TIMING TO FIRST UNION: A TEST OF THE VISIBLE MINORITY HYPOTHESIS

by

Esther Park Lee
BA, University of British Columbia, 2001

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Supervisory Committee

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Abstract

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Ideological shifts in Western society have transformed the process of entry into first unions including: a significant decline in legal marriage, later age marriage, and an increase in nonmarital cohabitation. Some literature has found that these trends have been further impacted by race as the decline in marriage rates has been significantly greater for racial minorities than for non-minorities. This study explores the divergence of marriage patterns on the basis of the visible minority hypothesis, which suggests that visible minority status itself, as a proxy for race will be significant in the first union process. The data were drawn from the 2006 General Social Survey (N= 19,983 men and women). The effects of visible minority status, socioeconomic factors, region, and other cultural markers are explored using Cox's proportional hazard modeling. The findings suggest that standard economic models are insufficient in explaining differentials in the entry into the first union for visible minorities. That is, visible minority status has an independent effect on the entry into the first union.

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Acknowledgments

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Chapter One

1 Introduction

1.1. Background to this Study

In the past few decades, there have been dramatic changes in family formation in Western societies. The institution of marriage[1] is said to have retreated in Europe, the US, and Canada due to a set of complex social and demographic forces. Increased age at marriage, declining fertility, increased rates of marital dissolution, and nonmarital cohabitation[2] are cited as some of the underlying causes to the changes in marriage patterns. Entry into first union – first marriage or first cohabitation – has come to include a growing proportion of cohabiting relationships, either as a precursor to marriage or as an end in itself, which has dramatically transformed the traditional dynamics of family formation (Bumpass & Sweet 1989; Bumpass, Sweet & Cherlin 1991; Thornton 1988). The proportion of first marriages in the US that began as cohabiting relationships increased from 46% in the 1980s to nearly 60% in the 1990s (Bumpass & Lu 2000). In Canada, the number of common-law-couple families surged 18.9% in 2006 representing a proportion of 15.5% of all families, an increase from 13.8% of all families in 2001 (Statistics Canada 2006).

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[1] Marriage, as used in this paper, refers to legal marriage only. While other definitions of the above exist, this terminology is used to stay consistent with the General Social Survey definition (the data source of this study) and Statistics Canada terminology.

[2] Cohabitation is referred to in the General Social Survey (GSSc20) as, "two people of the opposite sex or of the same sex who live together as a couple but who are not legally married to each other". While this definition refers to both opposite sex and same sex couples who cohabit, only individuals who enter into opposite sex unions will be followed due to data limitations.

Common-law unions continued to be more prevalent in Quebec in 2006 with 34.6% of all couples in cohabiting unions. The number of common-law-couple families increased 20.3% between 2001 and 2006 accounting for 44.4% of the national total (Statistics Canada 2006)[3]. With such significant changes to union life, academics have sought to uncover the underlying mechanisms to the changing process of first union formation.

A significant theme among these findings has been the differentials in first partnership entry according to race. US research in particular, tells us that varying differences exist in the transition towards marriage and cohabitation between blacks, Hispanics, and whites (Smock 2000). Scholars attribute these differences to socioeconomic conditions as well as cultural values which affect normative beliefs about family formation (Manning & Smock 2002; Oropesa & Gorman 2000; Oropesa 1996; South 1993). European research has also found differences in first union entry among specific ethno-cultural migrant groups and European researchers point to processes of cultural transmission of values (within families) as the underlying reasons for these differences. However, little empirical work has been conducted to investigate the influence of race on first union formation in Canada.

Although the issue of racial differentials pertaining to first union entry in Canada has received little attention, significant cultural divergences have been well documented, particularly with respect to regional differentials. For instance, it has been found that union formation in Quebec differs significantly from the rest of Canada indicating the independence of cultural and political factors which differentiate it from other provinces (Laplante 2006; Le Bourdais & Lapierre-Adamcyk 2004; Pollard and Wu 1998). While

[3] http://www12.statcan.ca/census-recensement/2006/as-sa/97-553/p1-eng.cfm

regional differentials appear to point to the significance of cultural effects on first union entry, there is little research substantiating a connection between race and first union entry. Hence, the nuptial patterns of Canada's visible minority population are of interest to family demographers, particularly, since US race research has indicated that differentials in marriage patterns are linked to race (Oropesa & Gorman 2000). However, due to differences in the minority populations of the US and Canada, theories grounded within the US context may not adequately account for racial differences in Canada.

Additionally, documenting patterns of first union entry from a sociological point of view is important for understanding trends in family formation behaviour, transitions in individual life course, and from a broader perspective, for observing social changes in Canadian society. If we view the family as the "first model of political societies" (Rousseau [1792] 2004), then changes and evolution to the formation of family may be symptomatic of larger shifts in culture and society and its underlying ideological foundations. For instance, scholars have attributed changes in fertility and union behaviour as being indicative of rising individualism and secularization in Western societies which involves, "an ideational change that emphasizes individual autonomy, the importance of self-fulfillment, and the rejection of institutional authority" (Lesthaeghe 1983; Lesthaeghe & Surkyn 1988). Hence, the increasing importance of individual goal attainment and the decline in religious adherence and involvement are aspects of social change which are revealed through the decline in the traditional family.

1.1.1 Visible Minorities in Canada

This study examines the timing and entry into first partnership – marriage and/or cohabitation – among visible minorities[4] and non-visible minorities[5] in Canada. Canada has a significant visible minority population which has increased steadily in the last twenty five years. A component of this growth may be due to changes in Canadian immigration policy. In the 1960s, changes in immigration regulation removed country of origin as an aspect of admission and moved instead towards a point system which awarded eligibility based on credentials and ability to contribute to the labour market. In addition, the new regulations confirmed the right of family sponsorship allowing for family reunification (Boyd & Vickers 2000). Furthermore, these changes also regulated a more formalized process of entry on the basis of humanitarian grounds for refugees. With immigrants to Canada increasingly coming from diverse cultural backgrounds, the visible minority population has grown drastically. In other words, Canada's visible minority population is influenced largely by immigration. About seven in ten visible minorities are immigrants, half of whom arrived since 1981 (Boyd & Vickers 2000).

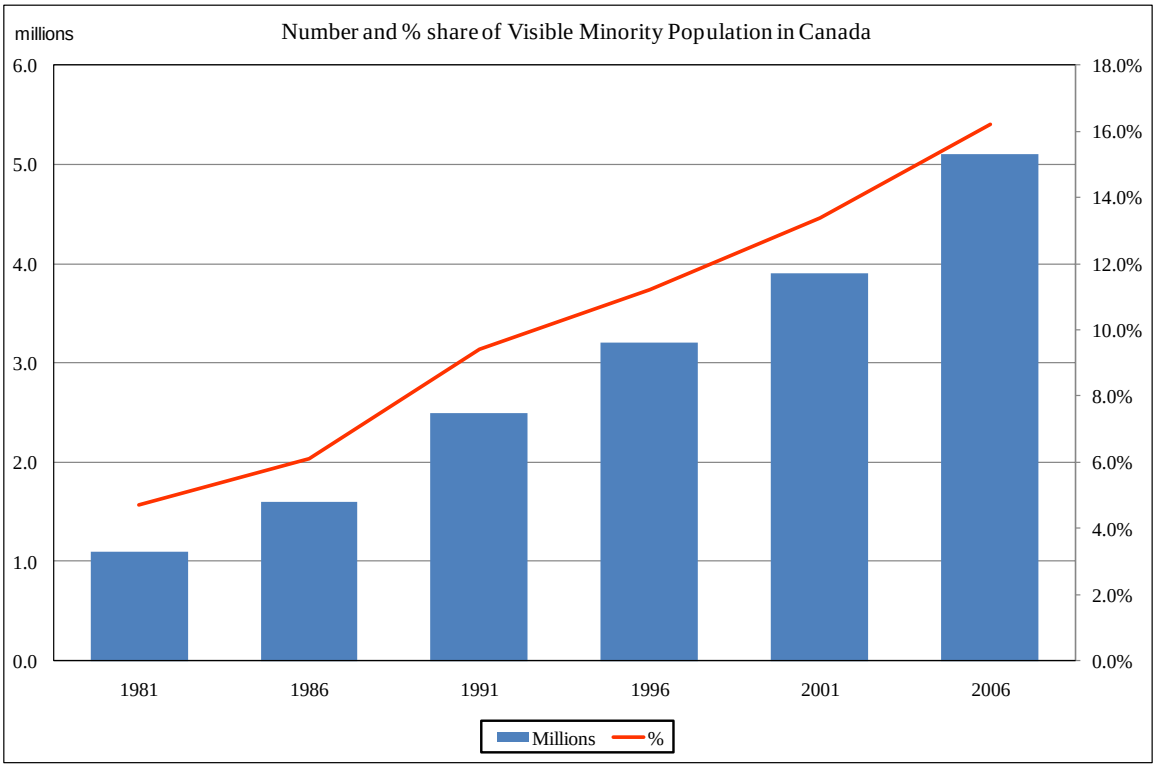
Figure 1 displays the number and share of visible minorities in Canada from 1981 to 2006. In 2006, just over 5 million visible minorities were present in Canada, accounting for over 15% of the total population. In comparison, visible minorities

[4] Visible minorities are defined under the *Employment Equity Act* as native born or foreign born persons, other than Aboriginal peoples, who are "non-Caucasian in race or non-white in colour". Visible minority status is self reported using Statistics Canada survey data which requests that respondents choose among categories of aggregated visible minority groupings (see 4.2 Study Sample and Variables). Again, while visible minority status contains distinct cultural, national, and ethnic groupings, it provides a first look at any potential differences which arise from the social context of race in Canadian society.

[5] Non-visible minority is classified by Statistics Canada as including Aboriginals and whites.

represented only 3% of the total population in 1981 indicating substantial growth in the last three decades.

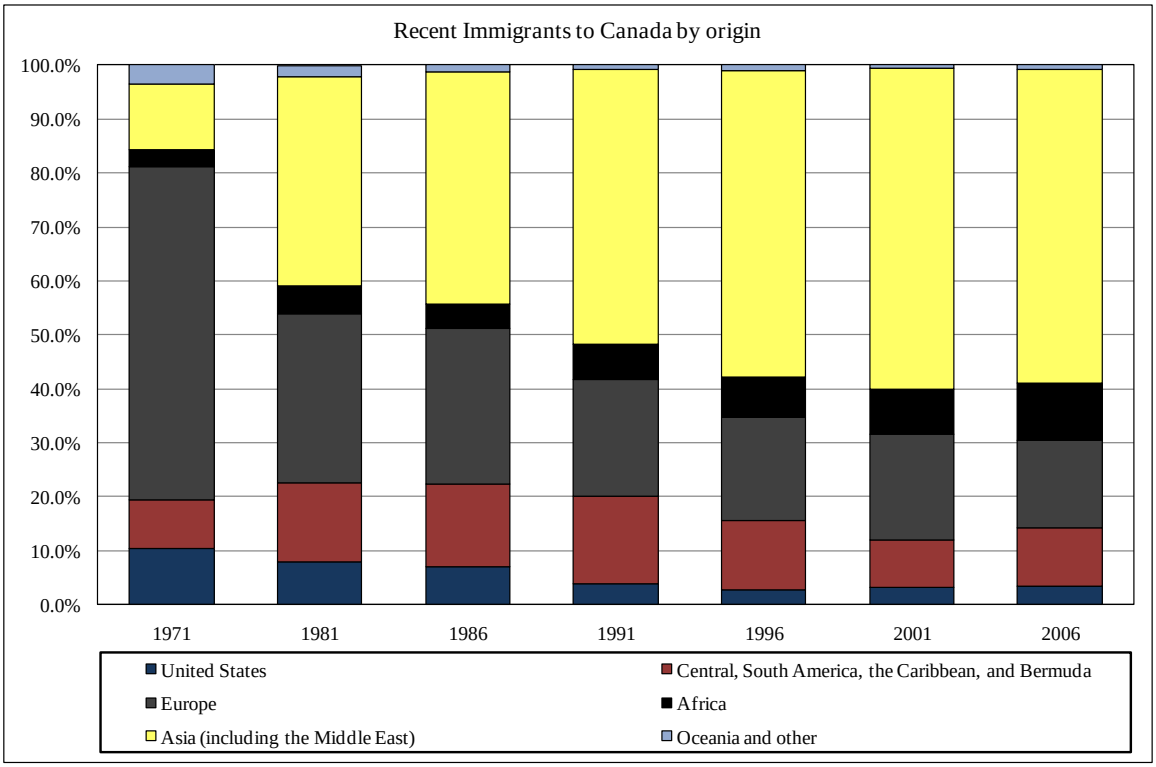
Figure 1. Number and share of visible minority people in Canada



Source: Statistics Canada. 2008. Ethnic Diversity and Immigration (graph). Summary Tables. Last updated 2009-01-05. http://www41.statcan.ca/2008/30000/grafx/htm/ceb30000_000_3-eng.htm (accessed April 20, 2010).

As mentioned, changes in Canadian immigration regulation in the 1960s increased the numbers of immigrants and allowed the makeup of immigrants to extend beyond European nations. The composition of immigrants to Canada changed drastically from those who came from Europe and the US to immigrants from Asian countries. Figure 2 shows that in 1971, 70% of immigrants were from Europe and the US while 10% were from Asia. By 2006, these numbers have nearly reversed, with over 60% of immigrants coming from Asia compared to only approximately 20% coming from Europe and the US. The top five countries of birth for immigrants who arrived between 1991 and 1996 were: Hong Kong, China, India, Philippines, and Sri Lanka (Boyd & Vickers 2000). The large numbers of Asian immigrants from Hong Kong and China have been cited to be due to a number of factors (Li 2003). In particular, Canada's expansion of the business immigration program in the 1980s, coupled with geopolitical dynamics in Hong Kong and China during the 1980s and 1990s (e.g., Tiananmen Square, return of Hong Kong to China) greatly allowed the rising middle class entrepreneurs from Hong Kong and China to benefit and emigrate in increasing numbers. This resulted in total numbers of the Chinese-Canadian immigrant population growing from 633,933 in 1991 to 1,094,700 in 2001 (ibid).

Figure 2. Recent immigrants to Canada, by region of origin

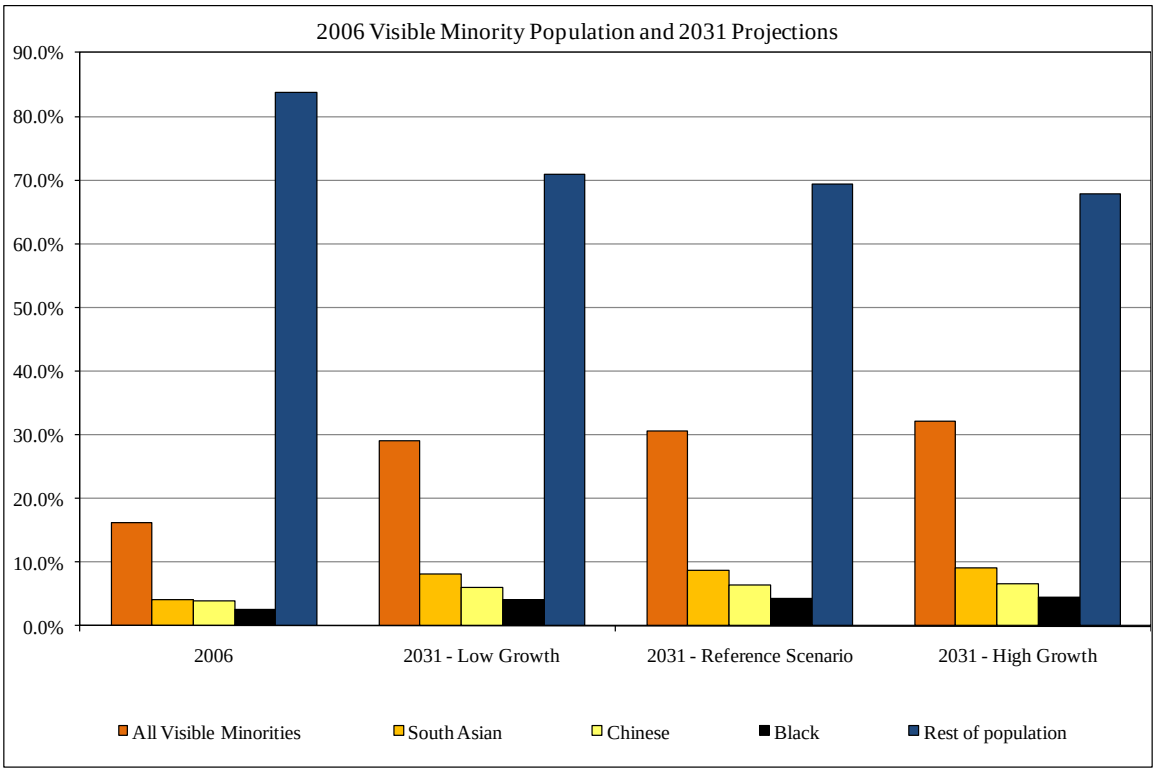


Source: Statistics Canada. 2008. *Ethnic Diversity and Immigration* (table). Summary Tables. Last updated 2009-01-05. http://www41.statcan.ca/2008/30000/grafx/htm/ceb30000_000_1-eng.htm#table (accessed April 20, 2010).

While the 2006 Census showed an already diverse population, future projections indicate that this diversity will rapidly increase. Figure 3 shows growth rates and projections by visible minority groupings. Visible minorities as a whole appear to be increasing in population while the rest of Canadian population declines. Low growth scenarios project a population just below 30% of the entire Canadian population while high growth scenarios project a population above 30% of the general population. South Asians, followed by Chinese continue to be projected as the largest groups in the visible minority population.

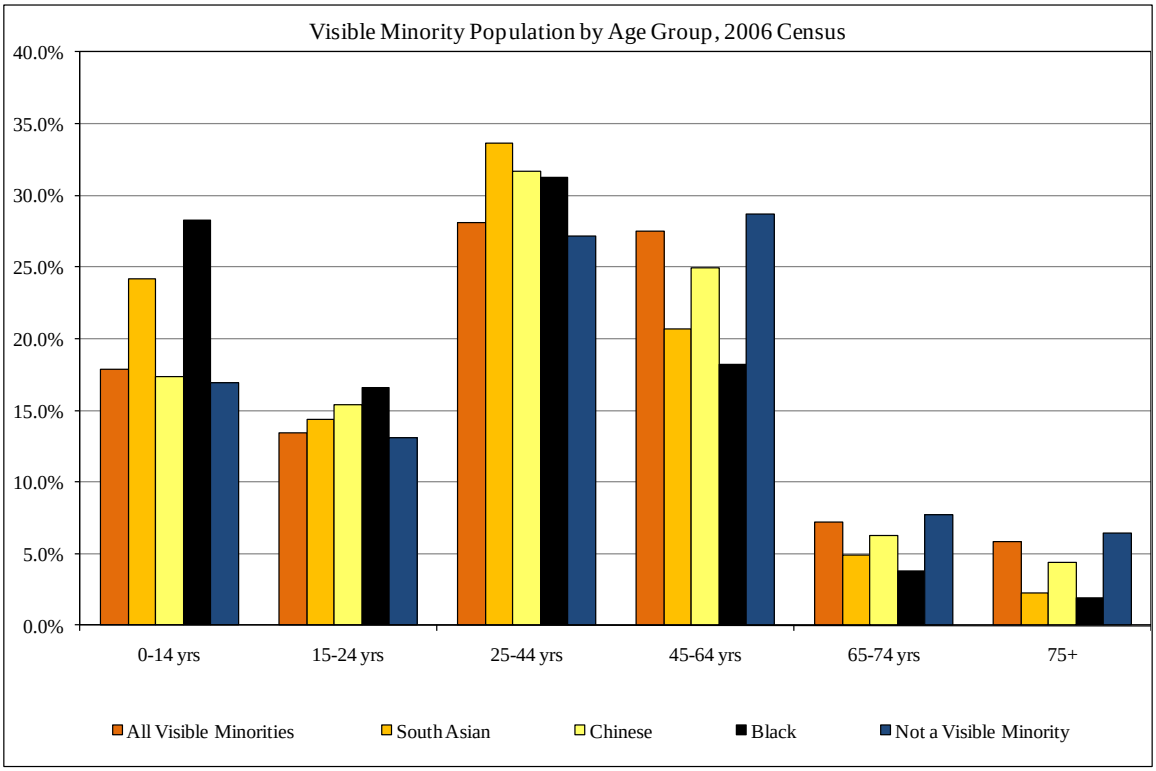
Figure 4 shows the breakdown of visible minorities by age group. Of particular significance is the population of immigrants and Canadian-born children of immigrants, who are between the ages of 25 and 44 years old. Since this age range covers the ages when first union and childbearing is most likely to occur, it has considerable implications on: formation and type of family unions entered, makeup and ethnic composition of Canadian society, and to a larger extent, demographic growth in Canada. With members of the visible minority population projected to account for roughly one fifth of the total population by 2017 (see Figure 3), it is imperative that research scholarship be directed toward understanding the dynamics of race and its impact on Canadian society.

Figure 3. Population by visible minority group and projection scenario, Canada, 2006 and 2031



Source: Statistics Canada. 2010. "Population by visible minority group and projection scenario, Canada, 2006 and 2031" (table). Projections of the Diversity of the Canadian Population. Statistics Canada Catalogue no. 91-551-XWE. Ottawa, Ontario. http://www.statcan.gc.ca/pub/91-551-x/2010001/tbl/tbl004-eng.htmhtm (accessed April 20, 2010).

Figure 4. Visible minority population by age group, 2006 Census



Source: Statistics Canada. No date. Visible Minority Population by Age Group (table). Summary Tables. Last updated 2009-12-10. http://www.statcan.ca/english/Pgdb/econ03.htm (accessed April 20, 2010).

Since Canada's growing visible minority population is very diverse, there are potential problems to grouping visible minorities as a mono-ethnic category from a research perspective. Certainly, it can be argued that there may be more differences among visible minority groupings than the commonality of being a visible minority. However, there may also be some broadly based, shared themes within the visible minority experience in Canada. Common themes among minorities may involve: the experience of being non-white or a non-majority person, the experience of being an immigrant (foreign born), being a member of a cultural group with differing social norms and values from dominant Western society, experiencing pressures of assimilation and acculturation, and the lack of, or limited access to, human and social capital which are needed for entry into social institutions.

As such, social researchers have hypothesized that racial and ethnic minority groups experience more social stressors than nonminorities. For example, one perspective, the minority group status perspective, theorizes that stressors or insecurities arise from the disadvantaged position minorities occupy in the social structure combined with the pressure to be on par with dominant society. Within the Canadian context, this has been indicated through the trends in educational attainment achieved among ethnic groups. For example, most ethnic groups in Canada have experienced improvements in educational attainment with Asians experiencing the largest improvement (Hou & Balakrishnan 1996). While this may be the result of the immigration point system implemented in the 1960s, it may also be an indicator that upward mobility is an important value which is achieved through educational attainment.

This perspective also predicts that in the attempt to achieve upward mobility, certain lifecycle events such as family formation are affected. Consequently, membership

in a minority group has an effect over and above all other factors including the effects of social class. Further to this, it may be hypothesized that racial differences exist concerning entry to first unions.

1.1.2 Minority Group Status Hypothesis

The research questions which form the basis of this study are formulated on the assumptions and expectations of the minority group status hypothesis. Minority group status hypothesis was developed by fertility researchers to explain fertility differences amongst Catholics in Europe (van Heek, 1956). While acknowledging factors such as socioeconomic status, the minority group status hypothesis considers minority status as a determining influence on family formation behaviour. In other words, an element of the minority experience influences the timing and the number of offspring produced relative to the family formation behaviour of the majority population. This perspective suggests that minority groups desire acculturation but membership in a minority group involves barriers to upward social mobility which results in opportunity costs (Goldscheider & Uhlenberg 1969). So, in an attempt to achieve greater status and overcome challenges from minority status (i.e., less human capital, fewer social networks), minorities may undergo a life path trajectory which involves foregoing life events for higher education and career growth. As a result, minority status results in a decreased fertility rate in the minority population compared to the majority population. It is therefore hypothesized that race (or any grouping that is considered a numerical minority relative to the dominant population) has a direct effect on fertility net of other social and demographic factors.

The process of foregoing (or delaying) certain life events (e.g., childbearing, marriage) due to cost perceptions may be illustrated by McGinnis' model of courtship

(2003). According to McGinnis, entry into cohabitation is a decision making process which perceives the costs and benefits of marriage and thereby predicts behaviour. For instance, McGinnis looked at the decision making processes in transitioning to marriage among cohabitors and non-cohabitors. Entry to marriage was a process determined by perceptions of the "costs" to marrying, intentions and expectations which were considered to be proximate predictors of behaviour. Cohabitors were more likely to see reduced benefits and higher costs associated from marriage. Hence, the results partly imply that being in a cohabiting relationship affected views on marriage and illustrate how these perceptions determine union outcome. In a similar vein to McGinnis' costs and benefits model of marriage, the experience of minority status may be associated with certain stressors which reduce the benefit perceptions of marriage and childbearing in favour of achieving social mobility.

With respect to applying minority group status hypothesis to this study, it is seen that fertility and the transition to first union are closely related demographic processes. These processes relate to each other in terms of involving an intimate/sexual relationship, signifying significant lifecycle transitions, and in a general sense being included as part of family formation behaviour. As such, the assumptions of minority status hypothesis are applied to this study to test whether visible minority status in Canada influences the timing and type of first union entry.

1.2. Statement of Research Problem

Using data from the 2006 General Social Survey (GSS 20) on family transitions, this study attempts to determine if visible minority status has a significant impact on the timing and entry into first union using survival methods as an analytical tool. These

analyses focus on the comparison of timing into first union between visible minorities and non-visible minorities, followed by an exploration of underlying socioeconomic and cultural factors to account for any resulting significant differences.

Based on an extensive review of the relevant Canadian literature, this is among the first to examine the impact of visible minority status on first union formation in Canada, thus providing a unique contribution. This study not only seeks to explicate within a minority status hypothesis framework but also looks at the influence and potential interconnectedness of visible minority status, socioeconomic status (hereafter used interchangeably with "SES"), and cultural factors.

However, I want to emphasize at the outset that this is an *exploratory* endeavour to find differences and trends among a growing population. In other words, this study provides an *initial* look into the timing and entry into first unions – marriage and/or cohabitation – among visible minorities and non-visible minorities in Canada.

1.3. Overview of the Study

The focus of this study is on the relationship between visible minority status and timing and entry into first union. The intention is to bridge the gap in research concerning visible minorities in Canada and the need for new studies on the family formation behaviour of visible minorities. This study begins with a look at the general trends in union formation, followed by a review of pertinent empirical studies and the construction of a theoretical framework. Then the results of the statistical analysis are presented and the influence of visible minority status on union behaviour examined. Finally, based on the results of the statistical analysis, a discussion is presented on the possible underlying mechanisms to

the transition to first union as well as the implications and social significance of resulting patterns.

The study is comprised of six chapters in total. Following the introduction in the first chapter, the second chapter will review the existing research findings on changes in first partnership which have occurred within the past few decades. The empirical studies reviewed will be limited to Europe, the United States, and Canada. In the third chapter, the underlying ideas of the theoretical perspectives which provide the basis of the analytical framework are outlined. Additionally, the research questions to be addressed in this study are also presented. Chapter four will outline the data and methods used in the study. In chapter five, the results of the statistical analysis will be presented followed by a discussion of the underlying processes which lead to the transition to first marriage, first cohabitation, and first union in general. Chapter six concludes the study with a review of the findings and limitations of the study.

Chapter Two: Review of Literature

2 Introduction

A rapidly expanding body of research has been dedicated to investigating the variations and determinants on entry into first marriage and cohabitation. Among this research, an important theme emerging in the literature looks at differences in entry into first union across racial groups. Notable differences have been found among various racial or ethnic subgroups in values and attitudes towards marriage, in the likelihood of entering a marital union versus a cohabiting relationship, and in transitioning to marriage from cohabitation (Brown 2000; Manning & Smock 1995; Raley 1996; South 1993; Wilson 1987).

To fully appreciate these research findings, this literature review will focus on entry into first unions. Although some studies may not be specific to racial differentials, the empirical research reviewed here draws upon a general perspective that is applicable and relevant to the variations and changing process of entry into first partnership including potential first union patterns between visible minorities and non-minorities in Canada. Also, while some of the studies reviewed focus specifically on entry into first marriage, the same theoretical frameworks are applicable to the context of entry to first cohabitation (Wu 2000). This discussion will encompass timing of entry into informal (i.e., cohabitation) and formal (i.e., legal marriage) first unions and consider the relevancy of socioeconomic and sociocultural factors.

Substantial differences in patterns of first union entry have been found across many societies. Changes to marriage and fertility such as those observed in East Asian and South East Asian nations have been well documented (Hirschman 1985; Hirschman & Rindfuss 1982). However, the research on entry into first union reviewed in the

following section will pertain only to studies based in Europe, US and Canada, and will not cover findings from developing countries or other post industrialized countries. More specifically, this literature review is organized into the following sections: 1) timing and entry to first union composed of: a) macro-level determinants to timing to first union, b) country-level determinants to timing to first union, and, c) individual-level determinants to timing to first union; 2) racial differences in union formation; and finally, 3) a summary of this research in terms of potential racial differences in timing of first marriage and cohabitation.

2.1 Timing and Entry into First Union

First union – which previously referred to first legal marriage only – now refers to first marriage or first cohabitation, whichever occurs first. With increasing age at marriage and increasing levels of cohabitation in Western societies, adults are less likely to enter into marriage as a first union type (Beaujot et al. 1995). Some reasons for general delays in marriage and increases in cohabitation include macro-level changes such as attitudinal shifts and changes in gender norms. Additionally, not only have these macro-level changes contributed to the postponement of marriage, they have also increased the prevalence of cohabitation.

2.1.1 Entering First Marriage

The decline in marriage rates across industrialized societies has been seen by many demographers as a momentous social change with some calling it a “second demographic transition” (Lesthaeghe 1995). As documented by Beaujot and other family researchers, the process of entry to marriage has undergone a dramatic shift in Western societies as

reflected through sharp declines in marriage and remarriage rates since the postwar period (Beaujot et al. 1995; Bumpass, Sweet & Cherlin 1991). However, Bumpass and colleagues, in considering this trend, note that these significant declines are largely offset by informal unions, or cohabiting relationships and therefore should not be misinterpreted as an increase in "singlehood" (1991, p.913). So, when first marriage and first cohabitation rates are combined, age at first union has not increased significantly compared to previous birth cohorts. In other words, while marriage rates have decreased, this decline is offset by larger numbers of individuals entering cohabiting relationships.

Qian and Preston (1993), note that 60.8% of women between 20-24 years of age in 1987 had never married compared to only 36.4% of women in 1972. There were greater increases in never married status among men as 77.7% of men had never married in 1987 compared to 56.9% in 1972. These researchers used multivariate analysis to indicate that sharp declines in marriage rates between 1972 and 1979 were not differentiated by age or education among men or women. However, the decline between 1979 and 1987 was concentrated amongst younger women in the study. These marriage declines were found to coincide with decreases in mean income (full-time employment) amongst the youngest age cohorts suggesting the effect of women's income on propensity to marry. These results support the idea of growing importance of women's income as a factor in marriageability and the changing dynamics of gender norms in the domestic sphere.

Goldstein and Kenney (2001) revisit the reason for falling marriage rates in the US and consider whether this trend signifies a retreat from marriage by women or merely a postponement. The authors find that despite the warnings of a marriage retreat, eventual frequencies of marriage indicate similar marriage rates in line with historical levels. Both women and men are marrying later with a strong educational effect influencing the

likelihood of marriage among women. That is, women with higher educational attainment were more likely to marry than women with lower educational attainment. This educational effect was found to hold for black women as well. The US black population has experienced large, overall declines in percentage marrying, a decline particularly felt among black women (Lichter et al., 1992). However, Goldstein and Kenney's results indicate that black women who are college graduates seem to be marrying at higher levels compared to their uneducated cohorts.

2.1.2 Entering Nonmarital Cohabitation

The growth of nonmarital cohabitation has been an area of interest for researchers over the past several decades due to its growing presence in the changing landscape of family formation. Decreases in marriage rates and a later age of marriage have been largely offset by the increase in cohabitation among first unions (Bumpass, Sweet, & Cherlin 1991). As a consequence, a number of researchers have been concerned with investigating causal links between entry into first marriage versus first cohabitation. Explanations for the increase in cohabiting unions point to self-selection and "causality" (to be explained below) as underlying factors.

2.1.2.1 Self-selection

One explanation posits that cohabiters are self-selected into the cohabitation experience according to certain characteristics. Some of these characteristics include: more liberal values concerning marriage, willingness to take risks, and/or personal and behavioural qualities that make an individual a "poor risk" in terms of marriage (Booth 1988). Using US Census data, Booth found a tentative link between personal/behaviour characteristics (i.e., substance abuse issues, poor management of finances, and unemployment) of

cohabiters and subsequent marital instability. Accordingly, cohabiters may be a select group compared to non-cohabiters due to certain observed and unobserved characteristics (e.g., marital experiences of parents) which predispose individuals towards cohabitation (Thornton 1991).

However, evidence for selectivity arguments has been mixed. DeMaris (1993) tested the selectivity hypothesis by comparing the stability of marriages with or without premarital cohabitation on the basis of an "unconventionality hypothesis". Unconventionality was defined by the researcher as a rejection of family control/influence over individual behaviour. Cohabitation was therefore more appealing to unconventional couples than conventional/traditional couples. While some predictors of unconventionality were found, the researcher found that family attitudes and beliefs failed to account for differences between cohabitors and non-cohabitors. Hall (1995) also examined the selectivity hypothesis using Canadian data on ever-marrieds from the General Social Survey (GSS). Using a proportional hazards model, it was found that individuals who cohabited prior to marriage were more likely to divorce even when controlling for demographic characteristics (i.e., stepchildren, marital status of first spouse, parental divorce, and age) thus refuting assertions of the selectivity hypothesis.

2.1.2.2 Causality

Causality arguments have also been used to explain the declines in marriage and growth in nonmarital cohabitation. According to the causality hypothesis, the experience of cohabitation leads to changes in attitudes and expectations towards marriage and divorce. In other words, the cohabiting experience undermines the legitimacy of the marriage institution and thereby results in the increased likelihood of marital dissolution. Thornton, Axinn and Hilll (1992) examined the reciprocal effects of religiosity and the formation of

cohabiting or marital unions. Using panel data from a sample of mothers and children from birth records of the Detroit Metropolitan Area, Thornton and colleagues looked at the religiosity of mothers in influencing children into specific types of union formation. It was found that parental religiosity as well as children's level of religiosity affected the type of union formed. The researchers found a reciprocal causation of religiosity and union formation. The experience of cohabiting resulted in reduced religiosity. That is, those who entered into cohabiting relationships (who previously participated in religious activities) decreased their religious attendance. In contrast, going directly to marriage increased religious participation. The researchers suggested that individuals who engage in certain acts that are not condoned by their religious organizations (divorce, contraceptive use, cohabitation) tend to question their commitment and subsequently diminish their levels of participation.

Several other studies compared the competing theories of selectivity and causation in union formation. For example, Axinn and Thornton (1992) hypothesized that cohabitation is selective of those who are more prone to divorce and, the experience of cohabitation helped to form values and attitudes that were more accepting of divorce. Using retrospective accounts of union formation histories from the Detroit Metropolitan Area multi-wave panel study, the study considered factors such as the value individuals placed on marriage, expectations of marital stability, and attitudes towards divorce. When both selectivity and causation were compared, results of the study seemed to support both hypotheses. Cohabitors were self-selected in terms of being less committed to marriage and more approving of divorce while the cohabiting experience increased acceptance of divorce (while marriage without cohabitation decreased approval of divorce). Axinn and Thornton theorized that the experience of cohabitation may alter views on marriage and

divorce and increase levels of actual divorce. The study was however limited in that it did not examine how attitudes affect the risk of divorce.

2.1.3 Macro-Level Determinants of the Two Forms of First Union

2.1.3.1 Compositional Factors (Sex Ratio)

Researchers have looked at the influence of compositional factors in explaining differences in union formation. Compositional factors are conceptualized at an aggregate level of analysis and include factors that make up and/or drive a pool of eligible marriage partners. Compositional factors often involve traditional mate selection criteria such as: homogamous social characteristics, patriarchal role arrangements, never married status, and childlessness (Bulcroft & Bulcroft 1993). Marriage researchers use the concept of a "marriage market" where unmarried individuals compete for marriage partners on the basis of economic and cultural resources (Kalmijn 1998). Marriage market dynamics are further influenced by the number of eligible and desirable mates available. In other words, the sex ratio (the supply of eligible men to eligible women, or vice versa) determines the maximum number of marriages that can take place in a certain period (Oropesa, Lichter, & Anderson 1994). Goldscheider and Waite (1986) used data from the National Longitudinal Survey of Young Men and Young Women and found that marriage market variables had similar effects on men and women suggesting the significant influence of common market conditions. They also found a significant effect of race on entry to marriage: black men and women were less likely to marry compared to other racial groups.

Compositional factors - specifically imbalanced sex ratios[6] - are often used to explain the racial differences in entry to marriage. Bennett, Bloom and Craig (1989) found that an imbalanced sex ratio occurred several years earlier for blacks due to high rates of death and incarceration of black men resulting in a decreased likelihood for black women to enter into first marriage. The depressed sex ratio is not only a demographic issue, but is a social and economic one as incarceration and death disproportionately affect the poorest and least educated groups. However, better educated black women are also affected due to the lack of equally educated men (i.e., educational homogamy). Lichter, McLaughlin, Kephart, and Landry (1992) also found a sex ratio imbalance influence in marriage markets for black women transitioning to first marriage. Using event history analysis, the shortage of economically viable males was more salient in explaining racial differences in marital timing than individual level factors (p.797). They concluded that mate availability in local marriage markets contributed significantly to delayed entry into first marriage, or non-marriage among black women.

Using a similar analytical approach as Lichter et al. (1992), Raley (1996) looked at how the availability of employed men affected racial differences to first marriage and first cohabitation. She found that marriage market characteristics contributed to a lower likelihood for black women to cohabit or marry. However, the availability of employed men did not influence the racial differences in union type entered (i.e., greater tendency for blacks to cohabit).

[6] See following section for theoretical discussion on sex ratio imbalances.

2.1.3.1.1 Theory of Sex Ratio Imbalances

The theory examining compositional factors to first union entry is associated with Guttentag and Secord (1983). The theory of sex ratio imbalances posits that changes to marital formation are thought to be a consequence of an imbalance between the number of women and men in a marriage market. When there is a high sex ratio (when there are more men than women), young women are in high demand resulting in more traditional sex roles and a gendered division of labour in unions. When there is a low sex ratio (where there are more women than men), men are in demand due to a relative excess supply of women. This oversupply of women results in a lower value placed on commitment and marriage (Guttentag & Secord 1983). Due to the supply of women available, men are granted more bargaining power in the mating process resulting in delaying marriage, increased proportions of single men in the population, and a decreased rate of remarriages after divorce.

Imbalances in male to female ratios have been attributed to the racial differentials in proportions marrying in the US, particularly within the black population. A low sex ratio or "marriage squeeze" affects women as women begin to outnumber men after a certain age. However, this marriage squeeze has been noted to occur several years earlier for black women compared to white women (Bennett, Bloom & Craig 1989). Scholars note that this may be the product of low sex ratios at birth as well as higher rates of mortality and incarceration among young black men indicating both demographic and socioeconomic influences in the racial differences of available men (ibid, p.700).

Wilson's (1987) "marriageable male" hypothesis suggests that the substantial decrease in marriage rates among blacks is due to the economically disadvantaged

position of black males in the US. Assuming male employment status to be a determining factor of marriage, rates of unemployment have been found to be related to the rise of single parenthood and female-headed households within black communities (p. 83). Wilson's hypothesis posits that this trend in non-marriage stems from the economic downturn of the 1970s which affected blacks more severely than whites. The economic downturn devalued the labour of men without higher education or skills in the trades. This disproportionally affected blacks with lower SES, resulting in the emergence of an underclass that had divergent behaviour from dominant society. This was reflected in increased poverty rates, decreased rates of marriage, increased single parent households, usage of welfare, and crime rates. In view of family formation behaviour, increasing unemployment among black male youths resulted in greater family instability and deterioration of family life (p. 82).

2.1.3.2 Ideational and Diffusion Theories

A more recent theory developed from the analysis of aggregate factors involves looking at macro-level ideational changes and the diffusion of these changes across culture and society. Ideational/diffusion theories also look at macro level determinants to timing and entry to first union. In contrast to research that looks at micro level, individual factors to family formation, researchers have used aggregate level analysis to emphasize the role of social influences, or culture in union processes. For instance, large scale changes in union formation are viewed by diffusion theorists as an indication of the wider changes in societal or cultural attitudes towards marriage.

Ideational explanations first emerged from the European Fertility Project (EFP) which studied declining rates of fertility in Europe in the latter half of the 19th century to

the first half of the 20th century. The directive of the EFP was to determine the social and economic factors responsible for declining fertility rates. While socioeconomic factors were found to have an influence, they were insufficient in accounting for regional variations in fertility. Demographers concluded that region-specific cultural differences had a hand in influencing marriage and family formation behaviour (Coal & Watkins 1986). Therefore, culture came to be seen by social researchers and demographers as a force to influence specific social norms and other particular aspects of social groups or subpopulations. As such, culture was developed (or quantified) by researchers as measureable through proxy markers such as ethnicity, language, religion, and region. Consequently, region as a proxy for culture was concluded to be the missing explanatory factor in European fertility.

Arising from the findings of the EFP, ideational theory provided an explanatory framework for the changes in European fertility behaviour using cultural markers of ethnicity, language and religion, which were concomitant with different regions despite the level of economic development (Pollard & Wu 1998). In short, ideational change has come to be considered as one of the major underlying mechanisms for the changes in family formation behaviour. It purports that changes in timing and entry to family formation have occurred due to the ideologically transitioning social structures and culture of Western society.

Lesthaeghe and Surkyn (1988), in particular, theorized that the historical decline in European fertility was due to rising individualism and secularism in Western democratic countries as well as economic conditions. Secularization consists of a declining adherence to an organized religious system of beliefs and values while individualization involves the attainment of personal goals and an increasing sense of

pluralism. Subsequently, the increasing emphasis on personal tastes and individual freedom is accompanied with a decline in a communality which gives weight to the interests of others (South 2001, p. 608). Ultimately, the result of these ideological changes is erosion in pro-familial or pro-nuptial values.

The premise of ideational changes was further developed to extend to gender norms. The theory of 'partnership transition' developed by Prinz (1995) suggested that changes in union formation are rooted in a wide scale rejection of traditional gender roles. Prinz's explanation for the decrease in marriage rates and increase in cohabiting unions was that a larger movement of women were opting out of formal marriages to avoid the traditional gender role expectations in marriage. The non-formal structure of cohabiting unions would allow women to have more bargaining power as well as an equal role in the relationship due to the lack of institutional constraints. As greater proportions of individuals reject the traditional constraints of marriage and enter into informal unions, a degree of social acceptability is reached indicating a transition in partnership formation.

Partnership transition was further developed by British demographer, Kathleen Kiernan (2001) who modelled the transformation in first unions from a dynamic perspective. Using the varying and diverse processes of union formation observed in European countries, Kiernan established a framework which demonstrated cohabitation as "diffusing" at different stages in some countries compared to others. While the partnership transition theory has been supported cross-nationally among European nations, nations such as Canada, US, and New Zealand have been more difficult to characterize according to Kiernan's stages due to the complexities of country-specific cultural differences (Heuvaline & Timberlake 2004).

The contribution of the macro level diffusion model which provides ideal-typical typologies (Heuvaline & Timberlake 2004; Kiernan 2001) has been its ability to empirically take account of "individuals' embeddedness in a social context" (Nazio 2008, p. 6) where social meanings and group dynamics change and exert influence over individual behaviour in the context of union formation. Therefore, the diffusion model provides a means to study social change, or the change that occurs in social processes over time. According to the diffusion model, social influence is the main force in the diffusion process. Social influence is an external force to individual characteristics but internally produced within a social system through the accumulated experience of individuals who adopt cohabitation as a viable union (ibid). The social influence of previous and current cohabitors increases social acceptance leading to an alteration of normative behaviour concerning union formation and is thereby a causal factor of change. This would explain why certain subpopulations or sociocultural groups which have a dominant presence in geographic locales may exhibit differences in union formation behaviour compared to other groups. For example, Quebec has substantially higher cohabitation rates and lower marriage rates than the rest of Canada. Even after controlling for socioeconomic factors, region continued to affect likelihood to marriage (Pollard & Wu 1998). This may indicate that certain unique historical and social processes occurred giving way to the adoption of cohabitation in greater numbers among Quebecers.

The diffusion model attempts to bridge the gap in research that looks at micro level individual factors and macro level processes by accounting for changes at the societal level and by explaining it through factors which affect individuals' decision making (ibid, p.11). While presenting an innovative approach to modelling the changing

processes of union formation among westernized societies, diffusion models present statistical challenges beyond the scope of this project and will not be used in the analysis.

2.1.3.3 Normative Changes in the Meaning and Behaviour of Marriage

Finally, literature on the determinants to first union formation also discusses the historical change to the meaning and perception of marriage. Cohabitation and marriage have had different meanings for different individuals during different periods of time. Manting (1996) used the 1988 Netherlands Fertility and Family Survey to examine differentials to marriage and cohabitation. Using a non-proportional hazards model, he found that determinants to marriage differed from the determinants to cohabitation with underlying mechanisms for each changing historically over time. For example, cohabitation in the Netherlands started as an alternative to marriage but changed into a means of entry into a union whereas direct entry to marriage changed from the norm to a less common form of union formation (p. 63). Manting concluded that the processes of union formation are dynamic with a diverse and complex set of underlying mechanisms that change over time.

Lastly, Smock (2004), considers the future of marriage in the 21st century and the reoccurring themes in family formation research. The retreat of marriage can be seen as a product of broader social and economic forces as well as intergenerational effects of union dissolution and marital quality (Cherlin 2004). However, despite a significant retreat from marriage, marriage retains its symbolic value for most westernized societies. Marriage is still associated with prestige and a strong association persists between economic well-being and likelihood to marry (Smock 2004). Conversely, economic insecurity has been found to be a barrier to marriage (Gibson-Davis et al. 2005; Manning

& Smock 2003; Sassler 2004). Smock (2004) concludes that the future of marriage reflects the growing emphasis placed on financial security and that the landscape of family and marriage will continue to change over time.

2.1.4 Country-Level Trends of the Two Forms of First Union

Country-level trends highlight potential cultural differences in timing of first union. For instance, varying aggregate levels of cohabitation among European nations have suggested gradual stages to a process of transition in union formation behaviour in westernized societies. However, when other westernized countries were included (e.g., US, Canada, and New Zealand), this pattern was less apparent, indicating specific cultural differences in these countries (Heuvaline & Timberlake 2004).

2.1.4.1 European Trends

In line with aggregate-level variations across nations, differentials have been found within Europe, US, and Canada. Variations and the prevalence of first marriage and first cohabitation have been studied across European nations in particular. Kathleen Kiernan (2004) examined cross-national patterns of cohabitation and childbearing in fifteen European countries. Using data from the Eurobarometer Surveys carried out in 1996, Kiernan found significant aggregate-level variations across European countries in rates of cohabitation among men and women aged 25-34 in 2000 and 2001. Cohabitation was most prevalent in Nordic countries. Sweden had the highest rates of cohabitation (85%) followed by Finland and Denmark (74% and 74% respectively). Countries that exhibited mid-levels of cohabitation included: The Netherlands (56%), Great Britain (52%), and West Germany (51%). Cohabitation was lowest in Greece and Portugal (34% and 28%

respectively). Aggregate level variations among countries appeared to reflect different stages of a process of transition: 1) cohabitation as a deviant phenomenon, 2) cohabitation as precursor to marriage, 3) cohabitation as a socially accepted alternative to marriage, and 4) cohabitation being indistinguishable from marriage in normative union formation behaviour. Northern European countries appeared to be at the latter stages of transition while southern European countries appeared to be at the beginning stages of transition. Heuvaline and Timberlake (2004) also compared the union formation process in sixteen industrialized European nations as well as the US, Canada, and New Zealand. The three non-European countries were difficult to characterize according to Heuvaline and Timberlake's ideal-typical categories of cohabiting behaviour. The authors suggest that the diverse ethnic populations within these countries may lead to a more heterogeneous set of cultural norms concerning family ideology.

2.1.4.2 US Trends

In the United States, Bumpass and Lu (2000) explored the link between socioeconomic status and first union and found that among 19-44 year old women who had cohabited at some point, 60% had not completed high school, compared to 37% of women who had a college education. With respect to black-white differences, Bumpass and Lu's results were mixed. There were no differences in the proportion that had ever cohabited signalling comparable rates of growth among black and white cohabitors.

South (1993) also investigated the effects of socioeconomic status and ethnicity using data from the 1987 National Survey of Families and Households (NSFH). In addition to finding ethnic differences in the expressed desire to marry, he found differences in perceived marriage gains among women and men of different ethnic

groups. Racial differences among women's desire to marry were attributable to levels of educational attainment. Differences among black, white and Hispanic men were attributed to differences in perceived gains to marriage. Relative to white and Hispanic men, black men anticipated less improvement to life, personal friendships and intimacy from marriage which suggests that low marriage rates among blacks may be a result of their reluctance to marry (p. 368).

Manning and Smock (2002) examined individual expectations for marriage and found that women's expectations of future marriage were influenced by the economic viability of their current cohabiting partners. Men's age, education, religiosity, and income were significant factors affecting the marriage expectations of their female partners. Using data from the 1995 National Survey of Family Growth, this study also found differences according to race in women's expectations to marry. Black women had lower probabilities to expect marriage than whites or Hispanics while white and Hispanic women had similar expectations despite Latinos having lower socioeconomic status than whites.

Nancy Landale (1994) considered the influence of immigration on race-ethnic variation in first union formation. In looking at racial differentials to first union entry among various Hispanic groups, she highlighted the effect of selective immigration[7] in the union formation behaviour of Puerto Ricans by comparing US Puerto Ricans (both first and second generation) to nonmigrant women in Puerto Rico (those who stayed in Puerto Rico and did not migrate to the US). She found significant differences in the entry to first unions between groups. Migrants were more likely to enter informal unions and

[7]Selective immigration refers to whether an immigrant group is distinct in behaviour and background in comparison to non-migrants to the US, suggesting that family formation processes of racial groups cannot be considered typical of the origin country.

enter unions at an earlier age than both nonmigrant and US born Puerto Rican groups. Landale suggests that race-ethnic differences in union entry cannot solely be attributed to race effects, but highlights the complex interplay of effects due to socioeconomic status, family background and immigration. This offers an opportunity to broaden the research scope to include both men and women of other racial groups and determine if immigrant status and nativity have differing effects.

Using data from the 1987 National Survey of Families and Households (NSFH), Oropesa and Gorman (2000) also considered immigrant status versus nativity in affecting normative beliefs about marriage. The authors highlighted the connection between race, nativity and socioeconomic status and expanded on other race research by including Asians[8] as a comparable ethnic group. Significant differences were found with Latinos and Asians in comparison to whites and blacks in the desirability of marriage. While conclusive interpretations for Asians were difficult due to the lack of adequate representation in the survey, Asians were found to be more pro-familial, positive about marriage and less supportive of individualism in marriage.

2.1.4.3 Canadian/Regional Trends

In Canada, Pollard and Wu (1998) found regional differences in union formation using Canadian data from the 1995 General Social Survey. Union formation in Quebec was found to be distinct in relation to the rest of Canada even after controlling for socioeconomic factors. Using rough markers of culture, they suggested that cultural differences influenced the regional disparities in union formation. While Pollard and Wu

[8] Panethnic designations were used to identify ethnic groups due to the absence of specific ethnic identifiers in the 1987 National Survey of Family and Households (NSFH).

consider religion, church attendance, nativity, and region as cultural indicators, visible minority status or ethnic background were not included in the study.

Wu (2000) used data from the Canadian Fertility Study (CFS) as well as the 1990 and 1995 General Social Surveys (GSS-90 and GSS-95) to examine trends and patterns of cohabitation in Canada. While he notes that nonmarital cohabitation has occurred historically, the recent increase in cohabiting relationships is unprecedented with the percentage of cohabitors increasing from 3.8 percent in 1981 to 7.9 percent in 1996 (p. 44). Moreover, a regional pattern is clear with considerably higher incidences of cohabitation occurring in the two northernmost territories: Yukon and Northwest Territories. Since the two territories are predominantly populated by Aboriginals, it suggests that cohabitation is a preferred lifestyle and union choice among Canada's Aboriginal population (p. 47). Amongst the remaining ten provinces, the rate of cohabitation is greatest amongst the French speaking population in Quebec (ibid). On an international scale, Canada has a much higher rate of cohabitation than the US and is more comparable to the Netherlands and France in rates of cohabitation as a first union (p. 51).

Le Bourdais and Lapierre-Adamcyk (2004) also looked at marriage and cohabitation trends in Canada and found that the cohabitation rate of 30 percent in Quebec was comparable to Sweden. In terms of marriage, women in Quebec were less than 40% likely to enter into marriage. In comparison, women in the rest of Canada were 60% likely to enter into marriage (p. 930). The authors suggest that these trends indicate that Quebec may have achieved the transition to the fourth stage of Kiernan's model[9] where marriage and cohabitation are indistinguishable from each other as a family unit (p. 939).

[9] See section 2.1.3.2 on Kiernan's partnership transition theory

The authors expand on this model and suggest that Quebec's divergence lies in its distinct cultural and religious origins. More specifically, it was the monopoly of the Catholic Church over Quebec society and the movement for secularization in the 1960s which created the unique conditions fostering the rejection of traditional family behaviours. In short, the difference between Quebec and the rest of Canada is argued to be due to cultural factors.

2.1.5 Individual-Level Determinants of the Two Forms of First Union

Some researchers consider individual propensity to marry rather than macro level determinants to explain racial differences in union formation. Propensity to marry is conceptualized at an individual level of analysis and reflects attitudinal and motivational factors in the decision to marry (Bulcroft & Bulcroft 1993).

2.1.5.1 Employment Effects

In monitoring the changes in first union formation, demographers have been attempting to ascertain the underlying forces that influence the transition to first union. Some scholars have emphasized the economic characteristics of individuals; others have focused on educational attainment or other associated socioeconomic characteristics such as parental education and background, while others take a broader perspective that considers widespread social changes in the meaning of marriage and cohabitation. The economic perspective in general has been a prevalent analytical framework used by researchers when proposing determinants to first union formation. This perspective centres around two main models of mate selection. First, Becker's (1973, 1974, 1981)

marriage gains/role specialization theory of mate selection[10] involves single men and women in the local marriage market (looking for prospective, eligible marriage partners) who look to trade their assets for a partner whose assets complement their own (Lichter, et al. 1992). According to Becker, the terms of the marriage agreement involve a trading of role functions that are gender specific. For instance, men are generally considered for their labour market potential, while women are considered on the basis of their domestic capabilities. Therefore, each partner specializes in a gender specific role to maximize the gains in the marriage.

A second model, search theoretic model suggests that the contractual terms of marriage (and the gendered division of labour) have changed over time due to changing labour markets and socioeconomic context (Oppenheimer 1988)[11]. Prospective marriage partners now consider economic well-being or potential as an important trait when considering a potential mate. Economic potential has become an important attribute for men and women replacing the traditional household/marriage roles based on gender role differentiation. Oppenheimer contests Becker's assumption that the growing economic independence of women results in increased rates of non-marriage for women due to reduced gains to marriage. Rather, she hypothesizes that the growing presence of women in the labour market will result in a delay to marriage rather than non-marriage.

Bennett, Bloom and Craig (1989) examined determinants to first marriage among black and white women in the US, using national data on partnership histories from the 1985 Current Population Survey (CPS). The researchers found strong social and economic effects which varied differently between blacks and whites in entry into first

[10] See section 3.1.1 for discussion on Becker's Gains to Marriage model

[11] See section 3.1.2 for discussion on Oppenheimer's Search-Theoretic model

marriage. In line with the discussion on economic characteristics, employment status was positively associated with marriage for women, and this effect was particularly strong among black women. Full-time employed women were significantly more likely to marry than their out of work counterparts (p. 717). Additionally, higher education - as an indirect indicator of socioeconomic status - was associated with a higher mean age at first marriage and a higher likelihood of marriage for black women (this relationship, however, was not found for white women) (p. 716).

Wu and Pollard (2000) tested three hypotheses: a female oriented hypothesis, a male oriented hypothesis, and an economic deprivation hypothesis on the likelihood to marry. It was hypothesized that increased economic circumstances for women would lead to a decreased likelihood to marry due to a reduced desirability to marry (as women no longer are dependent on the financial resources of their partner). Men's economic circumstance was hypothesized to be positively related to marriage due to traditional expectations of men as financial providers. Lastly, economic deprivation hypothesis associated a higher risk of union dissolution from poor economic circumstance. Using discrete-time event history methods separately for women and men, results supported an independent effect of economic circumstances. Increased personal earnings among women increased the likelihood for union dissolution through separation whereas increased earnings with employment status for men resulted in a higher likelihood to enter marriage. Economic instability was found to directly influence union instability and contribute to union separation.

Xie, Raymo, Goyette and Thornton (2003) examined economic potential on entry to first unions and compared the two competing economic perspectives. Retrospective data on individual's work and schooling histories were used to examine earnings

potential as a predictor of the likelihood of entering first marriage or first cohabitation. Using intergenerational panel data from the 1990 census and the 1980-1992 High School and Beyond Survey, Xie and colleagues looked at how five time-varying economic measures captured individuals' earning potential. These included: predicted current earnings, predicted earnings over the next 5 years, predicted past earnings, predicted future earnings, and predicted lifetime earnings. Results from the competing risks models indicated that all five measures of earning potential strongly effect likelihood of marriage for men (but not for women). Additionally, these measures were not found to affect entry into cohabitation for men or women. The results seem to contradict prevailing literature that indicates a positive influence of women's education and income on the likelihood to marriage. While seemingly disproving Oppenheimer's search theoretic theory, the analysis was not able to readily distinguish between Becker's and Oppenheimer's models. The authors suggest this may be due to an inadequate sample size or selectivity bias and that further studies should be implemented. In addition, the study was limited to white families and excluded sampling of minorities.

Aasve and colleagues (2006) also examined the effect of employment on family formation behaviour in Great Britain with retrospective data on employment histories, childbearing, and union formation from the 1940-1990 British Household Panel Survey. Using joint modelling to explore reciprocal relationships between births, union formation, union dissolution, and employment, it was found that employment had a strong, positive effect on union formation for both men and women. Employment also had a positive effect on union dissolution for women, suggesting that economic independence allows women to leave unhappy unions.

2.1.5.2 Effects of Socioeconomic Status: Family Background & Education Effects

Research has also looked at indirect measures of SES, such as family background and education, in influencing union formation. Waite and Spitze (1981) examined determinants of timing of marriage for young women between 14 and 24 years of age. Using data from a five year study, the National Longitudinal Survey of Young Women, the researchers looked at the influence of parental factors on entry to marriage. It was found that parental background, particularly parental resources, affected the likelihood of marriage during the early teens. More specifically, coming from an intact family with parents of high educational attainment and occupational status reduced chances of marriage before 18 years, with each additional year of parental education reducing likelihood of marriage by 1 percentage point (p. 688). The authors suggest that the chance of marrying early decreases (and is prevented) with increased parental resources.

Twelve family background factors- used as an indirect indicator of SES- were investigated as predictors of marriage entry in Michael and Tuma's (1985) study on marital formation patterns. Young men and women between the ages of 14-22 years were compared according to racial groupings. Retrospective data revealed that decreased family resources (i.e., parental education, parental income, employment status of mother and family structure) were associated with an increased likelihood of early marriage and early entry into parenthood. Comparing the different racial groupings, significant race effects were found, with blacks entering marriage less rapidly than whites but entering premarital parenthood more rapidly than whites. Hispanics, however, were found to enter both marriage and parenthood more rapidly than other racial groups compared in the study.

Clarkberg, Stolzenberg and Waite (1995) investigated how the choice between marriage and cohabitation was influenced by attitudes and values towards work, family, leisure time use, money and sex roles as well as attitudes towards marriage. Using a logistic discrete-time event history model, these researchers found that cohabitation was associated with a rejection of traditional views of marriage and gender roles. Cohabitors differed from married individuals in demographic characteristics (supporting selectivity hypothesis) such as race, income and educational attainment. Notably, proximity to family and religion also affected union formation. Consistent with the discussion focusing on parental and family background factors, Clarkberg and colleagues found that less attachment to parents, kin and religion resulted in increased propensity to cohabit since family/kin and religion reinforce pro-marital values. Generally, an emphasis on financial stability affected men and women differently and inhibited union formation. Women who placed great importance on having financial security were slower to transition to marriage but not necessarily union formation (p. 624).

Wu (2000) looked at the determinants to premarital and post-marital cohabitations in Canada using the 1990 and 1995 General Social Survey (GSS). He found that age, indicators of socioeconomic status, and family background significantly affected cohabitation formation. In other words, cohabitors tended to be women, younger, less educated, less religious and more likely to be brought up in a family of divorced parents. SES indicators included employment status, educational attainment, and school enrolment.

Berrington and Diamond (2000) used a competing risks hazards model to examine the type and timing of entry into first union among men and women born in Britain in 1958. While educational enrolment was found to affect the timing of entry into

first union, religiosity, parental separation, and region were found to have the greatest influence on predicting union type. Educational enrolment delayed entry to the marriage market, but direct entry to marriage was most popular among those with intermediate levels of educational attainment (i.e., some university) who delayed marriage until their early 20s. Also, parental separation was associated with lower marriage rates and preference to cohabit. Berrington and Diamond suggest that intergenerational effects persist in influencing first partnership processes. These findings lend support to Oppenheimer's model, such that higher educational attainment among women did not result in increased non-marriage but delayed marriage.

South (2001) looked at the effects of family background on first marriage timing historically and on individual life course variation. Based on "individuation theory" (Lesthaeghe & Surkyn 1988), normative pressure to marry has declined in Western societies resulting in the weakening of family/parental demographic factors (e.g., family income and mother's education) on individual family formation behaviour. South hypothesized that some family background characteristics weaken with age as individual life course events and trajectories take precedence in determining marriage timing. Using discrete time event history analysis, he found that the negative effect of parental resources and socioeconomic status on first marriage timing declined over the observed period of time spanning from 1969 – 1993 as well as during individual life courses. South suggests that the declining effects of parental resources may account for racial divergences in first marriage timing. However, consistent with previous studies (Axinn & Thornton 1992; Lichter et al 1992; South & Lloyd 1992), family structure was found to have a consistent effect on the timing of first marriage.

Blair and Beck (2004) investigated the relative influence of parents, peers, and individual traits in the transition to marriage among young adults and proposed that the relative influence of the aforementioned varied across ethnic groups in the US. Pointing to different cultural valuations in educational success, Blair and Beck suggest that the development of marital goals is also based on specific ethnic group characteristics. Using the second wave of the National Education Longitudinal Study (NELS) in 2000, the study sample contained 11,677 young adults who identified themselves as belonging to one of four groups: Asian, African-American, Hispanic, and White. Results revealed significant differences among the four racial groups in marital aspiration patterns. Asian females and males were found to marry later in life (late 20s) relative to the other ethnic groups in the sample due to patterns of educational and occupational attainment. Blacks were also more likely to marry later and were less likely to marry if they had a single parent. In contrast to Asians in the study, African-Americans were more likely to attribute marital aspirations to individual traits than the influence of parents or peers. Meanwhile, whites and Hispanics had similar patterns of marriage timing and were more likely to be influenced by peers and individual marriage aspirations. Across all four ethnic groups, salient ethnic group differences in patterns to marriage entry were apparent.

Examining educational effects on entry into marriage versus cohabitation, Thornton, Axinn and Teachman (1995) looked at the influence of educational enrolment on union formation. Event history techniques were used on panel study data of mothers and children. While school enrolment appeared to inhibit entry into marriage, effects were not as strong for cohabitation. In other words, school enrolment did not strongly influence whether individuals in the study entered into cohabiting relationships. However, accumulation of schooling or higher educational attainment was found to

increase rates of marriage and decrease rates of cohabitation since higher educational attainment is a strong determinant for financial success and independence, which is considered a requisite when forming marital unions. This research suggests that individuals with higher SES tend to marry while low income individuals tend to substitute cohabitation for marriage.

Glick and colleagues (2005) used discrete-time multinomial logistic regression models to examine how school engagement affected the likelihood of early family formation. Higher school engagement, as measured by parental expectations, previous school performance, school enrolment, and level of engagement (i.e., level of class preparation), was clearly found to be associated with slower family formation. Additionally, the predicted probabilities of early childbirth or marriage were significantly lower for those enrolled full-time in school and consistently prepared for classes. The above factors, in combination with the importance of parental expectations, were also found to reduce racial differences in timing of early family formation. Notably, the authors found an appreciative immigrant effect providing partial support for the minority group status hypothesis[12] in that the children of immigrants had the slowest transition to family formation out of all the groups included in the study.

Qian and Lichter (2007) used the 1990 and 2000 US Censuses to look at marriage/intermarriage rates among whites, blacks, Aboriginals, Asians, and Hispanics. Based on an assimilation framework, this study examined how intermarriage patterns among the respective racial groups reflected sociocultural boundaries and intergroup social distance and subsequently, the degree of assimilation achieved. Based on this perspective, higher rates of intermarriage reflect less salient group identity, lower cultural

[12] See section 3.3 on Minority Group Status Hypothesis.

boundaries and thereby greater levels of assimilation. The highest intermarriage rates were found to be among Asian to whites and to a less extent, Hispanics to whites. The high rates of intermarriage among Asians and Hispanics to those outside their racial groupings were attributed to the disproportionate numbers of individuals in those groups with higher levels of education (i.e., college and postgraduate degrees). The authors imply that the strong educational effect in intermarriage for both Asians and Hispanics indicates the influence of socioeconomic mobility in crossing intergroup boundaries through marriage.

2.1.5.3 Values and Attitudinal Effects

Many studies have highlighted the importance of values and attitudes towards marriage, socioeconomic characteristics, and family background factors in determining union formation. Brown (2000) investigated cohabiting couples to determine the influence of relationship assessments and relationship expectations in transitioning to marriage. Using discrete-time event history models, she found that relationship assessments (i.e., self-reported happiness, disagreements and conflict resolution) and relationship expectations (i.e., self-reported likelihood that the relationship will end up in marriage or separation) significantly predicted the transition to marriage for cohabiting couples. For instance, plans to marry were positively associated with entry to marriage, while a negative assessment of the relationship was associated with either increased odds of separation or a decreased likelihood to transition into marriage. While Brown's sample did not include non-cohabiting dating couples, her findings were congruent with studies on marriage entry that do not make assumptions on cohabitation status (McGinnis 2003) and demonstrate the importance of attitudes and expectations on marriage entry.

Sassler (2004) used data from in-depth interviews with cohabitors in the New York Metropolitan area to uncover the process of entry into a cohabiting union, with a specific focus on factors considered when deciding to cohabit. The results from the qualitative interviews revealed that the primary reasons for cohabiting were mainly financial; marriage was not a main reason to cohabit. Her findings contradict the notion of cohabitation as a trial to marriage and position it as a stage of dating that does not necessarily see marriage as an end goal. In another qualitative study, the marriage expectations of low income, unmarried parents were explored (Gibson-Davis, Edin & McLanahan 2005). Assuming attitudes towards marriage to be a good predictor of marriage, this research found that perceived financial prerequisites and expectations often led to the delay in transition to marriage and that cohabitation was seen as a trial marriage for couples with children.

Exploring values, attitudes, and normative beliefs concerning marriage has been effective in providing insight into the "marriage paradox" of Hispanics and Latinos who show similar marriage patterns to whites despite being more socioeconomically similar to blacks. Using event history data from the National Longitudinal Survey of Youth, Oropesa, Lichter and Anderson (1994), studied the effects of structural marriage market factors and "cultural" factors (p. 892) in transitioning to first marriages among Mexican American, black and white women. Factors included measures of: a) familialism (i.e., pro-familial and pro-nuptial values), b) degree of residential proximity among members of the same group, and c) family background. It was found that marital union formation of Mexican Americans was largely impervious to the factors that influenced the behaviour of other racial-ethnic groups and reflected more pro-familial and pro-nuptial attitudes on individual level cultural variables. Based on person-year data, the survival

analysis showed similar rates of marriage among whites and Mexican-American respondents (13% and 12% of observations respectively). In line with other marriage market studies, rates of marriage observed for black respondents were significantly lower at 6%.

In a similar study, Oropesa (1996) compared the normative beliefs concerning marriage and cohabitation among Mexican-Americans, Puerto Ricans, and whites. Similar to Oropesa and colleagues' 1994 study, results showed stronger pro-nuptial norms among Mexican-Americans than whites despite lower educational levels, lower income, and higher rates of poverty and welfare[13]. Given the Roman Catholic background of Mexican-Americans and Puerto Ricans, religion could be a significant predictor of pro-marriage normative beliefs. However, the relationship between religion and its effect on the cultural perceptions of marriage is difficult to untangle. The results showed that Mexican-Americans showed the strongest support for marriage in comparison to whites and Puerto Ricans. Mexican-Americans also showed more disapproval towards premarital sex and nonmarital childbearing compared to Puerto Ricans (p. 55). Oropesa's study highlights the complexity of cultural (religious) beliefs that underlie marriage and suggests racial differentials may stem from cultural variables rather than social class differences. In other words, culture which encompasses social norms concerning family, may significantly influence the type and timing of unions entered.

In Europe, Hooghiemstra (2001) looked at the partner choices of Turkish and Moroccan immigrants in the Netherlands. More than half of those who were born in the Netherlands or who had migrated at an early age had married partners from their countries of origin. Hooghiemstra assumed that selecting partners from the country of

[13] As measured by the response to the statement "It is better to marry than to be single".

migration would indicate assimilation/integration. He concluded that assimilation[14] theories were inadequate to explain marriage formation patterns with these two immigrant groups and found that social networks and cultural expectations strongly influenced partner choice. However, this study's limitation was its small sample of married Turks and Moroccans, and its exclusion of Turks and Moroccans who married out of their ethnic group (intermarriage).

Nauck (2001) looked at the intergenerational transmission processes among migrant parents and their children in Germany. Using a standardized questionnaire, four outcomes of intercultural contact were distinguished: integration, assimilation, segregation, and marginalization. Comparing children with their same sex parent, it was found that differences in life course timing preferences among migrants' children (2nd generation immigrants) were related to the cultural and SES characteristics of their migrant parents, particularly level of religiosity and education. Therefore, the cultural capital of parents was found to be a strong influence on the process of acculturation of children. While he notes that migrant children are exposed to both the family timing preferences of their parents and that of the host society, the implications of these two social forces on intergenerational transmission is largely unknown.

2.1.5.4 Immigrant Status

González-Ferrer (2006) explored partner choices among different racial/immigrant groups in Germany in relation to assimilation theory. Assimilation theory and marriage market dynamics generally hypothesize greater constraints for minority groups in finding suitable partners. Gonzalez-Ferrer considered these individual and structural factors in

[14] See section 3.2 on assimilation theories

influencing immigrants' choice of partners and investigated the likelihood of immigrants to: marry a co-national immigrant, import a partner from the country of origin, or (inter)marry a German native, as being indicative of the level of integration of the immigrant group into the host society. González-Ferrer's results provide mixed support for assimilation theory. While he found significant effects of education and immigrant status on intermarriage there were varying degrees of intermarriage by racial group. For instance, middle (i.e., 1.5 generation) or second generation immigrants in Germany were more likely than first generation immigrants to marry a German native but the likelihood of intermarriage varied by racial group with Turks the least likely to intermarry compared to Italians, Spanish, former Yugoslavians, and Greeks. Finally, the propensity to import partners from the country of origin was found to be influenced by the size of the immigrant community in Germany and the corresponding sex ratio.

De Valk and Liefbroer (2007) compared the timing preferences to marriage entry between immigrant and native Dutch families. While intergenerational transmission of family values among white families has been previously studied (Axinn & Thornton 1993), little is known about the intergenerational transmission processes among race-immigrant groups and their children from non-westernized countries. The study focussed on Turks and Moroccans, two of the largest racial immigrant groups in the Netherlands and was based on two surveys: the 2002/2003 Netherlands Kinship Panel Study and the 2002 Social Position and Provisions Ethnic Minorities Survey. Race and immigrant status – through the cultural transmission of parents - were hypothesized to have a significant influence on the timing preferences of immigrant children. Supporting their intergenerational transmission hypothesis, De Valk and Liefbroer found that parental preferences on timing and entry into marriage and motherhood had a significant effect on

the timing preferences of their children. In other words, second generation Turkish and Moroccan women preferred to leave the parental home and enter into marriage and motherhood at an earlier age compared to native white Dutch women. However, this effect was tempered through the educational and religious backgrounds of the parents. Children from highly educated and non-religious family backgrounds tended to postpone marriage and parenthood compared to children from parents with little educational attainment and higher religious involvement. The authors postulate that in addition to the direct transmission of specific values, broader influences from social networks and status orientation can play a role as well.

2.2 Racial Differences

Using data from the National Survey of Families and Households (NSFH), South (1993) looked at racial differences in the expressed desire to marry (dependent variable is based on the response to the statement, " I would like to marry someday") and found that sex ratio explanations did not account for the entirety of race differentials. Racial differences among women were attributable to education while differences among men were attributable to anticipated benefits of marriage. Black men saw marriage as not being of any further benefit to life, sex, and personal friendships. Hispanic men on the other hand, were more likely to desire marriage possibly due to cultural connotations of adulthood and masculinity.

Bulcroft and Bulcroft (1993) also used data from the NSFH to look at how both compositional and individual propensity influence racial differences in the decision to marry. While rates of cohabitation have increased similarly for blacks and whites, rates of marriage (as well as marital breakdown) are significantly more pronounced among blacks

(Cherlin 1998). The authors found that the racial differences in marriage rates could be accounted for by differences in attitudinal and motivational values towards marriage. Contradicting the previously held notion that black women are rejecting the institution of marriage, it was found that black women were more likely to adhere to traditional views of marriage that emphasized traditional gender roles of the male as a breadwinner and provider. Consequently, black women were more likely than whites to value the importance of economic viability in a male partner. They were also more resistant towards partners with previous marital/family experience. The authors concluded that declining marriage rates were due to a shortage of black men who could fulfill the economic criteria and other factors, rather than a decreased motivation to marry.

Manning and Smock (2002) used data from the 1995 NSFH to examine why some cohabiting couples do not transition to marriage. Based on previous research that found significantly decreased marriage rates among blacks and individuals of lower socioeconomic status, Manning and Smock focused on the influence of race and socioeconomic factors in expectations towards marriage. It was found that black cohabitors were less likely to expect marriage than their white and Hispanic counterparts. However, men's economic status was found to influence marriage expectations for all racial groups included in the study.

2.3 Limitations of Previous Studies

To sum, European studies on family formation have found racial differences in entry to first union and in processes to partnership selection. Race was found to influence timing to first marriage (as well as timing of first birth). Race and immigrant status were also found to be associated with partnership selection; the rate of intermarriage with natives of

the country of migration increased with successive generations (De Valk & Liefbroer 2007; González-Ferrer 2006; Hooghiemstra 2001). While intermarriage does not fall within the scope of this study, it does lend support to racial and immigrant status effects on union formation.

US studies have found significant racial differentials in union formation. Blacks are substantially less likely to marry than whites, while Hispanics generally report higher normative beliefs about marriage than whites and blacks. Additionally, Hispanics were found to enter into marriage earlier than blacks and whites with blacks entering marriage the latest (Oropesa 1994, 1996, 2003; Smock 2000). Findings also indicate that socioeconomic status affects union formation behaviour (Manning & Smock 2002; Oropesa & Gorman 2000; South 1993), which may be related to race (Wilson 1987). While substantial research exists on racial differences in union formation in the US, some critical issues on this topic still remain and relatively little is known concerning the impact of minority status on entry to first partnership in Canada.

While Canadian research has not tested for racial effects, regional variation in union formation has been documented (Le Bourdais & Lapierre-Adamcyk 2004; Pollard & Wu 1998). Notable divergences in union formation patterns are apparent in Quebec as compared to the rest of Canada (Laplante 2006; Wu 1998, 2000). Along with declines in marriage rates and increasing cohabitation, age at marriage in Canada has increased from 25.4 years among men and 22.5 years among women in the 1960s to 30.2 years and 28.2 years for men and women in 2001 (Le Bourdais & Lapierre-Adamcyk 2004). Unlike European studies on immigrant partnership selection, or US comparison studies on blacks, whites, and Hispanics, empirical work concerning the influence of race on entry into first union in Canada has been limited. Although European and American findings

cannot be generalized to racial-ethnic group comparisons in Canada, these studies offer empirical justification for additional research in a Canadian context.

2.4 Summary

In summary, European research has documented the partnership selection processes of migrants in relation to natives and found the intergenerational transmission of union and childbearing preferences amongst migrant communities. American research has documented racial disparities in first union entry. Blacks are more likely than whites to enter into early parenthood, but less likely to enter marriage while Hispanics are more likely to enter both early marriage and parenthood compared to blacks and whites. Canadian research on family formation has found strong regional differentials in first partnership. In particular, the research has examined differences in first union patterns between Quebec and the rest of Canada suggesting a strong cultural effect in first union entry.

Generally, similar conclusions have been made from the studies conducted in Europe, the US, and Canada. Immigrant status, race, geographic region, and SES appear to determine men's and women's transition to first union. The following chapter includes a review of family formation perspectives that provide a theoretical background from which a guiding theoretical framework may be developed for my study. A series of research hypotheses based on the theoretical framework are also developed in the next chapter.

Chapter Three: Theoretical Framework and Hypotheses

3 Introduction

The momentous changes in first union formation are often seen as part of broadly based, interconnected processes of demographic changes that have been occurring since the 1960s. Characterized by increased marital dissolution, decreased fertility rates, delay and decline in marriage, and the growth of nonmarital cohabitation, the notion of the "second demographic transition"[15] has been used to refer to widespread changes in family behaviour in westernized countries.

In considering the "underlying forces and motivations" (Lesthaeghe 1995, p. 18) to changes in family formation, family formation academics have posited a number of theories to account for delaying marriage, the increasing prevalence of nonmarital cohabitation, and other changes to the family in Western societies. This section provides a theoretical framework to guide my empirical analysis on the variations and differentials to first union formation between visible minorities and non-visible minority whites in Canada. These theories and arguments make the attempt to account for the link between individual and structural factors and the transformation that has occurred in family formation in the past decades. While these theories focus on explaining changes to first marriage formation, they can also be applied to a broader understanding of first union formation which includes both first marriage and first cohabitation due to the common characteristics shared in each process (Wu 2000). This chapter is divided into four

[15] Substantial changes in the Western family warranted some demographers to view it as a "second demographic transition" (Lesthaeghe 1995). The "second transition" involves three phases. The first occurred from 1955-1970 and is characterized by an upswing in divorce, decreased fertility rates, end of baby boom, and decline and delay in marriage. The second phase occurred from 1970-1985 and is characterized by the growth of nonmarital cohabitation in Europe and nonmarital childbirth. Finally, the third phase occurring from the mid-80s onward involves a plateau of divorce rates, recuperation of fertility rates, and cohabitation as replacing marriage to some extent (18).

sections: 1) marital theory, including: a) gains to marriage model and, b) search-theoretic model, 2) assimilation theory, 3) minority status hypothesis, and 4) summary. The first section reviews the dominant theoretical approaches to first union formation and corresponding explanations to changes in union formation behaviour such as Becker's gains to marriage and Oppenheimer's search theoretic model. The second section includes a discussion on modern assimilation theory. The third section covers minority status hypothesis perspective which provides the underlying theoretical framework for my analysis. The fourth and final section is a summary of the chapter.

3.1 Marital Theory

Much of the literature on first marriage and first cohabitation focuses on economic indicators, socioeconomic status and other related demographic factors in providing explanations for changes to union formation behaviour and population group divergences. Theoretical explanations for transition to first union often center around two main explanatory frameworks which provide an economically oriented explanation of marriage. In this section, these two main influential theories of marriage will be discussed: Becker's economic theory of marriage primarily concerning women's economic independence and Oppenheimer's critique.

3.1.1 Gains to Marriage / Rational Choice Models

Essentially, an economic perspective provides an explanation of social behaviour through the marketplace. Alfred Marshall initially related timing of first union entry to economic factors in the late 1800s:

> ...given the climate, the average age of marriage depends chiefly on the ease with which young people can establish themselves, support a family according to the standard of comfort that prevails among their friends and acquaintances (1898: 258).

Most notably, Gary Becker in the 20th century applied this perspective - using modern trade theory - to marital behaviour. Becker's classic marriage gains model (1973, 1974, 1981) assumes marital unions to be a voluntary choice based on rational individuals (hence "rational choice") who seek to maximize their gains. Analogous to countries, individuals act as trading partners for goods and services. In a similar vein to Durkheim's division of labour ([1893] 1997), the gains from trading arise from a mutual understanding of interdependency which come from specialized, differentiated roles in the marriage. These specialized roles in marriage are based on biological differences between women and men and involve household production provided by women and labour market value provided by men. This specialization promotes cohesion and unity among the marital partners as each cooperates to perform functions which seek to maximize utility and well-being. Marriage then involves gains which arise from economies of scale and a gendered division of labour that provides a comparative advantage to singlehood.

Hence, women make use of their comparative advantage by focussing on activities within the household while men focus on producing outside the household. Therefore, maximization of utility, which comes from specialization, is key to Becker's theory. The sources of utility include not only tangible goods available in the market, but such things as children, prestige (marrying for status), companionship and love. Becker's model thus characterizes traditional marriage and gender roles.

A second principle in Becker's gains theory is that individuals compete in a marriage market for potential mates. The marriage market is a finite marketplace composed of all individuals (typically geographically bound) who are searching for suitable marriage partners and functions in a similar fashion to commodity markets. This means that the marriage market allocates resources in the most efficient way possible and seeks to maximize output in all marriages. Therefore, the search for a mate continues until the value brought by a suitable mate is greater than the costs incurred through searching. When the gains to marriage exceed the costs incurred as a result of the search, then marriage is considered worthwhile.

When searching for suitable marriage partners, individuals also seek to maximize the output of marriage by marrying someone with matching, or similar traits (assortative mating) such as education, religion, or ethnicity. However, certain traits such as age or income can be substituted for other complementary traits such as physical attractiveness or household production.

3.1.1.1 Women's Economic Independence Hypothesis

However, this model of marriage – as traditional industrial society - has not gone unchanged. As society continues to modernize through advances in industry and technology, family behaviour is also increasingly transformed, and, as argued in Becker's well-known, *A Treatise on the Family* (1981), changes in the economic system are the primary forces of social change in society. Becker cites such patterns in the US as delayed marriage, declining marital fertility rates, increased marital dissolution, increased non-formal unions, increased nonmarital childbearing, and increases in female education and labour force participation to evidence the transformation in family life. Becker argues

that these changes to marriage and family life have been brought about through changes in economic markets.

More specifically, Becker attributed changes to marital formation behaviour to the changing position of women in the labour market which began in the 1950s. Increasing educational attainment and subsequent employment opportunities for women lead to higher earning capacity leading to a reduction in the gains received from traditional marriage. The rising economic independence of women (also referred to as the "independence hypothesis") allowed women to "buy out" (Goldscheider &Waite 1986) of the marriage market and this option resulted in decreased motivation among women to focus solely on household production. Becker (1981) states that the increased labour force participation and subsequent decreased fertility reduced marriage gains by making the gendered division of labour less efficient.

Education and employment are also related to the opportunity costs of marriage and motherhood for women. In this sense, Becker's model is about more than women's economic independence from men. While independence provides them greater choice in the decision to remain single or get married, the opportunity costs are a disincentive to early marriage and motherhood. This model further addresses the timing of marriage; that is, the timing of marriage is related to women's educational and employment status. Put into terms of Becker's gains perspective, increases in women's wage rates results in greater entry of women into the labour force. As a result, women become less specialized in traditional household production, become more economically independent and subsequently gain less from marriage. As such, this discourages women to enter into marriage.

Conversely, women's employment status does not preclude the formation of cohabitation. Reduced gains from marriage may encourage entry into cohabitation. Cohabiting relationships offer the benefits of marriage as well as singlehood (Wu 2000). Therefore, in some respects, the increasing prevalence of cohabitation is directly related to improvements in women's educational attainment and labour market prospects. In this regard, the "rational choice" for well-educated women is to cohabit rather than marry.

Becker's marriage gains model and independence hypothesis has not been without its critics and studies in recent decades show women with more education (using education as a proxy for earning potential) are more likely to marry compared to women with lower levels of educational attainment (Berrington & Diamond 2000; Lichter et al. 1992; Qian & Preston 1993; Sweeney 2002). Following is one of the notable critical responses to Becker's theory of marriage gains.

3.1.2 Oppenheimer's Critique

Valerie Oppenheimer (1988, 1994, 1997) challenges Becker's marriage gains theory. Historically, Oppenheimer argued, the postwar period saw large increases of women in the labour force. Yet, as women of all ages entered the marketplace, couples were still marrying, having children, and exhibiting stable marriages, contrary to Becker's theory of reduced marriage gains. Instead, Oppenheimer argues, recent changes in socioeconomic and cultural contexts have changed the very basis of assortative mating[16] and affected the gendered division in marriage. As work and occupational status become a significant aspect of men's and women's lives, they increasingly become a basis of social identity

[16] As described in Becker's marriage market, assortative mating involves the propensity of seekers and potential mates to marry someone with similar cultural characteristics (endogamy) and socioeconomic characteristics (homogamy).

and evaluation. Oppenheimer argues that this has shifted the dynamics of the marriage market, with women more frequently evaluated on achieved socioeconomic status and economic potential, rather than traditional characteristics such as religion, family background and physical attractiveness (also see Sweeney & Cancien 2004). Hence, labour market capital has become an important factor in determining women's position in the marriage market since this attribute facilitates the economic well-being and maintenance of a family. Since achieved socioeconomic status corresponds with educational attainment, entry to marriage is often delayed until education is completed.

Following this line of argument, Oppenheimer asserts that the changes in marriage formation behaviour are primarily reflected in *delayed* marriages (among whites[17]) rather than nonmarriage, which Becker's theory assumes. While Becker contends that growing economic independence of women decreases the motivation to enter into marriage, Oppenheimer attributes growing economic independence to delayed marriage. In other words, while market changes have provided an option for women to opt out of the marriage market, it has actually delayed the entrance of women into marriage as they pursue education and training requirements of the labour market.

Additionally, Oppenheimer points to empirical evidence which shows a positive relationship between achieved socioeconomic status and entry to marriage. Using CPS data, Oppenheimer examined the ever-married status of men and women by educational status. Looking at white women, she found that those with a college education were most likely to marry; college dropouts were least likely to marry. For white men, more

[17] Oppenheimer's theory (1997) posits that the upswing in women's labour force participation since the 1950s has been positively associated with delayed marriages but not nonmarriage which is not projected to rise markedly for white women in the US. However, with rates of nonmarriage from 25% - 30% for black women, Oppenheimer suggests that Becker's independence hypothesis may be relevant in providing an explanation for the sharp rise of nonmarriage among blacks (p. 437).

education was also associated with a higher likelihood of marriage (1994). Therefore, economic status as indicated through measures of educational attainment, employment status and income exert a significant influence on rates of marriage for white women (Lichter et al. 1992; South 1991).

3.1.2.1 Oppenheimer's Search-Theoretic Model

Using modified job-search theory, Oppenheimer developed a conceptual framework on marriage timing to show that some factors influence timing by facilitating assortative mating. The applicability of job-search theory was derived from the similarity of process in seeking a "close match" and the length of time to find it (1988, p. 564). Oppenheimer's theory particularly focuses on transition-to-work in influencing timing to marriage. This is applicable to the dynamics of assortative mating with respect to two scenarios: when gender roles are differentiated, and when women's economic roles start to converge with men's.

Oppenheimer's findings suggest that greater independence of women may reduce the gains to some marriages but does not necessarily have an effect on marriage in general. She explains that greater independence allows women to set a higher standard for a minimally accepted match rather than settling for a poor match or an unhappy union. And, while she concedes that higher standards lead to increased delays or marital instability, it is merely indicative of "friction" in family life as opposed to its breakdown (1988, p. 576).

Finally, Oppenheimer redirects attention from women's new-found independence to men's role in changing union behaviour. She argues that men's economic status must be considered as a significant factor in changing patterns of marriage and family

formation behaviour. Citing the decline in young men's position in the labour market, Oppenheimer suggests that men's economic status has a negative impact on the transition to marriage. The ability of men to be able to establish themselves in the labor market and thus "afford" marriage is an important matter. More specifically, Oppenheimer's application of job-search theory points to a decision making process individuals undergo before entering into the "risk" of marriage. Oppenheimer argues that career-entry difficulties lead to delays in marriage due to the level of uncertainty and risk involved (1997). This is particularly relevant to the framework of minority status hypothesis used in this study considering the potential racial differences in labor market status.

3.2 Assimilation Theory

In view of the potential patterns of first union entry among visible minorities in Canada, this section reviews assimilation theory and the minority status hypothesis as a theoretical basis for this analysis. As articulated by Park and Burgess, assimilation is a "process of interpenetration and fusion in which persons or groups acquire the memories, sentiments, and attitudes of other persons and groups and, by sharing their experience and history, are incorporated within them in a common cultural life" (1924, p. 735). Milton Gordon (1964) first developed his theory of assimilation based on immigrant integration in Western societies (i.e., westernization). The assimilation of an immigrant or ethnic group is based on specific events such as intermarriage, or entry into dominant social institutions which signified integration into the dominant society. Gordon's perspective of assimilation further differentiated cultural integration with structural integration. Cultural assimilation involved the change of cultural patterns to those of the country of migration while structural assimilation involved entry into institutions, social networks,

and other primary group relationships (including intermarriage) with the host country. According to Gordon, marital assimilation was also a distinct step in the process to integration and structural assimilation occurred when a large number of racial groups intermarried into the host society. Most importantly, Gordon believed that while different ethnic groups are structurally separated from one another, a significant basis of subgroup differentiation is social class, "ethclass" rather than race. Therefore, social class was more important than ethnicity in influencing demographic patterns (1964). In other words, any differences in union formation behaviour between visible minorities and non-visible minorities are based on socio-economic differences rather than race.

Hence, Gordon's theory of assimilation implies that any differing patterns of entry to first union between visible minority groups and non-visible minority whites in Canada would be due to differences in economic/socioeconomic factors such as educational attainment, labour force participation, and other compositional effects of visible minorities rather than due to an independent race effect. Put simply, after controlling for demographic and compositional factors, visible minority status will have no impact on entry to first union. In view of the process of assimilation, minority-majority differentials in entry to first union would disappear with the structural assimilation of a minority group indicative of an immigrant status effect.

Assimilation theories have been criticized for their linear and unidirectional approach to the socialization processes experienced by immigrant and ethnic groups. In addition, assimilation does not address the nature of a fluid bicultural identity, and believes there to be a distinct end point to the assimilation process (Salant & Lauderdale 2003). For instance, immigrant groups may see a need to preserve and perpetuate certain collectivistic values but at the same time encourage social mobility and socioeconomic

status on par with dominant society. Cross-cultural scholars therefore point to the need to consider migration histories and cultural context in addition to socioeconomic context. Additionally, increasing diversity within ethnic groupings requires more dynamic theoretical models in which nativity and multiple indicators of culture are considered (ibid).

3.3 Minority Group Status Hypothesis

Minority group status hypothesis was originally developed by van Heek (1956) to explain differences in fertility rates between Dutch Catholics and Dutch speaking Belgium Catholics. It was then extended by Day (1965, 1968) to explain higher fertility rates among Catholics in Europe. Minority group status hypothesis is an approach used in fertility studies which acknowledges demographic factors but recognizes minority group membership as a significant influence on family formation behaviour. In contrast to assimilation based explanations, which focus on differences in social characteristics, minority group hypothesis invokes a broader framework which allows for more varying dynamics of social change. First off, Goldscheider and Uhlenberg (1969) and Goldscheider (1971) stipulate that minority group status involves being a member of a minority group along sociocultural lines in relation to a numerically larger, majority group. Key assumptions of the hypothesis are that: 1) the minority group does not have a normative system which encourages large families and discourages contraceptive methods, 2) there is a desire for acculturation and upward social mobility on par with the majority population, and, 3) achievement values must be present in order for minority group members to translate the goals of upward mobility for themselves and to their children as well as justify the means of deferring shorter term gratification (ibid). Such

achievement and longer term orientation result in greater sacrifices and deferment of personal life course trajectories as seen through lower and deferred fertility relative to the majority population. Conversely, if the desire for acculturation is minimized in lieu of group preservation, then traditional patterns of family life conducive to high fertility and early unions will result (ibid).

Minority status hypothesis also allows for "strong" and "weak" variants. At higher levels of educational attainment there are lower fertility rates among nonwhites in comparison to whites as minorities attempt to overcome structural barriers. Conversely, at lower levels of education there are higher levels of fertility among nonwhites in comparison to whites. Even amidst assimilation and converging social, economic, and demographic characteristics between minorities and the majority, divergences in fertility patterns will continue to persist due to the effects of minority status. Thus minority group status is an independent factor influencing fertility (Goldscheider & Uhlenberg 1969). When applied to first union behaviour, the strong form of the minority status hypothesis implies that differences to first union entry among visible minorities will persist across all educational levels compared to non-visible minority whites. In short, it is not only educational attainment, labour force participation, and other socioeconomic indicators that affects differences in entry to first union but also the independent effect of being a visible minority in a majority white, westernized society.

On the other hand, the weak form of the minority hypothesis supposes similar levels of fertility between nonwhites and whites at lower levels of education but lower levels of fertility among nonwhites in comparison to whites at higher levels of education due to the structured nature of opportunities to achieve upward social mobility (Johnson 1979). In other words, minority status effect is most applicable to those seeking upward

mobility since these individuals are the most likely to encounter and conform to economic assimilation (ibid). When applied to first union behaviour, the weak form of the minority status hypothesis would imply that differences in entry to first union would be most marked (or differentials would only be present) among highly educated visible minorities. So, only the most highly educated visible minorities would exhibit differences in first union entry such as later age of marriage compared to whites with comparable educational attainment levels. In contrast to assimilation theory which predicts marriage patterns to converge between minorities and the majority population, both forms of the minority status hypothesis assert that differentials between visible minorities and non-visible minorities persist even after controlling for socioeconomic characteristics.

3.4 Conceptual Framework for this study

So, is there an effect of minority group status on entry into first partnership? If there is an influence of visible minority status, it may be due to differing cultural norms and values. Social groups that have strong ideological commitments apply in-group pressures that directly or indirectly discourage assimilation in order to preserve cultural tradition and thereby ensure group survival (Blau 1977). Groups with cultural values distinct from dominant society may impede interaction with other groups through encouraging collectivistic values and discouraging members from engaging in behaviour that potentially challenges group survival. In the Canadian context, East Asian groups and South Asian groups (which make up the largest visible minority groups in Canada) have greater preservation of language and culture and more stable family institutions which make them less descriptive of an “ethclass” (Gordon 1964). As such, it can be postulated

that traditional family norms and collectivistic values may be more strongly conveyed. Conversely, union behaviour alternative to marriage such as cohabitation, may be lower among cultures with less individualistic and more profamilial, pronuptial values (Oropesa & Gorman 2000).

An aspect of culturally transmitted values noted in ethnic minority research has been the high academic achievements of some minority groups and their children (Sue & Okazaki 1990). Valuation of academic success and attainment appears to be a significant cultural characteristic as indicated by the high school and college graduate rates of Asian and Pacific Islanders which exceed the US average (ibid). Indeed, perceptions of Asian Americans' preparedness, expectation, and motivation for college, career success and other indicators of socioeconomic status in comparison to non-minority whites have given rise to the notion of Asian Americans as "model minorities" (Hurh & Kim 1989; Wong, Lai, Nagasaki, & Lin 1998). And, this model minority perception has been shown to be shared among other racial groups: whites, African Americans, Hispanics, and Native Americans who all viewed Asian Americans as having a performance orientation in the areas mentioned above (Wong et al. 1998, p. 95).

Phalet and Shönpflug (2001) combine both the collectivistic and academic values orientation of minority groups and look at the process of transmission from one generation to the next (i.e., parents to offspring). Broadly speaking, values transmission of minority groups speaks to a larger individualism-collectivism divide between the dominant group and minority group which involve the emphasis of relatedness within a family and a community over individualistic goals. And, cultural transmission of values achievement is seen as an adaptive strategy of migrant groups in accessing social mobility for the next generation. As such, the authors postulate values transmission of

achievement to be a survival mechanism for the group as a whole. In looking at Turkish immigrant youth, causal modelling results show a definite 'collectivistic achievement orientation' in the Turkish immigrant families which includes both the child's academic aspirations with family loyalty. Cultural transmission was found to be stronger on the male side, but interestingly, there was an additional gender effect that differed between males and females. Academically successful sons were supported by more achievement-oriented and collectivistic-oriented fathers while school success of daughters was accompanied by a decrease in parental commitment to collectivistic family values.

There are similar patterns of academic achievement documented in Canada among visible minority groups. According to a study conducted by Krahn and Taylor (2005), visible minority immigrant students tend to report higher grades and have higher levels of school engagement than Canadian-born students. In line with Phalet and Shönpflug's study above, educational expectations of immigrant students was found to be related to parental influences with 88% of visible-minority immigrant parents stating that they hoped their children would acquire a university education compared to only 59% of Canadian-born non-visible minority parents who expressed the same goal for their children. Therefore, higher educational goals set by visible minority immigrant youth appear to be related to the educational values promoted within their families.

Alba and Nee (2003) also note that studies of educational attainment of children from immigrant families demonstrate school performance that is superior to that of the general school population (p. 239). In their reformulated theory on assimilation, these authors also support the idea that immigrant parents emphasize educational attainment as a route to success in the country of migration. While immigrants are generally overrepresented among the highly educated (e.g., postgraduate degrees), Alba and Nee

note this emphasis on educational success persists across immigrant groups despite the educational attainment of immigrant parents (p. 240).

In short, both assimilation theory and minority group status hypothesis offer culturally based explanations to family formation processes. Assimilation theory implies that the effect of visible minority status on first union entry will be either spurious (because ethnicity may be correlated to economic and demographic factors that influence first union behaviour) or indirect (because ethnicity may affect economic or demographic factors). Minority group status hypothesis on the other hand, posits a direct effect on first union entry above social and economic similarities. Both assimilation theory and minority status hypothesis provide an opportunity to consider the scope of effect of visible minority status in the timing and type of first union entered. In other words, is there a divergence of patterns to first union entry for visible minorities compared to non-minorities? And, are differentials due to the specific cultural values? While assimilation theory implies that first union patterns of visible minorities converge with non-visible minorities, minority status hypothesis presumes minority status to have an independent effect after controlling for socioeconomic factors.

3.5 Study Research Questions

I use the minority status hypothesis as the guiding framework for my analysis. Minority status hypothesis, may serve as an effective tool for examining differentials according to visible minority status in entry to first union. Canada is an ideal setting in which to apply this theory. Canada has a significant visible minority population which has increased steadily in the last 25 years. Accounting for a significant proportion of major urban centres, 41.7% of the population in metro Vancouver and 42.9% of the population in

metro Toronto[18], visible minority groups are a central demographic aspect of the Canadian population. Largely fuelled by immigration from non-European countries, visible minority groups – particularly Chinese and South Asians - represent a rapidly expanding population and a significant presence in Canada. Minority status hypothesis argues that factors identified by assimilation theory (Gordon 1964) and standard economic models (Becker 1981; Oppenheimer 1988) are insufficient in explaining divergences in union formation process. While socioeconomic status may affect racial differences in first union entry, visible minority status may persist in influencing differences in first union patterns.

Six research questions on the influence of visible minority status on timing and entry preferences to first partnership are examined. This study's research questions hypothesize an influence of visible minority status on the timing and entry to first union formation. That is to say, there is a significant difference of first union formation patterns in terms of timing and entry based on visible minority status.

Research Questions Pertaining to Entry into First Marriage:

1. Is there is a significant difference in the timing and entry into first marriage between visible minority groups and non-visible minority whites?

1a. If there is a significant difference in the timing and entry into first marriage according to visible minority status, can these differences be explained away by differences in

[18] Statistics Canada 2008. "2006 Census: Ethnic origin, visible minorities, place of work and mode of transportation." The Daily. April 2. http://www.statcan.gc.ca/daily-quotidien/080402/dq080402a-eng.htm (accessed February 23, 2009).

socioeconomic or other demographic factors? In other words, is the relationship between visible minority status and the timing to first partnership a spurious one?

2. Is there is a significant difference in the timing and entry into first marriage between immigrants (visible minority immigrants and non-visible minority immigrants) and non-immigrants (natives and visible minority natives)?

2a. If there is a significant difference in the timing and entry into first marriage between immigrant and non-immigrants, can these differences be explained away by differences in socioeconomic or other demographic factors? In other words, is the relationship between immigrant status and the timing to first partnership a spurious one?

3. Additionally, can the apparent differences in the timing and entry into first marriage be explained away by proxy indicators of culture (Wu 2000) such as region[19] and religion to indicate culturally normative beliefs concerning marriage and family formation? That is to say, will such factors being proxy measures of cultural norms have a significant impact on the timing of first marriage?

Research Questions Pertaining to Entry to First Cohabitation:

4. Is there is a significant difference in the timing and entry to first cohabitation between visible minority groups and non-visible minority whites?

4a. If there is a significant difference in the timing and entry to first cohabitation according to visible minority status, can these differences be explained away by

[19] Region as opposed to language was used to account for regionalism and English – French differences. Quebec's population is nearly 93% Francophone according to the GSS-06 (based on responses "French only" to the question asking "the language most often spoken at home"). Outside Quebec, 97% of respondents report speaking "English only".

differences in socioeconomic or other demographic factors? In other words, is the relationship between visible minority status and the timing to first cohabitation a spurious one?

5. Is there is a significant difference in the timing and entry to first cohabitation between immigrants (visible minority immigrants and non-visible minority immigrants) and non-immigrants (natives and visible minority natives)?

5a. If there is a significant difference in the timing and entry to first cohabitation for immigrant status, can these differences be explained away by differences in socioeconomic or other demographic factors? In other words, is the relationship between immigrant status and the timing to first cohabitation a spurious one?

6. Additionally, can the apparent differences in the timing and entry to first cohabitation be explained away by proxy indicators of culture (Wu 2000) such as region[20], and religion to indicate culturally normative beliefs concerning marriage and family formation? That is to say, will such factors being proxy measures of cultural norms have a significant impact on the timing of first cohabitation?

3.6 Summary

To sum up, this section has attempted to frame this study within a theoretical perspective considering the dominant theories of marriage behaviour and their hypotheses regarding declining marriage rates and increasing cohabitation. The economic perspective sees labour market trends and socioeconomic factors such as educational enrolment and

[20] Region as opposed to language was used to account for regionalism and English–French differences and serve as an approximation of Québécois culture. Ideational theory suggests that region, as a proxy for culture, will be a determinant in the formation of marriage.

attainment as important influences in changing first union patterns. Assimilation theory presumes that the effect of visible minority status on first union entry will be either spurious or indirect and minimizes the potential influence of racial-ethnic differences on cultural values, instead seeing socioeconomic factors as determining influences to first union entry. Minority status hypothesis on the other hand, posits a direct effect of minority status on first union entry despite social and economic similarities among groups.

Minority status hypothesis appears to be ideally suited to the situation of union formation patterns in Canada. Various aspects of minority status hypothesis will be used to hypothesize and account for potential differences in first union entry among visible minorities and non-visible minority whites. Minority group status hypothesis acknowledges minority status as a significant influence on family formation behaviour and invokes a broader framework than economically based ones by allowing for varying dynamics of social change. It theorizes that stressors or insecurities arise from the disadvantaged position minorities occupy in the social structure combined with the pressure to be on par with dominant society. It also theorizes a strong form vs. weak form of the hypothesis. That is, the strong form suggests differences will persist across all SES (i.e. educational) levels while weak form suggests differences will only apply among highly educated minorities who are affected by structured nature of opportunities in achieving upward mobility. In short, I hypothesize that there will be differences in first union entry according to minority status and that these differentials will be largely due to the minority experience itself.

Chapter Four: Data and Methodology

4 Introduction

In this chapter, I detail the methods used to address the comparative timing of first marriage and first cohabitation between visible minorities and non-visible minorities in Canada. The chapter is divided into five main sections: 1) data source, 2) study sample, 3) explanatory variables, 4) statistical analysis, and 5) summary. The first section includes information on the survey data, followed by a discussion of the study sample selection procedure. Section 3 describes the explanatory variables used in the analysis and the rationale for the inclusion of the particular indicators chosen. Section 4 discusses the event history method used in the study. The final section reviews the chapter in its entirety.

4.1 Data Source

Data for the empirical analyses came from the 2006 General Social Survey Cycle 20: Family Transitions (GSS-20). GSS data were collected through telephone interviews from non-institutionalized Canadians aged 15 or older in ten provinces excluding the three Northern Territories: Yukon, Nunavut, and Northwest Territories. The GSS-20 collected a nationally representative sample of 35,045 respondents with an overall response rate of 67.4%. Data were collected from June 2006 to October 2006. Family transitions are the main topic of GSS-20, which collected information on changes and trends in family formation, fertility, and dissolution. In particular, the 2006 GSS addresses key transitions in the early years of family life with respect to the nature and timing of transition into unions. Cycle 20 also records information on the chronology of

marriages, common-law unions, fertility intentions, family origins, and specific demographic and cultural characteristics such as place of birth, ethnicity, and visible minority status. While a cross-sectional survey, the 2006 GSS provides a rich source of retrospective data[21] that are very useful in composing summary measures of first union processes. Using information on the rank of union, type of first union, and age at first union will allow marriages and cohabitations to be modelled both separately and together, to better understand overall entry into first unions. Most importantly, GSS-20 provides information on the respondent's ethnicity and race, as well as visible minority status. Such information makes it possible to examine the impact of visible minority status on the timing and type of first partnership. Further information on GSS-20 is available elsewhere (see Statistics Canada 2006).

4.2 Study Sample

This study looks at patterns of first partnership entry among visible minorities and non-visible minorities. The population at risk[22] is composed of Canadian men and women between the ages of 15-40 years old who had not entered into a union at the time of the observation (observed monthly since age 15). Immigrants who married before moving to Canada were removed from the study population. Additionally, for those who remained single (never entered a marriage or cohabitation) by age 40, they are censored at age 40 since the focus of this study is to explore first partnership entry, and the occurrence of a first union is less likely to occur after 40 years of age. Moreover, first cohabitation

[21] Retrospective data – data collected through asking people to recall dates of events such as marriage, child births, and job promotions (Allison 1995, p. 3).

[22] "At risk" refers to a period of non-occurrence which precedes an event (i.e., marriage or cohabitation). In other words, the risk period refers to the study sample/population of men and women who are followed during the time of the study from age 15 until the time of the occurrence of the first union (if the event occurred) or the time of the survey (if the event had not occurred by the time of the survey).

compared to first marriage, is more likely to occur among younger generations (Thornton, Axinn & Teachman 1995; Wu 2000). Therefore, including men and women between the ages of 15 and 40 years ensures that the most significant proportion of cases is included.

4.3 Variables

The dependent variable in this study measures whether or not the respondent experiences: 1) entry into marriage, 2) entry into cohabitation, or 3) entry into a first union within the given period of time. More specifically, it measures the "hazard rate"[23] of the first union event for an individual during his/her exposure time (see following discussion on statistical analyses).

The main independent variable is a rough approximation of self-reported visible minority status and is derived from responses to the survey question, "People in Canada come from many racial or cultural groups. You may belong to more than one group on the following list. Are you ... (multiple response categories were given to respondent)." The responses to this question were used to categorize a respondent as part of an aggregated visible minority grouping. Although it would be desirable to further break down the minority group into separate ethnic groupings such as Chinese and South Asian, such information is not available for the public-use data file. For this reason, visible minority status was measured as a three-level categorical variable: visible minority, Aboriginal, and non-visible minority white. The Aboriginal respondents were kept in the analysis for the purpose of comparison and for avoiding a substantial reduction in the

[23] Hazard rate is defined as the probability of event occurrence during short time interval periods (e.g., at the beginning of each month of the observation) (see Yamaguchi 1991).

sample size (about 4%). However, my primary interest is in comparing visible minorities with non-visible minority whites.

According to the economic perspective, differences in socioeconomic and demographic characteristics account for potential differentials in union formation between visible minorities and non-visible minorities. In order to control for the effects of socioeconomic and demographic structural measures, educational attainment, full-time employment status, part-time employment status, pre-union children, pregnancy are included in the analyses. Employment, pre-union children, and pregnancy variables were measured as time-variant variables. As minority status hypothesis tests the effect of minority status independent of these socio-economic and demographic characteristics, any persisting effects may be related to factors which are rooted in insecurities associated with the process of acculturation for minority group members (Goldscheider & Uhlenberg 1969).

Also, rough proxy variables for culture (Wu 2000) such as immigrant status, region and religion were controlled for to examine the transition into first union and determine if culturally normative beliefs have a significant impact on union formation. If the impact of visible minority status continues to have a significant effect with these factors controlled, then an examination of these factors is valuable in the comparison of the first union processes between visible minorities and non-visible minorities. It must be noted that there may be a close association between visible minority status and immigrant status. As such, the potential for a collinearity[24] effect exists but after a check for

[24] Collinearity occurs when two independent variables are highly correlated and contribute redundant information to a regression analysis. High collinearity can result in indefinable regression estimates with large standard errors and be non-significant.

correlations in an unreported analysis, the collinearity diagnostics[25] did not indicate high correlations (which would indicate problems with any regression-like model). Since there was no high correlation, it was assumed to be safe to include immigrant status in the model.

[25] Although survival analysis programs typically do not provide collinearity diagnostics, one can do a check with a linear regression program (i.e., proc corr in SAS), while specifying the event time as the dependent variable. Because multicollinearity is about linear relations among the covariates, it is not necessary to evaluate it within the context of a survival analysis. (Allison 2010).

Table 1. Definitions and descriptive statistics for independent variables used in the analysis

Variable	Definition	Mean or %	S.D
Visible Minority Status			
Visible minority	Dummy indicator (1 = yes, 0 = no)	9.38%	-
Aboriginal	Dummy indicator (1 = yes, 0 = no)	3.89%	-
Non-visible minority white	Reference category	86.73%	-
Sex			
Female	Dummy indicator (1 = yes, 0 = no)	50.54%	-
Male	Reference category	49.46%	-
Union			
Marriage	First union entered is marriage (1 = yes, 0 = no)	53.15%	-
Cohabitation	First union entered is cohabiting (1 = yes, 0 = no)	24.15%	-
First Union	Reference category	22.70%	-
Pre-Union Children[a]	Current presence of child (1=yes, 0=no)	-	-
Pregnancy[a]	Current pregnancy (1=yes, 0=no)	-	-
Cultural Indicators			
Immigrant Status			
Foreign Born	Dummy indicator (1 = yes, 0 = no)	12.73%	-
Canadian Born	Reference category	87.27%	-

Religion			
Protestant	Dummy indicator (1 = yes, 0 = no)	30.83%	-
Other	Dummy indicator (1 = yes, 0 = no)	6.11%	-
None	Dummy indicator (1 = yes, 0 = no)	22.00%	-
Catholic	Reference category	41.06%	-
Region			
Quebec	Dummy indicator (1 = yes, 0 = no)	24.60%	-
Rest of Canada	Reference category	75.38%	-
Economic Indicators			
Education	Educational attainment in 10 levels (1 = no schooling, …, 10 = bachelor or higher)	5.70	2.83
Full-Time Employment[a]	Current employment status	-	-
Part-Time Employment[a]	Current employment status	-	-
Family Background			
Father's education	Educational attainment in 10 levels (1 = no		
Father's highest level of education	schooling, …, 10 = bachelor or higher)	4.00	2.81
Mother's education	Educational attainment in 10 levels (1 = no		
Mother's highest level of education	schooling, …, 10 = bachelor or higher)	3.90	2.65
Intact family	Whether respondent lived with both parents up	81.97%	-

	to age 15 (1 = yes, 0 = no)	18.00%		
Parents ever married	Respondent's parents were ever married	96.78%		-
	marriage (1 = yes, 0 = no)	3.22%		
Parents ever cohabited	Respondent's parents ever cohabited	90.02%		-
	cohabited (1 = yes, 0 = no)	9.98%		
N (*Unweighted*)			19,983	

Note:
S.D. = Standard Deviation
Weighted means or percentages, unweighted N.

[a] Time - variant variables.

Source: 2006 General Social Survey

4.4 Statistical Analyses

Individual-level processes were modelled using event history analysis (also called survival analysis). Cycle 20 of the GSS covers information on family transitions and as such, provides a detailed source of retrospective data on family formation and other life cycle events which is amenable to survival analysis (Allison 1995). This section outlines the rationale for using survival analysis over other conventional methods employed in demographic research. Additionally, two different methods in survival analysis – life tables and proportional hazard models – were used to model first union formation in this study. These additional methods will also be introduced in the following sections.

4.4.1 Survival Analyses

In comparison to ordinary least squares regression (OLS), survival analysis focuses on individual level events and factors that affect a respondent's entry into an event (e.g., marriage or cohabitation). Importantly, it allows for the inclusion of censored data[26] in the model to provide more substantive results (Allison 1995; Yamaguchi 1991).

A competing risks model was used in modelling the timing of entry into first partnership. The model was built for first marriage and first cohabitation separately by assuming that the two events are independent; that is, it is appropriate to treat one as censored when modeling the other. This framework is more appealing as it is less

[26] Superior to OLS models because they allow for including of right censored cases which would bias model estimates if excluded. Censored cases include those cases in which the event of interest occurs outside the observation period. Right censored cases are those cases in which the event has not yet occurred by the time of the interview. In this case, a right censored case represents a respondent who had not entered into a union by the time the interview took place. Such cases would necessarily be excluded from conventional OLS models as data regarding the DV would be unavailable.

sensitive to the types of effects for particular covariates, and causes no statistical problem for modeling multiple effects of a single variable (Yamaguchi 1995). Two techniques in particular – life tables and the proportional hazard model - were used in the data analysis.

4.4.2 Life Table Techniques

Life table techniques were used first to estimate the "risk" of entering into a first partnership at the beginning of each month from age 15. Respondents were measured until they entered either type of union and consequently removed if they married or cohabited. This information provides the cumulative proportion of first union entry.

4.4.3 Proportional Hazards Model

The proportional hazard model (Cox's model) is the most popular technique in event history analysis (Yamaguchi 1991) and is utilized in this study for its ability to deal with time-variant variables and allow for the distribution of the time of event occurrence unspecified. The proportional hazard model takes the following form:

$$(t) = \lambda_0 (t) \cdot \exp\{\beta_j \cdot \chi_{ij} + \ldots + \beta_k \cdot \chi_{ik}\}$$

where $h_i(t)$ is the hazard rate of ith individual at time t, $\lambda_0 (t)$ is the baseline hazard function, β is the coefficient of the explanatory variable χ examined in the model of individual i. $\beta_j \ldots \beta k$ are a set of regression parameters which show the effects of the explanatory variables. Then, a transformation is done to β_k in order to provide a simple interpretation:

$$(100\% \times [e^{\beta} - 1])$$

which is illustrative of the increase or decrease in the baseline hazard for one unit of change in the explanatory variable χ, while holding all other variables constant (Allison 1995).

4.4.4 Modeling Strategy

Statistical analysis is composed of two stages. The first stage involves the use of simple life tables to compute the cumulative proportion of first marriage, first cohabitation, or first union - at the beginning of each month during the exposure time. The second stage involves proportional hazard modeling and is the core of the analysis. This part of the analysis comprises several models involving different sets of explanatory variables.

The proportional hazard modeling undertaken in the second stage, involved initially running a simple regression model (model 1) to first look at the baseline impact of visible minority status on first marriage, first cohabitation, and first union entry as a whole within Canada. Model 2 involved the replication of the first model by adding control variables: pre-union children and pregnancy. Model 3 included the addition of three cultural indicators: immigrant status, religion and region. Finally, following Becker's and Oppenheimer's economic perspective, model 4 focused on economic/socioeconomic indicators, including: educational attainment, employment status (i.e., full-time or part-time status) and family background variables. Model 4 was the full model that included all explanatory variables considered in the study.

As noted above, in each stage of the analysis, entry into first marriage, first cohabitation, and first union were each modeled separately by censoring cohabitation (when entry to marriage was modeled), and marriage (when entry into cohabitation was

modeled) respectively. Then, a hazard model of first union was estimated, modeling the hazard rate of cohabitation or marriage, whichever occurs first. It was assumed that both risks involved the same process of entry. Nested models were set up for isolating the effects that influence the process of entry into first marriage, first cohabitation and first union.

4.5 Summary

The 2006 General Social Survey provides a rich source of retrospective data on marital and cohabiting unions allowing for the detailed summaries of first union processes for this study. The modeling strategy employs survival analysis techniques and involves the use of life tables followed by proportional hazard models. The varying nested models include variables that best examine visible minority status and its relation to first union. As discussed in the theoretical framework chapter (chapter 3), a number of specific variables are included in nested models in order to test for cultural and economic effects when examining first union entry among men and women in Canada.

In the following chapter, the statistical analyses and results are presented. This is followed by a re-examination of the hypotheses and a discussion on the findings of the study.

Chapter Five: Results

5 Introduction

This chapter outlines the results of the models described previously; it is composed of four sections: 1) life table estimates, 2) proportional hazard models, 3) visible minority effects, and 4) summary. The first section provides an overview of descriptive life table estimates of entry into first union. The second section explores the effects of different explanatory variables and examines how each contributes to the transition to first marriage, first cohabitation, and first union in general. The third section focuses on the impact of visible minority status and discusses what effect minority status has on the timing and type of unions entered when compared to non-visible minorities. Finally, the last section summarizes the results of the analysis.

Detailed interpretations of results are provided in the final chapter. The purpose of this chapter is to primarily present the results of the statistical analyses and their relevance to the visible minority hypothesis, as well as to provide the basis for the conclusions made in the final chapter.

5.1 Life Table Estimates

Using data from the GSS-20, life table estimates can be generated to estimate the probability that a woman or man will enter into a union at each age. The first stage of the statistical analysis consisted of running life table estimates to calculate the cumulative proportion of first partnerships at monthly intervals until age 40. The initial examination was entry into first marriage, which involved treating entry into cohabitation as a competing risk. Entry into cohabitation involved treating marriage as a competing risk.

Table 2 presents the changes in the cumulative probability of entry into first marriage, cohabitation, and union for both women and men, based on the sample of women and men from the GSS-20 and calculated using standard life-table techniques. It provides a description of these probabilities in terms of the cumulative experience of marriage, cohabitation, and first union by successive ages from 15 to 40 years (in complete years). Clearly, Table 2 suggests that cumulative probability of marriage, cohabitation and first union varies by age.

Table 2 shows that by age 20, 17.7% of women have entered into marriage while only 4.2% of men have entered into first marriage. In terms of first cohabitation, only 7.8% of women have entered into cohabiting relationships while 4.4% of men have done so by age 20. Total first union rates are 24.1% for women and 8.4% for men. However, by age 30, 76.6% of women have entered into first marriage and 42.3% entered into cohabitation. At slightly lower rates, 67% of men have entered into marriage and 33.6% into cohabiting relationships. Total first union rates at age 30 are 86.6% for women and 78.1% for men. By 35 years, increased entry into first union plateaus slightly at 92.8% for women and 89% for men. Hence, the most rapid entry into first union amongst women and men appears to occur between the ages of 20 and 30.

Table 2. Life table estimates of cumulative proportion of couples entering into first union by sex

	Women			Men		
	Proportion			Proportion		
Age (yrs)	First Union	Marriage	Cohabitation	First Union	Marriage	Cohabitation
15	0.005	0.003	0.002	0.006	0.003	0.003
20	0.241	0.177	0.078	0.084	0.042	0.044
25	0.690	0.576	0.268	0.497	0.382	0.187
30	0.866	0.766	0.423	0.781	0.670	0.336
35	0.928	0.846	0.530	0.890	0.801	0.448
40	0.957	0.887	0.616	0.940	0.868	0.543
N (*Unweighted*)			11241			8742

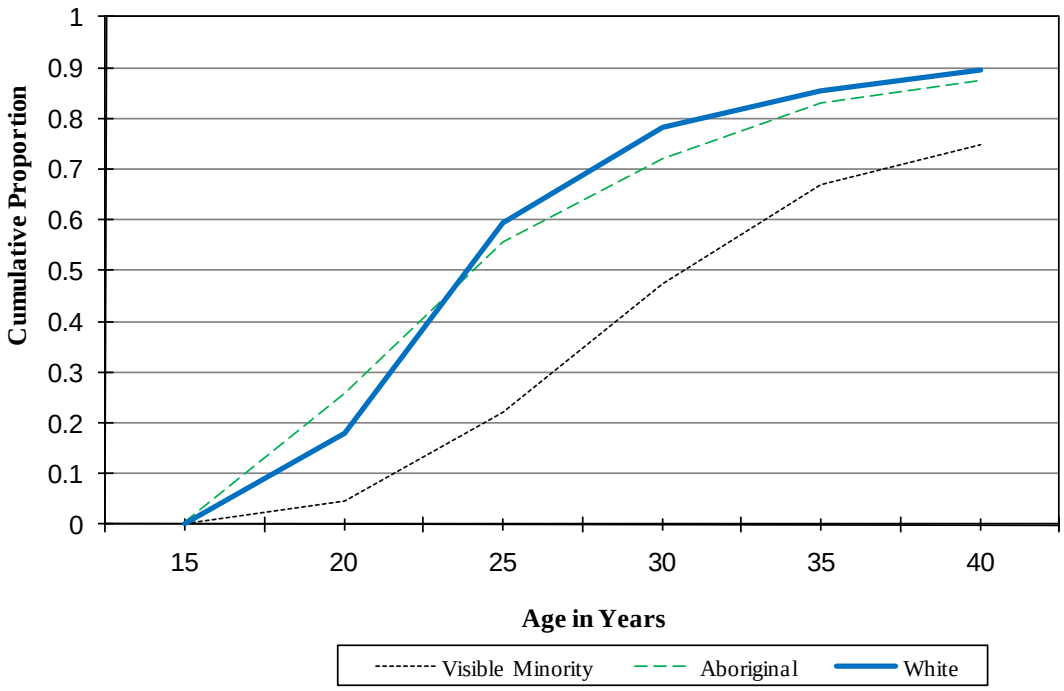
Source: The 2006 General Social Survey.

5.1.1 Effect of Visible Minority Status on Women

Figures 5-10 present life table results for visible minority status differentials in the likelihood of entry into marriage, cohabitation, and first union. Figure 5 shows the effect of visible minority status on marriage and explores whether marriage rates differ significantly for visible minority, Aboriginal, and white women. It shows that the cumulative proportion of marriage for visible minority women differs significantly from Aboriginal and white women. By age 20, 4.7% of visible minority women had entered into first marriage compared to 18.1% of white women and 25.7% of Aboriginal women. By age 30, 47.4% of visible minority women had entered into first marriage compared to 78.3% and 72.1% of white and Aboriginal women respectively. By 35 years, only 66.9% of visible minority women had entered into marriage compared to 85.6% and 83% of whites and Aboriginals.

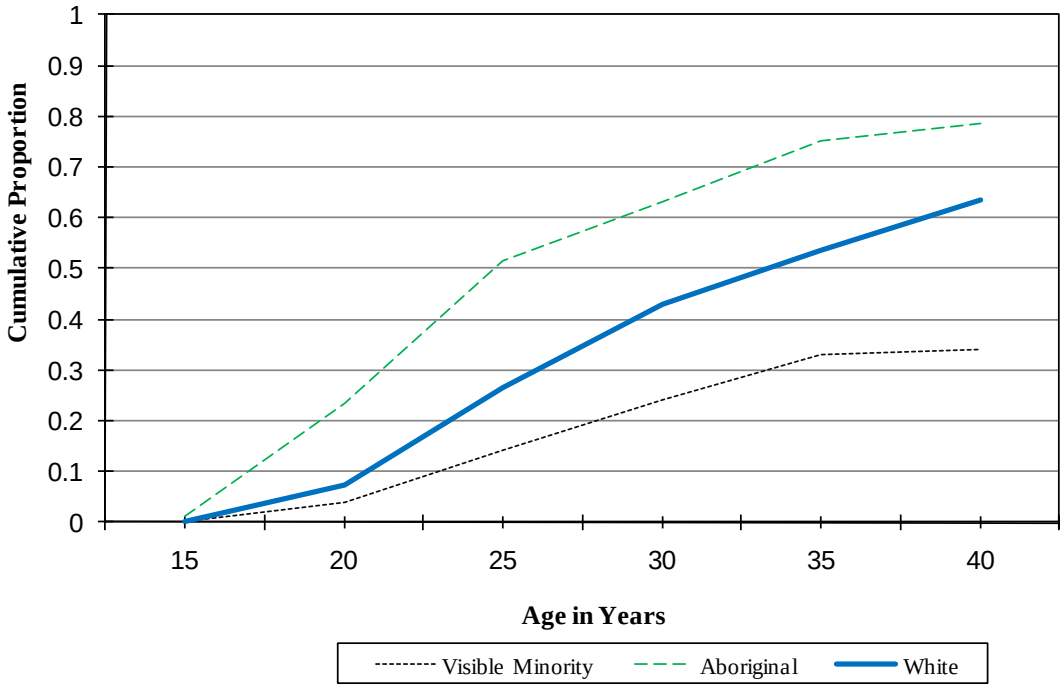
Figure 6 shows the differing cohabitation rates amongst visible minorities, Aboriginals and whites. The model reveals that the cumulative proportion of cohabitation for visible minority women differs significantly from Aboriginal and white women. By age 20, only 4% of visible minority women had entered into first cohabitation compared to 7.4% of white women and 23.3% of Aboriginal women. By age 30, differentials are significant with only 24.1% of visible minority women having entered into first cohabitation compared to 43.0% and 63.0% of white and Aboriginal women respectively. By 35 years, 32.9% of visible minority women had entered into cohabitation compared to 53.8% and 75.1% of whites and Aboriginals, respectively.

Figure 5. Ordinary life table estimates of cumulative proportion of first marriage: Canadian women aged 15-40



Source: The 2006 General Social Survey.

Figure 6. Ordinary life table estimates of cumulative proportion of first cohabitation: Canadian women aged 15-40

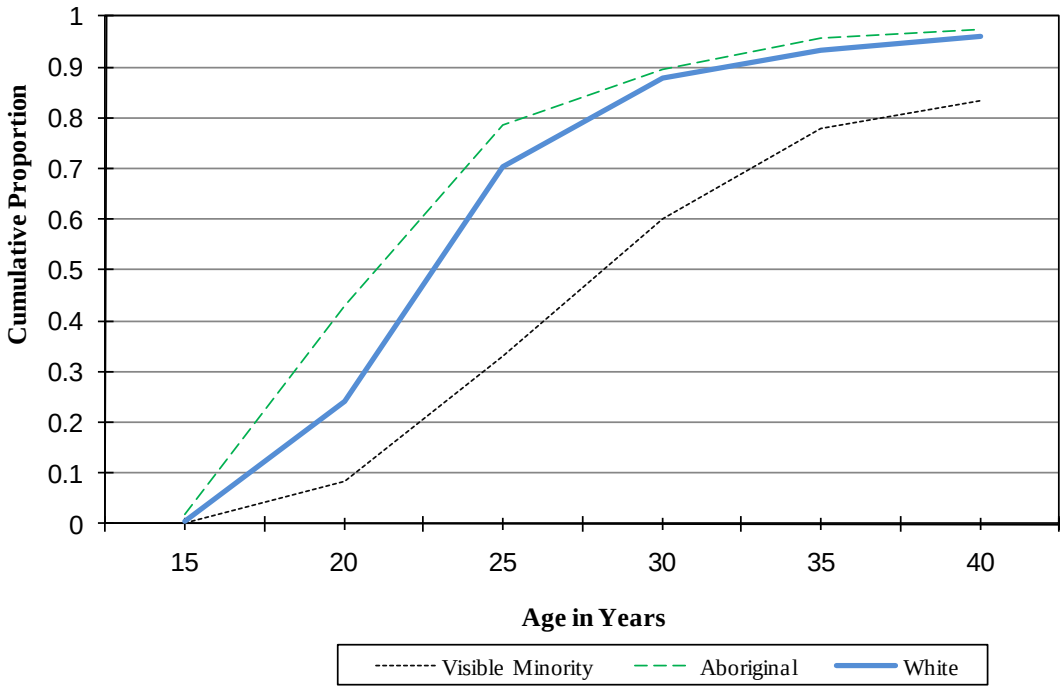


Source: The 2006 General Social Survey.

Figure 7 shows the trajectory of entry into first union as a whole for visible minorities, Aboriginals and whites. The model indicates that the cumulative proportion of first union for visible minority women differs substantially from Aboriginal and white women. At 20 years of age, only 8.5% of visible minority women had entered into first unions compared to 24.1% of white women and 43.1% of Aboriginal women. By age 30, 60.1% of visible minority women had entered into first unions, significantly lower than the rates of 87.7% and 89.7% of white and Aboriginal women, respectively. By age 35, only 77.8% of visible minority women had entered into unions compared to 93.4% and 95.8% of whites and Aboriginals.

Marriage gains theories assert that significant differences observed are primarily due to socioeconomic differences underlying racial differences which affect the costs and gains of first union entry. However, these trends potentially provide initial support towards an independent effect of visible minority status. In a later section, we will see whether these observed differences in transitioning to first marriage, first cohabitation, and first union among visible minority, Aboriginal, and white women can be explained by SES differences and other explanatory variables considered in this study.

Figure 7. Ordinary life table estimates of cumulative proportion of first union: Canadian women aged 15-40



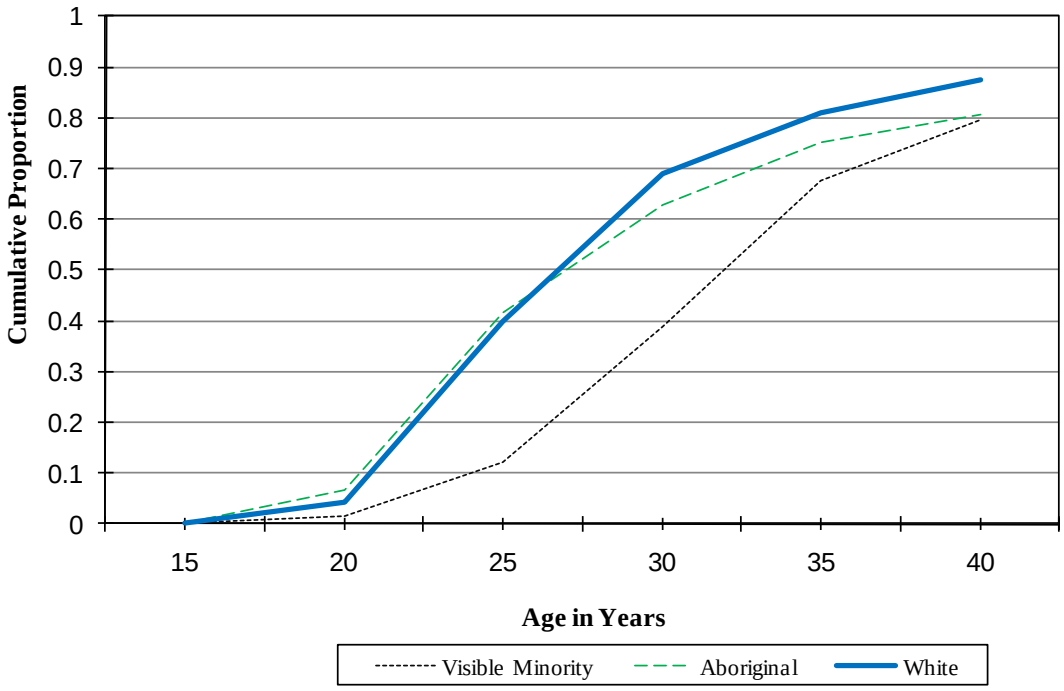
Source: The 2006 General Social Survey.

5.1.2 Effect of Visible Minority Status on Men

The next three figures indicate the life table estimates of marriage, cohabitation and first union for men according to visible minority status. Figure 8 shows the effect of visible minority status on marriage to determine whether marriage rates differ significantly according to visible minority status among men. It shows that the cumulative proportion of marriage for visible minority men differs significantly from Aboriginal and white men. At age 20, only 1.6% of visible minority men had entered into first marriage compared to 4.3% of white men and 6.7% of Aboriginal men. By age 30, 38.9% of visible minority men had entered into first marriage compared to 69.0% and 62.7% of white and Aboriginal men respectively. By 35 years, only 67.7% of visible minority men had entered into marriage compared to 81.1% and 75.1% of whites and Aboriginals.

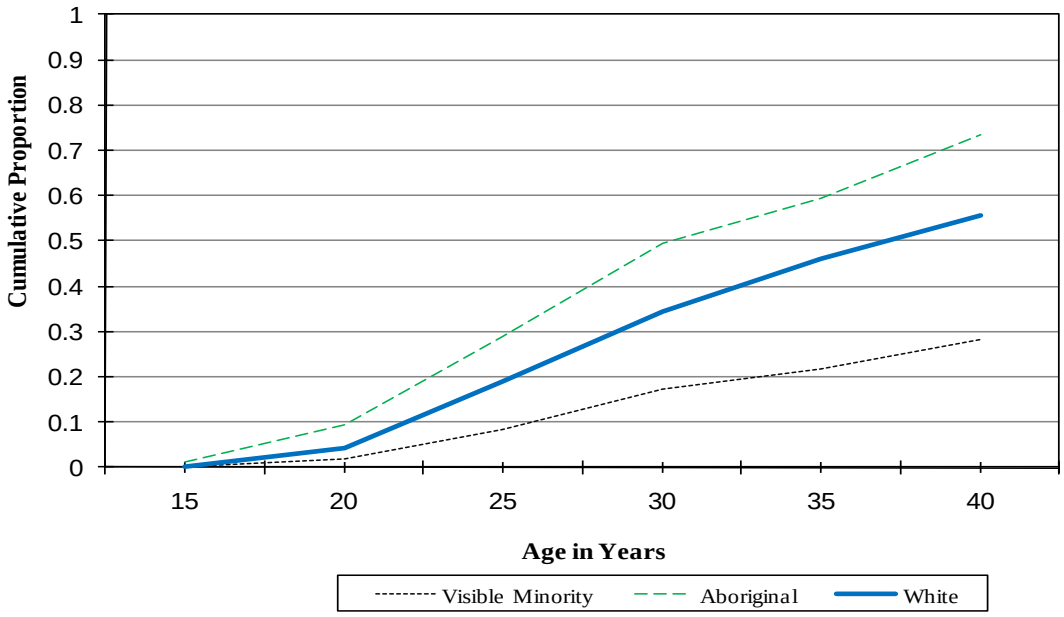
Differences were also found in rates of entry into cohabitation for men. Figure 9 highlights these differing rates. The cumulative proportion of cohabitation for visible minority men differs significantly from Aboriginal and white men. At age 20, only 1.7% of visible minority men had entered into first cohabitation compared to 4.3% of white men and 9.3% of Aboriginal men. By age 30, only 17.1% of visible minority men had entered into first cohabitation compared to 34.4% and 49.5% of white and Aboriginal men, respectively. Even by 35 years of age, only 21.8% of visible minority men had entered into cohabitation compared to 46.2% and 59.4% of whites and Aboriginals, respectively.

Figure 8. Ordinary life table estimates of cumulative proportion of first marriage: Canadian men aged 15-40



Source: The 2006 General Social Survey.

Figure 9. Ordinary life table estimates of cumulative proportion of first cohabitation: Canadian men aged 15-40

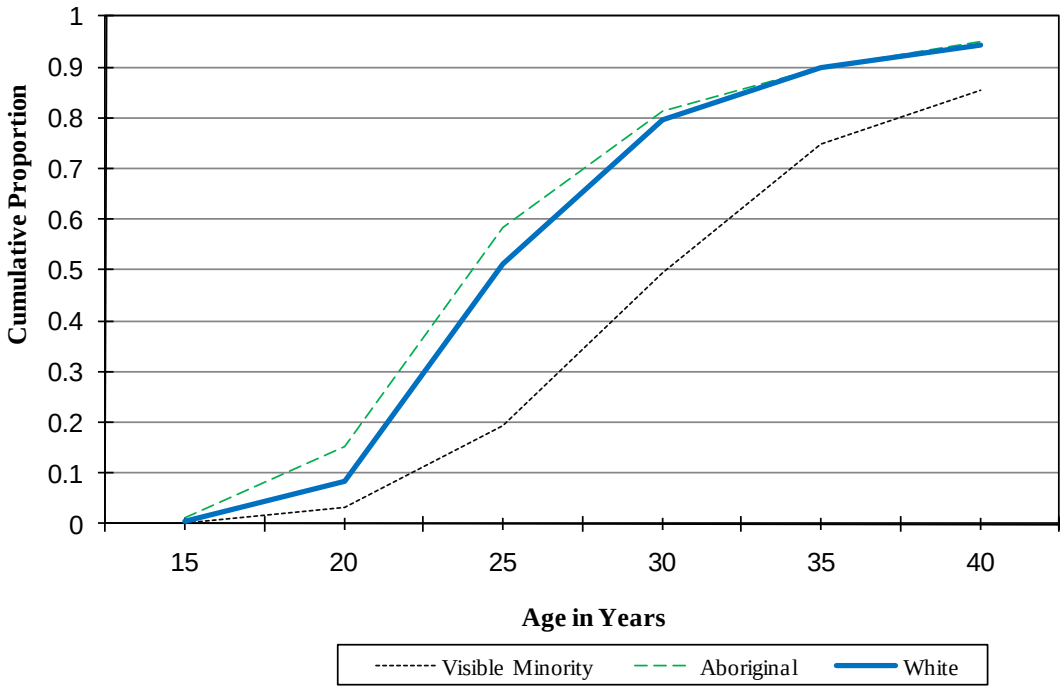


Source: The 2006 General Social Survey.

Finally, Figure 9 shows the total combined rate differences among visible minority, Aboriginal, and white men. It indicates that the cumulative proportion of first union formation for visible minority men differs significantly from Aboriginal and white men. By age 20, 3.3% of visible minority men had entered into first union compared to 8.4% of white men and 15.4% of Aboriginal men. By age 30, 49.3% of visible minority men had entered into first union compared to 79.7% and 81.2% of white and Aboriginal men, respectively. By 35 years, there is still a lag with 74.7% of visible minority men entering into first unions compared to 89.9% of whites and Aboriginals.

The visible minority hypothesis suggests that visible minority status should have influence on first union formation behaviour net of all other variables. The results for women and men provide initial support for this hypothesis. In the next section, we will see whether these differences can be accounted for by selected SES, family background and cultural variables.

Figure 10. Ordinary life table estimates of cumulative proportion of first union: Canadian men aged 15-40



Source: The 2006 General Social Survey.

5.2 Proportional Hazard Models

Ordinary life table techniques estimate the proportions of first union entry at each given time-period but they are unable to show how the process of first union is affected by visible minority status while controlling for other explanatory factors. The next stage of the analysis, therefore, employs multivariate analysis, i.e., the proportional hazard model, to model the timing of first union. The results of proportional hazard models are summarized in Tables 3 to 8.

Tables 3 and 4 provide the regression estimates of entry into first marriage for women and men treating cohabitation as a competing risk. Tables 5 and 6 provide the estimates of entry into first cohabitation for women and men treating marriage as a competing risk. And Tables 7 and 8 provide the estimates of entry into first union for women and men. In each of the tables, I first explore the independent effect of visible minority status without controlling for the other variables. Then, starting with model 2, the models were re-estimated by adding demographic variables. Model 3 involves testing for the effects of cultural indicators (i.e., immigrant status, religion, and region). Lastly, in model 4 economic indicators are introduced (i.e., educational attainment, employment status, and family background variables) to determine if the original relationship of visible minority status still holds. Model 4 is the "full" model, my preferred model, which includes all explanatory variables in the study.

Gender differences in entry into cohabitation and marriage are well known, and the differences in the effects of covariates on the process of union formation between men and women are also well documented (e.g., Goldscheider & Waite, 1991; Wu 2000). Therefore, gender-specific models were estimated for men and women and the results are

presented in separate tables (Tables 3 to 8). For the full model (model 4), the hazard ratios for the parameter estimates are also presented. A value greater than 1, means a rise in the hazard rate of first union, while a value less than 1 suggests a decline in the hazard rate. As noted, a simple transformation of the hazard ratio, 100 x (exp(b) - 1), gives a percentage interpretation of the effect of a given covariate.

5.2.1 Transition to First Marriage for Women and Men

5.2.1.1 Model One – Baseline Effect

Table 3 shows the results of the proportional hazard models of the transition to first marriage for women. Model 1 in Table 3 shows the baseline effect of visible minority status; belonging to visible minority grouping results in a decrease in the hazard rate of 56% (100% x [$e^{-0.8208} - 1$]) compared to white women. For Aboriginal women, the hazard rate of entering into a first marriage – in comparison to white women - is only slightly lower at 0.6%.

Table 4 shows the results of the proportional hazard models of the transition to first marriage for men. Model 1 in Table 4 examines the baseline effect of visible minority status among men and shows a decrease in the hazard rate of 47% (100% x [$e^{-0.64156} - 1$]) for visible minority men in comparison to white men. For Aboriginal men, the difference is non-significant.

5.2.1.2 Model Two – Demographic Variable Effects

Model 2 in Table 3 includes demographic variables – pre-union children and pregnancy – which have substantial, significant effects on entry into first marriage for women. Pre-union children for women results in a decreased hazard rate of first marriage entry of

78% compared to those with no pre-union child. This finding is consistent with the literature that consistently shows that the presence of children prior to marriage decreases the rate to marriage (e.g., Bennett et al. 1995; Landale 1994). Pregnancy on the other hand, results in an increase in the hazard rate by 152%. The effects for the two demographic variables remain after all other explanatory variables were introduced (see model 4).

Model 2 in Table 4 shows similar findings for men. Men with pre-union children results in a delayed entry into marriage while having a pregnant partner results in an increased rate of marriage entry. This relationship holds across all models.

5.2.1.3 Model Three – Cultural Indicators

Model 3 in Table 3 includes 3 cultural indicators (immigrant status, religion, and region), which were found to influence entry into first marriage for women. There is a negative effect of immigrant status on entry into first marriage but it is non-significant. Religion has a significant effect on entry into first marriage. Religious categories Protestant and None are statistically significant compared to Catholics. The hazard rate of first marriage is 20% higher for Protestant women and 28% lower for women with no religious affiliations in comparison to Catholic women. Geographic region – Quebec – has a highly significant effect which results in a hazard rate decrease of 16% compared to women in the rest of Canada.

Model 3 in Table 4 also shows a highly significant and negative effect of immigrant status on entry into first marriage for men. The hazard rate of first marriage is 16% lower for immigrant men than for native born Canadian men. Religion also has a significant effect on entry into first marriage. All religious categories – Protestant, Other,

and None – are statistically significant compared to Catholics. The hazard rate of first marriage is 18% higher for Protestant men, 15% lower for men of other religious affiliations, and 24% lower for men with no religious affiliations in comparison to Catholic men. Geographic region – Quebec – also has a highly significant effect resulting in a hazard rate decrease of 13% for Quebec men compared to men in the rest of Canada.

5.2.1.4 Model Four – Full Model for Entry into Marriage

Economic indicators are introduced in the final model for women and men. In the full model for women, there is a significant, negative effect of educational attainment on entry into first marriage, with each level increase of education resulting in the hazard rate decreasing by 8%. For instance, women with some post-secondary education have a decreased hazard rate of entry into marriage than women with a high school diploma.

The final model also shows the effect of employment status upon entry into first marriage. The full-time employment variable shows a highly significant and positive effect on entry into first marriage, which provides support for the notion of achieved economic status as a positive factor in marriage formation (Bennett, Bloom & Craig 1989; Oppenheimer 1988). Full-time employment results in a hazard rate of marriage entry which is 48% higher. Part-time employment status has a negative effect on entry into first marriage but is not significant.

Family background variables such as father's education, mother's education, intact family, and parents' union status were also included in the final model. Educational attainment of the father and mother are highly significant with a negative effect on entry to marriage. Therefore, a one level increase in the father's or mother's

education resulted in a decreased hazard rate of 3%. Coming from an intact family and having parents who married are significant on marriage entry.

In sum, after all explanatory variables have been added to Model 4, visible minority status still results in a negative, highly significant effect with a hazard rate which is 45% lower for visible minority women than for whites. Aboriginal women have a hazard rate of first marriage which is 13% lower than whites.

In the full model for men in Table 4, the effect of educational attainment is negative and highly significant. Therefore, a one level increase in educational attainment results in a hazard rate decrease of 2%. Full and part-time employment effects are again mixed. Full-time employment status has a significant effect on marriage entry resulting in a hazard rate increase of 42% whereas the effects of part-time employment are not significantly related to entry into marriage. The full-time employment effect is supported by the literature which associates a positive relationship between employment and first marriage entry for men and supports the notion that men's economic circumstance is positively related to marriage due to traditional expectations of men as financial providers (Pollard & Wu 1998; Xie, Raymo, Goyette & Thornton 2003).

Father's education and mother's education – as indirect economic indicators – also had a significant, negative effect on entry into marriage. Higher levels of parental education resulted in lower hazard rates of entry. Having parents who cohabitated resulted in a hazard rate decrease of 51% but coming from an intact family or having parents who were married did not have a significant effect on entry into marriage.

Cultural variables such as immigrant status, religion, and region remained significant in the final model for men. Table 4 shows a highly significant and negative

effect of immigrant status on entry into marriage. The hazard rate of marriage for immigrants is 19% lower than for native born Canadians after all variables have been added in the full model. Table 4 also shows some significant effects of religion on entry into marriage with Protestants having a hazard rate 16% higher for entry into marriage compared to Catholics while non-religious have a 19% lower hazard rate of entry compared to Catholics. Geographic region – Quebec – remains significant and results in a hazard rate that is 16% lower for marriage entry for Quebec men than for men in the rest of Canada.

In the full model, the demographic variables of pre-union child and having a pregnant partner also remain significant. Having a pre-union child resulted in a hazard rate into marriage 46% lower than those without children. For men with a pregnant partner, the hazard rate into marriage is 541% higher than those without a pregnant partner. Finally, after all explanatory variables have been added, visible minority status still results in a highly significant effect with a hazard rate of marriage which is 25% lower for visible minority men than for white men. Therefore, the effects of visible minority status with respect to marriage persists for women and men in that visible minority status results in a lower hazard of entry into first marriage.

Table 3. Proportional hazard models of transition into first marriage: women

Variable	Model 1	Model 2	Model 3	Model 4	exp[β]
Visible Minority Status					
Visible minority	-0.821 ***	-0.810 ***	-0.738 ***	-0.594 ***	0.552
Aboriginal	-0.007 ***	0.015	0.018	-0.145 *	0.865
Non-visible minority white[a]					
Pre-union Children[b]		-1.518 ***	-1.551 ***	-0.893 ***	0.409
Pregnancy[b]		0.922 ***	0.889 ***	2.051 ***	7.778
Cultural Indicators					
Immigrant Status					
Foreign Born			-0.054	-0.004	0.996
Canadian Born[a]					
Religion					
Protestant			0.187 ***	0.177 ***	1.194
Other			-0.120	0.019	1.019
None			-0.334 ***	-0.167 ***	0.846
Catholic[a]					
Region					
Quebec			-0.181 ***	-0.226 ***	0.798
Rest of Canada[a]					
Economic Indicators					
Educational Attainment				-0.086 ***	0.917
Full-Time Employment[b]				0.395 ***	1.484
Part-Time Employment[b]				-0.087	0.917
Family Background					
Father's education					
Father's highest level of education				-0.035 ***	0.966
Mother's education					
Mother's highest level of education				-0.040 ***	0.961
Intact family				0.179 ***	1.197
Parents ever married				-0.125	0.883
Parents ever cohabited				-0.690 ***	0.502
– 2 Log L without covariates	75354.869	115498.310	115498.310	75354.869	
– 2 Log L with covariates	75152.583	114647.290	114389.310	71348.622	
LR (chi-square)	202.287	851.017	1108.996	4006.247	
df	2	4	9	17	

Note: All dummy variables are coded 1 = yes and 0 = no.
[a] Reference category.
[b] Time-variant dummy indicator, 1 = yes, 0 = no.
* $p < .05$
** $p < .01$
*** $p < .001$ (two-tailed test)

Source: The 2006 General Social Survey.

Table 4. Proportional hazard models of transition into first marriage: men

Variable	Model 1	Model 2	Model 3	Model 4	exp[β]
Visible Minority Status					
Visible minority	-0.642 ***	-0.610 ***	-0.427 ***	-0.287 ***	0.750
Aboriginal	-0.070	-0.081	-0.092	-0.210 ***	0.810
Non-visible minority white[a]					
Pre-union Children[b]		-1.378 ***	-1.409 ***	-0.622 **	0.537
Pregnancy[b]		0.686 ***	0.656 ***	1.858 ***	6.413
Cultural Indicators					
Immigrant Status					
Foreign Born			-0.177 ***	-0.211 ***	0.810
Canadian Born[a]					
Religion					
Protestant			0.167 ***	0.149 ***	1.161
Other			-0.168 *	-0.094	0.910
None			-0.281 ***	-0.211 ***	0.810
Catholic[a]					
Region					
Quebec			-0.144 ***	-0.175 ***	0.840
Rest of Canada[a]					
Economic Indicators					
Educational Attainment				-0.020 ***	0.980
Full-Time Employment[b]				0.345 ***	1.412
Part-Time Employment[b]				-0.138	0.871
Family Background					
Father's education					
Father's highest level of education				-0.030 ***	0.970
Mother's education					
Mother's highest level of education				-0.055 ***	0.947
Intact family				0.073	1.076
Parents ever married				-0.217	0.805
Parents ever cohabited				-0.718 ***	0.488
– 2 Log L without covariates	54993.276	79921.356	79921.356	54993.276	
– 2 Log L with covariates	54881.348	79563.396	79394.383	53131.835	
LR (chi-square)	111.928	357.960	526.973	1861.442	
df	2	4	9	17	

Note: All dummy variables are coded 1 = yes and 0 = no.

[a] Reference category.

[b] Time-variant dummy indicator, 1 = yes, 0 = no.

* $p < .05$

** $p < .01$

*** $p < .001$ (two-tailed test)

Source: The 2006 General Social Survey.

5.2.2 Transition to First Cohabitation for Women and Men

5.2.2.1 Model One – Baseline Effect

Tables 5 and 6 model entry into first cohabitation for women and men respectively, treating marriage as a competing risk. Model 1 in Table 5 shows the baseline effects of visible minority status on entry into cohabitation for women. Visible minority status results in a hazard rate decrease of 51% (100% x [$e^{-0.71878} - 1$]) in comparison to white women. For Aboriginal women, the hazard rate of entering into cohabitation is 131% higher compared to white women.

Table 6 shows the results of the proportional hazard models of the transition to first cohabitation for men. Model 1 examines the baseline hazard rates of first cohabitation, which is 57% (100% x [$e^{-0.8545} - 1$]) lower for visible minority men than for white men. For Aboriginal men, the hazard rate of entering into cohabitation is 65% higher compared to white men. Therefore, the effects of visible minority status with respect to cohabitation is similar for women and men, in that it results in a lower hazard of entry into cohabitation.

5.2.2.2 Model Two – Demographic Variable Effects

Model 2 includes demographic variables – pre-union children and pregnancy – both of which have significant effects on entry into first cohabitation for women and men. Pre-union children for women results in a decreased hazard rate of 74% compared to women with no pre-union children. Pregnancy results in a hazard rate decrease of 20%.

For men, pre-union children and pregnancy, also have significant, negative effects on entry into cohabitation.

5.2.2.3 Model Three – Cultural Indicators

Model 3 in Table 5 includes cultural indicators such as immigrant status, religion, and region. There is a highly significant and negative effect of immigrant status on entry to first cohabitation for women. Immigrant status for women results in a hazard rate decrease of 45% in comparison to native born Canadian women. Religion also has a significant effect on entry into first cohabitation. Religious categories Protestant and None are statistically significant compared to Catholics. In comparison to Catholics, the hazard rate of first cohabitation is 15% lower for Protestants and 45% higher for those with no religious affiliations. Geographic region – Quebec – has a highly significant effect on entry into cohabitation, which results in a hazard rate that is 68% higher for Quebec women than for women in the rest of Canada.

Table 6 shows that, for men, there is also a highly significant and negative effect of immigrant status on entry into first cohabitation. Immigrant status results in a hazard rate decrease of 52% in comparison to native born Canadian men. Religion also has an effect on entry into first cohabitation. Compared to Catholic men, only Protestant men and non-religious men were found to be statistically significant. The hazard rate of entry into first cohabitation is 21% lower for Protestant men and 35% higher for men with no religious affiliations in comparison to Catholics. Geographic region – Quebec – has a highly significant effect on entry into cohabitation, resulting in a hazard rate increase of 95% compared to men in the rest of Canada.

5.2.2.4 Model Four – Full Model for Entry into Cohabitation

Economic indicators are introduced in the full model for women in Table 5. The effect of educational attainment as well as full and part-time employment are highly significant on

entry into cohabitation. Parent's education, intact family status, and having parents who cohabited were also found to have significant effects on entry into cohabitation. Father's education had a positive effect on entry into cohabitation, resulting in a hazard rate increase of 2%. Mother's education also had a positive effect on entry into cohabitation also resulting in a hazard rate increase of 2%. Growing up from an intact family resulted in a decreased hazard rate of entry by 30%. In contrast, individuals who had parents who cohabitated resulted in a hazard rate increase of 125%. Parents ever being married did not have a significant effect on entry into cohabitation, however. Intact family status, and having parents who cohabited have the strongest effect on entry into cohabitation suggesting an effect of intergenerational transmission (Clarkberg, Stolzenberg, & Waite 1995).

In the full model for women, demographic variables – pre-union children and pregnancy – continue to have substantial, significant effects on entry into cohabitation. However, the effects of some of the cultural variables become non-significant when economic variables are introduced. Immigrant status remains significant but region is non-significant. For religion, only Protestants remain significant compared to Catholics while all other religious categories are now non-significant. Visible minority status for women, however, remains significant.

In the full model for men (see Table 6), educational attainment and full and part-time employment do not have significant effects on entry into cohabitation, while mother's education, intact family status, and having parent's who cohabited had mixed effects on entry into cohabitation. Having an intact family resulted in a decreased hazard rate of entry by 28%. In contrast, individuals who had parents who cohabitated resulted in

a hazard rate increase by 125%. Parents ever being married did not have a significant effect on entry into cohabitation for men.

In the full model for men, having a pregnant partner continues to have significant effect on entry into cohabitation resulting in a hazard rate increase of 127% but the effect of a pre-union child is non-significant. With respect to cultural indicators, the results of immigrant status and region remain significant. Immigrant status continues to be highly significant resulting in a hazard rate decrease of 52% for foreign born compared to native born. Visible minority status continues to be highly significant resulting in a hazard rate decrease of 33% in comparison to white men. Therefore, the effects of visible minority status with respect to cohabitation persists for women and men in that visible minority status results in a lower hazard of entry into cohabitation.

Table 5. Proportional hazard models of transition into first cohabitation: women

Variable	Model 1	Model 2	Model 3	Model 4	exp[β]
Visible Minority Status					
Visible minority	-0.719 ***	-0.716 ***	-0.281 **	-0.326 **	0.722
Aboriginal	0.841 ***	0.881 ***	0.905 ***	0.690 ***	1.994
Non-visible minority white[a]					
Pre-union Children[b]		-1.338 ***	-1.304 ***	-0.778 **	0.459
Pregnancy[b]		-0.224 **	-0.167	1.016 ***	2.762
Cultural Indicators					
Immigrant Status					
Foreign Born			-0.599 ***	-0.626 ***	0.535
Canadian Born[a]					
Religion					
Protestant			-0.170 **	-0.155 **	0.857
Other			-0.132	-0.140	0.869
None			0.375 ***	0.277 ***	1.320
Catholic[a]					
Region					
Quebec			0.521 ***	0.542 ***	1.719
Rest of Canada[a]					
Economic Indicators					
Educational Attainment				0.026 ***	1.026
Full-Time Employment[b]				0.275 ***	1.316
Part-Time Employment[b]				0.234 *	1.264
Family Background					
Father's education					
Father's highest level of education				0.020 **	1.021
Mother's education					
Mother's highest level of education				0.017 *	1.017
Intact family				-0.361 ***	0.697
Parents ever married				0.053	1.054
Parents ever cohabited				0.870 ***	2.387
– 2 Log L without covariates	34115.703	45120.317	45120.317	34115.703	
– 2 Log L with covariates	33947.775	44908.073	44601.396	33156.665	
LR (chi-square)	167.928	212.243	518.920	959.038	
df	2	4	9	17	

Note: All dummy variables are coded 1 = yes and 0 = no.
[a] Reference category.
[b] Time-variant dummy indicator, 1 = yes, 0 = no.
* $p < .05$
** $p < .01$
*** $p < .001$ (two-tailed test)

Source: The 2006 General Social Survey.

Table 6. Proportional hazard models of transition into first cohabitation: men

Variable	Model 1	Model 2	Model 3	Model 4	exp[β]
Visible Minority Status					
Visible minority	-0.855 ***	-0.869 ***	-0.289 *	-0.404 **	0.667
Aboriginal	0.506 ***	0.536 ***	0.589 ***	0.427 ***	1.533
Non-visible minority white[a]					
Pre-union Children[b]		-0.764 **	-0.684 **	0.229	1.257
Pregnancy[b]		-0.523 ***	-0.487 ***	0.821 ***	2.274
Cultural Indicators					
Immigrant Status					
Foreign Born			-0.733 ***	-0.724 ***	0.485
Canadian Born[a]					
Religion					
Protestant			-0.230 ***	-0.217 ***	0.805
Other			-0.172	-0.140	0.869
None			0.298 ***	0.238 ***	1.269
Catholic[a]					
Region					
Quebec			0.667 ***	0.656 ***	1.927
Rest of Canada[a]					
Economic Indicators					
Educational Attainment				0.000	1.000
Full-Time Employment[b]				-0.048	0.953
Part-Time Employment[b]				-0.146	0.864
Family Background					
Father's education					
Father's highest level of education				0.009	1.009
Mother's education					
Mother's highest level of education				0.025 **	1.026
Intact family				-0.334 ***	0.716
Parents ever married				0.033	1.034
Parents ever cohabited				0.815 ***	2.259
– 2 Log L without covariates	26355.858	33283.460	33283.460	26355.858	
– 2 Log L with covariates	26257.667	33151.821	32797.997	25651.451	
LR (chi-square)	98.191	131.639	485.463	704.408	
df	2	4	9	17	

Note: All dummy variables are coded 1 = yes and 0 = no.

[a] Reference category.

[b] Time-variant dummy indicator, 1 = yes, 0 = no.

* $p < .05$

** $p < .01$

*** $p < .001$ (two-tailed test)

Source: The 2006 General Social Survey.

5.2.3 Transition into First Union for Women and Men

5.2.3.1 Model One – Baseline Effect

Finally, Tables 7 and 8 show the results of the proportional hazard models of the transition into first union for women and men. As discussed in section 4.4.4 (Modeling Strategy), I modeled the hazard rate of first union, cohabitation or marriage, whichever occurred first. It was assumed that both risks involved the same process of entry. Model 1 in Table 7 examines the baseline effects of visible minority status on entry into first union for women. Visible minority status results in a hazard rate decrease of 55% (100% x [$e^{-0.79348} - 1$]) in comparison to white women. In contrast, Aboriginal status results in a hazard rate increase of 36% compared to white women.

In the baseline model for men (see Table 8), visible minority status results in a hazard rate decrease of 57% (100% x [$e^{-0.8545} - 1$]) compared to white men. Aboriginal status, however, results in a hazard rate increase of 65% compared to white men. Therefore, the baseline effects of visible minority status with respect to first union for women and men results in a lower hazard of entry into first union.

5.2.3.2 Model Two – Demographic Variables

Model 2 in Table 7 and 8 includes demographic variables – pre-union children and pregnancy – both of which have significant effects on entry into first union for women and men.

5.2.3.3 Model Three – Cultural Indicators

All cultural indicators, immigrant status, religion, and region had significant effects. Model 3 reveals a highly significant and negative effect of immigrant status on entry to

first union for women. Immigrant status results in a hazard rate decrease of 16% compared to native born Canadian women. Religion also has a significant effect on entry into first union. All religious categories – Protestant, Other, and None – are statistically significant compared to Catholics. In comparison to Catholic women, the hazard rate of first union is 12% higher for Protestant women, 11% lower for women of other religious affiliations, and 8% lower for women with no religious affiliation. Geographic region – Quebec – also has a significant effect on entry into first union which results in a hazard rate increase of 5% for Quebec women compared to the rest of Canada.

For men (see Table 8), there is also a highly significant and negative effect of immigrant status on entry into first union. Immigrant status results in a hazard rate decrease of 27% in comparison to native born Canadian men. Religion also has an effect on entry into first union; compared to Catholic men, Protestant men, men of other religious affiliation, and non-religious men were all found to be significantly different. Protestant men have a hazard rate increase of 9%; men of other religious affiliation have a hazard rate decrease of 15%; and men with no religious affiliation have a hazard rate decrease of 8% in comparison to Catholics. Geographic region – Quebec – has a highly significant effect on entry into first union, resulting in a hazard rate increase of 15% compared to men in the rest of Canada.

5.2.3.4 Model Four

Model 4, the full model, adds economic indicators and family background variables. Table 7 shows that for women the effect of educational attainment and full-time employment are highly significant on entry into first union. Educational attainment resulted in a hazard rate decrease of 5% while full-time employment resulted in a hazard

rate increase of 44%. Part-time employment was found to be non-significant. Family background variables such as parent's education and parents ever cohabiting were also found to have significant effects on entry into first union. Both father's and mother's education had a negative effect on entry into first union, each resulting in a hazard rate decrease of 2%. Individuals who had parents who cohabitated resulted in a hazard rate increase of 13%. Intact family status and having parents ever married did not have a significant effect on entry into first union.

In this final model for women, the effect of region in the full model becomes non-significant when economic and family background variables are introduced. Also, for religion, only Protestants remain significantly different compared to Catholics while all other religious categories become non-significant. Visible minority status for women, however, remains significant.

For men, educational attainment and full-time employment have significant effects on entry into first union when included in the final model (see Model 4, Table 8). Educational attainment results in a hazard rate decrease of 1.5% while full-time employment results in a hazard rate increase of 28%. Father's education resulted in a hazard rate decrease of 2% while mother's education resulted in a hazard rate decrease of 3%. Having an intact family was non-significant but having parents who cohabitated resulted in a hazard rate increase by 12%. Parents ever being married did not have a significant effect on entry into first union for men.

In the full model for men, the results of immigrant status and region remain significant. Most importantly, visible minority status continues to be highly significant resulting in a hazard rate decrease of 29% for visible minority men compared to white

men. Therefore, the effects of visible minority status persists for women and men in that visible minority status results in a lower hazard of entry into first union.

Table 7. Proportional hazard models of transition into first union: women

Variable	Model 1	Model 2	Model 3	Model 4	exp[β]
Visible Minority Status					
Visible minority	-0.793 ***	-0.783 ***	-0.623 ***	-0.551 ***	0.577
Aboriginal	0.307 ***	0.333 ***	0.339 ***	0.149 **	1.161
Non-visible minority white[a]					
Pre-union Children[b]		-1.444 ***	-1.451 ***	-0.841 ***	0.431
Pregnancy[b]		0.689 ***	0.680 ***	1.857 ***	6.403
Cultural Indicators					
Immigrant Status					
Foreign Born			-0.180 ***	-0.146 ***	0.865
Canadian Born[a]					
Religion					
Protestant			0.112 ***	0.109 ***	1.116
Other			-0.122 *	-0.030	0.970
None			-0.085 **	-0.003	0.997
Catholic[a]					
Region					
Quebec			0.056 *	0.035	1.036
Rest of Canada[a]					
Economic Indicators					
Educational Attainment				-0.056 ***	0.946
Full-Time Employment[b]				0.364 ***	1.440
Part-Time Employment[b]				0.029	1.029
Family Background					
Father's education					
Father's highest level of education				-0.017 ***	0.983
Mother's education					
Mother's highest level of education				-0.020 ***	0.980
Intact family				0.006	1.006
Parents ever married				-0.055	0.947
Parents ever cohabited				0.120 *	1.127
– 2 Log L without covariates	99501.907	160618.630	160618.630	99501.907	
– 2 Log L with covariates	99194.343	159802.900	159723.130	96124.606	
LR (chi-square)	307.565	815.732	895.499	3377.301	
df	2	4	9	17	

Note: All dummy variables are coded 1 = yes and 0 = no.

[a] Reference category.

[b] Time-variant dummy indicator, 1 = yes, 0 = no.

* $p < .05$

** $p < .01$

*** $p < .001$ (two-tailed test)

Source: The 2006 General Social Survey.

Table 8. Proportional hazard models of transition into first union: men

Variable	Model 1	Model 2	Model 3	Model 4	exp[β]
Visible Minority Status					
Visible minority	-0.698 ***	-0.679 ***	-0.399 ***	-0.342 ***	0.710
Aboriginal	0.136 *	0.136 *	0.143 **	0.002	1.002
Non-visible minority white[a]					
Pre-union Children[b]		-1.135 ***	-1.137 ***	-0.320	0.726
Pregnancy[b]		0.433 ***	0.421 ***	1.659 ***	5.253
Cultural Indicators					
Immigrant Status					
Foreign Born			-0.308 ***	-0.326 ***	0.722
Canadian Born[a]					
Religion					
Protestant			0.084 **	0.077 *	1.081
Other			-0.162 *	-0.092	0.912
None			-0.080 *	-0.050	0.951
Catholic[a]					
Region					
Quebec			0.142 ***	0.122 ***	1.129
Rest of Canada[a]					
Economic Indicators					
Educational Attainment				-0.015 ***	0.985
Full-Time Employment[b]				0.248 ***	1.281
Part-Time Employment[b]				-0.128	0.880
Family Background					
Father's education					
Father's highest level of education				-0.018 **	0.982
Mother's education					
Mother's highest level of education				-0.027 ***	0.974
Intact family				-0.058	0.943
Parents ever married				-0.114	0.892
Parents ever cohabited				0.112 *	1.119
– 2 Log L without covariates	74342.815	113204.820	113204.820	74342.815	
– 2 Log L with covariates	74156.191	112864.370	112752.600	72769.400	
LR (chi-square)	186.624	340.445	452.217	1573.415	
df	2	4	9	17	

Note: All dummy variables are coded 1 = yes and 0 = no.
[a] Reference category.
[b] Time-variant dummy indicator, 1 = yes, 0 = no.
* $p < .05$
** $p < .01$
*** $p < .001$ (two-tailed test)

Source: The 2006 General Social Survey.

5.3 Visible Minority Status Effects

In summary, the results from both the life table analysis and the proportional hazard models indicate persistent differences in the pace and rate of entry into first marriage, first cohabitation and first union according to visible minority status. Clearly, visible minorities do not enter any type of first partnership at the same pace or rate as Aboriginals and whites. What are these divergences in family formation patterns indicative of?

Minority status hypothesis states that visible minority status results in differences into entry to first partnership net of other effects. That is, minority group status is an independent factor in influencing family formation (Goldscheider & Uhlenberg 1969). The strong form of the hypothesis implies that differences to union entry among visible minorities will persist across all socioeconomic levels compared to the majority population. On the other hand, the weak form of the minority hypothesis supposes similar levels of union behaviour between visible minorities and whites at lower levels of SES but suggests differentials will be present at higher levels of SES due to the structured nature of opportunities to achieve upward social mobility (Johnson 1979). In other words, minority status effect is most applicable to those seeking upward mobility since these individuals are the most likely to encounter and conform to economic assimilation (ibid).

The results of this analysis provide support for the strong form of the hypothesis. As outlined in research questions 1 to 6 of this study, visible minority status has significant effect on the entry to marriage, cohabitation and first union for women and for men after adding all selected explanatory variables to the model. These differences cannot be explained exclusively away by demographic or socioeconomic factors.

Therefore, the relationship between visible minority status and entry into first partnership is not spurious.

The cultural factors included in the study – immigrant status, region, and religion - showed a significant influence which may indicate culturally normative beliefs concerning marriage and family formation. However, divergences according to visible minority status were not explained away by these proxy indicators of culture.

5.4 Summary

This chapter outlined and discussed the results of the statistical analyses. Life table estimates were first presented to depict the pace and cumulative proportions entering into first partnership. Then, results of the proportional hazard models were presented and discussed comparing various models in order to better understand the role of the explanatory variables in influencing the process of first union entry.

In summary, the above analysis suggests that visible minority status has a significant and ongoing effect on entry into first marriage, first cohabitation, and first union. There is evidence to suggest that the research questions of this study are supported. That is, visible minority status has an effect on the transition to first partnership whether marriage or cohabitation.

Chapter Six: Discussion and Conclusions

Dramatic changes have occurred in the transition to first union in the past four decades. Ideological shifts, economic developments, and the changing makeup of society have resulted in diverse marriage patterns. This study has sought to examine to the influence of visible minority status on these divergent marriage patterns. Using an exploratory perspective, it was theorized that there were significant differences in entry into first partnership according to visible minority status which would be beyond the scope of economic (e.g., gains to marriage and search-theoretic) models in terms of explaining such differences amongst visible minorities, Aboriginals, and whites.

This study attempted to identify the role of visible minority status on entry into first marriage and first cohabitation in Canada. Considering minority status perspective as a framework for this study, consistent differences were observed despite controlling for employment, SES, and cultural factors. This chapter contains three sections. First, a summary of the findings according to the main determinants is provided and discussed. This is then followed by a discussion of the limitations of this study. Finally, the chapter concludes with a brief summary of the project and suggested areas for future research.

6.1 Summary of Findings

Empirical findings are in agreement with the visible minority hypothesis and support the research questions outlined in the study. The following section outlines the important role of visible minority status on entry into first partnership, followed by a discussion on the role of employment and other economic related factors, and lastly a review of other factors of entry into first union.

6.1.1 Visible Minority Status and Union Formation

Visible minority hypothesis highlights the role of visible minority status in shaping the context – sociocultural or otherwise - which influences entry to first partnership. While this hypothesis acknowledges economic and socioeconomic factors in determining union behaviour, group differences between a numerical minority and majority population will persist despite socioeconomic assimilation between them. This is in contrast to the assimilation perspective which argues differences in behaviour are due to differences in SES composition (Day 1984). Underlying forces behind minority behaviour are attributed to the social pressures of achieving upward mobility while having fewer personal resources and human capital (compared to individuals who are part of the dominant group). Therefore, visible minority status was used as a proxy in this study to capture this minority group effect in order to determine its influence on first union timing and entry.

The empirical findings of this study strongly support this hypothesis and confirm that visible minority status reduces the propensity to marry, cohabit or enter into a first union when compared to Aboriginals and whites. For example, hazard model estimates reveal that in the full model, visible minority women are nearly 45% less likely to form a marital union and visible minority men are nearly 25% less likely to form a marital union, than whites. In the analysis, the effect of visible minority status is negative, significant and independent of the confounding variables. From this perspective, visible minority status appears to delay the process of first marriage.

Cohabitation is most often studied in the context of family formation and seen as an alternative to marriage, singlehood or as a prelude to marriage. Economic models see cohabitation as a more economically feasible route to union formation. As such, the

assimilation perspective would argue that differences in cohabitation rates among visible minorities would be due to underlying socioeconomic status. However, in the analysis, the effect of visible minority status on entry into cohabitation remains significant after controlling for all confounding variables. This provides support to the minority hypothesis and research questions of this study which argue for an independent effect of visible minority status net of economic/socioeconomic indicators.

6.1.2 Economic Factors and Family Background Factors on Union Formation

Explaining union formation behaviour from an economic perspective highlights the role of employment. Employment relates to greater personal resources which facilitates entry into marriage. Within assortative mating dynamics, employment is associated with reducing economic uncertainty. The findings of this study support this assumption and are associated with greater likelihood to marry for both men and women. In the analysis, the effect of employment on entry into marriage is positive, significant and independent of other variables. Employment had mixed effects on cohabitation, however. For women, being employed influences entry into cohabitation positively and significantly. Alternately, for men, employment did not have a significant effect on entry into cohabitation. More specifically, for women and men, the difference in the hazard rate of marriage between full-time employed and part-time employed individuals was large (see Tables 3 and 4). Most notably, these findings substantiate the argument that men's employment has more influence in forming a marital union than a cohabiting relationship (Oppenheimer, Kalmijn & Lim 1997; Clarkberg 1999).

Educational attainment is considered in economic models to be an indicator of long-term economic prospects or a "proxy for ultimate socioeconomic status"

(Oppenheimer 2000, p. 29). Viewed another way, educational attainment determines an individual's position in the labour market and as such impacts union behaviour (Mare 1991). In this analysis, educational attainment had a significant, negative effect on the rate of entry into first marriage and first union for women and men. Conversely, educational attainment was found to have a positive effect on entry into cohabitation for women and was non-significant for men. These results may indicate that for both genders, first marriage is delayed until completion of educational attainment but has limited impact on entry into cohabitation.

Family background variables were also found to have a significant impact on first union entry. Some studies have found childhood family experience to have a strong, consistent impact on an individual's life course (South 2001). In this analysis, family background variables such as father's and mother's education, intact family status, parents ever cohabited, and parents ever married were found to have varying degrees of influence. For entry into marriage, parents' education, intact family status (women only), and parents ever cohabiting had significant effects. In other words, parents' education and parents ever cohabiting resulted in a decreased hazard rate of entry into marriage whereas intact family (for women) resulted in an increased hazard rate of entry into marriage. The results of intact family status for women are consistent with studies which also find a greater effect of intact family status on women due to the persistence of sex roles within marriage. Coming from a broken family can be seen to have a greater effect on women because women are more likely to be assigned a more intensively domestic role (Goldscheider and Wait 1986). These findings are also consistent with studies that argue

parental resources affect the likelihood of marriage (Waite & Spitze 1981; Michael & Tuma 1985).

For entry into cohabitation, intact family status was found to have a negative and significant effect for both men and women, consistent with studies that found that less attachment to parents and kin resulted in increased propensity to cohabit since family/kin reinforce pro-marital values (Clarkberg, Stolzenberg & Waite 1995).

6.1.3 Cultural and Other Determinants on Union Formation

The cultural variables in the study generally had significant impacts on first union entry. To varying degrees, immigrant status, religion, and region had an influence on entry into first marriage and first cohabitation. While religion and region had limited influence on first union entry when holding all other variables constant, immigrant status was found to have a consistently significant, negative effect on first cohabitation and first union entry (but not first marriage) for both men and women.

Pertaining to entry to first marriage, immigrant status was significant only for men. For men, being foreign born results in a lower hazard rate of entering into marriage but for women, the results were non-significant. It can be postulated that immigrant status is non-significant for visible minority women due to higher rates of intermarriage for women in certain minority groups. As evidenced by US studies, intermarriage rates between Asian to whites were found to be higher compared to other pairings (Qian and Lichter 2007). The high rates of intermarriage among Asians have also been attributed to the disproportionate numbers of individuals in those groups with higher levels of education but intermarriage is outside the scope of study (Edmonston and Lee 2005).

Conversely, in hypothesizing the negative immigrant effect on marriage for men, research has shown stronger cultural transmission processes for males of immigrant groups (Phalet and Shönpflug 2001). In other words, males in immigrant groups are more encouraged to uphold collectivistic values of their family / community thereby affecting family formation patterns. Since migrant research shows marriage to be a function of maintaining ties to the country of origin (Hooghiemstra 2007), it may be postulated that immigrant men are less likely to intermarry resulting in lower overall marriage rates. For the most part, those who were born outside of Canada have a lower hazard rate of entering into a first union than those who were born in Canada. This may be due to marriage market effects which are outside the scope of this study.

6.1.4 Limitations

After controlling for a wide array of economic, demographic and cultural factors, visible minority status continues to affect the likelihood of first union entry. Minority status hypothesis suggests that this is due to the distinct social and economic barriers and obstacles which arise from the experience of belonging to a minority group. However, while it has been established that differences between visible minorities and non-visible minorities are not a result of social or demographic differences, this study has several limitations.

The first concerns the measure of visible minority status. In order to consider the viability of minority status hypothesis, this study employed visible minority status as a "mono-ethnic" category of racial-ethnic status. As discussed in the introduction, visible minority status was employed as a means to measure broad patterns and overcome limited data. However, research attention needs to be directed to groups that make up

various racial-ethnic categories since the differences among various racial-ethnic groups can vary greatly.

The second limitation is the use of the full-time and part-time employment variable as an economic indicator to capture socioeconomic status and level of personal resources. While full-time employment indicates more stability and resources than part-time employment, full-time employment ranges widely in income and status. Personal income would have been a more accurate description of economic viability, but retrospective income measures were not available in the GSS-20 data file.

A third limitation arises concerning the analysis of marriage market effects. Marriage market effects are important to consider when studying entry into first union and is most relevant to understanding the dynamics which affect individuals when they are actively seeking a partner. However, the GSS-20 does not include measures which reflect the "local marriage market", which has been shown to affect marital behaviour (Guttentag & Secord 1983; Lichter et al. 1992; Qian & Preston 1993).

Finally, the results of this study make it difficult to distinguish between non-marriage and delayed marriage. As discussed in the theoretical framework, Oppenheimer (1994, 1997) made the distinction that women's independence hypothesis is a theory of non-marriage that does not adequately address the issue of delayed marriage. With respect to this study, it is difficult to conclusively determine whether the results for cohabitation mean a delay in marriage, or rather promote non-marriage. This could, however, be determined by studying individuals who have previously cohabited and reached the end of the risk period.

6.2 Summary of Findings and Conclusion

I examined the divergence of Canadian first union patterns using an exploratory theoretical approach based on minority status hypothesis, which states that rational choice (economic) models are framed by a socio-cultural context when it comes to family formation patterns. Despite the limitations of this approach, minority status hypothesis facilitates an initial glimpse of race-ethnic cultural patterns in Canadian society. The effects of visible minority status were observed in addition to employment and SES factors, and cultural factors. The results suggest that employment and related SES and family background factors used in economic models are insufficient in explaining differentials according to visible minority status. And, after controlling for a number of demographic and cultural characteristics, visible minority status still had a statistically significant effect on union entry. These findings support the visible minority hypothesis which states that minority group status is an independent factor in influencing family formation and implies that differences to union entry among visible minorities will persist across all socioeconomic levels compared to the majority population.

The findings reported here highlight the importance of using new theoretical approaches in studying trends in union formation in Canada. Although, this study provides only an initial, exploratory look into differences in marriage and union trends based on visible minority status, it provides an important first step in documenting this substantial population. This study also demonstrates the limitations of applying an economically oriented analysis to explain trends and patterns within a specific sociocultural setting. The inability of the gains to marriage model to explain the visible minority differentials suggests that there are certain sociocultural factors which must be considered as significant influences. Continued efforts to gather data on racial-ethnic

groups across Canada is required to expand our understanding of the complexities of race-ethnicity and family formation.

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Appendix

Table 9. Correlation matrix

	Sex	Union	Immigrant Status	Visible Minority Status	Education	Religion	Intact Family	Region	Mother's Education	Father's Education	Parents Ever Married	Parents Ever Cohabited
Sex	1											
Union	-0.06192	1										
	<.0001											
Immigrant Status	-0.03148	0.01392	1									
	<.0001	0.0491										
Visible Minority Status	0.02424	-0.15822	-0.42168	1								
	0.0006	<.0001	<.0001									
Education	0.0306	-0.00649	0.06049	-0.02238	1							
	<.0001	0.3589	<.0001	0.0016								
Religion	-0.06754	0.14595	0.07426	-0.10067	0.06091	1						
	<.0001	<.0001	<.0001	<.0001	<.0001							
Intact Family	-0.01859	-0.12681	-0.00339	0.057	0.07624	-0.07436	1					
	0.0086	<.0001	0.6316	<.0001	<.0001	<.0001						
Region	-0.01473	0.04694	-0.07582	0.07376	-0.00659	-0.29295	0.00215	1				
	0.0373	<.0001	<.0001	<.0001	0.3517	<.0001	0.7614					
Mother's Education	-0.02594	0.27249	0.02511	-0.05495	0.2009	0.13549	-0.03425	-0.07384	1			
	0.0002	<.0001	0.0004	<.0001	<.0001	<.0001	<.0001	<.0001				
Father's Education	-0.02552	0.26053	0.1067	-0.11014	0.22839	0.13439	-0.01099	-0.05437	(0.51614)	1		
	0.0003	<.0001	<.0001	<.0001	<.0001	<.0001	0.1201	<.0001	<.0001			
Parents Ever Married	0.0187	0.13015	-0.00224	-0.07795	-0.07441	0.02875	-0.29503	0.02303	-0.00214	-0.0042	1	
	0.0082	<.0001	0.751	<.0001	<.0001	<.0001	<.0001	0.0011	(0.7619)	0.553		
Parents Ever Cohabited	-0.02001	0.27396	-0.01112	-0.06811	-0.07933	0.04152	-0.18162	0.08266	0.08815	0.0545	0.31217	1
	0.0047	<.0001	0.116	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	

Note: Correlations larger than .50 are shown in parentheses.