears to more likely among premarital cohabitors than it is among couples that did not cohabit first. There is also some gender difference. The difference in percentages between cohabitors and non-cohabitors is not as pronounced for females, which may indicate that women consider premarital cohabitation as simply another stage in the marriage process, more than men do. Women may also be more likely to turn cohabitation into marriage, while men would tend to exit from cohabitation into singlehood (Wu and Balakrishnan 1995).

Figure 6.1 shows high percentages of intact marriages for both marital types, but gives no indication of how these marriages would be distributed throughout various

---

[3] The purpose and method of weight standardization are described in the GSS-95 user's guide:

> For many analysis techniques ..., a method exists which can make the variances calculated by the standard packages more meaningful. If the weights on the data, or any subset of the data, are rescaled so that the average weight is one (1), then the variances produced by the standard packages will be more reasonable; they still will not take into account the stratification and clustering of the sample's design, but they will take into account the unequal probabilities of selection. This rescaling can be accomplished by dividing each weight by the overall average weight before the analysis is conducted. (Statistics Canada 1997, p.17).

Figure 6.1. Percentage Distribution of Marital Dissolution Among First Marriages

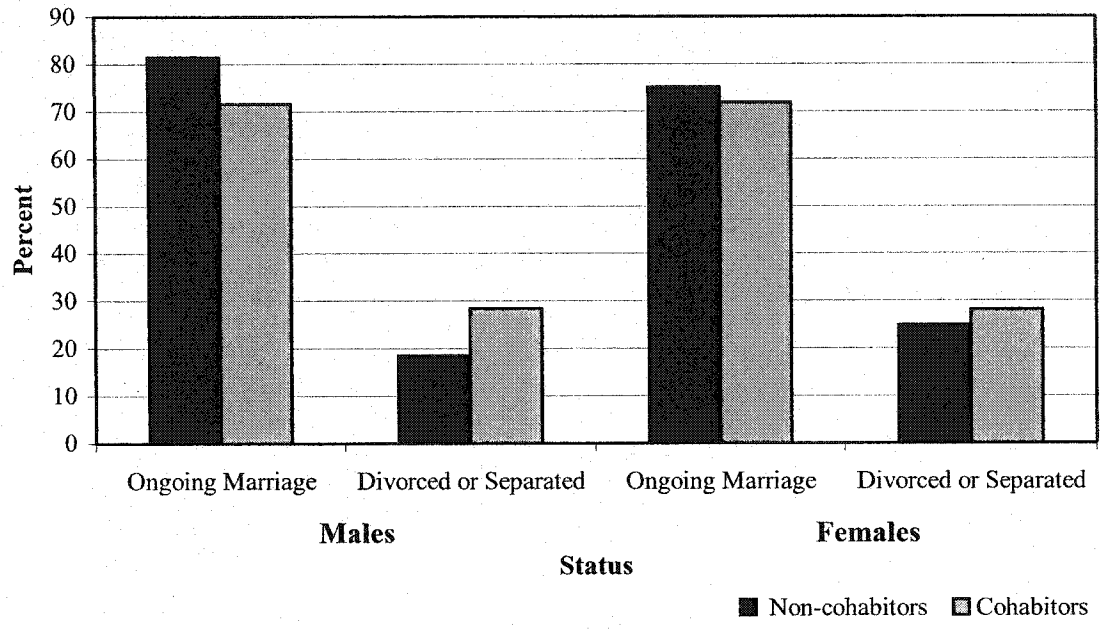
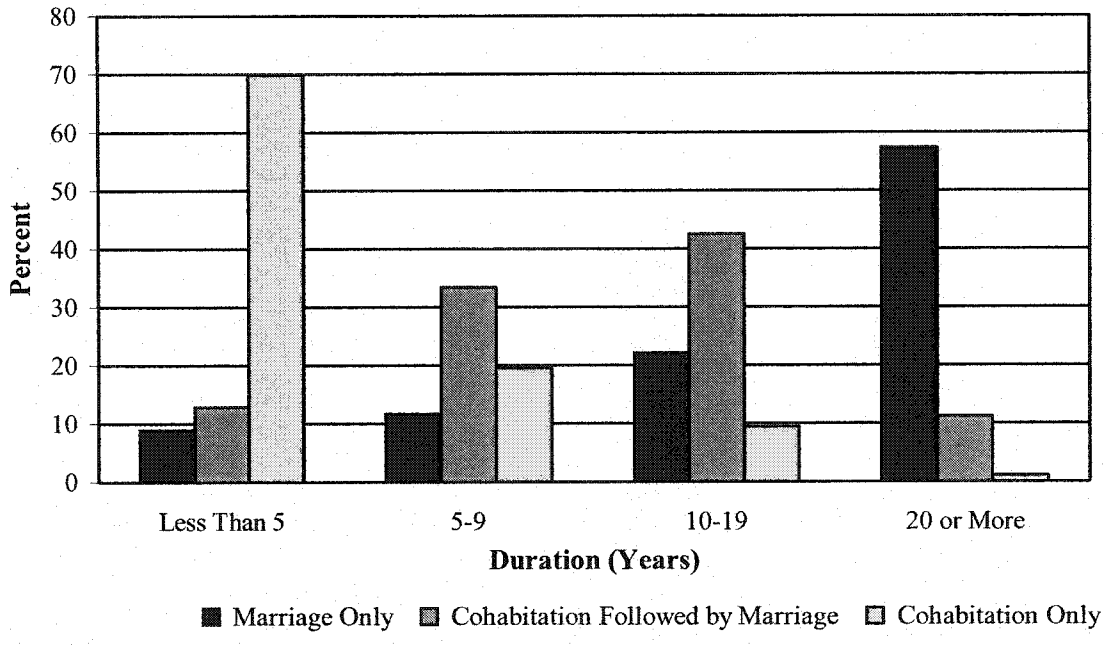


Figure 6.2. Duration of Union by Union Type



Source: The 1995 General Social Survey

marital durations. This information is indicated in Figure 6.2, with the addition of cohabiting unions *not* followed by marriage, for comparison. The distribution of marriages not preceded by cohabitation increases at each duration, which may be accounted for by a cohort effect – cohabitation not being considered an option for older cohorts at the time of their first marriage. The short-lived nature of cohabitation is clearly indicated by the 70% of non-marital cohabitations that lasted less than 5 years. What is surprising, however, is the sizable proportion of marriages with preceding cohabitation that have survived up to 19 years. As premarital cohabitors age, we may begin to see larger proportions of these marriages remaining intact into longer durations, until the graphs of both marital types becomes similar. The fact that there are larger proportions of marriages preceded by cohabitation in the two intervals 5-9 and 10-19 than marriages without cohabitation can again be attributed to a cohort effect. These intervals correspond to first marriages that took place between 1976 and 1990, when young adults were much more likely to enter into cohabitation as a trial marriage.

A series of items in GSS-95 attempted to measure respondents' attitudes and values toward sex roles and importance of family. Whether it is due to selectivity of cohabitors or experience of cohabitation, persons who choose cohabitation have been found to possess more liberal, egalitarian attitudes toward sex roles (Clarkberg et al. 1995; Nock 1995), and tend to place a lower value on marriage and childbearing than do non-cohabiting married persons (Axinn and Barber 1997; Axinn and Thornton 1992; Bennett et al. 1988; Rindfuss and Vandenheuvel 1990). The results of these items provide some evidence of basic attitudinal differences between cohabitors and non-cohabitors who have married, in line with previous research.

Figures 6.3 and 6.4 present the distribution of responses to questions relating to importance of marriage and childbearing, for the two marital groups. Non-cohabitors place a great deal of importance on marriage, whereas cohabitors are more evenly distributed among responses, though few of them place no importance on marital unions.

Figure 6.3. Percent of Responses to Statement, "Importance of being married"

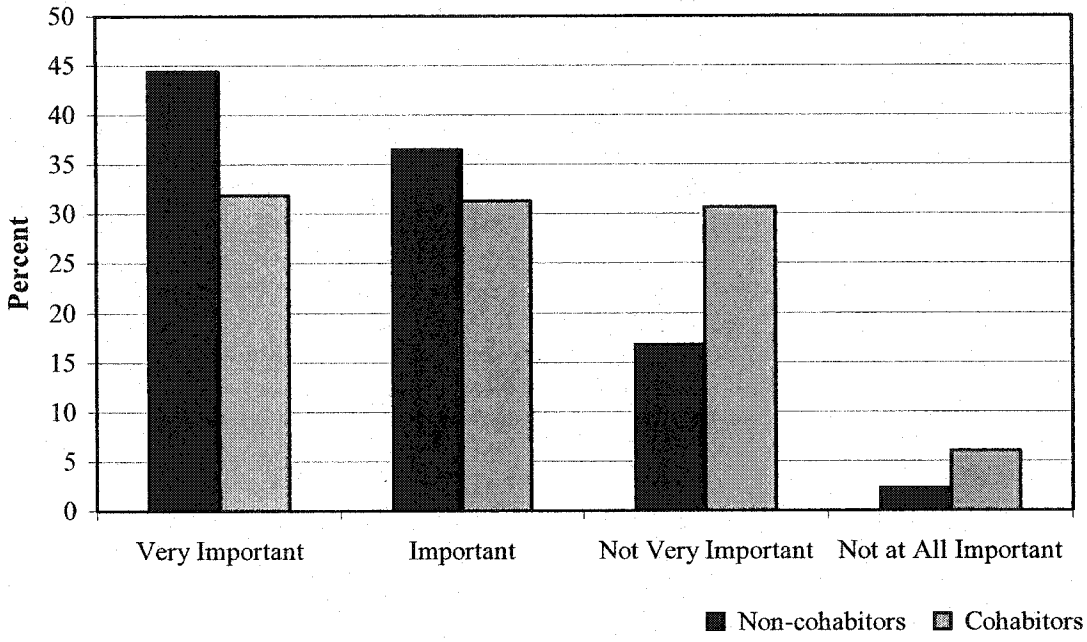
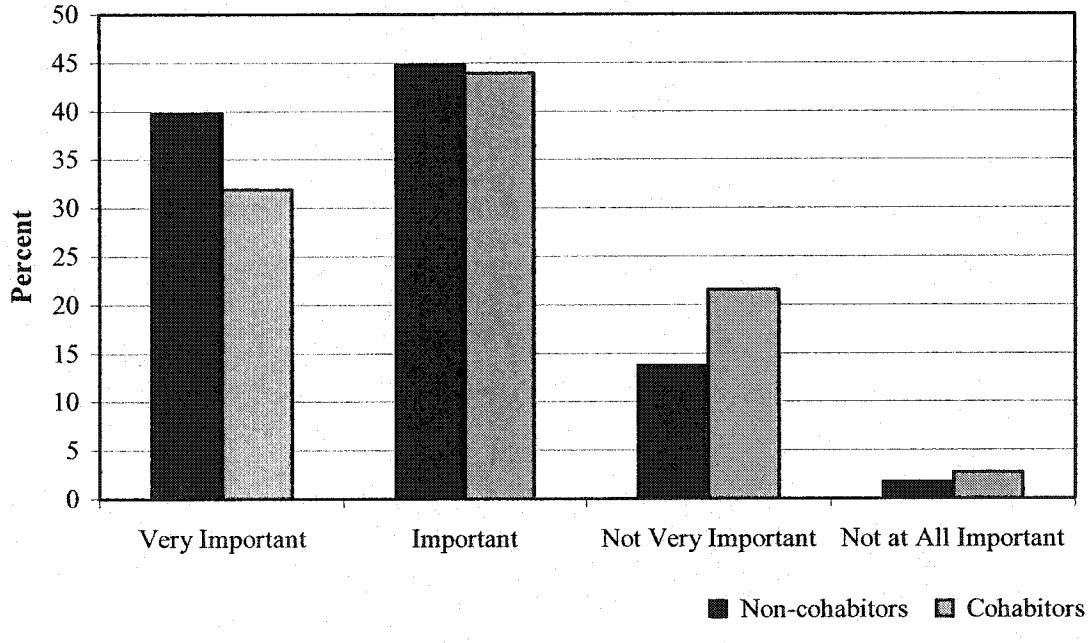


Figure 6.4. Percent of Responses to Statement, "Importance of having at least one child"



Source: The 1995 General Social Survey

Figure 6.5. Percent of Responses to Statement "Raising children is not a man's responsibility" (Males Only)

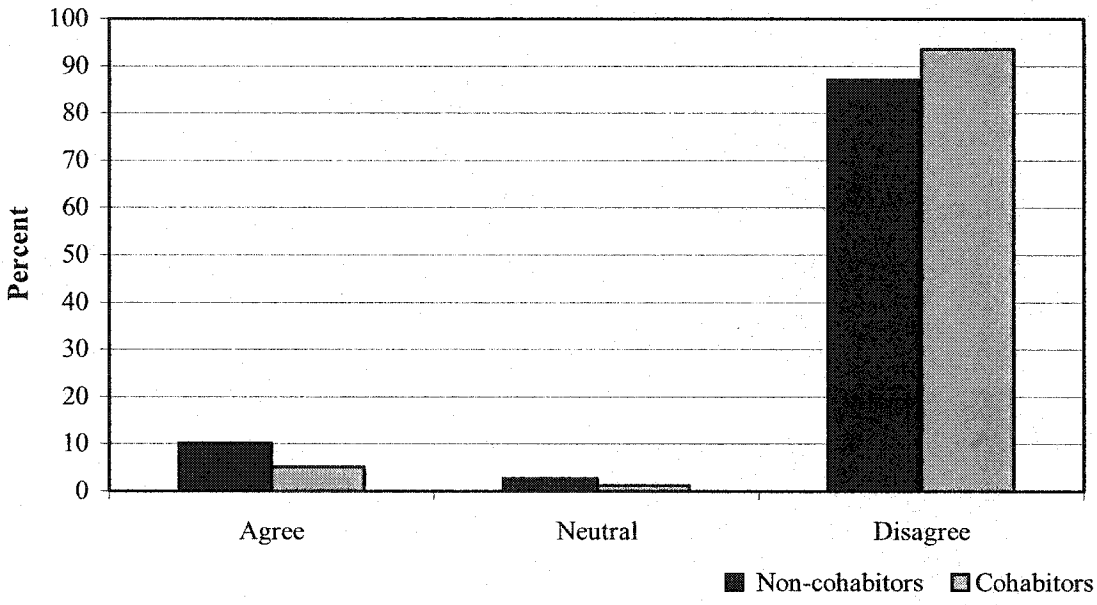
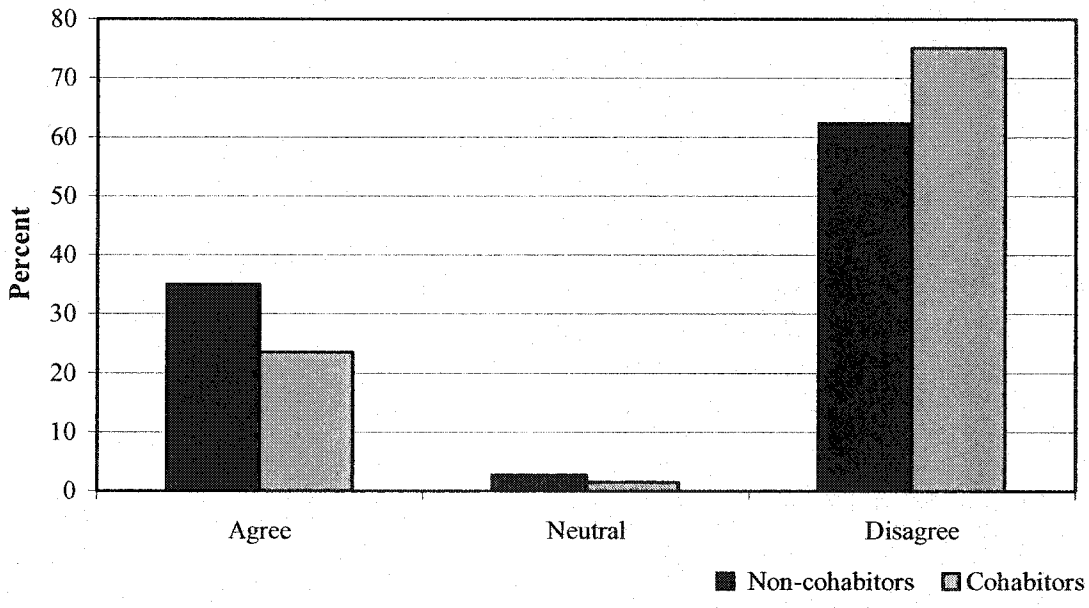


Figure 6.6. Percent of Responses to Statement "A man's role is to bring enough money home" (Males Only)



Source: The 1995 General Social Survey

Figure 6.7. Percent of Responses to Statement "What most women really want is a home and children" (Females Only)

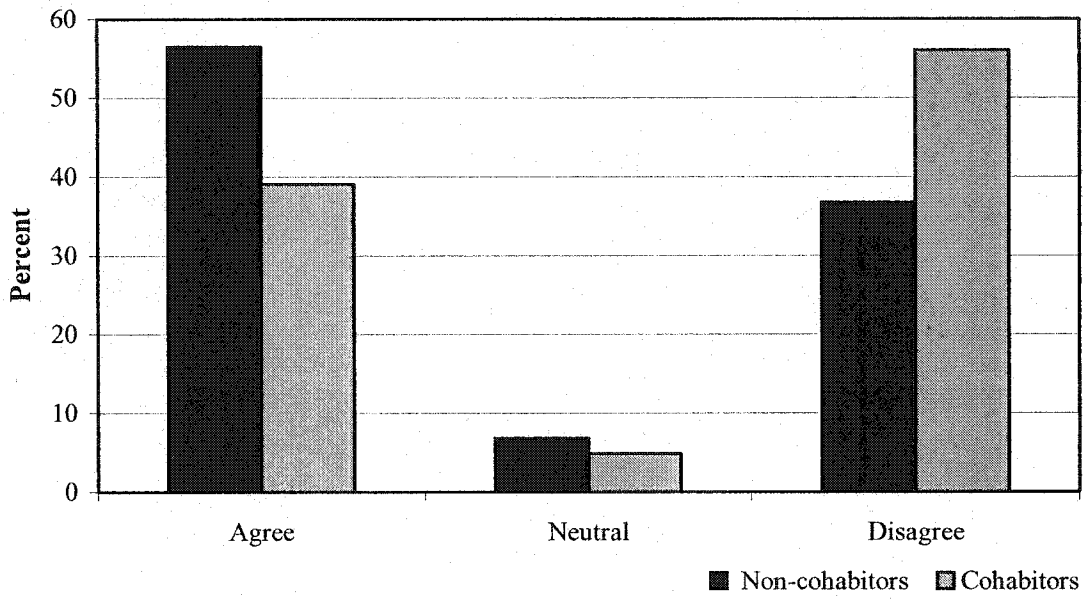
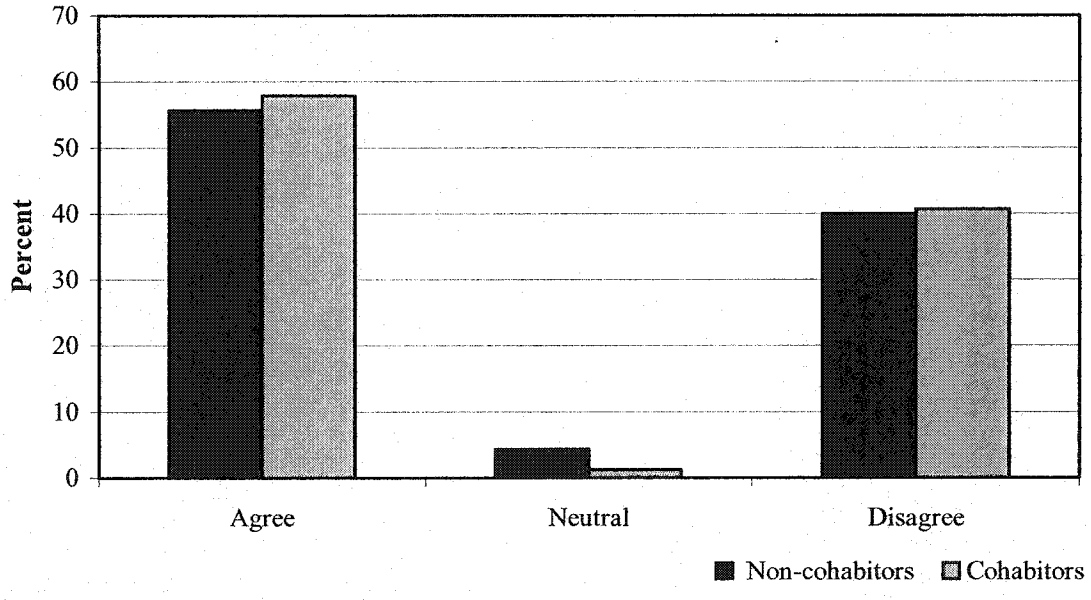
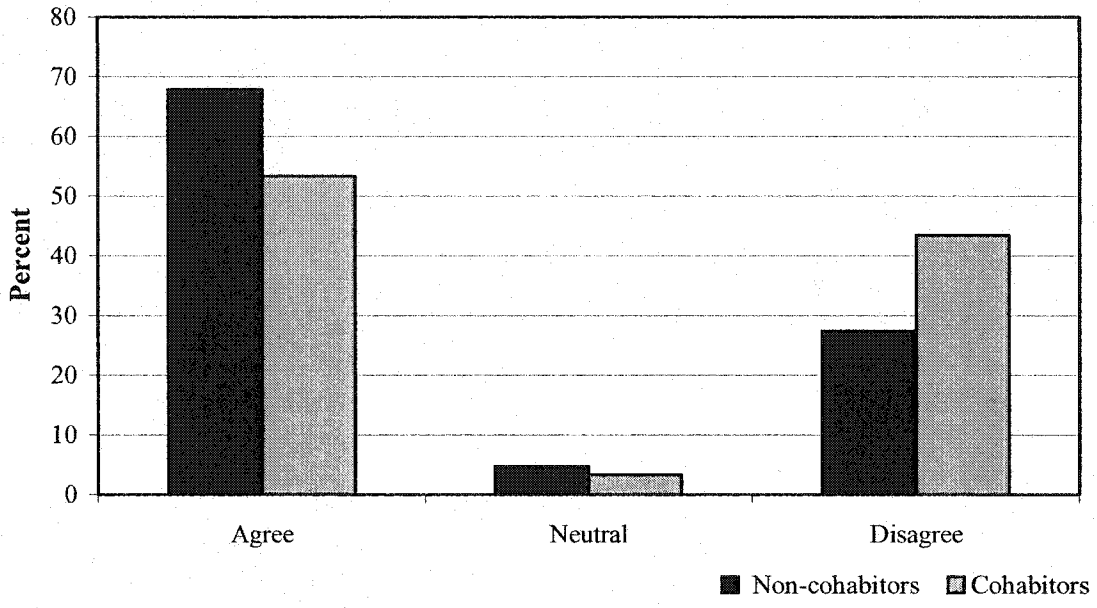


Figure 6.8. Percent of Responses to Statement "Having a job is the best way for a woman to be independent" (Females Only)



Source: The 1995 General Social Survey

Figure 6.9. Percent of Responses to Statement "Keeping house is just as fulfilling as working" (Females Only)



Source: The 1995 General Social Survey

The two groups are more evenly matched in placing importance on having children. Non-cohabitors still tend to value children more than cohabitors, but a clear majority of both groups believe having at least one child is important.

Distribution of responses pertaining to sex roles in the home and workplace are presented in Figures 6.5 though 6.9. Results are indicated for one sex or the other, depending on the content of the question. Figures 6.5 and 6.6 indicate that both cohabiting and non-cohabiting men who marry tend to disagree with the most traditional ideas of the male role, although the extent of this disagreement is greater among cohabitors. One third-of non-cohabiting men in the sample believe that the primary male role in the family is that of breadwinner, while less than one quarter of cohabiting man agree with this. In Figure 6.7, we see a greater difference of opinion between cohabiting and non-cohabiting women. Most non-cohabitors (>50%) appear to believe in the traditional female desires of home and children, while the opposite is true for cohabitors.

The percentages are not extreme, however. There is still a sizable proportion of cohabiting women who also believe as most non-cohabitors do, and vice versa. In Figure 6.8, distribution between the two marital groups of women is almost even; a slight majority of women believe that female independence is best accomplished through work outside the home. In this respect, non-cohabiting women share similar values with cohabiting women. Finally, in Figure 6.9, a surprisingly large proportion of both cohabiting and non-cohabiting women agree that housework brings as much fulfillment as working outside the home, especially in light of the results in Figures 6.7 and 6.6. As expected, more non-cohabiting than cohabiting women agree, but agreement to this statement is favoured even by a slight majority of cohabiting women. This result may indicate that women are not devaluing their traditional familial roles even as new roles expand for them outside the home.

To summarize, these results provide evidence that married persons who first cohabited appear to have slightly more liberal attitudes toward sex roles and do not appear to value marriage or children quite as much as non-cohabitors do, affirming results of previous research. The differences between the two groups are not as great as some previous research has indicated, however. Most respondents across both marital groups generally take the same attitude or opinion, the two groups differing only by proportion. It is possible that since cohabitation is fast becoming a normal stage in the lives of young adults, a convergence of attitudes is taking place between premarital cohabitors and non-cohabiting married persons over time, while more significant differences tend to develop between cohabitors who marry and those who exit into singlehood.

Before analysing GSS-95 data by PH model, it would be worthwhile to determine the distribution of the sample among various demographic, socioeconomic, and cultural variables, for the two marital groups, premarital cohabitors and non-cohabitors. Would there be any important variation in the GSS-95 sample from expected distributions, based on other studies that have compared cohabitors and non-cohabitors? Table 6.1 provides

Table 6.1. Percentage Distribution of Covariates, by Marital Union Type and Sex

Covariate	Men		Women	
	Marital Union Type			
	Marriage Only	Marriage Preceded by Cohabitation	Marriage Only	Marriage Preceded by Cohabitation
Age Cohort				
15-29	4.2	13.9	7.2	22.8
30-39	20.8	46.7	19.4	48.4
40-49	24.9	27.8	23.2	23.6
50 and Over	50.1	11.6	50.3	5.2
Total	100.0	100.0	100.1	100.0
Union Cohort				
1990-	8.0	12.8	6.5	14.0
1980-1989	19.5	46.3	15.8	46.4
1970-1979	22.9	34.6	22.1	34.7
1960-1969	22.7	4.2	19.8	4.2
Before 1960	26.9	2.1	35.9	0.7
Total	100.0	100.0	100.1	100.0
Age at Start of Union				
< 20 Years	5.6	14.3	26.6	30.8
20-21	16.2	18.6	25.1	16.9
22-24	33.5	23.9	25.4	23.1
25 and Over	44.7	43.2	22.9	29.2
Total	100.0	100.0	100.0	100.0
Age Difference Between Respondent and Spouse				
No difference	21.3	24.5	19.6	23.8
Respondent 1-5 years older	53.3	51.1	9.3	8.7
Respondent > 5 years older	13.0	9.9	0.7	0.7
Respondent 1-5 years younger	11.0	11.5	52.3	50.9
Respondent > 5 years younger	1.4	3.0	18.0	15.8
Total	100.0	100.0	99.9	99.9
Highest Level of Education Attained				
Less than high school	28.0	22.3	31.5	16.6
High school diploma	14.4	16.3	19.3	19.9
Some post-secondary	12.5	16.0	10.9	14.9
Diploma from Community College, Technical/Vocational School	25.1	25.7	24.9	28.1
University degree	20.0	19.7	13.4	20.5
Total	100.0	100.0	100.0	100.0
Canadian Region of Residence				
Quebec	21.6	27.7	22.8	30.7
Rest of Canada	78.4	72.3	77.2	69.3
Total	100.0	100.0	100.0	100.0
Frequency of Religious Attendance				
At least once a week	29.9	10.9	35.0	16.9
At least once a month	13.8	8.7	14.5	12.4
One or more times a year	26.2	36.3	25.9	32.3
Not at all	30.1	44.1	24.6	38.4
Total	100.0	100.0	100.0	100.0

Presence of Children in Household				
Yes / One or more	54.3	62.0	50.9	70.4
No	45.7	38.0	49.1	29.6
Total	100.0	100.0	100.0	100.0
Parents Ever Separated or Divorced				
Yes	9.3	15.5	8.8	22.0
No	90.7	84.5	91.2	78.0
Total	100.0	100.0	100.0	100.0
Respondent or Spouse Using Contraceptive				
Yes	51.2	56.2	47.3	55.2
No	48.8	43.8	52.7	44.8
Total	100.0	100.0	100.0	100.0
Spouse Had Lived Common-Law Previously With Another Person				
Yes	1.2	12.7	2.2	18.5
No	98.8	87.3	97.8	81.5
Total	100.0	100.0	100.0	100.0

Note: Columns may not total 100.0 due to rounding.
Sample consists of all respondents who had experienced a marital union.
Source: The 1995 General Social Survey.

the percentage distribution of the covariates to be used in the PH model, for both marital types and for each sex. These are a few differences worth noting. Premarital cohabitation is much more common within the two youngest age cohorts than is marriage without preceding cohabitation. Even members of the age cohort 40-49, corresponding to the early baby boom, have slightly higher percentages among premarital cohabitors than among non-cohabitors. The opposite is true for the oldest cohort. Related to this, marriages preceded by cohabitation were rare among respondents who married prior to the 1970s. Each subsequent decade has brought a further shift toward cohabitation before marriage. Another important feature is that women and (especially) men who formed unions at an early age (<20) tended to cohabit at the beginning, in accordance with research that has found that young adults are currently forming unions at nearly the same rate that they had several decades ago, and at nearly as young an age (Bumpass 1990; Bumpass and Sweet 1989; Rao 1988). They are simply substituting cohabitation for marriage, at least to begin with (Berrington 2001; Bumpass et al. 1991; Rao 1988). In our sample, however, women who waited a few years to begin their union (25 and over) have

also shown a tendency to cohabit at first. Women who establish independence through school and career may tend to postpone union formation to a later age, and thus may be reluctant to enter directly into a permanent marital union.

Most men and women in the sample have married down and up, respectively, in age by one to five years, which is typical in most Western populations. Premarital cohabitors follow the same pattern as non-cohabitors, although they show a slightly greater tendency toward age parity with their spouses than non-cohabitors do.

Although research has found evidence of either a negative or negligible relationship between education and propensity to cohabit (Bumpass et al. 1991; Burch 1989; LeBourdais and Marcil-Gratton 2000; Nock 1995), our sample shows that for women, premarital cohabitation becomes more likely with increased level of education. Generally, proportions of premarital cohabitors are higher than non-cohabitors for women with any amount of post-secondary schooling, whereas the proportion of non-cohabitors is nearly double that of cohabitors among women who have not completed high school. The same relationship is true for men, except at higher education levels, where the likelihood of cohabiting or not cohabiting before marriage is approximately even. We may therefore conclude from this that for women, cohabitation is related to education level and the related higher socioeconomic status. This is not surprising. Women who are willing to spend time and effort pursuing further education would be likely to hold professional positions in the work force and unlikely to follow the traditional female role in the family, taking care of the home and children, and so their attitudes toward family formation are likely to be more liberal.

For most of the other covariates, the distributions of cohabitors and non-cohabitors are what we would expect, based on the literature. For example, results from the sample concur with previous studies on the difference in marriage and family formation between Quebec and the rest of Canada (LeBourdais et al. 2000; Pollard and Wu 1998; Wu 2000). The proportions of cohabiting men and women are higher than non-cohabitors in Quebec,

but outside Quebec the opposite is true. Religious attendance appears to be quite strongly associated with the propensity to cohabit before marriage. Almost one-third the proportion of premaritally cohabiting males compared to non-cohabiting males attends religious service at least once a week. For female cohabitors in this category, the proportion is less than half that of non-cohabitors. Likewise, men and women who never attend religious service show a greater likelihood of premarital cohabitation than of entering marriage directly.

Experience of parental marital breakdown has been strongly linked to demographic outcomes in adulthood, one of which is formation of common-law unions (Axinn and Thornton 1996; Cherlin et al.; LeBourdais and Marcil-Gratton). The distribution of the sample is consistent with this hypothesis. Though most respondents had not experienced their parent's marital dissolution, those that had tended to choose cohabitation before marriage, especially among female respondents. Contraceptive users were slightly more highly represented among premarital cohabitors (Balakrishnan et al. 1987), although even a slight majority of males who had not cohabited before their marriage had reported contraceptive use in their relationship. And experience of a previous CLU appears to be strongly linked to forming a subsequent CLU. Even if respondents had not cohabited before, cohabitation before marriage was the overwhelming choice among those whose spouse had cohabited previously with another person.

An unexpected result in Table 6.1 shows that respondents who cohabited before marriage were more likely to have children present in the household than those who did not cohabit. The proportions of children present and not present in the household were evenly divided among female non-cohabitors, but among female cohabitors, 70% had children in their household. Most male cohabitors also had children residing with them, though the proportion was smaller for them than it was for females. This covariate does not differentiate between couples' own children or stepchildren. The proportions shown in Table 6.1 for presence of children may be the result of blended families, which are

becoming more common with the increase in post-marital cohabitation. It is unlikely that respondents who had cohabited before marriage have had a higher rate of childbirth than non-cohabiting respondents, given that cohabitors generally have lower fertility preferences than people who enter directly into marriage (Axinn and Barber 1997; Balakrishnan et al. 1987, 1993; Manning 1995).

The distribution in Table 6.1 of the GSS-95 sample among the covariates generally bears out previous notions of individuals who choose to cohabit, based on past research. These individuals possess less traditional, more liberal attitudes and values regarding marital and family formation, and sex roles. There are some important demographic and socioeconomic differences in the sample between married persons who first cohabited, and those who did not, such as age, religious observance, residency in Quebec, education, and experience of parental separation. Selectivity of cohabitors, the experience of cohabitation, or both, may be reasons behind these differences, but the investigation of this is beyond the scope of this study. Nevertheless, there are some indications that the similarities between premarital cohabitors and non-cohabitors are greater than the differences. Premarital cohabitors still do not stray too far from societal conventions, such as age homogamy between male and female partners. A sizeable proportion of cohabitors practice religious observation regularly. They are represented within all educational backgrounds, and place similar value on childbirth as non-cohabitors, judging by their contraceptive use. Most premarital cohabitors in the sample come from intact families, just as non-cohabitors do.

Dumas and Bélanger (1997) note that a weakness of crosstabulations is that they are unable to control for possible concurrent effects of variables. For example, variations between individuals may be partially explained by the group of cohorts to which they belong. The distributions just discussed illustrate differences among the covariates for the cohabiting and non-cohabiting marital groups. But there is a possibility that age is a mitigating factor in these differences. Since cohabitation is primarily a phenomenon

among younger adults, could the differences be influenced by an age cohort effect? The distributions in Table A3 (see Appendix A) provide a basic idea of the influence of age cohort on selected covariates.

For men, the more recent the cohort, they more likely their union has started at a younger age. The trend since the 1970s, for both men and women, has been toward marital formation at a later age, and so we may assume that starting a union at a younger age entails a preliminary common-law union.

Younger cohorts have also shown that they are more willing to disregard traditional age heterogamy patterns in marriage. Though the same heterogamy pattern still holds, there are larger proportions among recent marriages in which the husband and wife have age parity, or where the wife is older than the husband, than in the past.

For men, and especially for women, education level generally increases with each subsequent age cohort. Religious attendance is less frequent for younger cohorts, with the exception of larger proportions of older men who do not attend at all. The majority of all age cohorts had not experienced parental dissolution of marriage or had a spouse that had lived common-law previously, although these two experiences were more frequent with young than with older cohorts.

These distributions indicate that age is an important consideration in measuring the effect of cohabitation on marital dissolution, while controlling for selected covariates. Survey and research data have shown that cohabitation is mainly a phenomenon among young adults, and GSS-95 data bears this out. The data also shows that young adults differ from older adults, in some cases quite significantly, with respect to some of the covariates examined.

6.2 Proportional Hazards Models

This study seeks to determine the effect of premarital dissolution on marital stability, controlling for several demographic and socioeconomic covariates. Therefore

the event of interest is marital dissolution by separation or divorce. For the analyses, the hazard function represents the probability of marital dissolution occurring at marital (or common-law plus marital) duration *t*. Table A1 (see Appendix A) provides a schedule of all PH models tested. Some of these models were tested on specific subgroups of the sample, and most did not include all covariates together. Although not indicated, models were also tested with interactions of specific pairs of covariates, but none of the hazard estimates for these interactions were significant. Results of only a few of the models indicated in Table A1 are presented and discussed in this study.

Initially, preliminary bivariate PH models were tested for each individual covariate, by sex. Each bivariate model included *only* a single covariate as an independent variable, although hazard ratio results for *all* bivariate models are shown together in Table 6.2. Since these models test only one covariate at a time without controlling for the others, it is expected that their hazards will be large. The purpose of the bivariate models is mainly for observation of significance, and for comparison of the hazards in the full PH model.

The hazard ratios in the bivariate models indicate significant relationships between most of the covariate categories and marital dissolution. In most cases, the direction of the relationship is what was expected based on the research of others - i.e. hazard ratios increased above 1.0 for groups considered to have greater likelihood of dissolution compared to the reference group.

Premarital cohabitation is a strong and significant predictor of marital dissolution when not controlling for other covariates. The hazard ratio for men is 2.127. Using the transformation $100 \cdot (e^{\beta_i} - 1)$ yields $100 \cdot (2.127 - 1)$ or approximately a 113% greater hazard of dissolution for cohabitors than for non-cohabitors. For women, the ratio is 2.733, or a 173% greater hazard.

Significant and large hazard ratios are found for most of the other covariates, such as Age Cohort, Union Cohort, Age of Respondent at Start of Union, Education Level of Respondent, Frequency of Religious Attendance, Separation or Divorce of Respondent's

Table 6.2. Bivariate Hazards for Marital Dissolution

Covariate	Hazard Ratio (exp(ß)) Men	Women
Marital Union Type		
(Marriage only)	1.000	1.000
Marriage preceded by cohabitation	2.127 **	2.733 **
Age Cohort		
15-29	2.586 *	5.689 **
30-39	2.749 **	5.242 **
40-49	2.680 **	3.908 **
(50 or older)	1.000	1.000
Union Cohort		
1990-	6.668 **	5.298 **
1980-1989	5.043 **	7.930 **
1970-1979	5.230 **	6.375 **
1960-1969	3.442 **	4.279 **
(Before 1960)	1.000	1.000
Age of Respondent at Start of Union		
Less than 20 years	2.017 **	2.022 **
20-21	1.438 *	1.568 **
22-24	1.248 *	1.423 *
(25 or older)	1.000	1.000
Age Difference Between Respondent and Spouse		
(No difference)	1.000	1.000
Respondent 1-5 years older	1.063	0.988
Respondent > 5 years older	0.977	1.476
Respondent 1-5 years younger	1.027	0.862
Respondent > 5 years younger	0.913	0.702 *
Education Level of Respondent		
Less than high school diploma	1.303	1.321 *
High school diploma	1.576 *	2.233 **
Some post-secondary	1.506 **	1.793 **
Diploma from College, tech. school	1.261	2.334 **
(University degree)	1.000	1.000
Canadian Region of Residence		
Quebec	1.214 *	1.094
(Canada less Quebec)	1.000	1.000
Frequency of Religious Attendance		
(At least once a week)	1.000	1.000
At least once a month	1.525 *	1.790 **
One or more times a year	2.108 **	2.611 **
Not at all	3.125 **	3.938 **
Children Present in Household		
(Yes)	1.000	1.000
No	1.572 **	0.632 **

Parents had Separated or Divorced		
Yes	1.946 **	3.069 **
(No)	1.000	1.000
Respondent and Spouse Using Contraceptive		
Yes	0.960	0.694 *
(No)	1.000	1.000
Spouse had Previously Lived Common-Law With Another Person		
Yes	2.466 **	2.979 **
(No)	1.000	1.000

( ) indicates reference categories.
* $p < 0.05$
** $p < 0.001$

Parents, and Respondent's Spouse Lived Common-Law With Another Person. Age difference between the respondent and spouse appears to be a poor predictor of marital instability, even without controlling for other covariates, and even among the unusual circumstances where the wife is older than the husband. Only in cases where a female respondent is five or more years younger than her husband is there a significantly different hazard of marital dissolution than if both were the same age, but the hazard ratio in these cases, 0.702, is lower than it is for the reference group. Since the hazard ratio is less than unity, the transformation 100 • [(1/0.702) - 1] gives a 42% greater hazard of marital dissolution for the reference group, couples with no age difference between the man and the woman, compared to couples where the woman is five or more years younger than the man.

Differences by sex appear for some covariates. There is a 21% greater hazard of marital dissolution for men residing in Quebec, compared with men residing in the rest of Canada. For women, however, there appears to be no significant difference in the hazards between the two regions. Contraceptive use among male respondents has no effect on the likelihood of marital breakdown, but among female respondents, it seems to significantly *lessen* the hazard of their marital breakdown by about 44%. Curiously, the presence of children in the household significantly decreases the hazard of dissolution for men, but increases it for women. The results of these last two covariates seems to indicate that

either having children present or the idea of having them is a stabilizing force in marriage for men, but has the opposite effect for women.

Conflicting results have been found in previous studies in which the effect of premarital cohabitation on subsequent marital stability has been tested by duration of marriage (Bennett et al. 1988; Schoen 1992; Teachman and Polonko 1990). This study hypothesizes that the hazard of marital dissolution is greater for premarital cohabitors than it is for non-cohabitors in the early years of marriage, but converges for both groups with time spent in marriage. The full PH model must therefore include an interaction of marital union type with some function of time.

Table 6.3 presents results for the hazard ratios of two full PH models. Full results of these PH models, and all subsequent models, may be found in Appendix B, including coefficients, standard errors, 95% confidence intervals, and log-likelihood values. Each of the two models was tested separately for each sex, as the results are expected to differ by sex for certain covariates. The time function in these two models is simply a linear function t, measured in years. Models 1 and 2 differ only by the inclusion of a different age-related covariate in each. Model 1 includes a covariate for age cohort, while model 2 includes a covariate for union cohort, the decade in which the union first began. An unexpected problem occurred with these two covariates during the tests for female respondents, in which SPSS was forced to eliminate the reference categories and to substitute the next-to-last categories as the reference. This problem, which went unexplained by the statistical program, may be due to the inclusion of other covariates that are significantly correlated to these two covariates, or to possible collinearity effects. The problem did not occur in tests with male respondents, or in any model that did not include the full set of covariates.

The most important result of both models is that there is no difference in the hazard of marital dissolution between premarital cohabitors and non-cohabitors, either among men or women. The interaction of this covariate with time indicates that the difference

Table 6.3. Multivariate Hazards for Marital Dissolution, with Time-Varying Covariate for Marital Union (Models 1 and 2)

Covariate	Hazard Ratio (exp(ß))			
	Model 1		Model 2	
	Men	Women	Men	Women
Marital Union Type × *t*				
(Marriage only)	1.000	1.000	1.000	1.000
Marriage preceded by cohabitation	1.004	0.994	1.000	0.998
Age Cohort				
15-29	7.798 **	2.251 *		
30-39	4.941 **	1.928 **		
40-49	3.490 *	1.000		
(50 or older)	1.000	——		
Union Cohort				
1990-			6.664 *	2.719
1980-1989			3.137	2.711 **
1970-1979			2.404	1.718 *
1960-1969			1.070	1.000
(Before 1960)			1.000	——
Age of Respondent at Start of Union				
Less than 20 years	1.073	1.196	1.686	1.750 *
20-21	1.348	0.746	1.844 *	1.008
22-24	1.011	0.891	1.264	1.046
(25 or older)	1.000	1.000	1.000	1.000
Age Difference Between Respondent and Spouse				
(No difference)	1.000	1.000	1.000	1.000
Respondent 1-5 years older	1.431	1.260	1.252	1.221
Respondent > 5 years older	1.427	4.504 *	1.060	3.195
Respondent 1-5 years younger	1.258	0.876	1.133	0.893
Respondent > 5 years younger	0.990	1.011	0.757	1.035
Education Level of Respondent				
Less than high school diploma	1.403	0.648	1.493	0.621
High school diploma	1.573	0.698	1.592	0.647
Some post-secondary	1.814 *	1.072	1.824 *	1.031
Diploma from College, tech. school	1.416	0.835	1.515	0.832
(University degree)	1.000	1.000	1.000	1.000
Canadian Region of Residence				
Quebec	1.018	1.161	1.004	1.237
(Canada less Quebec)	1.000	1.000	1.000	1.000
Frequency of Religious Attendance				
(At least once a week)	1.000	1.000	1.000	1.000
At least once a month	1.476	0.971	1.457	1.069
One or more times a year	1.591	1.350	1.570	1.473 *
Not at all	2.042 *	1.834 *	1.929 *	1.912 *
Children Present in Household				
(Yes)	1.000	1.000	1.000	1.000
No	3.512 **	1.278	3.561 **	1.296

Parents had Separated or Divorced				
Yes	1.559	1.888 **	1.562	1.813 **
(No)	1.000	1.000	1.000	1.000
Respondent and Spouse Using Contraceptive				
Yes	1.287	0.555 **	1.240	0.550 **
(No)	1.000	1.000	1.000	1.000
Spouse had Previously Lived Common-Law With Another Person				
Yes	1.459	1.651 *	1.667	1.623 *
(No)	1.000	1.000	1.000	1.000

( ) indicates reference categories.
* $p < 0.05$
** $p < 0.001$

in dissolution risk between the two marital types is negligible and unchanging throughout marriage. With the strong negative influence of premarital cohabitation on marital stability, observed in the bivariate test, but disappearing in the multivariate full models, we may assume that the cohabitation effect is, in fact, explained by the addition of other variables included in models 1 and 2.

Few covariate categories, in fact, have significant hazard ratios in these two models, with the exception of the two age-related covariates. In model 1, younger age is strongly associated with marital instability. The effect is especially pronounced for men – those who were less than 30 years of age at the time of the survey were almost 8 times more likely to dissolve their marriage than men age 50 and over. Women under 30, on the other hand, have a risk of dissolution slightly more than twice as large as the risk for women age 50 and over.

Model 2 shows that the more recent the union, the more likely it is to dissolve. The hazard increases (again, especially for men) with the most recent union cohorts, although some of the cohorts have non-significant hazard ratios. Male respondents whose first marriage took place during the 1990s have a hazard ratio of 6.6, compared to males who were married prior to the 1960s. For female respondents, this cohort had a large but non-significant hazard ratio. Instead, women who were first married during the 1980s and 1970s have significant hazard ratios of 2.7 and 1.7, respectively.

Comparing these results with the bivariate test results in Table 6.2, we see that the inclusion of control variables in model 1 has magnified the hazard of dissolution for men in younger age cohorts, compared to men 50 years of age or older, while it has diminished the hazard somewhat for young women. Likewise, the hazard of dissolution for women whose union began in the 1990s was much higher than that of women whose union cohort was pre-1960, in the bivariate model. In Model 2, this hazard, while still large, has been reduced to non-significance. Only men in the most recent union cohort have a significant, and very large, hazard ratio. Either one, or a combination of other variables included in the full PH model, influences young men and women differently in terms of their propensity to dissolve their marriage.

Looking at the results for the other covariates, we see that women who are five or more years older than their husbands have a very large hazard of marital dissolution in model 1. In model 2, the hazard for this group is still large, but not significant. Men with some post-secondary education have more than an 80% greater risk of dissolution, in both models, compared with university-educated men. Both men and women who never attend religious service have risks of marital dissolution ranging from 83% to 100% greater than those who attend at least once per week, in both models.

In the bivariate model testing the effect of children's presence in the household on marital stability, it was found that the lack of children significantly decreased the risk of dissolution for women, but slightly and non-significantly increased the risk for men (see Table 6.2). In both multivariate models, the inclusion of other covariates has strengthened the negative relationship between lack of children in the household and marital stability for men, while changing the positive relationship between the two variables to a negative relationship, albeit an insignificant one, for women. Male respondents with no children in the household have a marital dissolution hazard that is 3.5 times greater than males with children present.

The remaining covariates appear to influence the risk of dissolution significantly only among female respondents, in both models 1 and 2. For the males, there is a negative effect of these covariates on marital stability, though the values of the hazard ratios are not significant. For example, the experience of a parental marital breakdown increases the hazard of marital breakdown among female offspring by over 80 percent, but does not significantly affect marital outcomes among male offspring. The hazard is lower for women when contraceptives are used in the relationship, as was found in the bivariate model as well. And women whose husbands had once cohabited with another person have more than a 60% greater risk of marital breakdown than women whose husbands had never cohabited with anyone else.

After a series of revisions to models 1 and 2 by the removal of covariates from the model, one at a time, and then by the removal of combinations of covariates, the hazard ratio for premarital cohabitors still remained close to unity and non-significant. To allow this hazard ratio to reach a point of significance with as many other covariates as possible remaining in the model, both age and union cohort variables, as well as the covariate indicating contraceptive use, had to be removed from the model. Results for this reduced model, model 3, can be seen in Table 6.4.

The exclusion of the two age-related covariates in model 3 has brought some major changes from models 1 and 2 to the some of the hazard ratios. Premarital cohabitors now have a significantly higher risk of marital dissolution than do non-cohabitors, though the difference is still very small. There is only a 3.7% greater risk of marital breakdown for male cohabitors, and a 2.4% greater risk for female cohabitors. However, the negative relationship between age at the start of the union and marital stability has been strengthened from the full models, for both men and women. Model 3 provides clear evidence that younger age at the start of the first union tends to result in a greater chance of marital dissolution.

Table 6.4. Multivariate Hazards for Marital Dissolution, with Time-Varying Covariate for Marital Union (Models 3 and 4)

Covariate	Hazard Ratio (exp(ß))			
	Model 3		Model 4	
	Men	Women	Men	Women
Marital Union Type × *t*				
(Marriage only)	1.000	1.000	1.000	1.000
Marriage preceded by cohabitation	1.037 *	1.024 *	1.033 *	1.027 *
Age of Respondent at Start of Union				
Less than 20 years	2.587 **	2.348 **	1.915 **	1.862 **
20-21	1.530 *	1.721 **	1.352 *	1.377 *
22-24	1.467 *	1.402 *	1.321 *	1.186
(25 or older)	1.000	1.000	1.000	1.000
Age Difference Between Respondent and Spouse				
(No difference)	1.000	1.000		
Respondent 1-5 years older	0.974	1.294		
Respondent > 5 years older	1.231	1.666 *		
Respondent 1-5 years younger	1.615	6.040 **		
Respondent > 5 years younger	0.905	1.129		
Education Level of Respondent				
Less than high school diploma	0.675 *	0.381 **	0.746	0.414 **
High school diploma	0.993	0.456 **	1.067	0.483 **
Some post-secondary	1.212	0.791	1.201	0.821
Diploma from College, tech. school	1.042	0.686 *	1.089	0.717 *
(University degree)	1.000	1.000	1.000	1.000
Canadian Region of Residence				
Quebec	1.457 **	1.270 *	1.372 *	1.282 *
(Canada less Quebec)	1.000	1.000	1.000	1.000
Frequency of Religious Attendance				
(At least once a week)	1.000	1.000	1.000	1.000
At least once a month	1.437	1.647 *	1.428	1.578 *
One or more times a year	2.149 **	2.277 **	2.076 **	2.220 **
Not at all	2.963 **	3.252 **	2.824 **	3.104 **
Children Present in Household				
(Yes)	1.000	1.000	1.000	1.000
No	1.805 **	0.772 *	1.634 **	0.775 *
Parents had Separated or Divorced				
Yes	1.556 *	2.118 **	1.485 *	2.188 **
(No)	1.000	1.000	1.000	1.000
Spouse had Previously Lived Common-Law With Another Person				
Yes	2.917 **	3.072 **	2.575 **	2.802 **
(No)	1.000	1.000	1.000	1.000

( ) indicates reference categories.

* $p < 0.05$

** $p < 0.001$

Significant hazard ratios below unity provide evidence of a strong negative relationship between educational attainment and marital stability. For men this is only true for the lowest level of educational attainment, but it is true for almost all levels below university degree for women, which lends support to the theories of Becker (1981) – women with higher education have greater access to well-paying jobs, and consequently more economic independence. These women would then have more to gain and less to lose by exiting a marriage, than do women with lower education levels.

The effect of religious attendance on the hazard of marital breakdown appears to be stronger in model 3 than it was in either model 1 or model 2. For men and women, both infrequent attendance and non-attendance tends to significantly increase the hazard of dissolution. This relationship becomes more apparent once age is no longer controlled for in the model, because regular religious attendance is most common among older age groups, those that had been socialized in a less secular and individualistic atmosphere.

There is also a stronger positive effect of parental breakdown in marriage on daughters' likelihood of marital breakdown, in model 3. The effect on sons' likelihood of marital breakdown has not changed from the two full models. Also, a spouse who had previously cohabited with another person is another factor associated with marital instability for both male and female respondents.

One important change from models 1 and 2 is that Quebeckers show a significantly higher dissolution hazard compared to other Canadians, once age is no longer controlled for. The risks for men and women in Quebec are about 46% and 27% greater, respectively, than they are for men and women outside Quebec.

Age heterogamy still has no significant influence on marital stability for men in model 3. However, the value of the hazard ratio for women who are 1-5 years younger than their husbands is 6.04, a dramatic increase from the value in the full multivariate models. This unusually high value contradicts what we would intuitively expect, but it has a very large standard error, and should therefore not be given too much importance.

Model 4 (see Table 6.4) eliminates the age heterogamy covariate with little change in the hazard ratios for the remaining covariates, while providing a slightly better fitting model.

We have seen that having children in the household affects the propensity of men and women to dissolve their marriage differently, and not in ways we might expect. Although this is not a focus of the present study, the surprising results warrant some discussion. The bivariate model indicated that if children were *not* present, women were *less* likely to divorce and men were *more* likely to divorce, than if children were present. In the full bivariate models, the hazard of marital dissolution in cases with no children present increased several-fold for men, and for women increased to a point where they were also more likely to divorce, but not by a significantly greater likelihood than women who have children in the household. Now, in models 3 and 4, the hazard ratio for women with no children present in the household drops below unity again, to a significant value of 0.772. In other words, women have about a 30% greater risk of marital dissolution when there *are* children present. For men with no children at home, the likelihood of dissolution is 80% and 63% greater in models 3 and 4, respectively.

There was no distinction made regarding the age of the respondents' children in these models. Having no children present at home could mean that the couple was older and their children were old enough to be living on their own, or the couple may not yet have started a family or had no intentions of starting one. What is clear, as the proportional hazards models show, is that the respondent's age has some bearing on whether children are present, and ultimately has a strong influence on marital outcomes. Table A5 (see Appendix A) provides the full results of a bivariate model on four groups. The single covariate, *Presence of Children in Household*, is tested separately by gender, and by age groups of less than 40 and 40 and over. The results show that having children at home acts as a deterrent to marital discord among male respondents of all ages and among female respondents under age 40. The *lack* of children at home deters marital discord among female respondents age 40 and over. Children's integrative role in

marriage is lower overall for women than for men. Not only that, but men age 40 and over show a much lower likelihood of marital dissolution when children are not present at home than men under age 40 do. It is possible that both husbands and wives feel strongly about keeping their marriage together "for the sake of the children" when their children are young and still living at home. When couples get older, however, they may feel less obligated to remain in a troubled marriage if there are still children present in the household. Older women with children still at home are in fact more likely to exit a troubled marriage, a result possibly of greater female economic independence which also tends to increase with age. Basically, then, these results give evidence that men and women view the role of marriage in the context of childbearing and rearing differently. And, the integrative role of children on marital stability seems to deteriorate with older age of the couple, presumably once children have gotten beyond the childhood stage.

The full multivariate models indicated no effect of premarital cohabitation on marital stability. With the marital union type covariate interacting with time, it would appear that the effect of premarital cohabitation remains negligible throughout the course of marriage. Yet when the age-related covariates were removed from the model, a slight positive effect of cohabitation on likelihood of marital dissolution appeared. Is it possible that there is in fact a differential cohabitation effect on marriage determined by length of the union?

Another method to empirically measure this possible differential effect would be to divide marital duration into a series of intervals, and assume that the hazard of dissolution remains constant within each interval but differs between intervals. As previously mentioned, this method assigns the time function $g(t)$ within the time interval (t_0 , t_1) the value of 1 when $t_0 < t < t_1$, and zero otherwise. Because of limitations with the SPSS program and also because of the possibility of small sample sizes, the number of intervals in subsequent models is limited to two. In other words, there are two time functions $g_1(t)$ and $g_2(t)$ such that $g_1(t) = 1$ if $t < t_0$ and 0 if $t = t_0$, and $g_2(t) = 1$ if $t = t_0$ and 0 if $t < t_0$. This

study will follow the findings of Teachman and Polonko (1990) and set the hypothetical dividing point t_0 at 10 years from the start of the union (premarital cohabitation or marriage). However, Teachman and Polonko found that premarital cohabitors experienced a greater propensity than non-cohabitors to dissolve their marriage only after ten years. This study hypothesizes the opposite: cohabitors who marry are more likely than married couples who did not cohabit to dissolve their marriage, but after ten years of marriage, the difference in hazards between the two groups decreases to non-significance, once the less stable marriages between cohabitors have been "weeded out" early on. The full multivariate models 1 and 2 will be revised as models 5 and 6 to include two covariates for marital union type, one multiplied by $g_1(t)$ and the other multiplied by $g_2(t)$. Results of these models are given in Table 6.5.

There is clearly a premarital cohabitation effect for the interaction of marital union type with the time function $g_1(t)$, in which union duration is less than ten years. The hazard ratios for both sexes, in both models, are significant and above 2.0, indicating that premarital cohabitors are more than twice as likely to dissolve their marriage dissolving during its early years than non-cohabitors are. However, the hazard ratio values for cases where the union has lasted ten years or more are below unity, which would indicate a *lower* likelihood of marital dissolution among cohabitors than among non-cohabitors, at least for those couples whose marriage has lasted for at least ten years. It is possible that these opposing effects of premarital cohabitation, depending on whether the duration of marriage is lass than or more than 10 years, cancelled each other out in models 1 and 2, where we saw that the hazard ratios for premarital cohabitors were at unity.

The relationships of the categories of the other covariates in the model with marital stability are, for the most part, unchanged from models 1 and 2. Most of the significant and non-significant categories remain that way in the current models, though the values of some have changed from the previous models. There are still few significant effects on marital stability from covariates such as Age Heterogamy, Education Level, and Canadian

Table 6.5. Multivariate Hazards for Marital Dissolution, with Separate Hazards for Marital Union of Less Than 10, or 10 or More Years (Models 5 and 6)

Covariate	Hazard Ratio (exp(ß))			
	Model 5		Model 6	
	Men	Women	Men	Women
Marital Union Type × *g1(t)*				
(Marriage only)	1.000	1.000	1.000	1.000
Marriage preceded by cohabitation	2.558 *	2.042 *	2.303 *	2.018 *
Marital Union Type × *g2(t)*				
(Marriage only)	1.000	1.000	1.000	1.000
Marriage preceded by cohabitation	0.664	0.508 *	0.621	0.526 *
Age Cohort				
15-29	4.652 *	1.551		
30-39	4.927 **	1.960 **		
40-49	3.503 *	1.000		
(50 or older)	1.000	——		
Union Cohort				
1990-			5.745 *	2.123
1980-1989			3.318	2.592 **
1970-1979			2.815	1.883 *
1960-1969			1.195	1.000
(Before 1960)			1.000	——
Age of Respondent at Start of Union				
Less than 20 years	1.228	1.385	1.814 *	1.782 *
20-21	1.381	0.830	1.787 *	1.004
22-24	1.257	0.989	1.212	1.063
(25 or older)	1.000	1.000	1.000	1.000
Age Difference Between Respondent and Spouse				
(No difference)	1.000	1.000	1.000	1.000
Respondent 1-5 years older	1.400	1.358	1.231	1.307
Respondent > 5 years older	1.381	5.773 *	1.007	4.150
Respondent 1-5 years younger	1.257	0.855	1.135	0.879
Respondent > 5 years younger	0.990	1.023	0.749	1.056
Education Level of Respondent				
Less than high school diploma	1.344	0.652	1.439	0.622
High school diploma	1.513	0.667	1.545	0.624
Some post-secondary	1.799 *	1.153	1.830 *	1.105
Diploma from College, tech. school	1.408	0.861	1.493	0.863
(University degree)	1.000	1.000	1.000	1.000
Canadian Region of Residence				
Quebec	1.075	1.171	1.060	1.231
(Canada less Quebec)	1.000	1.000	1.000	1.000
Frequency of Religious Attendance				
(At least once a week)	1.000	1.000	1.000	1.000
At least once a month	1.440	0.978	1.431	1.120
One or more times a year	1.510	1.402	1.508	1.553 *
Not at all	2.021 *	1.790 *	1.944 *	1.911 *

Children Present in Household				
(Yes)	1.000	1.000	1.000	1.000
No	3.534 **	1.276	3.613 **	1.307
Parents had Separated or Divorced				
Yes	1.573	1.838 **	1.564	1.751 **
(No)	1.000	1.000	1.000	1.000
Respondent and Spouse Using Contraceptive				
Yes	1.340	0.544 **	1.318	0.534 **
(No)	1.000	1.000	1.000	1.000
Spouse had Previously Lived Common-Law With Another Person				
Yes	1.320	1.704 *	1.507	1.648 *
(No)	1.000	1.000	1.000	1.000

( ) indicates reference categories.
$g1(t) = 1$ if $t < 10$ years, 0 if $t >= 10$ years
$g2(t) = 0$ if $t < 10$ years, 1 if $t >= 10$ years
* $p < 0.05$
** $p < 0.001$

Region of Residence. The remaining covariates show hazard ratios in one or more categories that are significantly large or small, as they were in models 1 and 2.

We saw that the effect on marital stability of almost all the covariates, including Marital Union Type, became significant once age was not controlled for, as in models 3 and 4. It is very likely that the same would happen if the age-related covariates were removed from models 5 and 6. Since cohabitation is, as we have seen, so closely linked with young adults, we may assume that regardless of the greater effect of premarital cohabitation on marital dissolution early on in marriage, some of that effect is due not to cohabitation itself, but to the fact that young people, who are more likely to cohabit than older adults, are also more likely to dissolve their marriage through separation or divorce.

Chapter 7:
Discussion

Research on cohabitation has provided ample evidence of its association with marital instability. Numerous studies have found that couples that live together prior to marriage have a greater risk of their marriage dissolving than couples that do not. A handful of these studies have given some attention to what happens throughout duration of marriage with cohabitors and non-cohabitors (e.g. DeMaris and Rao 1992; Lillard et al. 1995; Teachman and Polonko 1990), though this was not their focus question.

This study sought to further investigate the issue of cohabitation's impact on marital stability throughout marital duration, based on Canadian data. How might the effect of cohabitation change over time? Does it increase, leading to greater likelihood of marital breakdown as marriage goes on, or does it dissipate? Why would there be such a change over time? What other variables are related to marital instability, and do they also affect the relationship of premarital cohabitation and risk of marital breakdown?

Preliminary analyses of frequency distributions in the GSS-95 sample showed that differences exist between respondents who cohabited before their first marriage, and those who entered marriage directly from singlehood. In measures of attitudes related to sex roles, cohabitors were found to hold slightly more liberal, egalitarian attitudes than non-cohabitors. This concurs with research in the United States, where cohabiting couples were less likely to follow traditional gender-based division of labour in the home (Clarkberg et. al. 1995; Nock 1995; Seltzer 2000). Clarkberg et al. would argue that cohabitation would have selected individuals who hold such egalitarian views toward sex roles more than direct marriage would.

Cohabitors did not value marriage or children to the extent that respondents who had not cohabited did. Again, this concurs with research on cohabiting couples in the United States (Axinn and Barber 1997; Lillard et al. 1995) and Sweden (Bennett et al.

1988). As some of these studies have shown, individuals who hold these attitudes toward marriage and family may have been selected to cohabit. Or, the cohabitors may have developed and strengthened these attitudes during their union, since cohabitation has been found to reduce enthusiasm for marriage (e.g. Axinn and Barber 1997; Nock 1995).

The purpose of these descriptive statistics was to lend credence to the "selectivity" and "experience" theories, and it seems that many of the premarital cohabitors in the sample do possess attitudes that are not conducive to a stable marital relationship, at least in greater proportions than the non-cohabitors do. Nevertheless, the similarities between cohabitors and non-cohabitors were greater than the differences. Most respondents, whether or not they lived with their spouse before marriage, still believed in the importance of marriage and children. Most agreed that men and women do not need to follow rigid, traditional roles that are so quickly becoming obsolete in modern society. This may indicate that as cohabiting unions grow in popularity and are practiced by a wider variety of people, cohabitors are becoming more heterogeneous over time, and less of a select group of individuals.

The data showed that only a small proportion of marriages preceded by cohabitation had lasted as long as 20 years, in contrast to the large proportion of direct marriages that had. Cohabitation is truly a short-lived union, according to the sample. And, even with duration of the CLU added to the total length of the union, marriages preceded by cohabitation are shorter on average than marriages without cohabitation. However, it is important not to read too much into this result. Only a small proportion of cohabitations had even begun 20 or more years prior to the 1995 General Social Survey.

A series of models based on Cox's Proportional Hazards method attempted to measure the effect of cohabitation on marital stability, particularly how it interacts with time spent in marriage. When measured as a single covariate in a simple bivariate model, cohabitation exerted a strong positive influence on the likelihood of marital disruption. With the addition into a multivariate model of several covariates that previous studies

have shown are associated with marital disruption, the cohabitation effect was nullified, even when measured as an interaction with time spent in the union. With the removal of three covariates from the model, indicating age cohort, (start of) union cohort, and contraceptive use, the null cohabitation hazard changed to a very small but significant positive hazard.

The models provide clear evidence that age cohort explains most of the effect of cohabitation on marital instability. Cohabitation is mainly practiced by young adults, but at the same time, both common-law *and* marital unions have simply become less stable among these same young adults. In our sample, post-war birth cohorts are represented by the under-50 age cohorts and the 1970s-and-beyond union cohorts. Being born and raised in an atmosphere of individualism and self-fulfillment, people from these birth cohorts have accepted alternatives to the traditional family pattern, like cohabitation, but are also more willing to end unions that do not work for them. The social environment of their time has shaped their attitudes toward marriage and family.

Removal of age-related covariates from the model strengthened the effect on the likelihood of marital dissolution for most of the other remaining covariates as well. As Table A3 in Appendix A shows, variations exist between younger and older adults in the distribution of the sample among the covariates. The effect on marital instability of these covariates can be partially explained by a birth cohort factor. Interestingly, though, is the fact that Quebeckers showed a greater dissolution hazard than non-Quebeckers only in the reduced models; the hazard ratio for this covariate was insignificant in the full model. If age explains most of the Quebec/non-Quebec effect on marital dissolution, it is due to older age, not younger — respondents from Quebec were actually represented in slightly larger proportions among the *older* age cohorts, than were respondents from outside Quebec. This result invites further study into the differences between Quebec and the rest of Canada of attitudes and behaviours relating to marriage and relationships.

And what of the covariate indicating contraceptive use? Why do other covariates, including the main covariate, become significant when contraceptive use is not controlled for? It is possible that this covariate is also related to age/birth cohort. Contraceptive use is low among the pre-baby boom birth cohort. Young adults who are postponing childbearing in marriage, or are trying to limit it, would be more likely to use contraceptives.

A strong cohabitation effect became evident in a full PH model that included interactions of Marital Union Type with two time functions, to designate if the duration of the union had lasted less than ten years, or at least ten years. The hazard of marital dissolution was much larger among premarital cohabitors than it was among non-cohabitors in unions that have not yet lasted ten years. The relationship is reversed after ten years: couples that did not cohabit before marriage faced a greater risk of marital dissolution than those who did cohabit. This contradicts the results of Wu (2000) who found, using Canadian data from the 1990 General Social Survey, that the marital disruption risk gap between cohabitors and non-cohabitors increases with marital duration. However, the results in the models agree, in part, with the bulk of research that has investigated the cohabitation effect through marital duration. Most of these studies did find that premarital cohabitors are at greater risk of their marriage breaking up in the early years, but after a certain number of years of marriage, the risk for cohabitors and non-cohabitors becomes similar (Bennett et al. 1988; Lillard et. al. 1995; Schoen 1992). Teachman and Polonko's study (1990) found no significant effect on dissolution among cohabitors, once marital duration was controlled for, and DeMaris and Rao (1992) noticed that the likelihood of dissolution was always higher for couples who cohabited before marriage, regardless of marital duration. It was never found in any of these studies that cohabitation before marriage actually works in favour of marital stability, at any point in marriage.

White's research (1987) on the effect of premarital cohabitation on later marital stability, based on Canadian data from the 1984 Family History Survey, did find just this sort of relationship: the likelihood of staying married was greater for those who cohabited beforehand, once age at marriage and length of marriage was controlled for. White provided a few explanations for this. First, cohabitation delays marriage to a later age, allowing couples to mature before marrying. Wu's study (2000) found evidence of this idea. Second, selectivity factors that other research have linked to marital instability among cohabitors, may actually serve to increase marital stability instead. Third, cohabitation may serve as a transitional stage between the loosely prescribed sex roles of dating and the more rigidly prescribed sex roles in marriage, or it may provide a period where a couple can develop an intimate relationship without the pressure to start a family. Finally, White states, "as cohabitation becomes increasingly popular and accepted, the very elements that might mitigate against marital disruption could disappear." (p. 646).

These are all logical reasons for cohabitation to have a positive effect on marital stability. Given the results of some of the descriptive statistics in this study, however, not all these reasons could apply here. For example, Table 6.1 indicates larger proportions of cohabitors among the men and women who entered a first union before age 20. That does not necessarily mean that premarital cohabitors entered *marriage* at an earlier age than non-cohabitors, but since cohabitation before marriage is, on average, rather brief, it is doubtful that in this sample, cohabitation has acted to delay marriage to any great extent. The Table also indicates that the education levels (at point of survey) of male cohabitors were generally not higher than non-cohabiting males, while cohabiting females were generally better-educated than their non-cohabiting counterparts. The employment and economic prospects of male cohabitors and non-cohabitors should then be roughly equal, while female cohabitors would, on average, enjoy much better prospects than non-cohabiting females. If we go by the theories and research of Becker (1981), Easterlin (1978, 1987), and Oppenheimer (e.g. 1988, 1994), better job prospects for cohabiting

women, due to better education, would lead to reduced prospects for stable marriage. And similar job prospects for cohabiting and non-cohabiting men would not lead to better marital stability prospects for the non-cohabitors. Also, the series of attitudinal questions in GSS-95 indicated that respondents who had cohabited before their first marriage placed a little less importance on marriage and family than those who did not cohabit, and tended to hold more liberal and individualistic views of family and sex roles. This is hardly a strong argument for a *positive* effect of cohabitation on marital stability.

The last point that White makes could be true. It is possible that cohabitation before marriage is now common enough, and considered normal enough, that cohabitors are heterogeneous enough not to be a "select" group of individuals. It could be that any characteristics of cohabitors that can still cause marital disruption tend to have their effect early into the marriage, leaving the more stable couples that had cohabited to remain in marriage. The significantly low hazard ratios in Table 6.5 for male and female cohabitors who had been married at least ten years may also have been exaggerated, due to the smaller number of cases suiting these criteria, which led to large standard errors of the estimates.

Nevertheless, the PH models that control for marital duration provide evidence that there is an association between premarital cohabitation and marital instability, but the strength and direction of that association are not constant throughout marriage. At least for the first ten years in marriage, cohabitors face a larger risk that their marriage will dissolve than non-cohabitors. After ten years, the risk of dissolution faced by cohabitors is reduced, and may even be lower than the risk faced by non-cohabitors. When marital duration was not controlled for, however, premarital cohabitation had no effect at all on the likelihood of marital dissolution, unless age/birth cohort factors were eliminated from the analyses. Any future research on premarital cohabitation should therefore take into account marital duration and age/birth cohort factors when analyzing the effect on marital stability.

Results of the association of the other covariates with marital instability generally concur with previous research. Studies on the divorce trend have documented the surge in divorce rates in Canada, the United States, and Europe, after the 1960s (Cherlin 1990; Lesthaeghe 1983; Statistics Canada 2000), and the PH models provide evidence of this. The hazard of marital dissolution was larger for younger cohorts than for older cohorts. Couples that had begun their first marriage after the 1960s, in particular, faced a greater dissolution risk.

Like the covariate indicating marital union type, the significance increased for some of these covariates once age was no longer controlled for. Experiencing the separation or divorce of parents in childhood, being a resident of Quebec rather than another Canadian province, never or rarely attending religious service, marrying a person who had already cohabited with another person, and forming a union at an early age, were all predictors of marital instability. The use of contraceptives in the union tended to increase marital stability, for female respondents. Age heterogamy and education level remained weak predictors of instability, even when age was no longer controlled for.

An unexpected and unlooked for result was the effect of the presence of children on the hazard of marital dissolution. This effect was found to differ by sex – children's presence increased likelihood of marital dissolution for women, but decreased that likelihood for men. Further research should be conducted on the effect that children have on women's and men's marital outcomes, and both parent's and children's age should be taken into account.

There are some considerable weaknesses in the models that must be addressed. First, time-dependency is appropriate in a PH model for covariates in which making a change of state, or category, is possible during the risk exposure period. Two examples that may have been considered as time-dependent covariates in the models are Education Level of the Respondent, and Presence of Children in the Household. GSS-95 gathered information from respondents on the status of these two covariates *at the time of the*

survey only, but since the models required retrospective information on first unions, in all likelihood the status of education level and presence of children had changed from the start of the union (as well as the end of the union, if it occurred) to the time of the survey. However, Marital Union Type would not have changed. Interacting this covariate with a function of time was therefore not an appropriate method to determine the effect of cohabitation throughout marital duration. Partitioning the sample into subgroups based on duration intervals and running separate models for each group may be an alternative method[4], but there is a risk of sample sizes being too small. Each model would also lose all information from cases that do not fall within the appropriate duration interval, severely biasing the hazard estimates.

Second is the issue of *unobserved heterogeneity*[5], which occurs as a result of covariates that play a part in the causal processes investigated in the model but which have not been included in the model (Yamaguchi 1991). Data and model limitations restrict the number of meaningful covariates that can be included.

Related to this is the issue of correlations between the covariates. As Table A2 (see Appendix A) indicates, most of the correlations are fairly small, but few are insignificant. Some of the larger correlations can be found between age cohort, union cohort, and the other covariates. The effect of some covariates on marital stability is, as we have seen, partially due to their association with age and union cohort. Further research should use, wherever possible, covariates that are very weakly correlated with each other, but without sacrificing too much information due to exclusion of important predictors of marital instability.

---

[4] This method was tested in models similar to models 5 and 6. Hazard ratios for Marital Union Type indicated that premarital cohabitation has no significant effect on marital stability before ten years of marriage, but leads to greater likelihood of marital dissolution only after ten years. This is the opposite of what was found in models 5 and 6, and indicates that improper methods can bring dramatically different results.

[5] A more detailed explanation of unobserved heterogeneity and its related issue, selection bias, as well as methods for controlling these two problems in PH models with time-dependent covariates, can be found in Yamaguchi (1991, pp. 130-3).

This study has helped to further understand the cohabitation phenomenon in Canada. Canadians who have lived with their spouse before entering marriage seem to fit the description of cohabitors as developed in American and European research. They are mainly young adults whose attitudes and values are less traditional than their non-cohabiting counterparts. They come from all educational groups, although female cohabitors tend to be better-educated than female non-cohabitors. Most cohabitors who marry feel that their marriage is important to them, as is having children, and this attitude helps to strengthen their resolve to stay married. However, the methods used to measure the cohabitation effect on marital stability have added to the conflicting results on how this effect might vary throughout the course of marriage. When considering short marital durations, in which premarital cohabitation leads to a greater risk of marital dissolution, this study concurs with Wu (2000) and contradicts White (1987). For longer marital durations, in which premarital cohabitation leads to a lesser risk of marital dissolution, this study concurs with White and contradicts Wu. The problem is that the results of all three studies were found using different data sets and different methods. A more useful method to study the relationship of premarital cohabitation and marital stability might be to replicate, as close as possible, the analysis of either White or Wu using up-to-date data.

This study has shown that Canadian cohabitors are characteristically similar to their counterparts in the United States and Europe, but cohabitation does not necessarily have the same effect on marital stability in Canada as it does in either the U.S. or Europe. Other studies have already documented how Canadians differ from Americans and Europeans with respect to certain aspects of cohabitation and marriage, such as stability, the transition from cohabitation to marriage or separation, or the purpose of cohabitation in place of marriage (Pollard and Wu 1998; White 1987; Wu and Balakrishnan 1995). Here, cohabitors and non-cohabitors who marry are similar with respect to the risk of marital disruption. Cohabitation may even be beneficial for marital stability, if the marriage is able to last long enough.

What are the implications of the results found in this study? First, it is clear that cohabitation continues to select people with certain characteristics and attitudes that are not as common among non-cohabitors, but the differences are not that great. The one major characteristic of cohabitors is that they are usually young, and young age could account for the other differences between cohabitors and non-cohabitors, such as individualistic attitudes, lack of religious commitment, and higher education levels (for women). As the population ages, cohabitation will become more widespread among older age cohorts, and we may no longer see any special selective characteristics among people who choose to cohabit. When that happens, there may be no theoretical reason why marriages that begin with cohabitation should be any more or any less stable than marriages without cohabitation (see Schoen 1992).

The current marital trend indicates that marriage rates will continue to decline as marriage is delayed or put off altogether. Divorce rates have more or less leveled off since the 1990s, but at much higher levels than they had been before the 1970s, so that marriage continues to be seen as a risky prospect. More people will decide to opt for cohabitation *instead of* marriage, and any marital prospects they might have had could be reduced during cohabitation, as Axinn and Thornton's study (1992) has found. Childbearing within CLUs has been on the upswing in recent years (Wu 2000). In short, cohabitation is becoming increasingly similar to marriage over time. It could supplant marriage as the union of choice as the young cohorts of today age and new cohorts take up the trend. In fact, Canada and the United States have been catching up to Europe's lead, where a CLU is accepted as a legitimate union in itself. Already, Canada has seen an increase in the number of cohabitations that never translate into marriage, and a narrowing of the differences between cohabitors and those who marry directly, especially in Quebec (LeBourdais et al. 2000). Theoretically, cohabitation will eventually come to be considered as only a modern form of marriage, and be treated as such.

Further research should be conducted on premarital cohabitation's effect on marital stability throughout the course of marriage. Age factors must be taken into account in future research, since the cohabitation phenomenon is so much more common among young adults. In fact, it may be preferable to restrict samples to individuals under a certain age (50, for example). As cohabitation makes inroads into older age groups, as it is expected to do in the future, age restrictions in analyses may be lifted. Replication of surveys and studies over a specified period of years could be conducted, to determine if the cohabitation effect dissipates as it becomes more common among all age groups. Data should include measures of attitudes and characteristics that have been identified in the literature as peculiar to cohabitors, in order to determine if these become less common as cohabitation is disseminated throughout the population.

This study looked only at first unions. But research indicates that post-marital cohabitation is increasing at a faster rate than pre-marital cohabitation. Divorced individuals have been found to prefer cohabitation to marriage (Lillard et al. 1995), and serial cohabitation has been found to explain marital instability rather than simply cohabitation itself (DeMaris and Macdonald 1993). Further research should determine if any differences exist between the effects these two categories of cohabitation have on marital stability.

Finally, future research should make comparisons between Canada and the United States, and Canada and Europe (and/or Australia), to track changes in the evolution of cohabitation and determine if there is any sort of convergence. Canadian data should also differentiate between Quebec and non-Quebec Canada, in order to make such comparisons between these two regions. It must be kept in mind that cohabitation, as a form of union, is still young. It is continuing to evolve, and what purpose it will finally serve, or what it will mean to the future of the family and of society, will provide plenty of opportunity for further research to discover.

Bibliography

Axinn, William G., and Jennifer S. Barber.1997. "Living arrangements and family formation attitudes in early adulthood." *Journal of Marriage and the Family*, Vol. 59(3): 595-611.

——, and Arland Thornton.1992. "The relationship between cohabitation and divorce: selectivity or causal influence?" *Demography*, Vol. 29(3): 357-74.

——, and Arland Thornton.1996. "The influence of parents' marital dissolutions on children's attitudes toward family formation. *Demography*, Vol. 33(1): 66-81.

Bachrach, Christine A. 1987. "Cohabitation and reproductive behavior in the U.S." *Demography*, Vol. 24(4): 623-37.

Balakrishnan, T.R., and Jiajian Chen. 1990. "Religiosity, nuptiality and reproduction in Canada." *Canadian Review of Sociology and Anthropology*, Vol. 27(3): 316-40.

——, Evelyne Lapierre-Adamcyk, and Karol J. Krotki.1993. *Family and Childbearing in Canada: A Demographic Analysis*. Toronto: University of Toronto Press.

——, K. Vaninadha Rao, Evelyne Lapierre-Adamcyk, and Karol J. Krotki.1987. "A hazard model analysis of the covariates of marriage dissolution in Canada." *Demography*, Vol. 24(3): 395-406.

Baker, Maureen, and Donna Lero. 1996. "Division of labour: paid work and family structure." in *Families: Changing Trends in Canada, 3rd ed.* Maureen Baker, ed. Toronto: McGraw-Hill Ryerson Ltd.

Becker, Gary S. 1981. *A Treatise on the Family*. Cambridge, Mass.: Harvard University Press.

Bennett, Neil G., Ann Klimas Blanc, and David E. Bloom.1988. "Commitment and the modern union: assessing the link between premarital cohabitation and subsequent marital stability." *American Sociological Review*, Vol. 53(1): 127-38.

Berrington, Ann. 2001. "Entry into parenthood and the outcome of cohabiting partnership in Great Britain." *Journal of Marriage and the Family*, Vol. 63(1): 80-96.

Blackwell, Debra L., and Daniel T. Lichter. 2000. "Mate selection among married and cohabiting couples." *Journal of Family Issues*, Vol. 21(3): 275-302.

Booth, Alan, and John N. Edwards.1985. "Age at marriage and marital instability." *Journal of Marriage and the Family*, Vol. 47(1): 67-75.

——, and David Johnson.1988. "Premarital cohabitation and marital success." *Journal of Family Issues*, Vol. 9(2): 255-72.

Brien, Michael J., Lee A. Lillard, and Linda J. Waite. 1999. "Interrelated family-building behaviors: cohabitation, marriage, and nonmarital conception." *Demography*, Vol. 36(4): 535-51.

Brown, Susan L. 2000. "Union transitions among cohabitors: the significance of relationship assessments and expectations." *Journal of Marriage and the Family*, Vol. 62(3): 833-46.

Bumpass, Larry L. 1990. "What's happening to the family? Interactions between demographic and institutional change." *Demography*, Vol. 27(4): 483-98.

——. 1991. "The impact of family background and early marital factors on marital disruption. *Journal of Family Issues*, Vol. 12(1): 22-42.

——, and James A. Sweet. 1989. "National estimates of cohabitation." *Demography*, Vol. 26(4): 615-25.

——, James A. Sweet, and Andrew Cherlin.1991. "The role of cohabitation in declining rates of marriage." *Journal of Marriage and the Family*, Vol. 53(4): 913-27.

Burch, Thomas K. 1989. "Common-law unions in Canada: a portrait from the 1984 Family History Survey" in *The Family in Crisis: A Population Crisis?,* Jacques Légaré, T.R. Balakrishnan, and Roderick P. Beaujot, ed. Ottawa: Lowe-Martin Company Inc.

Castro-Martin, Teresa, and Larry L. Bumpass. 1989. "Recent trends in marital disruption." *Demography*, Vol. 26(1): 37-51.

Chafetz, Janet Saltzman. 1995. "Chicken or egg? A theory of the relationship between feminist movements and family change." In *Gender and Family Change in Industrialized Countries*, Karen Oppenheim Mason and An-Magritt Jensen, ed. New York: Oxford University Press.

Cherlin, Andrew. 1990. "Recent changes in American fertility, marriage, and divorce." *Annals of the American Academy of Political & Social Science*, Vol. 510: 145-154.

——, Kathleen E. Kiernan, and P.Lindsay Chase-Lansdale. 1995. "Parental divorce in childhood and demographic outcomes in young adulthood." *Demography*, Vol. 32(3): 299-318.

Clarkberg, Marin. 1999. "The price of partnering. The role of economic well-being in young adults' first union experiences." *Social Forces*, Vol. 77(3): 945-68.

——, Ross M. Stolzberg, and Linda J. Waite. 1995. "Attitudes, values, and entrance into cohabitational versus marital unions." *Social Forces*, Vol. 74(2): 609-34.

Clarke, Sally Cunningham, and Barbara Foley Wilson. 1994. "The relative stability of remarriages." *Family Relations*, Vol. 43(3): 305-10.

Conway, John F. 2001. *The Canadian Family in Crisis, 4th ed.* Toronto: James Lorimer & Company Ltd.

Cox, D.R. 1972. "Regression models and life tables." *Journal of the Royal Statistical Society, Series B*, Vol. 34(2): 187-220.

DeMaris, Alfred, and William MacDonald.1993. "Premarital cohabitation and marital instability: a test of the unconventionality hypothesis." *Journal of Marriage and the Family*, Vol. 55(2):399-407.

——, and K. Vaninadha Rao. 1992. "Premarital cohabitation and subsequent marital stability in the United States: a reassessment." *Journal of Marriage and the Family*, Vol. 54(1): 178-90.

Dumas, J., and Yvés Péron. 1992. *Marriage and conjugal life in Canada*. Statistics Canada Catalogue 91-534E. Ottawa: Statistics Canada.

——, and Alain Bélanger. 1997. "Common-law unions in Canada at the end of the 20th century." in *Report on the Demographic Situation in Canada 1996*. Statistics Canada Catalogue No. 91-209-XPE. Ottawa: Statistics Canada.

Easterlin, Richard. 1978. "What will 1984 be like? Socioeconomic implications of recent twists in age structure." *Demography*, Vol. 15(3): 397-432.

——. 1987. *Birth and Fortune: The Impact of Numbers on Personal Welfare*. Chicago: University of Chicago Press.

Espenshade, Thomas J. "Marriage trends in America: Estimates, implications, and underlying causes." *Population and Development Review*, Vol. 11(2): 193-245.

Glick, Paul C., and Graham B. Spanier. 1980. "Married and unmarried cohabitation in the United States." *Journal of Marriage and the Family*, Vol. 42(1): 19-30.

Goldscheider, Frances Kobrin, and Linda J. Waite. 1986. "Sex differences in the entry into marriage." *American Journal of Sociology*, Vol. 92(1): 91-109.

——. 1991. *New Families, No Families?: The Transformation of the American Home.* Los Angeles, Calif.: University of California Press.

Graefe, Deborah Roempke, and Daniel T. Lichter. 1999. "Life course transtitions of American children: parental cohabitation, marriage, and single motherhood." *Demography*, Vol. 36(2): 205-17.

Hinde, Andrew. 1999. *Demographic Methods*. London: Arnold Publishers.

Hobart, Charles. 1996. "Intimacy and family life: sexuality, cohabitation, and marriage." in *Families: Changing Trends in Canada, 3rd ed.* Maureen Baker, ed. Toronto: McGraw-Hill Ryerson Ltd.

Kleinbaum, David G.1997. *Survival Analysis: A Self-learning Text*. New York, NY. Springer–Verlag New York Inc.

Lapierre-Adamcyk, Évelyne, and Carole Charvet. 2000. "Cohabitation and marriage: an assessment of research in demography." *Canadian Studies in Population*, Vol. 27(1): 239-54.

Le Bourdais, Céline, and Nicole Marcil-Gratton. 1998. "The impact of family disruption in childhood on demographic outcomes in young adulthood" from *Labour Markets, Social Institutions, and the Future of Canada's Children*, Miles Corak, ed. Statistics Canada Catalogue No. 89-553-XPB. Ottawa: Statistics Canada.

Le Bourdais, Céline, Ghyslaine Neill, and Nathalie Vachon. 2000. "Family disruption in Canada: impact of the changing patterns of family formation and of female employment." *Canadian Studies in Population*, Vol. 27(1): 85-105.

Lesthaeghe, Ron. 1983. "A century of demographic and cultural change in Western Europe: an exploration of underlying dimensions." *Population and Development Review*, Vol. 9(3): 411-35.

——. 1995. "The second demographic transition in Western countries: an interpretation." in *Gender and Family Change in Industrialized Countries*, Karen Oppenheim Mason and An-Magritt Jensen, ed. New York: Oxford University Press.

——. 1998. "On theory development: applications to the study of family formation." *Population and Development Review*, Vol. 24(1): 1-14.

——, and Johan Surkyn. 1988. "Cultural dynamics and economic theories of fertility change." *Population and Development Review*, Vol. 14(1): 1-45.

Lillard, Lee A., Michael J. Brien, and Linda J. Waite.1995. "Premarital cohabitation and subsequent marital dissolution: a matter of self-selection?" *Demography*, Vol. 32(3): 437-57.

Loomis, Laura Spencer, and Nancy S. Landale. 1994. "Nonmarital cohabitation and childbearing among black and white American women." *Journal of Marriage and the Family*, Vol. 56(4): 949-62.

Mahler, K. 1996. "Completed, premarital pregnancies more likely among cohabiting women than among singles." *Family Planning Perspectives*, Vol. 28(4): 179-80.

Manning, Wendy D. 1993. "Marriage and cohabitation following premarital conception." *Journal of Marriage and the Family*, Vol. 55(4): 839-50.

——. 1995. "Cohabitation, marriage, and entry into motherhood." *Journal of Marriage and the Family*, Vol. 57(1): 191-200.

——, and Nancy S. Landale. 1996. "Racial and ethnic differences in the role of cohabiting in premarital childbearing." *Journal of Marriage and the Family*, Vol. 58(1): 63-77.

——, and Pamela J. Smock. 1995. "Why marry? Race and the transition to marriage among cohabitors." *Demography*, Vol. 32(4): 513-20.

Marcil-Gratton, Nicole, Céline Le Bourdais, and Évelyne Lapierre-Adamcyk. 2000. "The implications of parents' conjugal histories for children." *ISUMA*, Vol. 1(2): 32-42.

Mills, Melinda, and Frank Trovato. 2000. "The effect of pregnancy in cohabiting unions on marriage in Canada, the Netherlands and Latvia." *Statistical Journal of the United Nations Economic Commission for Europe*, Vol. 18: 103-18.

Moore, Kristin A., and Thomas M. Stief. 1991. "Changes in marriage and fertility behavior." *Youth and Society*, Vol. 22(3): 362-86.

Morgan, S. Philip, and Ronald R. Rindfuss.1985. "Marital disruption: structural and temporal dimensions." *American Journal of Sociology*, Vol. 90(5): 1055-77.

Nett, Emily M. 1993. *Canadian Families Past and Present, 2nd ed.* Toronto: Harcourt Brace & Company.

Newcomb, Michael D., and Peter M. Bentler. 1980. "Cohabitation before marriage: a comparison of married couples who did and did not cohabit." *Alternate Lifestyles*, Vol. 3(1): 65-85.

Nock, Steven L. 1995. "A comparison of marriages and cohabiting relationships." *Journal of Family Issues*, Vol. 16(1): 53-76.

Norton, Arthur J., and Jeanne E. Moorman. 1987. "Current trends in marriage and divorce among American women." *Journal of Marriage and the Family*, Vol. 49(1): 3-14.

Oppenheimer, Valerie Kincade. 1982. *Work and the Family: A Study in Social Demography*. New York: Academic Press.

——. 1988. "A theory of marriage timing." *American Journal of Sociology*, Vol. 94(3): 563-91.

——. 1994. "Women's rising employment and the future of the family in industrial societies." *Population and Development Review*, Vol. 20(2): 293-342.

——, Matthijs Kalmijn, and Nelson Lim. 1997. "Men's career development and marriage timing during a period of rising inequality." *Demography*, Vol. 34(3): 311-30.

——, and Vivian Lew. 1995. "American marriage formation in the 1980s: how important was women's economic independence?" in *Gender and Family Change in Industrialized Countries*, Karen Oppenheim Mason and An-Magritt Jensen, ed. New York: Oxford University Press.

Parsons, Talcott. 1949. "The Social Structure of the Family." in *The Family: Its Function and Destiny*, Ruth Ansheu, ed. New York: Harper and Brothers.

Peritz, Ingrid. 2002. "Fewer Quebeckers choosing to marry." *The Globe and Mail*, October 23, 2002.

Pollard, Michael S., and Zheng Wu. 1998. "Divergence of marriage patterns in Quebec and elsewhere in Canada." *Population and Development Review*, Vol. 24(2):329-56.

Ram, Bali. 1990. *New Trends in the Family: Demographic Facts and Features*. Statistics Canada Catalogue No. 91-535E. Ottawa: Statistics Canada.

Rao, K.V. 1990. "Marriage risks, cohabitation and premarital births in Canada." *European Journal of Population*, Vol. 6(1): 27-49.

——, and Alfred DeMaris. 1995. "Coital frequency among married and cohabiting couples in the United States." *Journal of Biosocial Science*, Vol. 27(2): 135-50.

Rindfuss, Ronald R., and Audrey VandenHeuvel.1990. "Cohabitation: a precursor to marriage or an alternative to being single?" *Population and Development Review*, Vol. 16(4): 703-26.

Schoen, R.1992. "First unions and the stability of first marriages." *Journal of Marriage and the Family*, Vol. 54(2): 281-284.

——, and Roben M. Weinick.1993. "Partner choice in marriages and cohabitations." *Journal of Marriage and the Family*, Vol. 55(2): 408-14.

Seltzer, Judith A. 2000. "Families formed outside of marriage." *Journal of Marriage and the Family*, Vol. 62(4): 1247-68.

Smock, Pamela J. "Cohabitation in the United States: Appraisal of research themes, findings, and implications." *Annual Review of Sociology*, Vol. 26: 1-20.

——, and Wendy D. Manning. 1997. "Cohabiting partner's economic circumstances and marriage." *Demography*, Vol. 34(3): 331-41.

Statistics Canada. 1997. *General Social Survey, Cycle 10: The Family: Public Use Microdata File Documentation and User's Guide*. Catalogue No. 12-M0010-GPE. Ottawa: Statistics Canada.

——. *Annual Demographic Statistics*. Catalogue No. 91-213. Ottawa: Statistics Canada.

——. *Vital Statistics, Vol. II: Marriage and Divorce*. Catalogue No. 84-205. Ottawa: Statistics Canada.

——. 1999. "Marriages." *The Daily, Thursday, October 28, 1999*. Ottawa: Statistics Canada

——. 2000. "Divorces." *The Daily, Thursday, September 28, 2000*. Ottawa: Statistics Canada

Sweeney, Megan M. 1997. "Remarriage of women and men after divorce." *Journal of Family Issues*, Vol. 18(5): 479-502.

Teachman, Jay D. 1982. "Methodological issues in the analysis of family formation and dissolution." *Journal of Marriage and the Family*, Vol. 44(4): 1037-53.

——, and Karen A. Polonko.1990. "Cohabitation and marital stability in the United States." *Social Forces*, Vol. 69(1): 207-20.

——, Lucky M. Tedrow, and Kyle D. Crowder. 2000. "The changing demography of America's families." *Journal of Marriage and the Family*, Vol. 62(4): 1234-46.

Thomson, Elizabeth, and Ugo Colella.1992. "Cohabitation and marital stability: quality or commitment?" *Journal of Marriage and the Family*, Vol. 54(2): 259-67.

Thornton, Arland.1988. "Cohabitation and marriage in the 1980s." *Demography*, Vol. 25(4): 497-507.

——. 1989 "Changing attitudes towards family issues in the United States." *Journal of Marriage and the Family*, Vol. 51(4): 873-95.

——, William G. Axinn, and Daniel H. Hill. 1992. "Reciprocal effects of religiosity, cohabitation, and marriage." American Journal of Sociology, Vol. 98(3): 628-51.

Trovato, Frank. 1988. "A macrosociological analysis of change in the marriage rate: Canadian women, 1921-25 to 1981-85." *Journal of Marriage and the Family*, Vol. 50(2): 507-21.

——. 2002. "Explanations of Quebec's fertility transition." Unpublished manuscript. Edmonton: Department of Sociology, University of Alberta.

Waite, Linda J., and Glenna D. Spitze. 1981. "Young women's transition to marriage." *Demography*, Vol. 18(4): 681-93.

Westoff, Charles S. 1983. "Fertility decline in the West: causes and prospects." *Population and Development Review*, Vol. 9(1): 99-104.

White, James M. 1987. "Premarital cohabitation and marital stability in Canada." *Journal of Marriage and the Family*, Vol. 49(3): 641-47.

White, Lynn, and Stacy J. Rogers. 2000. "Economic circumstances and family outcomes: a review of the 1990s." *Journal of Marriage and the Family*, Vol. 62(4): 1035-51.

Wu, Zheng.1995. "The stability of cohabitation relationships: the role of children." *Journal of Marriage and the Family*, Vol. 57(1): 231-36.

——. 2000. *Cohabitation: An Alternative Form of Family Living*. Don Mills, Ont.: Oxford University Press.

——, and T.R. Balakrishnan. 1995. "Dissolution of premarital cohabitation in Canada." *Demography*, Vol. 32(4): 521-32.

——, and Michael S. Pollard. 2000. "Economic circumstances and the stability of nonmarital cohabitation." *Journal of Family Issues*, Vol. 21(3): 303-28.

Yamaguchi, Kazuo. 1991. *Event History Analysis*. Newbury Park, Calif.: SAGE Publications, Inc.

Appendix A

Table A1. List of PH Models Tested

Test #	Model #	Regression on group	Covariates							
			Marrtype	Agegrp	Unperiod	Unage	Agedif	Region	Educ	Relfreq
1		All-M-F	X	X	X	X				
2		All-M-F					X	X	X	X
3		All-M-F								
4		All-M-F	X	X		X	X	X	X	X
5		All-M-F	X		X	X	X	X	X	X
6		All-M-F	X	X		X				X
7		All-M-F	X	X						X
8		All-M-F	X							X
9		All-M-F	X			X				X
10		All-M-F	X			X	X	X	X	X
11		All-M-F	X		X	X	X	X	X	
12		Region categ.	X	X		X	X		X	X
13		Region categ.	X		X	X	X		X	X
14		Region categ.	X		X	X				
15	1	All-M-F	X	X		X	X	X	X	X
16	2	All-M-F	X		X	X	X	X	X	X
17	3	All-M-F	X			X	X	X	X	X
18	4	All-M-F	X			X		X	X	X
19	5	Dur<>10	X	X		X	X	X	X	X
20	6	Dur<>10	X		X	X	X	X	X	X
21	7	Dur<>10	X			X	X	X	X	X
22	8	Dur<>10	X			X		X	X	X
23		Age<>40	X			X	X	X	X	X
24		Age<>40	X			X	X	X	X	X
25		Age<>40	X			X	X	X	X	X
26		Age<40, Dur <> 10	X			X		X	X	X
27		Age>40, Dur <> 10	X			X		X	X	X
28		Age<>40, Dur <> 10	X							
29		Age < 40	X			X	X	X	X	X
30		Age >= 40	X			X	X	X	X	X
31		M-F-Age <> 40								

Table A1. List of PH Models Tested (continued)

Test #	Covariates					Comments
	Chldpres	Pardivrc	Cncptuse	Spcoml	Interactions	
1						Separate bivariate tests for each covariate
2						Separate bivariate tests for each covariate
3	X	X	X	X		Separate bivariate tests for each covariate
4	X	X	X	X		
5	X	X	X	X		
6	X	X	X	X		
7	X	X		X		All covariates except marrtype significant
8	X	X		X		Marrtype becomes sig. after removal of Agegrp
9	X	X		X		Chldpres sig. for M and F separately, not together
10	X	X		X		Same as above Marrtype not sig. for F
11	X					
12	X	X	X	X		
13	X	X	X	X		
14	X					
15	X	X	X	X	Marrtype * *t*	*t* = Linear time (years)
16	X	X	X	X	Marrtype * *t*	*t* = Linear time (years)
17	X	X		X	Marrtype * *t*	*t* = Linear time (years)
18	X	X		X	Marrtype * *t*	*t* = Linear time (years)
19	X	X	X	X		Marrtype * *g1(t)* , Marrtype * *g2(t)*
20	X	X	X	X		Marrtype * *g1(t)* , Marrtype * *g2(t)*
21	X	X		X		Marrtype * *g1(t)* , Marrtype * *g2(t)*
22	X	X		X		Marrtype * *g1(t)* , Marrtype * *g2(t)*
23	X	X	X	X		
24	X	X		X		Marrtype sig. for young & old age groups
25	X	X		X	Marrtype * *t*	Marrtype sig. only for >= 40 group
26	X	X		X		
27	X	X		X		
28						No sig. difference for duration <10 years, regardless of whether age < or >= 40.
29	X	X	X	X		Separate bivariate tests for selected covariates.
30	X	X	X	X		Separate bivariate tests for selected covariates.
31	X					Separate tests for <40 & >=40 age groups

Table A2. Pearson Correlations of Covariates

Covariates	Duration of Union	Marital Union Type	Age Cohort	Union Cohort	Age of Resp. at Start of Union	Age Difference Between Resp. and Spouse	Canadian Region of Residence
Duration of Union	**1.000** 8,209						
Marital Union Type	**-0.271** ** 6,950	**1.000** 7,341					
Age Cohort	**0.779** ** 8,209	**-0.318** ** 7,341	**1.000** 8,736				
Union Cohort	**0.854** ** 8,202	**-0.291** ** 7,078	**0.879** ** 8,383	**1.000** 8,383			
Age of Respondent at Start of Union	**0.011** 8,209	**-0.019** 7,341	**0.149** ** 8,736	**-0.087** ** 8,383	**1.000** 8,736		
Age Diff. Between Resp. and Spouse	**0.018** 7,800	**-0.017** 6,821	**-0.001** 7,896	**-0.195** ** 7,896	**0.041** ** 7,891	**1.000** 7,896	
Canadian Region of Residence	**-0.021** 8,209	**0.055** ** 7,341	**-0.005** 8,736	**0.000** 8,736	**-0.011** 8,383	**0.005** 7,896	**1.000** 10,976
Education Level at Time of Survey	**-0.244** ** 7994	**0.065** ** 7,041	**-0.171** ** 8,411	**0.180** ** 8,411	**-0.251** ** 8,146	**-0.073** ** 7,694	**-0.068** ** 10,588
Frequency of Religious Attendance	**-0.204** ** 6,837	**0.144** ** 6,150	**-0.156** ** 7,140	**-0.075** ** 7,140	**-0.160** ** 6,956	**-0.044** ** 6,631	**0.076** ** 8,793
Presence of Children in Household	**0.265** ** 8,209	**-0.093** ** 7,341	**0.250** ** 8,736	**0.016** 8,736	**0.287** ** 8,383	**0.051** ** 7,896	**0.001** 10,976
Parents Ever Separated or Divorced	**-0.205** ** 7,972	**0.108** ** 7,129	**-0.214** ** 8,464	**-0.131** ** 8,464	**-0.181** ** 8,135	**0.013** 7,681	**-0.022** * 10,624
Resp. and/or Spouse Using Contraceptive	**-0.230** ** -0.224	**0.054** * 2,034	**-0.259** ** 3,041	**-0.007** 3,041	**-0.258** ** 2,944	**-0.059** * 2,716	**0.009** 5,044
Spouse Cohabited Previously With Other Person	**-0.224** ** 8,089	**0.248** ** 7,203	**-0.206** ** 8,499	**0.007** 8,499	**-0.207** ** 8,249	**0.088** ** 7,790	**0.068** ** 8,499

Upper value in each box is Pearson correlation. Lower value is number of cases analyzed.
Correlations are determined from all first marital unions among respondents, using standardized weighted data.
* *$p < 0.05$ (two-tailed)*
** *$p < 0.001$ (two-tailed)*

Table A2. Pearson Correlations of Covariates (continued)

Covariates	Education Level	Frequency of Religious Attendance	Presence of Children in Household	Parents Ever Separated or Divorced	Resp. and/or Spouse Using Contra-ceptive	Spouse Cohabited Previously With Other Person
Duration of Union						
Marital Union Type						
Age Cohort						
Age of Respondent at Start of Union						
Period of Start of Union						
Age Diff. Between Resp. and Spouse						
Canadian Region of Residence						
Education Level at Time of Survey	**1.000** 10,588					
Frequency of Religious Attendance	**0.005** 8,757	**1.000** 8,793				
Presence of Children in Household	**-0.116** ** 10,588	**0.046** ** 8,793	**1.000** 10,976			
Parents Ever Separated or Divorced	**-0.026** * 10,267	**0.136** ** 8,553	**-0.001** 10,624	**1.000** 10,624		
Resp. and/or Spouse Using Contraceptive	**0.162** ** 4,954	**0.116** ** 3,920	**-0.076** ** 5,044	**0.059** ** 4,886	**1.000** 5,044	
Spouse Cohabited Previously With Other Person	**0.046** ** 8,237	**0.101** ** 7,020	**0.003** 8,499	**0.044** ** 8,248	**0.021** 2,949	**1.000** 8,499

Upper value in each box is Pearson correlation. Lower value is number of cases analyzed.
Correlations are determined from all first marital unions among respondents, using standardized weighted data.
* *$p < 0.05$ (two-tailed)*
***$p < 0.001$ (two-tailed)*

Table A3. Percentage Distribution of Selected Covariates, by Age Cohort and Sex

Covariate	Men				Women			
	Age Cohort				Age Cohort			
	15-29	30-39	40-49	50 +	15-29	30-39	40-49	50+
Age at Start of Union								
< 20 Years	10.4	8.7	8.7	4.0	29.9	26.2	28.9	26.1
20-21	22.0	16.1	16.4	16.2	26.4	22.9	26.8	22.9
22-24	47.3	30.1	35.4	29.8	29.6	26.3	25.1	23.6
25 and Over	20.3	45.1	39.5	50.0	14.1	24.7	19.2	27.5
Total	100.0	100.0	100.0	100.0	100.0	100.1	100.0	100.1
Age Difference Between Respondent and Spouse								
No difference	33.7	23.3	22.4	18.8	17.2	22.5	22.0	18.4
Resp. 1-5 years older	41.9	56.7	53.5	52.2	3.0	9.4	8.4	10.9
Resp. >5 years older	3.5	7.3	11.3	17.7	0.0	0.2	0.7	1.1
Resp. 1-5 years younger	19.2	11.6	11.3	9.5	60.7	51.7	55.8	48.7
Resp. >5 years younger	1.7	1.2	1.6	1.7	19.2	16.2	13.1	20.8
Total	100.0	100.1	100.1	99.9	100.1	100.0	100.0	99.9
Highest Level of Education Attained								
Less than high school	14.8	14.1	20.7	39.9	12.0	15.6	19.6	46.3
High school diploma	17.0	16.8	15.8	12.4	21.6	22.3	21.8	16.1
Some post-secondary	22.2	14.6	16.2	9.0	12.6	13.9	11.8	9.5
Diploma from Community College, Technical/Vocational School	28.4	31.2	26.7	20.7	34.7	30.6	26.3	20.0
University degree	17.6	23.4	20.6	18.0	19.2	17.6	20.6	8.0
Total	100.0	100.1	100.0	100.0	100.1	100.0	100.1	99.9
Frequency of Religious Attendance								
At least once a week	25.5	22.5	22.1	33.5	22.8	27.4	27.1	40.7
At least once a month	19.1	18.1	9.4	12.1	15.1	15.4	15.9	12.6
One or more times a year	34.0	30.8	29.9	23.6	33.0	28.9	29.1	23.1
Not at all	21.3	28.6	38.7	30.7	29.1	28.2	28.0	23.5
Total	99.9	100.0	100.1	99.9	100.0	99.9	100.1	99.9
Parents Ever Separated or Divorced								
Yes	18.3	14.4	10.0	6.7	21.7	14.5	10.6	5.9
No	81.7	85.6	90.0	93.3	78.3	85.5	89.4	94.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Spouse Had Lived Common-Law Previously With Another Person								
Yes	6.1	5.1	3.1	0.5	10.0	8.5	3.9	0.8
No	93.9	94.9	96.9	99.5	90.0	91.5	96.1	99.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Columns may not total 100.0 due to rounding.
Sample consists of all respondents who had experienced a marital union.
Source: The 1995 General Social Survey.

Table A4. Means and Standard Deviations for Sample Groups With and Without Reported Union Duration

Covariate	Duration Reported		No Duration Reported	
	Mean	Standard Deviation	Mean	Standard Deviation
Marital Union Type	0.12	0.32	0.29	0.45
Age Cohort	3.05	0.99	3.31	0.93
Union Cohort	3.38	1.30	3.98	1.08
Age at Start of Union	2.74	1.08	3.43	1.02
Age Difference Between Respondent & Spouse	2.82	1.36	2.97	1.35
Highest Level of Education Attained	2.87	1.49	2.33	1.45
Canadian Region of Residence	0.24	0.43	0.11	0.32
Frequency of Religious Attendance	2.53	1.19	2.84	1.24
Presence of Children in Household	0.45	0.50	0.59	0.49
Parents Ever Separated or Divorced	0.10	0.30	0.12	0.33
Respondent and/or Spouse Using Contraceptive	0.51	0.50	0.40	0.49
Spouse Had Lived Common-Law Previously With Another Person	0.00	0.18	0.00	0.20

Source: The 1995 General Social Survey.

Table A5. Data for Cox Regression Testing Presence of Children in the Household, by Age Group and Sex

	Age < 40		Age 40 and Over	
	Men	Women	Men	Women
ß	1.958	0.810	0.284	-0.323
Hazard Ratio (exp(ß))	**7.084** **	**2.247** **	**1.329** **	**0.724** **
Standard Error	0.195	0.164	0.112	0.095
-2 Log Likelihood	1,276.747	2,796.160	5,637.512	7,975.575
95% C.I. on exp(ß)				
Lower	4.830	1.628	1.068	0.601
Upper	10.391	3.102	1.654	0.872
N (event)	112	219	386	525
N (censored)	793	1,045	1,549	2,145

** $p < 0.001$

Appendix B

Table B1. Multivariate Hazards Data for Marital Dissolution, With Time-Varying Covariate for Marital Union (Model 1)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Marital Union Type × *t*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	0.004	1.004	0.017	0.971	1.039	-0.007	0.994	0.014	0.966	1.022
Age Cohort										
15-29	2.054	7.798 **	0.617	2.327	26.132	0.811	2.251 *	0.330	1.178	4.301
30-39	1.597	4.941 **	0.440	2.085	11.706	0.657	1.928 **	0.161	1.407	2.643
40-49	1.250	3.490 *	0.396	1.604	7.591		1.000			
(50 or older)		1.000								
Age of Respondent at Start of Union										
Less than 20 years	0.070	1.073	0.292	0.606	1.900	0.179	1.196	0.243	0.743	1.923
20-21	0.299	1.348	0.261	0.808	2.250	-0.293	0.746	0.248	0.459	1.213
22-24	0.010	1.011	0.236	0.636	1.606	-0.116	0.891	0.237	0.560	1.417
(25 or older)		1.000					1.000			
Age Difference Between Respondent and Spouse										
(No difference)		1.000					1.000			
Resp. 1-5 years older	0.359	1.431	0.222	0.926	2.213	0.231	1.260	0.273	0.738	2.150
Resp. > 5 years older	0.355	1.427	0.396	0.656	3.101	1.505	4.504 *	0.751	1.033	19.642
Resp. 1-5 years younger	0.229	1.258	0.297	0.702	2.251	-0.132	0.876	0.169	0.629	1.221
Resp. > 5 years younger	-0.010	0.990	0.639	0.283	3.466	0.011	1.011	0.213	0.666	1.534
Education Level of Respondent										
< High school diploma	0.338	1.403	0.287	0.800	2.461	-0.433	0.648	0.253	0.395	1.064
High school diploma	0.453	1.573	0.298	0.877	2.823	-0.359	0.698	0.244	0.432	1.127
Some post-secondary	0.595	1.814 *	0.284	1.040	3.163	0.070	1.072	0.230	0.684	1.682
Diploma from College, tech. school	0.348	1.416	0.265	0.842	2.381	-0.180	0.835	0.212	0.551	1.265
(University degree)		1.000					1.000			
Canadian Region of Residence										
Quebec	0.017	1.018	0.183	0.712	1.455	0.149	1.161	0.137	0.888	1.518
(Canada less Quebec)		1.000					1.000			
Frequency of Religious Attendance										
(At least once a week)		1.000					1.000			
At least once a month	0.390	1.476	0.356	0.734	2.969	-0.030	0.971	0.250	0.594	1.586
One or more times a year	0.464	1.591	0.285	0.910	2.784	0.300	1.350	0.208	0.898	2.030
Not at all	0.714	2.042	0.269	1.206	3.457	0.607	1.834 *	0.205	1.227	2.742
Children Present in Household										
(Yes)		1.000					1.000			
No	1.256	3.512	0.183	2.456	5.023	0.245	1.278	0.145	0.963	1.697

Table B1. (continued)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Parents had Separated or Divorced										
Yes	0.444	1.559	0.233	0.987	2.463	0.636	1.888 **	0.161	1.376	2.590
(No)		1.000					1.000			
Respondent and/or Spouse Using Contraceptive										
Yes	0.252	1.287	0.177	0.910	1.821	-0.588	0.555 **	0.163	0.403	0.765
(No)		1.000					1.000			
Spouse had Previously Lived Common-Law With Another Person										
Yes	0.377	1.459	0.339	0.750	2.836	0.502	1.651 *	0.208	1.097	2.485
(No)		1.000					1.000			
-2LL			1,634.045					2,738.766		
DF			23					22		

( ) indicates reference categories.
* $p < 0.05$
** $p < 0.001$

Table B2. Multivariate Hazards Data for Marital Dissolution, With Time-Varying Covariate for Marital Union (Model 2)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Marital Union Type × *t*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	0.000	1.000	0.018	0.966	1.035	-0.002	0.998	0.014	0.971	1.025
Union Cohort										
1990-	1.897	6.664 *	0.896	1.151	38.574	1.000	2.719	0.584	0.865	8.542
1980-1989	1.143	3.137	0.772	0.691	14.239	0.997	2.711 **	0.247	1.671	4.398
1970-1979	0.877	2.404	0.751	0.551	10.486	0.541	1.718 *	0.205	1.149	2.570
1960-1969	0.067	1.070	0.782	0.231	4.954		1.000			
(Before 1960)		1.000								
Age of Respondent at Start of Union										
Less than 20 years	0.522	1.686	0.294	0.946	3.002	0.559	1.750 *	0.248	1.076	2.845
20-21	0.612	1.844 *	0.264	1.099	3.094	0.008	1.008	0.249	0.619	1.643
22-24	0.234	1.264	0.237	0.794	2.011	0.045	1.046	0.237	0.657	1.666
(25 or older)		1.000					1.000			
Age Difference Between Respondent and Spouse										
(No difference)		1.000					1.000			
Resp. 1-5 years older	0.224	1.252	0.221	0.812	1.930	0.200	1.221	0.274	0.714	2.087
Resp. > 5 years older	0.058	1.060	0.390	0.493	2.278	1.161	3.195	0.755	0.727	14.034
Resp. 1-5 years younger	0.125	1.133	0.301	0.628	2.042	-0.113	0.893	0.170	0.640	1.248
Resp. > 5 years younger	-0.278	0.757	0.646	0.214	2.685	0.034	1.035	0.215	0.679	1.578
Education Level of Respondent										
< High school diploma	0.400	1.493	0.285	0.853	2.611	-0.477	0.621	0.254	0.378	1.020
High school diploma	0.465	1.592	0.300	0.884	2.867	-0.436	0.647	0.246	0.400	1.047
Some post-secondary	0.601	1.824 *	0.284	1.046	3.182	0.031	1.031	0.230	0.657	1.619
Diploma from College, tech. school	0.415	1.515	0.265	0.901	2.546	-0.184	0.832	0.213	0.548	1.263
(University degree)		1.000					1.000			
Canadian Region of Residence										
Quebec	0.004	1.004	0.184	0.699	1.440	0.213	1.237	0.137	0.945	1.619
(Canada less Quebec)		1.000					1.000			
Frequency of Religious Attendance										
(At least once a week)		1.000					1.000			
At least once a month	0.377	1.457	0.356	0.725	2.930	0.067	1.069	0.250	0.655	1.746
One or more times a year	0.451	1.570	0.284	0.899	2.740	0.387	1.473	0.210	0.976	2.223
Not at all	0.657	1.929 *	0.270	1.136	3.273	0.648	1.912 *	0.206	1.276	2.866
Children Present in Household										
(Yes)		1.000					1.000			
No	1.270	3.561 **	0.183	2.487	5.100	0.259	1.296	0.146	0.973	1.726

Table B2. (continued)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Parents had Separated or Divorced										
Yes	0.446	1.562	0.238	0.979	2.491	0.595	1.813 **	0.162	1.321	2.489
(No)		1.000					1.000			
Respondent and/or Spouse Using Contraceptive										
Yes	0.215	1.240	0.179	0.873	1.762	-0.599	0.550 **	0.163	0.399	0.757
(No)		1.000					1.000			
Spouse had Previously Lived Common-Law With Another Person										
Yes	0.511	1.667	0.343	0.851	3.266	0.484	1.623 *	0.208	1.080	2.440
(No)		1.000					1.000			
-2LL			1,636.275					2,739.265		
DF			24					23		

( ) indicates reference categories.
* $p < 0.05$
** $p < 0.001$

Table B3. Multivariate Hazards Data for Marital Dissolution, With Time-Varying Covariate for Marital Union (Model 3)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Marital Union Type × *t*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	0.036	1.037 *	0.013	1.011	1.063	0.024	1.024 *	0.011	1.003	1.046
Age of Respondent at Start of Union										
Less than 20 years	0.950	2.587 **	0.196	1.761	3.801	0.854	2.348 **	0.158	1.724	3.198
20-21	0.425	1.530 *	0.176	1.084	2.160	0.543	1.721 **	0.159	1.260	2.351
22-24	0.383	1.467 *	0.152	1.089	1.976	0.338	1.402 **	0.160	1.024	1.918
(25 or older)		1.000					1.000			
Age Difference Between Respondent and Spouse										
(No difference)		1.000					1.000			
Resp. 1-5 years older	-0.027	0.974	0.403	0.442	2.147	0.258	1.294	0.142	0.980	1.710
Resp. > 5 years older	0.208	1.231	0.389	0.574	2.638	0.510	1.666 *	0.180	1.172	2.368
Resp. 1-5 years younger	0.479	1.615	0.417	0.713	3.659	1.798	6.040 **	0.394	2.793	13.063
Resp. > 5 years younger	-0.100	0.905	0.416	0.400	2.045	0.121	1.129	0.119	0.894	1.425
Education Level of Respondent										
< High school diploma	-0.393	0.675 *	0.172	0.482	0.945	-0.964	0.381 **	0.147	0.286	0.509
High school diploma	-0.007	0.993	0.194	0.679	1.453	-0.784	0.456 **	0.157	0.336	0.620
Some post-secondary	0.192	1.212	0.198	0.822	1.786	-0.235	0.791	0.157	0.581	1.076
Diploma from College, tech. school	0.041	1.042	0.175	0.740	1.467	-0.377	0.686 *	0.142	0.519	0.906
(University degree)		1.000					1.000			
Canadian Region of Residence										
Quebec	0.376	1.457 **	0.116	1.161	1.827	0.239	1.270 *	0.090	1.065	1.514
(Canada less Quebec)		1.000					1.000			
Frequency of Religious Attendance										
(At least once a week)		1.000					1.000			
At least once a month	0.363	1.437	0.233	0.911	2.267	0.499	1.647 *	0.157	1.210	2.241
One or more times a year	0.765	2.149 **	0.178	1.517	3.043	0.823	2.277 **	0.131	1.763	2.941
Not at all	1.086	2.963 **	0.166	2.141	4.099	1.179	3.252 **	0.125	2.546	4.153
Children Present in Household										
(Yes)		1.000					1.000			
No	0.590	1.805 **	0.120	1.426	2.284	-0.258	0.772 *	0.093	0.643	0.927
Parents had Separated or Divorced										
Yes	0.442	1.556 *	0.166	1.125	2.154	0.751	2.118 **	0.116	1.686	2.661
(No)		1.000					1.000			

Table B3. (continued)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Spouse had Previously Lived Common-Law With Another Person										
Yes	1.071	2.917 **	0.260	1.751	4.859	1.122	3.072 **	0.177	2.173	4.343
(No)		1.000					1.000			
-2LL			4,806.474					8,233.803		
DF			19					19		

( ) indicates reference categories.
* $p < 0.05$
** $p < 0.001$

Table B4. Multivariate Hazards Data for Marital Dissolution, With Time-Varying Covariate for Marital Union (Model 4)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Marital Union Type × *t*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	0.032	1.033 *	0.013	1.008	1.059	0.027	1.027 *	0.011	1.006	1.049
Age of Respondent at Start of Union										
Less than 20 years	0.650	1.915 **	0.167	1.381	2.657	0.622	1.862 **	0.138	1.421	2.439
20-21	0.302	1.352 *	0.144	1.019	1.794	0.320	1.377 *	0.143	1.039	1.823
22-24	0.279	1.321 *	0.128	1.029	1.697	0.171	1.186	0.147	0.890	1.581
(25 or older)		1.000					1.000			
Education Level of Respondent										
< High school diploma	-0.293	0.746	0.158	0.548	1.016	-0.883	0.414 **	0.144	0.312	0.548
High school diploma	0.065	1.067	0.179	0.751	1.516	-0.728	0.483 **	0.154	0.357	0.653
Some post-secondary	0.183	1.201	0.185	0.836	1.727	-0.197	0.821	0.155	0.606	1.114
Diploma from College, tech. school	0.085	1.089	0.161	0.794	1.494	-0.333	0.717 *	0.140	0.545	0.944
(University degree)		1.000					1.000			
Canadian Region of Residence										
Quebec	0.316	1.372 *	0.107	1.113	1.691	0.249	1.282 *	0.087	1.081	1.521
(Canada less Quebec)		1.000					1.000			
Frequency of Religious Attendance										
(At least once a week)		1.000					1.000			
At least once a month	0.356	1.428	0.214	0.938	2.174	0.456	1.578 *	0.152	1.170	2.127
One or more times a year	0.730	2.076 **	0.164	1.507	2.860	0.797	2.220 **	0.125	1.736	2.838
Not at all	1.038	2.824 **	0.152	2.096	3.804	1.133	3.104 **	0.120	2.454	3.926
Children Present in Household										
(Yes)		1.000					1.000			
No	0.491	1.634 **	0.109	1.320	2.023	-0.255	0.775 *	0.090	0.650	0.924
Parents had Separated or Divorced										
Yes	0.395	1.485 *	0.152	1.103	2.000	0.783	2.188 **	0.112	1.755	2.727
(No)		1.000					1.000			
Spouse had Previously Lived Common-Law With Another Person										
Yes	0.946	2.575 **	0.230	1.641	4.042	1.030	2.802 **	0.170	2.008	3.910
(No)		1.000					1.000			
-2LL			5,710.367					8,787.220		
DF			15					15		

( ) indicates reference categories.

* $p < 0.05$

** $p < 0.001$

Table B5. Multivariate Hazards Data for Marital Dissolution, with Separate Hazards for Marital Union of Less Than 10, or 10 or More Years (Model 5)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Marital Union Type × *g1(t)*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	0.939	2.558 *	0.332	1.334	4.906	0.714	2.042 *	0.258	1.230	3.388
Marital Union Type × *g2(t)*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	-0.410	0.664	0.248	0.408	1.080	-0.678	0.508 *	0.215	0.333	0.773
Age Cohort										
15-29	1.537	4.652 *	0.643	1.319	16.411	0.439	1.551	0.358	0.769	3.130
30-39	1.595	4.927 **	0.440	2.080	11.671	0.673	1.960 **	0.163	1.423	2.700
40-49	1.254	3.503 *	0.395	1.615	7.599		1.000			
(50 or older)		1.000								
Age of Respondent at Start of Union										
Less than 20 years	0.205	1.228	0.297	0.687	2.196	0.326	1.385	0.248	0.851	2.254
20-21	0.316	1.371	0.262	0.821	2.290	-0.186	0.830	0.253	0.506	1.363
22-24	0.022	1.022	0.238	0.641	1.631	-0.011	0.989	0.242	0.615	1.591
(25 or older)		1.000					1.000			
Age Difference Between Respondent and Spouse										
(No difference)		1.000					1.000			
Resp. 1-5 years older	0.337	1.400	0.222	0.906	2.164	0.306	1.358	0.274	0.794	2.321
Resp. > 5 years older	0.323	1.381	0.398	0.634	3.011	1.753	5.773 *	0.754	1.318	25.284
Resp. 1-5 years younger	0.229	1.257	0.295	0.705	2.240	-0.157	0.855	0.169	0.613	1.190
Resp. > 5 years younger	-0.011	0.990	0.634	0.285	3.431	0.023	1.023	0.212	0.675	1.551
Education Level of Respondent										
< High school diploma	0.295	1.344	0.285	0.769	2.347	-0.428	0.652	0.253	0.397	1.070
High school diploma	0.414	1.513	0.298	0.844	2.714	-0.404	0.667	0.245	0.413	1.079
Some post-secondary	0.587	1.799 *	0.284	1.030	3.142	0.142	1.153	0.229	0.736	1.807
Diploma from College, tech. school	0.342	1.408	0.264	0.839	2.363	-0.150	0.861	0.212	0.568	1.305
(University degree)		1.000					1.000			
Canadian Region of Residence										
Quebec	0.072	1.075	0.182	0.753	1.535	0.158	1.171	0.137	0.895	1.533
(Canada less Quebec)		1.000					1.000			
Frequency of Religious Attendance										
(At least once a week)		1.000					1.000			
At least once a month	0.365	1.440	0.357	0.716	2.897	-0.023	0.978	0.251	0.598	1.598
One or more times a year	0.412	1.510	0.286	0.861	2.646	0.338	1.402	0.208	0.933	2.109
Not at all	0.704	2.021 *	0.269	1.192	3.426	0.582	1.790 *	0.207	1.194	2.684

Table B5. (continued)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Children Present in Household										
(Yes)		1.000					1.000			
No	1.262	3.534 **	0.183	2.467	5.062	0.224	1.276	0.146	0.958	1.699
Parents had Separated or Divorced										
Yes	0.453	1.573	0.234	0.995	2.486	0.608	1.838 **	0.164	1.332	2.536
(No)		1.000					1.000			
Respondent and/or Spouse Using Contraceptive										
Yes	0.293	1.340	0.178	0.945	1.900	-0.608	0.544 **	0.163	0.395	0.749
(No)		1.000					1.000			
Spouse had Previously Lived Common-Law With Another Person										
Yes	0.278	1.320	0.345	0.672	2.595	0.533	1.704 *	0.213	1.122	2.586
(No)		1.000					1.000			
-2LL	1,622.173					2,716.511				
DF	24					23				

( ) indicates reference categories.
g1(t) = 1 if t < 10 years, 0 if t >= 10 years.
g2(t) = 0 if t < 10 years, 1 if t >= 10 years.
* $p < 0.05$
** $p < 0.001$

Table B6. Multivariate Hazards Data for Marital Dissolution, with Separate Hazards for Marital Union of Less Than 10, or 10 or More Years (Model 6)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Marital Union Type × *g1(t)*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	0.834	2.303 *	0.328	1.211	4.379	0.702	2.018 *	0.245	1.248	3.261
Marital Union Type × *g2(t)*										
(Marriage only)		1.000					1.000			
Marriage preceded by cohabitation	-0.477	0.621	0.253	0.378	1.019	-0.643	0.526 *	0.214	0.346	0.799
Union Cohort										
1990-	1.748	5.745 *	0.904	0.978	33.756	0.753	2.123	0.590	0.668	6.747
1980-1989	1.199	3.318	0.777	0.423	15.226	0.952	2.592 **	0.251	1.586	4.236
1970-1979	1.035	2.815	0.753	0.643	12.318	0.633	1.883 *	0.205	1.259	2.815
1960-1969	0.178	1.195	0.784	0.257	5.551		1.000			
(Before 1960)		1.000								
Age of Respondent at Start of Union										
Less than 20 years	0.596	1.814 *	0.295	1.018	3.231	0.578	1.782 *	0.250	1.093	2.907
20-21	0.580	1.787 *	0.264	1.064	2.999	0.004	1.004	0.251	0.614	1.641
22-24	0.192	1.212	0.238	0.761	1.931	0.061	1.063	0.239	0.666	1.698
(25 or older)		1.000					1.000			
Age Difference Between Respondent and Spouse										
(No difference)		1.000					1.000			
Resp. 1-5 years older	0.208	1.231	0.221	0.799	1.899	0.267	1.307	0.274	0.763	2.236
Resp. > 5 years older	0.007	1.007	0.390	0.469	2.166	1.423	4.150	0.757	0.941	18.300
Resp. 1-5 years younger	0.126	1.135	0.296	0.636	2.025	-0.129	0.879	0.170	0.630	1.227
Resp. > 5 years younger	-0.289	0.749	0.641	0.213	2.632	0.054	1.056	0.215	0.693	1.608
Education Level of Respondent										
< High school diploma	0.364	1.439	0.283	0.827	2.505	-0.474	0.622	0.254	0.378	1.024
High school diploma	0.435	1.545	0.299	0.859	2.777	-0.472	0.624	0.247	0.385	1.012
Some post-secondary	0.604	1.830 *	0.285	1.047	3.197	0.100	1.015	0.230	0.704	1.734
Diploma from College, tech. school	0.401	1.493	0.265	0.889	2.508	-0.147	0.863	0.214	0.567	1.313
(University degree)		1.000					1.000			
Canadian Region of Residence										
Quebec	0.058	1.060	0.183	0.740	1.517	0.207	1.231	0.138	0.939	1.613
(Canada less Quebec)		1.000					1.000			
Frequency of Religious Attendance										
(At least once a week)		1.000					1.000			
At least once a month	0.359	1.431	0.356	0.712	2.878	0.113	1.120	0.250	0.686	1.827
One or more times a year	0.411	1.508	0.286	0.861	2.638	0.440	1.553 *	0.210	1.028	2.345
Not at all	0.665	1.944 *	0.270	1.146	3.297	0.648	1.911 *	0.208	1.272	2.872

Table B6. (continued)

Covariate	Men					Women				
		Hazard Ratio		95% C.I. for exp(ß)			Hazard Ratio		95% C.I. for exp(ß)	
	ß	Exp(ß)	S.E.	Lower	Upper	ß	Exp(ß)	S.E.	Lower	Upper
Children Present in Household										
(Yes)		1.000					1.000			
No	1.285	3.613 **	0.185	2.515	5.191	0.268	1.307	0.148	0.979	1.746
Parents had Separated or Divorced										
Yes	0.448	1.564	0.239	0.979	2.499	0.560	1.751 **	0.165	1.267	2.420
(No)		1.000					1.000			
Respondent and/or Spouse Using Contraceptive										
Yes	0.276	1.318	0.180	0.926	1.877	-0.627	0.534 **	0.163	0.388	0.735
(No)		1.000					1.000			
Spouse had Previously Lived Common-Law With Another Person										
Yes	0.410	1.507	0.350	0.759	2.992	0.499	1.648 *	0.213	1.086	2.499
(No)		1.000					1.000			
-2LL			1,624.201					2,717.900		
DF			25					24		

( ) indicates reference categories.
g1(t) = 1 if t < 10 years, 0 if t >= 10 years.
g2(t) = 0 if t < 10 years, 1 if t >= 10 years.
* $p < 0.05$
** $p < 0.001$