Marriage Patterns in Historical Perspective: What Can We Learn from Three Centuries of Marriages in Quebec?

Marianne Caron, Lisa Dillon, Alain Gagnon

Department of Demography, Université de Montréal
Correspondence: marianne.caron@umontreal.ca

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ABSTRACT:

The historical demographic literature on marriage has devoted a great deal of attention to understanding how and why age at marriage and the rate of celibacy were historically higher in North Western European countries. More recently, comparative work in a Eurasian perspective confirmed earlier and more universal marriages in Eastern Asia. On the other side, North America also had earlier ages at first marriages and lower rates of permanent celibacy than Western Europe, but later marriage than Eastern Asia. This study will provide insights on marriage patterns in a region somewhere in the middle of Western European and East Asian marriage. We will explore how families and the context may have influenced jointly or separately the timing and probability of marriage in Quebec using three centuries of marriages and a large territory covering from sparsely populated and isolated parishes to densely populated cities like Québec and Montréal.

1. INTRODUCTION

The aim of this paper is to explore the process of men's and women's timing and probability to marry. The historical demographic literature on marriage has devoted much attention to understanding how and why age at marriage and the rate of celibacy were historically higher in Western European countries **(Hajnal 1965; 1982)**. More recently, comparative work in a Eurasian perspective emerged, confirming the differences and uniqueness of Europe when compared to Eastern Asia where marriages occurred much earlier, and were universal **(Engelen and Wolf 2005; Lundh and Kurosu 2014)**. Beyond the statistics, researchers agree that differences in the family households system

is part of the explanation; while men and women traditionally established a new household thereafter their marriage in Europe, women usually joined her husband household when married and lived with his family of origin in Eastern Asia. In that fashion, women were expected to marry young to contribute early to her future household.

Nevertheless, the household structure alone cannot account for all variations in marriage patterns; North American women and men showed earlier ages at first marriage and lower rates of permanent celibacy than North Western Europe, while the neolocal tradition followed the European colonizers when they crossed the Atlantic **(Smith 1993)**. Other researchers supposed that the higher availability of land facilitated the accumulation of needed resources to establish the new household thereafter the marriage **(Smith 1993; Bouchard 1996)**. Previous research explored how the parents and siblings could influence the timing of marriages **(Dillon 2010; Caron and Neyrinck 2014)**. With this research, we propose to explore in more depth the marriage patterns of Québec over three centuries, integrating both family and contextual characteristics to our analyses to understand how they varied across and in each generation. In that way, we will trace the diversity of marriages patterns within Québec to better understand the subtleties of the probability and timing of marriage.

2.1. THEORETICAL BACKGROUND

Various social sciences addressed the question of marriages, demography included. For population studies, marriage is an event that has indirect repercussions for the population structure since it is, or was in some societies, closely related to fertility. In populations in

which marriage is a necessary condition for family formation, like the preindustrial period, marriage pinpoints the beginning of women's reproductive lives. For instance, Thomas Malthus in his *Essay on the principle of population* identified late marriage as a *preventive* check to limit population growth **(Malthus 1826)**. In that respect, a marriage late in a woman's life course shortens the duration of her reproductive period, hence reducing the number of children she will have in a context in which efficient contraceptive methods do not exist, or are not accepted. However, such preventive checks were not needed in regions where population growth was not a problem, like North America. Therefore, and especially for women, the timing of marriage is an important factor to consider when we are interested in preindustrial populations, and may be at the centre of regional differences.

Following the Malthusian theory, John Hajnal made a considerable contribution to the study of marriage with his hypothesis of the distinctive European marriage pattern which is different from the rest of the world.

> *« The distinctive marks of the 'European pattern' are (1) a high age at marriage and (2) a high proportion of people who never marry at all. The 'European' pattern pervaded the whole Europe except for the eastern and south-eastern portion »* **(Hajnal 1965)**

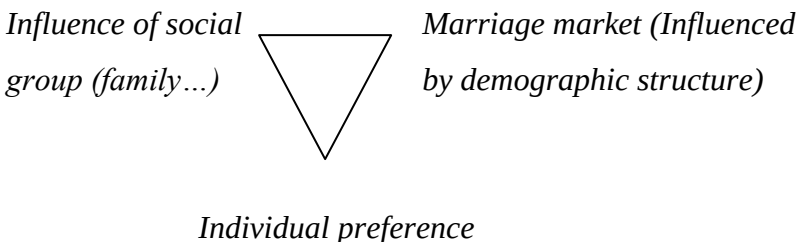
Unlike Malthus, John Hajnal did not associate late marriage in Western Europe with the limitation of population growth, but rather with the perspective of individuals and families. First, he suggests that the West European neolocal tradition, namely the formation of a new household right after marriage without cohabitation with the parents,

forced men to delay their marriage until the time they have sufficient resources to sustain a new household. In comparison, societies which traditionally form complex households, as seen in Eastern Asia, newlywed couples lived under the same roof as their the parents, usually the groom's parents, and contributed immediately to household productivity without needing to accumulate resources prior to marriage. Secondly, Hajnal suggests that a society in which women have opportunities outside married life may feature later marriage and higher proportion of celibacy.

Recently, the Malthusian theory and Hajnal hypothesis have been addressed from a Eurasian perspective. In their book, *Similarity in Differences* **(2014)**, the Eurasia project compared marriage patterns of both Western European and East Asian communities using micro-individual data. The main contribution of this collective effort is to show that beyond the expected aggregate differences that divide these two regions in term of age at first marriage and proportion of never-married, similarities related to the decisions and actions taken by individuals and families were found across Western Europe and East Asia. From a North American perspective, we are however still left with questions that could explored more deeply about why the age at first marriage and the proportion of never-married persons was lower in North America than in Europe, while the North American colonies followed the same neolocal tradition found in western Europe **(**Scott Smith **1993)**. Could the adoption of a research framework similar to thatused by the Eurasian project, namely a model that distinguishes the decisions made by the actors in the marriage market, individuals and families/household, lead toward a better understanding of the North American marriage patterns ?

It is commonly accepted that the marriage decision is influenced by the interplay of three major factors as shown in **figure 1**; the individuals' preferences for certain characteristics a spouse should have, the social pressure they encounter from the social group they are part of - such as family -, and the opportunities present in the marriage market **(Kalmijn and Flap 2001).**

Figure 1- The marriage decision



Whereas this theory of matrimonial decision-making may apply to various contexts, the degree of importance of each factor may vary. We have reasons to believe that an individual's preferences were less likely to play an important role in the decision process in pre-transitional populations **(Lestheague 1995).** Marriage was primarily viewed as a necessary alliance for social reproduction, therefore a key part of an individuals' life. Even though the people living in these pre-transitional societies certainly had their own desires, compromises for such an important decision had to be made:

> "*between his family and hers, between parents and children, sometimes between the heart and the head, and between social property and personal commitment."* **(Olson and Thornton 2011).**

Individuals

Men and women's different incentives to marry are difficult to observe quantitatively, especially for historic populations for which we have no surveys and interviews. However, it may be possible to infer from available information a general idea of individuals' capacity to choose their partner. For example, Dixon argues that the sex ratio at marriageable ages can alter the timing of age at first marriage; in addition, marriage intensity was lower and marriage timing was later where the elders did not arrange a match for their children **(Dixon 1971).** Other studies have used age at marriage to examine how family characteristics and contextual factors interplayed with individuals' preferences. For example, Van Bavel and Kok suggest in a study on intergenerational transmission of age at marriage that in societies with strong group constraints, individuals had less opportunity to express freedom acquired through socialization and personality traits **(Van Bavel and Kok 2009).**

Families/households

Although marriage is today viewed as an individual event, in historic populations, marriage should be considered a part of the family of origin life-cycle. The theory of the economy of family, influenced by the work of Chayanov **(1966),** posit the idea of a development cycle constantly modifying the shape of the household; these cyclic modifications of the household drove the peasant economy. Following the establishment of a household upon marriage, household burden first increases as children are born and require resources. Household burden then stabilizes when the eldest children become old enough to contribute to the household; household burden finally decreases as children

marry and form their own households **(Greer 1985).** Therefore, marriage formation bears consequences not only for the two individuals involved in that alliance, but also for the members of their family of origin **(Olson and Thornton 2011; Ekamper et al. 2011; Caron and Neyrinck 2014).** Accordingly, it has been demonstrated that demographic components of the family of origin - namely birth order and sibship size - influence one's ability to marry and the timing of that marriage **(Smith 1973; Brenan et al. 1982; Alter 1988; Dillon 2010).**

Likewise, how parents divided their resources among their children could result in sibling competition for the opportunity to marry **(Bengtsson et al. 2014; Caron and Neyrinck 2014)**. Parental input into the marriage decision could vary among the siblings in relation to the timing in the family life-cycle. Variation in the degree of equality inherent in local customs may favor collaboration or competition between siblings. For example, it has been shown in Northern France that an egalitarian inheritance system, in comparison to the unequal system of primogeniture in which the first son is preferred, improved relationships within the family. It is later in the family life-cycle, upon the death of parents - especially when half-siblings were involved-, that conflicts among the siblings could appear **(Segalen 1985).** An egalitarian inheritance system did not always result in equal distribution of resources among children, as gendered differences were common; for instance, in the Saguenay-Lac-Saint-Jean, Quebec, region, sons were more likely to receive farm lands while daughters' destiny was to marry an established men and inherited some household goods **(Bouchard 1996)**.

M*arriage market*

The demographic structure of a population is an important factor to consider when studying marriage as it affects the size of the pool of potential spouses available in the marriage market. Needless to say, a potential spouse is needed if one desired to marry. The size of the marriage market depended on local context, whether urban or rural, as well as period, whether early settlement/new frontier or long-existing community. In addition, the composition of the marriage market can be affected by previous demographic conditions such as fluctuations in infant mortality or the number of marriages in the previous months.

Moreover, in a world where the means of communication were limited and transportation more or less efficient, the distance between potential spouses was constrained to a small radius. In general, five kilometers - which represents approximately an hour walk - is the distance one could regularly walk in order to court a potential partner. Moreover, a distance greater than 20 km could mean entering a community that one was not acquainted with**.** As Ekamper et. al. cited: *"'Court the boy next door, so you know what you get'* and *'Lovers coming from far away are to be feared' "***(Ekamper et al. 2011)**. Thus, spatial isolation potentially had an impact on the marriage decision by creating a smallere pool of potential spouses with limited possibilities.

2.2. CONTEXTUAL BACKGROUND

With the objective to use a framework similar to that of the Eurasian project, we will limit our analyses of North America to a region reputed for its large historical micro-

individual databases, the province of Quebec in French-speaking Canada. While this region may differ culturally from the rest of North America, both in term of religion and language, it featured new frontier settlements and high availability of land resources, making it an excellent and comparable context in which to study marriage processes.

Historically, the province of Quebec went through considerable political change through the three centuries which comprise this study. The Quebec territory evolved as a political unit between 1621 and 1867, and these changes are reflected in its name changes, from ”Le Canada” in its early settlement period, to Lower Canada in 1791, to Canada East following the Union of the Canadas in1841, to the province of Quebec when it joined Ontario, New Brunswick and Nova Scotia to form the Dominion of Canada in 1867. Nonetheless, no major change in the inheritance rules were observed, as the egalitarian component remained in the Civil Code of Quebec after the abolition of the *Coutume de Paris* in 1866 **(Ruggiu 2007)**, with the exception of a short period following the British conquest (1760) before French Civil Code was reinstituted in 1774 for the province of Quebec. The adopting of the French Civil code meant the population could continue to handle their property as they did before.

The geographic expanse of this territory evolved greatly during the period covered in this study, with settlement first occurring in the St. Lawrence valley, then expanding further inland. For instance, we can note the Saguenay-Lac-Saint-Jean region about 200km North of Québec city was open to colonization only from 1842. Within the period covered, the population increased from a few inhabitants in early 17th century, to 70 000 in 1760, 1 110 664 in 1861 and 2 003 232 in 1911 **(Pouyez and Lavoie 1983; Courville**

1996). Parallel to this population growth, the number of parishes also gradually increased to support the population growth that, with each generation, expanded the territory. After a few generations,older parishes progressively suffered from land saturation. Similarly, the cities of Québec, Montréal and Trois-Rivière grew, as well as other parishes that urbanized during the 19th century like St. Hyacinthe, Dorchester (St. Jean), Sorel and later Terrebonne **(Courville, 1987)**.

The demographic structure of the population was characterized by high fertility, and relatively low emigration for a long period before the United States began to attract Quebec emigrants in the 19th century, mostly in the last decade, although it started earlier from mid-19th century **(Courville, 1996)**. Marriage patterns in turn evolved in important ways, as demonstrated by previous studies of shifts in the age at first marriage.

Table 1: Age at first marriage by sex, Quebec, 1621-1911

	Before 1663[1]	1680-1740[2]	1852[3]	1881[3]	1911[3]
Men	28.6	26.7	25.5	26.8	26.9
Women	19.3	22.8	23.7	24.8	24.1

Sources : [1]Charbonneau 1987; [2] Desjardins 1995; [3] Pouyez and Lavoie 1983

Table 1 shows how age at marriage changed differently for men and women, with more important shifts observed for women. From the 17th century to early 20th century, age at first marriage for women marriage steadily rose until 1881, and then dropped a bit between 1881 and 1911 years; for men, on the other hand, age at marriage diminished until of the midpoint of the 19th century, when it was 25.5 years, and then rose slightly duringthe second half of the 19th century. The very early age at first marriage for women

in the period before 1663 is related to a strong shortage of women in the marriage market, a situation that was addressed by the input of several women, *les filles du roi*, who immigrated from France during the 1663-1673 period **(Charbonneau 1987, Gauvreau 1991)**. From these averages, we see that the considerable age gap in age at first marriage between men and women reduced over time to stabilize at some point in the 19th century.

3. RESEARCH QUESTIONS AND HYPOTHESES

In this paper, we will explore how both families and contexts may have influenced the timing and incidence of 17th, 18th- and 19th-century Quebec marriages. If we assume that most people wanted to get married during that period, either for rational or romantic motivations, two questions remain: 1- What prevented some from getting married ? and 2- What factors influenced the timing of marriage ? More precisely, did parents and siblings influence the occurrence and timing of marriage, and do these effects still stand when we control for contextual characteristics? Furthermore, in which specific ways did context intervene in the marriage process? What were the contexts that favoured early marriage and which ones delayed marriage? Could families intervene to counterbalance the negative effect some restrictive contexts may have had?

Based on our previous research and findings from the literature, we anticipate finding significant familial effects. Siblings should exhibit mixed effects on the chances of ego's marriage, either a negative effect when they are competing for available resources, or a positive effect once the majority of siblings have married and cease being competitors for resources but rather become another agent in the family who may facilitate marriage. Having a farmer father should favour the marriage of sons as such fathers will have farm

land to help establish their sons, but the marriage of these men might arrive later in the life course depending on the moment when the father is ready to transmit parts of his land.

In addition, we will compare different contexts, notably cities versus isolated parishes, or regions with high availability of cheap farm lands versus regions with saturated lands; we will also explore how these contexts evolved across the 17th, 18th and 19th centuries in the province of Québec. We believe geographic context may influence the timing of marriage; for example, the saturation of the land in older parishes which limited the division of the land among sons after some generations, thus restricting resource availability. Another contextual factor which may influence the probability to marry is the size of the marital market: living in settings which featured a more restrictive pool of potential partners could hinder courtship and marriage. Conversely, even though we can expect to find bigger marriage markets in urban parishes, other factors such as economic activities related to early industrialisation in late 19th century might delay marriage for some, including women who decide to work for a period of time prior to marriage.

4. DATA

To answer these questions, we will use data drawn from two different databases that harmonize well together. Our first database is the Registre de la population du Québec ancien (RPQA) which covers the St. Lawrence valley during the period 1621 to 1799. This database was constructed using parish registers of baptisms, marriages and burials acts of the French-Catholic population with the family reconstitution methods **(Desjardins, 1998)**. With this database, it possible to have the biography from birth to

death, and link an individual's life course to those of their parents and siblings (and any other kin), allowing us to consider the effect of the family life cycle. Unlike what was done by the Eurasian project, we cannot situate the individuals within their household. Nonetheless, we are privileged to have the possibility to study multiple generations with dense kin networks across a broad territory consisting of various contexts at different point of time.

For the 19th century, we will use the data of the Balsac project which has all Catholic marriages contracted in the province of Québec from 1800 until 1912 (1971 in its full version), as well as the baptisms and burials for the Saguenay-Lac-Saint-Jean region (SLSJ), data also linked via family reconstitution methods. The nature of the first part of this database (the provincial-level marriage database) does not allow us to use event history analyses since only marriages, without date of birth are available. However, these marriage certificates indicate whether the bride and groom were minor (under 21 years) or major (21 years and over) at the time of the marriage, which is a good indicator of early marriage. Also, since only marriage certificates are included in the BALSAC provincial marriage database, it is impossible to use this particular source to calculate the proportion of never married with that source; for this calculation, we can turn to the nominal censuses of the second half of the 19th century. We can, however, study the population of the SLSJ region during the second half of the 19th century using event history analyses, similar to what we can do with the RPQA. We must keep in mind that the SLSJ region was a frontier population featuring earlier age at first marriage than the rest of the province of Quebec during that period.

Using the RPQA in conjunction with the BALSAC provincial marriage database as well as the family reconstitution of SLSJ provides the depth necessary to study the marriage patterns in the province of Quebec from its early days until the beginning of the 20th century, covering a large period of Canadian history. Moreover, these two databases cover a large territory that allows us to compare various contexts, from isolated parishes to cities, in various points in time.

5. RESEARCH METHODS

In this paper, we use a variety of statistical analyses to capture how family formation and the context evolved through the 17th to early 20th centuries in the province of Québec. First, we use descriptive analyses to explore variations in age at first marriage and the proportion of never-married at age 40, and how it differed for men and women. These analyses are done with a restricted selection of our individuals; we only keep the ones who know lived to age 40. With this criteria, only the ones with a date of birth and death are selected, therefore individuals from the province of Québec before 1760 (RPQA) and SLSJ 1842-1872 (SLSJ BALSAC).

Secondly, we use logistic regression for the probability of marriage and for the probability of marriage before age 21 to assess which characteristics of the family and the context remain when we control for both. In addition, we can compare how the family and context had or not a different influence on the probability and timing of marriage. The logistic regression for the probability of marriage is done with the same restricted dataset than the descriptive analyses; therefore individuals who lived up to age 40. The logistic regression for the probability of marriage before age 21 is done with the full

datasets of RPQA and BALSAC covering the whole province of Québec from 1660 to 1912, restricted to the individuals who married and for whom we have either an age at first marriage, or the mention "*mineur/majeur*" (age 21).

Thirdly, we use event-history analyses to analyse the time to first marriage. These methods have the advantage, contrary to logistic regression, to capture the effect of time in the analysis. Marriage is an important event in the life course of an individual, and event-history analyses allow to consider the variations in the family life cycle and the contextual environment that precedes the marriage by the inclusion of time-varying covariates. Moreover, these models take into account the censoring, which have the benefit to allow us to include individuals who were not 40 at the end of the period[1]. For these models, we use piecewise-constant exponential models with time intervals of one year.. In addition, we fit models with individual-time nested within individuals, nested within families using the shared frailty specification (or random effects) for the family. Therefore, we control for the unobserved characteristics of the family that may favored early marriage for some, or prevent marriage for others. These models are run separately to compare period of time, and build in three steps: (a) Family covariates (b) Context covariates and (c) Both the family and context covariates.

[1] We however keep the condition of knowing the date of death to make sure they were still alive at the end of observation. Considering the necessity of a birth date and death date, these analyses were done with RPQA and SLSJ BALSAC datasets. For RPQA, death dates are available up to 1850, and we also excluded individuals who emigrated outside the province of Quebec. For SLSJ BALSAC we have death years up to 1971, and excluded individuals who emigrated outside the SLSJ territory.

Finally, we use binomial multilevel models for the probability to marry before the age 21, also with a random effect for the families. To have the broader picture through time from 17th century to 1900, we use the same model building method than for our event-history analyses models, and the full version of our datasets. Contrary to the previous models, these are not restricted to SLSJ region in the 19th century, but comprise the whole province of Quebec, including more diverse contexts like urbanizing parishes around Montréal.

Measurements

For this paper, a considerable amount of work was realized to be able to capture the effect of the families and context in our analyses. First, concerning the families, the father occupation (or SES) are given in BALSAC with the HISCLASS codification scheme of HISCO codes. We recoded the 12 categories into 5 as shown in Table 2. These are not available for the RPQA dataset

[Table 2]

For the probability to marry, parents' presence was conceptualized as whether or not the father/mother was alive at the individual 35th birthday. For the probability to marry before age 21, it was either the mother/father was alive at the marriage (RPQA), or the father/mother presence is mentioned on the marriage certificates (BALSAC). The married siblings are the total number of married siblings for the probability to marry (or is time-varying for the event-history analyses), and the number of married siblings before the marriage for the probability of marriage before age 21.

The contextual covariates included in this research are the type of parish and the time since the parish foundation. First, for each combination of parish/year, we determined whether the parish was "urban", rural isolated or rural non-isolated. The cities of Québec, Montréal and Trois-Rivières are qualified as urban, although the reality from the 17th century is different than in the 19th centuries. Also, from mid-19th centuries, the parishes of St-Hyacinthe, Sorel, Dorchester (St. Jean) and Terrebonne all surrounding Montréal were also considered urban. The threshold used to consider a parish "isolated" is 20km, meaning there was not another parish in a radius of 20km of that parish in the year. Therefore, an isolated parish in 1680 may be a rural non-isolated parish in 1720 if a new parish was founded close by in the meantime. In addition, we added the year of the parish foundation to our data, approximated from the year of the first marriage celebrated there, and calculated the time since the parish foundation at each point in time.

6. RESULTS

[Table 3]

Marriage patterns

First, if we compare the mean age at first marriage of men and women to the rules common to the Northwest simple household system (over 26 for men; over 23 for women), our results are actually very close to Hajnal threshold **(Hajnal 1982)**. The mean age at first marriage for men in all regions vary from 26.2 to 27.3, while it is between 22.9 to 23.2 for the women **(Table 3)**. These mean age at first marriage are also, for instance, a bit older than what observed in certain East Asian context **(Lundh and**

Kurosu 2014). Nevertheless, when we divide the province of Quebec by the characteristics of the parishes, we get a variation of age at first marriage. For men, we observe a higher mean age at first marriage for the ones in parish founded more than 60 years (27.7 vs. 27.3 for birth cohort before 1730; 26.6 vs. 26.4 1730-1759), but a lower mean age at first marriage in younger parishes (27.1 before 1730; 25.4 1730-1759). For women, a similar situation is observed with mean age at first marriage spreading from 22.6 for younger parishes to 23.8 for older parishes for the birth cohort before 1730, and respectively 22.5 to 23.2 for the 1730-1759 birth cohort. This is a first indication that the first generations in the frontier population may benefit from the high land availability, but that the situation may get closer to the European pattern once the farm land is saturated.

[Table 4]

In terms of proportion of never-married at age 40, the descriptive results show patterns of a population with an almost universal marriage regime. Very few people who lived to age 40 did so without getting married at one point, approximately 5% of men and 6% of women **(Table 4)**. These number however do not count men who have chosen more "adventurous" lifestyle like fur trader whom we might have loose track and therefore could not find their death date. However, the proportions of successful link are over 90% with the RPQA, we are not too concerned about this issue. Both for men and women, the highest proportion of never-married at age 40 could be found in urban parishes (6.41% for men and 8..59% for women for the birth cohort before 1730; and respectively 5.68% and 6.28% for the 1730-1759 birth cohort) and in parish founded for more than 60 years (6.38% and 8.61%; 5.16% and 5.89%). Therefore, even in more "difficult" region to

marry, the vast majority of men and women found a way to get married, even if it may happen a bit later in the life course.

[Table 5]

The marriage rates per 1000 **(Table 5)** show in more details how marriage patterns varied for the men and women before 1800. First, we observe that the higher rate for the men were in the 25-29 age group (123.8‰ before 1750; 123.6‰ 1750-1799), while it is the 15-19 age group for the women (respectively 134.2‰ and 168.3‰). To compare with other non-European population, Tsuya and Kurosu **(2014)** obtained for two Northeastern Japanese villages between 1716-1870 the highest first marriage rate in the 20-24 age group for men (173.3‰) and in the 15-19 age group (308.9‰) for women, but also showed a rate of 132.9‰ for the women in the 10-14 age group. Therefore, although marriages were early in the province of Quebec, especially for women since many married before age 20, these marriages were still later than what observed in certain East Asian communities. If we take a deeper look into regional variations, we observe that only the level of the rate differs, but the trend of higher marriage rates within the 25-29 age group for the men and 15-19 for the women always remain.

[Table 6]

In addition to the marriage rates by age group, it is possible to capture early marriage by the proportion of men and women who get married before age 21. **Table 6** shows the proportion of couples with both spouses under age 21 at marriages, or both over age 21, and the couples with only either the men or the women under 21. First, we note that,

overall, 50.6% of marriages were between both men and women over age 21 (44.09% in the period before 1750 to 55.83% in the 1900-1912 period), which inversely means that almost half of the marriages involved an individual under age 21. In general, it is in the urban parishes that the proportion of marriage involving a man and a woman over age 21 occurred more often. Furthermore, the marriage between men over age 21 and women under age 21 decreased from 48.04% to 33.24%. The proportion was always higher in parishes founded for less than 20 years than the parishes founded for more than 60 years. Inversely, the marriages involving a woman over age 21 and a man under age 21 remained below 5% in all the periods, but we can observe a slight increase from 1750 when compared to the period before 1750. Finally, we can conclude from **table 6** that the marriage before age 21 is much more common for the women (8.06 % + 37.54% = 45.6%), than for the men (8.06 % + 3.80% = 11.86%).

The family and context

[Table 7]

Following the description of the marriage patterns, and with a glance at how the characteristics of the context might have an influence on the probability and timing of marriage, we now turn to our multivariate analyses adding control for the characteristics of the family. Table 7 shows both the probability of marriage and the probability of marriage before age 21 for men and women, complemented by the odd ratios of logistic regressions including all covariates to assess whether the differences are statistically significant.

For the family, the presence of the parents has different effects on the probability of marriage and the probability of marriage before age 21; while the death of the parents is associated with a higher likelihood of marriage for men (OR = 1,203** father dead & 1.114+ mother dead in model 1), the presence of a parent is associated also with a higher likelihood of marriage before age 21 (OR= 1.657*** father presents & 1.095*** mother present in model 3). For women, while they have similar results than men for the probability of marriage before age 21, the death of a parent is associated with a lower likelihood of marriage (OR= 0.919 father dead & 0.893* mother dead in model 4). For the effect of married siblings, the absence of married brothers (OR= 0.797* for men and 0.690*** for women) or married sisters (OR= 0.712*** for men and 0.848+ for women) are both associated for men and women with a lower likelihood of marriage, but a higher likelihood of marriage before age 21 (OR = No brothers: 1.348*** men and 1.338*** women & No sisters: 1.354*** men & 1.580*** women). The difference seems to indicate a different dynamic among families with no married children and the ones with married children, the second having more success to find potential spouses. However, it seems that for the ones that get married without having married siblings, who are also more likely to be the firstborns, they will do it sooner in their life course.

For the contextual covariates, we have few statistically significant results for the probability of marriage, an indication that although there is variation in the marriage patterns between contexts, the family helps individuals to adapt themselves to the situation by altering the timing, not the probability of marriage. The exception are the urban parishes that are associated with lower likelihood of marriage for both men and women (OR = 0.760*** men vs. 0.733*** women). Likewise, the parishes founded for

60 years or more are also associated with a lower likelihood of marriage before age 21 for both men and women (OR = 0.920*** for men and 0.881*** for women).

Duration time to first marriage

[Figure 3]

Event-history analyses feature both the timing and probability of marriage in the results. Therefore, it is not always easy to distinguish both effects with the results. However, non-parametric analyses known as Kaplan-Meier survival graphs helps us to visualize how fast and in which proportion marriage occurred. **Figure 3** presents the Kaplan-Meier survival analyses both for men and women of first marriage by the time since parish foundation. First, we clearly see that the curves fall more quickly for women than for men, another indication that they marry earlier in their life course than the men. Likewise, the curve for the ones who are in a parish founded for less than 20 years is steeper, especially for the women in the period before 1750. Inversely, the curve for the parishes founded for 60 years or more falls a bit less quickly. However, if we take a closer look at analysis time 25 (equivalent to age 40), we observe that the three curves are more or less at the same level, which indicates no major differences in the proportion of men and women who get married, although there is a bit more differences for the women in the period before 1750.

[Table 8&9]

Next, the event-history analysis models with a shared frailty specification include a theta term informative of the interfamily variations. With a quick transformation of that output

(exponentiation of the square-root of theta, minus one), we have an easy to interpret percentage of how the hazards vary in relation the baseline risk. For instance, the hazard is approximately 68% lower or higher than the baseline risk for men in the period before 1750, while it is approximately 78% of the women. In general, the variation is more important for the women in the two periods before 1800, but for SLSJ 1842-1912, there are more variations for the men.

The model building steps of models presented in Tables 8&9 indicate that no major differences exist when we control only for the family characteristics or only the contextual characteristics and then control for both altogether. We observe variations in the significance level, and on the strength of the effect, but there is no change in the directions of the effects. For instance, in the model for men in the period 1842-1899 in SLSJ, the low skilled father's occupation were not significant if we only control for the family, but gets significant (at the 0.10 level) if we control for the context. Another example would be the hazard ratio for the effect of the sisters for the women in SLSJ for the period 1842-1899. In the same model, the relative risk to marry for the men in parish founded for less than 20 years went from 1.413*** with only control for the context, to 1.386*** with a control for both family and context.

In addition, if we compare results from **Table 7** to the ones in **Table 8&9** for the parents' presence, we see that the results are closer to the ones for the probability of marriage before age 21 for the father dead (HR = 0.940+ Model 1c & 0.901*** Model 2c for men and 0.948* model 6c for women). Since the covariate in these models are time-varying, they represent the hazard of getting married from the time the father died, and in this case

the father's death is associated with a lower likelihood to marry. Also, with more precision in the attribution of our covariates for the time since parish foundation possible with the use of time-varying covariates, we get stronger results that show that "older" parishes are associated with a lower relative risk of marriage for both men and women.

Timing of first marriage across periods

[Table 10]

Finally, our multilevel analyses of the probability of marriage before age 21 offer a broader picture of how the timing of first marriage varies over time in the province of Quebec with the possibility to use the full datasets. While these tests are not shown, log likelihood ratio tests were done to determine whether these two level models have a statistically better fit than a one level model, which was the case (Also, a three level model with individual nested within the family, nested within parish showed a better fit than the two level models, as well as a higher variance between families than between parishes). First, we see that the between family variance is much higher for the men than for the women. There is also much more variation in the variance throughout time for the men, while the variance remains more or less the same for the women.

Next, if we take a look at the family characteristics, we can see a changing trend of the effect of father's occupation. When compared the period 1850-1899 to the period 1900-1912 to the men with father in another occupation than a farmer, the odds ratios all change direction (only when we add the context covariates, results not shown). This may indicate a shift in the employment situation in the society in general at the onset of the

20th century, as well as for the lifestyle of farmers. For the women, the father's occupation has a similar effect throughout time; a father in the higher/middle class is associated with a lower likelihood of marriage before age 21 than for women with a farmer father, while the association is the inverse for women with a skilled and low skilled father.

For the parents' presence, to have a father or a mother present at marriage is associated with a higher likelihood of marriage before age 21 both for men and women in all periods. We can note that the presence of a father of men gets more important as we advance in time, which might indicate that men who get married before age 21 after 1850 were more often doing it under strong suggestions from their father. The effect of the married siblings is more or less the same than what we got from our logistic regressions, and the odds ratios are going up and down with no remarkable trend throughout time. Therefore, no married brothers and sisters are generally, with a few exceptions, associated with a higher likelihood to marry before age 21 both for men and women. Also, to have 4 or more married brothers or sisters is associated with a lower likelihood of marriage before age 21 for women; for men the results are mixed and vary through time without a clear pattern.

The contextual characteristics also show interesting patterns. First, it is interesting to see that to live in an urban parish compared to a rural non-isolated one is associated with an increasing likelihood of marriage before age 21 for men (OR = 0.392*** before 1750 vs. 1.752*** in 1910-1912), whereas associated with a decreasing likelihood for the women (OR= 1.029 before 1750 vs. 0.446*** in 1910-1912). As for the rural isolated parishes,

the results also vary, but they seem to be associated with a generally lower likelihood to marry before age 21 for the men, and more often positively associated with marriage before age 21 for the women. This may suggest that women will more often marry earlier in their life course if they are in a restricted marriage market, while men might decide to migrate to another parish to find a potential spouse. Finally, to live in a parish founded for 60 years or more is in all periods, and for both men and women, associated with a lower likelihood to get married before age 21.

7. DISCUSSION AND CONCLUSIONS

To summarize our results, we found evidence that marriage patterns in the province of Quebec remained nearly universal for a long period for both men and women, while the timing varied across region and periods. From our descriptive analyses, logistic regressions and Kaplan-Meier analyses, we found that the proportion of never-married at age 40 stayed essentially the same, at least for the period before 1800 and for SLSL in the 1842-1912 period. One exception is the urban parishes where the marriage market, while bigger, is more complex with the different social groups interacting and restricting the availability of potential spouse to a certain group as shown by studies on marital homogamy. Also, the economic activities in urban regions are more diverse than in rural regions. For instance, women had more opportunities to be hired as a domestic in the cities.

The timing of marriage, and that transcended all our analyses from the descriptive to the event-history and multilevel ones, is influenced by various family and contextual factors. First, there is a clear distinction in the marriage timing of men and women as shown by

our marriage rates by age. As men tended to marry mostly in the 25-29 age group, it was the 15-19 age group for the women. This as an impact on what we measure with our regressions using age 21 as the threshold for early marriage. In that sense, our proportions of marriage before age 21 showed that more than 40% of women married before age 21 whereas approximately 12% of men did so. Therefore, marriage early in the life course was more common for women, and more exceptional for men, which may explain the greater variance in our analyses for the second. Hence, the significance of a marriage before age 21 for men, and what influenced its occurrence, need more considerations to understand what pushed these men to marry earlier than their counterparts who married later in their life course.

The multivariate analyses demonstrated that the effects of the family and context, taken both separately and together, stand whether or not we control for both. However, our results also show that the family effects explain a greater part of the variance than the context. Thus, more could be explored about the effect of the family, and that goes in the same direction than one of the conclusion of the Eurasian project in their book *Similarities and Differences*. The socioeconomic situation of the father did not have significant results on the probability of marriage, but did have an effect on the timing. Contrary to what we expected, the son of farmers were not favored, but as predicted, there is an influence on the timing as the sons (and daughters) of skilled and low skilled father were more likely to marry before age 21. The different destiny of farmers' children might be related to the fact that they were not expecting to inherit farm lands from their father or to help in the fields for the productivity of their family of origin.

In addition, we can see how parents' presence is associated with higher likelihood of marriage before age 21, especially if we consider the increasing importance of the father's presences for the men across the periods. This suggests the implication of the parents in marriage that occurred sooner in the life course, especially for men who were less likely to marry at such an early age. The mixed results concerning the presence of married siblings were expected, and we did find a positive effect of having married siblings on the likelihood of marriage, except for women who have more than 4 married sisters. However, we also found that having married siblings could delay marriage for women. More in depth analyses of the siblings are needed to fully understand this dynamic.

Our results concerning the contextual effects show that characteristics of the parish may influence the timing of marriage. Unlike what we thought, more restrictive marriage market like we can find in isolated parishes did not prevent marriages. In fact, we found in some periods that women in isolated parishes were more likely to marry earlier in their life course, while it was the opposite for the men. This result suggests that a restrictive marriage pattern may incite women to settle as soon as a possible spouse is available, nut this dynamic may change as means of transportation improve. Moreover, many of our results show that marriage might be delayed in parishes founded for 60 or more years, even in early periods as before 1750. This is an interesting finding as it shows how men and women started to be confronted with the land saturations issues from an early point in the colony, not only from the 19th century. In fact, our contextual covariate time since parish foundation is partly influenced by how the families adapt to what we presume to be saturated land. If some decided to stay in their family of origin's parish and marry

later in their life course, others may have decided to move to another more recent parish, possibly closely, with more available farm land.

In conclusion, there would be benefits to include more characteristics of the families has the variance of our multilevel models showed. For instance, the inclusion of the birth rank in our analyses could help us to understand how firstborns and later born were influenced by the local context for the timing of marriage. Likewise, the inclusion of an indication of family migration could help us see if it was a successful strategy for earlier marriage of the children. Also, more could be learned about the benefit or married siblings if we could get deeper in the family life cycle dynamics to explore how families can enhance the social network of individuals to find a potential spouse. Finally, in the following steps of this research, it would be interesting to add more information about the individuals like what influences the prenuptials conceptions had on early marriage, or if literacy (ability to sign the marriage certificates) was a characteristic of individuals who married later in their life course.

Overall, we believe our paper contributes to a better understanding of what may have influenced the probability and timing of marriages across periods in the province of Québec. While our results show few variations on the probability to marry, we found various influences for the timing of the first marriage. Both families, by the parents' presence and socioeconomic status, and local context, by the type of parish and time since parish foundation, had influences on the timing of marriage for men and women.

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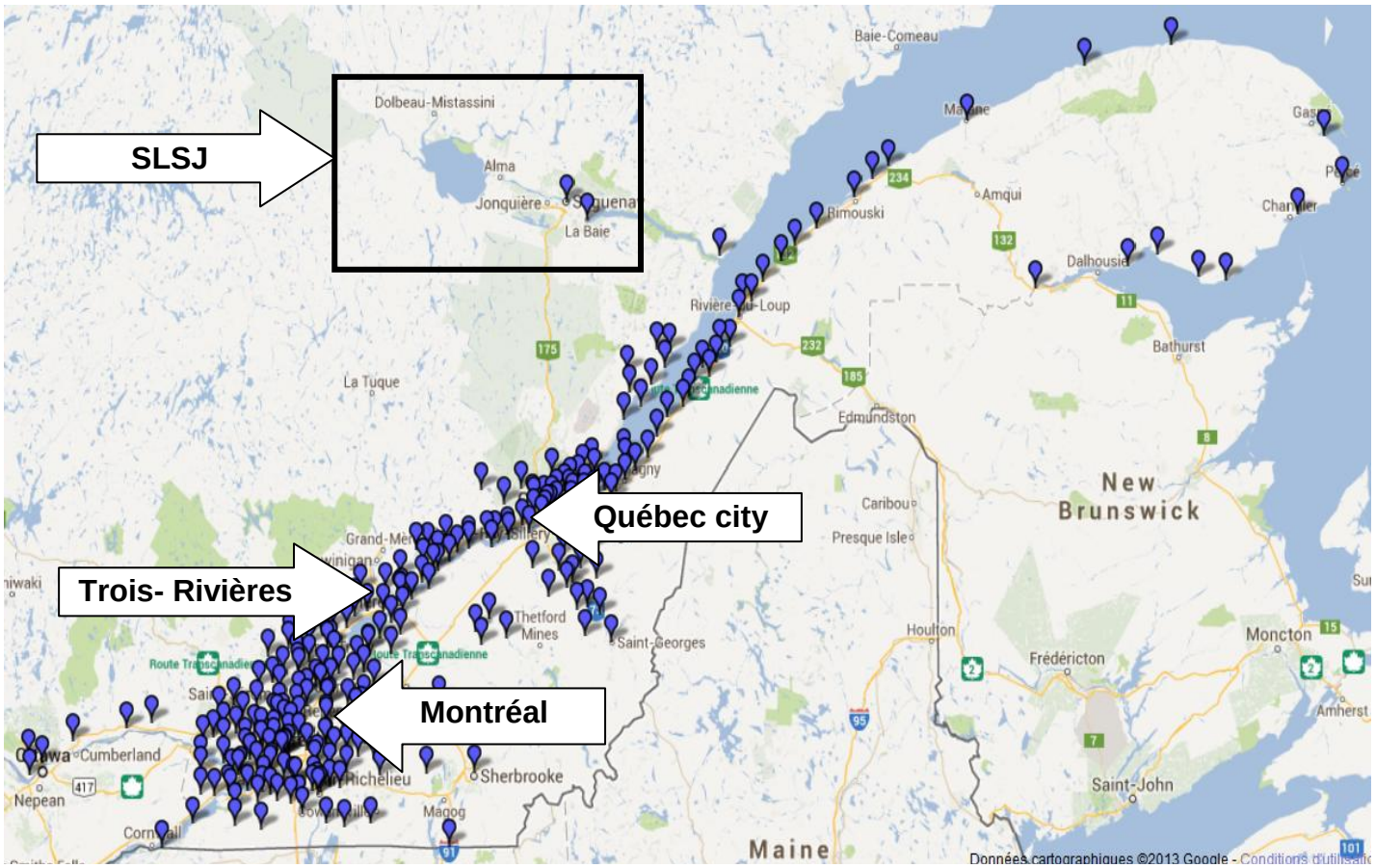
FIGURE 2- Parishes of Québec



Source : PRDH website : http://www.genealogy.umontreal.ca/en/Carte

Table 2 - HISCLASS recodification of occupations

Class number	Hisclass	Recode
1	Higher managers	Higher/Middle
2	Higher Professionals	Higher/Middle
3	Lower managers	Higher/Middle
4	Lower professionals. and clerical and sales personnel	Higher/Middle
5	Lower clerical and sales personnel	Higher/Middle
6	Foremen	Skilled
7	Medium skilled workers	Skilled
8	Farmers and fishermen	Farmers
9	Lower skilled workers	Low skilled
10	Lower skilled farm workers	Low skilled
11	Unskilled workers	Low skilled
12	Unskilled farm workers	Low skilled

Source: VAN LEEUWEN. M. & MAAS, I. (2011). Hisclass: a historical social class scheme. Leuven: Leuven University Press.

Table 3: Distribution of mean age at first marriage by sex. region and birth cohort. Quebec 1660-1760; SLSJ 1842-1872

Birth cohort & Region		Men				Women			
		Mean	SE	95% Conf. Int.		Mean	SE	95% Conf. Int.	
Before 1730[1]	All regions	**27.3**	**0.1**	**27.2**	**27.4**	**23.2**	**0.1**	**23.1**	**23.3**
	Urban	27.5	0.1	27.3	27.7	23.1	0.1	22.9	23.3
	Rural isolated	27.6	0.4	26.8	28.4	21.8	0.3	21.2	22.4
	Rural non-isolated	27.2	0.1	27.0	27.3	23.4	0.1	23.2	23.5
	Parish founded less than 20 years	27.3	0.3	26.7	27.8	22.6	0.3	22.0	23.2
	Parish founded 20 to 60 years	27.1	0.1	27.0	27.3	23.0	0.1	22.9	23.2
	Parish founded for 60 years or more	27.7	0.1	27.4	27.9	23.8	0.1	23.6	24.0
1730-1759[1]	All regions	**26.4**	**0.0**	**26.3**	**26.4**	**22.9**	**0.1**	**22.8**	**23.0**
	Urban	26.3	0.1	26.2	26.5	22.7	0.1	22.5	22.8
	Rural isolated	25.8	0.3	25.2	26.4	23.5	0.3	22.8	24.1
	Rural non-isolated	26.4	0.1	26.3	26.5	23.0	0.1	22.9	23.1
	Parish founded less than 20 years	25.4	0.5	24.4	26.4	21.7	0.4	20.9	22.6
	Parish founded 20 to 60 years	26.0	0.1	25.9	26.2	22.5	0.1	22.3	22.6
	Parish founded for 60 years or more	26.6	0.1	26.5	26.7	23.2	0.1	23.1	23.4
SLSJ 1842-1872[2]	All regions	**26.2**	**0.1**	**26.0**	**26.4**	**23.1**	**0.1**	**22.9**	**23.3**
	Rural isolated	26.0	0.9	24.2	27.8	23.7	0.9	21.8	25.6
	Rural non-isolated	25.5	0.1	25.3	25.7	23.0	0.1	22.7	23.3
	Parish founded less than 20 years	24.8	0.6	23.5	26.1	24.2	1.0	22.2	26.2
	Parish founded 20 to 60 years	25.5	0.1	25.3	25.7	23.0	0.1	22.7	23.3

Sources: [1]RPQA & [2]BALSAC

*Only individuals who lived up to age 40 were kept

Table 4: Proportion of never-married at age 40 by sex. region and birth cohort. Quebec 1660-1760; SLSJ1842-1872

Region	Men			Women		
	Before 1730[1]	1730-1760[1]	SLSJ 1842-1872[2]	Before 1730[1]	1730-1760[1]	SLSJ 1842-1872[2]
All regions	**5.49**	**4.55**	**3.28**	**7.09**	**5.26**	**3.99**
Urban	6.41	5.68		8.59	6.28	
Rural isolated	5.03	1.66	7.14	1.85	5.02	2.70
Rural non-isolated	4.95	4.25	5.48	6.18	4.91	5.88
Parish founded less than 20 years	2.95	5.50	4.92	6.76	2.83	7.35
Parish founded 20 to 60 years	5.27	3.60	5.55	6.44	4.30	5.78
Parish founded for 60 years or more	6.38	5.16		8.61	5.89	

Sources: [1]RPQA & [2]BALSAC

*Only individuals who lived up to age 40 were kept

Table 5: Age-specific marriage rate, by sex. region and period. Quebec 1660-1799

Period & region		Men						
		15-20	**20-25**	**25-30**	**30-35**	**35-40**	**Total**	**person-time**
Before 1750	**All areas**	**29.2**	**87.7**	**123.8**	**88.6**	**44.0**	**73.7**	**106239.0**
	Urban	30.2	87.3	116.8	78.9	30.6	72.8	38034.6
	Rural isolated	22.9	84.8	119.4	69.8	94.1	62.9	3785.7
	Rural non-isolated	28.9	87.9	128.1	96.2	53.1	74.6	65309.3
	Parish founded less than 20 years	25.8	87.0	121.2	104.2	50.9	64.4	16036.5
	Parish founded 20 to 60 years	28.5	91.2	131.9	96.8	53.6	77.5	63775.5
	Parish founded for 60 years or more	34.7	79.3	107.2	73.3	30.3	70.1	26426.9
1750-1799	**All areas**	**58.6**	**110.8**	**123.6**	**91.0**	**31.4**	**93.5**	**171003.0**
	Urban	61.3	103.0	116.0	74.4	24.0	87.7	37663.8
	Rural isolated	56.7	125.4	129.3	108.0	66.5	102.5	3512.4
	Rural non-isolated	57.9	112.5	125.8	96.6	34.1	94.9	129826.7
	Parish founded less than 20 years	50.3	138.9	138.9	81.6	3.3	90.0	9282.8
	Parish founded 20 to 60 years	62.1	119.8	137.4	103.2	38.8	101.7	58968.5
	Parish founded for 60 years or more	57.3	102.7	116.5	87.3	32.5	89.1	102751.7
		Women						
		15-20	**20-25**	**25-30**	**30-35**	**35-40**	**Total**	**person-time**
Before 1750	**All areas**	**134.2**	**120.7**	**95.2**	**58.3**	**21.6**	**116.6**	**81612.3**
	Urban	139.7	112.6	79.9	44.2	22.3	110.3	30914.8
	Rural isolated	152.4	156.1	108.7	81.6	0.0	147.1	2447.2
	Rural non-isolated	129.7	124.2	105.9	71.1	21.1	119.2	48761.2
	Parish founded less than 20 years	159.7	135.3	114.1	82.4	49.5	147.7	10713.1
	Parish founded 20 to 60 years	133.0	124.3	100.4	64.4	25.4	119.0	47505.1
	Parish founded for 60 years or more	117.5	107.3	82.9	48.8	17.0	97.5	23394.1
1750-1799	**All areas**	**168.3**	**130.8**	**100.9**	**61.1**	**21.1**	**128.6**	**7481.0**
	Urban	177.1	125.2	94.8	46.7	14.3	122.9	29113.8
	Rural isolated	141.8	134.7	100.0	76.6	41.6	122.4	3365.9
	Rural non-isolated	166.8	132.3	102.8	66.0	23.3	130.5	5151.2
	Parish founded less than 20 years	186.1	168.0	101.4	35.4	8.3	155.0	7313.9
	Parish founded 20 to 60 years	179.3	140.2	109.6	72.0	30.3	145.7	43279.4
	Parish founded for 60 years or more	153.0	118.8	92.2	53.5	16.5	114.6	79885.2

Source: RPQA

Table 6: Distribution of couple age at first marriage , by sex. region and period. Quebec 1660-1912

		Men less 21 Women less 21	Men 21 over Women less 21	Men less 21 Women 21 over	Men 21 over Women 21 over
Before 1750[1]	**All areas**	**4.56**	**48.94**	**2.41**	**44.09**
	Urban	4.35	49.14	1.87	44.64
	Rural isolated	4.18	56.08	2.85	36.88
	Rural non-isolated	4.69	48.36	2.61	44.34
	Parish founded less than 20 years	7.31	56.63	2.34	33.72
	Parish founded 20 to 60 years	4.15	49.05	2.55	44.24
	Parish founded for 60 years or more	3.43	43.63	2.21	50.73
1750-1799[1]	**All areas**	**6.82**	**46.45**	**4.02**	**42.71**
	Urban	6.15	46.01	3.69	44.15
	Rural isolated	5.83	45.00	3.47	45.69
	Rural non-isolated	7.00	46.58	4.11	42.31
	Parish founded less than 20 years	7.64	54.32	4.18	33.86
	Parish founded 20 to 60 years	8.02	50.11	3.89	37.98
	Parish founded for 60 years or more	6.00	43.01	4.07	46.93
1800-1849[2]	**All areas**	**8.26**	**40.3**	**3.86**	**47.58**
	Urban	8.07	37.12	3.46	51.36
	Rural isolated	6.56	45.26	3.06	45.12
	Rural non-isolated	8.57	41.18	4.10	46.14
	Parish founded less than 20 years	9.51	44.38	3.59	42.52
	Parish founded 20 to 60 years	8.65	40.89	3.92	46.53
	Parish founded for 60 years or more	7.53	38.32	3.93	50.22
1850-1899[2]	**All areas**	**8.41**	**36.63**	**4.03**	**50.92**
	Urban	8.92	31.01	3.95	56.11
	Rural isolated	8.54	36.86	3.59	51.00
	Rural non-isolated	8.22	39.18	4.11	48.49
	Parish founded less than 20 years	9.85	38.30	4.14	47.72
	Parish founded 20 to 60 years	8.41	37.28	3.96	50.35
	Parish founded for 60 years or more	7.43	34.88	4.04	53.65
1900-1912[2]	**All areas**	**7.70**	**33.24**	**3.23**	**55.83**
	Urban	6.63	24.65	3.01	65.71
	Rural isolated	7.63	39.02	3.11	50.24
	Rural non-isolated	8.42	38.41	3.38	49.79
	Parish founded less than 20 years	9.32	36.51	3.29	50.88
	Parish founded 20 to 60 years	7.79	33.3	3.27	55.64
	Parish founded for 60 years or more	6.83	31.68	3.15	58.34
TOTAL[1&2]	**All areas**	**8.06**	**37.54**	**3.80**	**50.60**
	Urban	8.00	31.37	3.57	57.06
	Rural isolated	7.56	40.66	3.31	48.47
	Rural non-isolated	8.17	40.19	3.94	47.69
	Parish founded less than 20 years	9.60	39.98	3.88	46.55
	Parish founded 20 to 60 years	8.15	37.79	3.72	50.35
	Parish founded for 60 years or more	7.18	36.03	3.83	52.96

Source: [1]RPQA & [2]BALSAC

Table 7: Distribution of proportion & logistic regression of married & married before age 21 by sex and familial and contextual characteristics, Québec 1660-1912

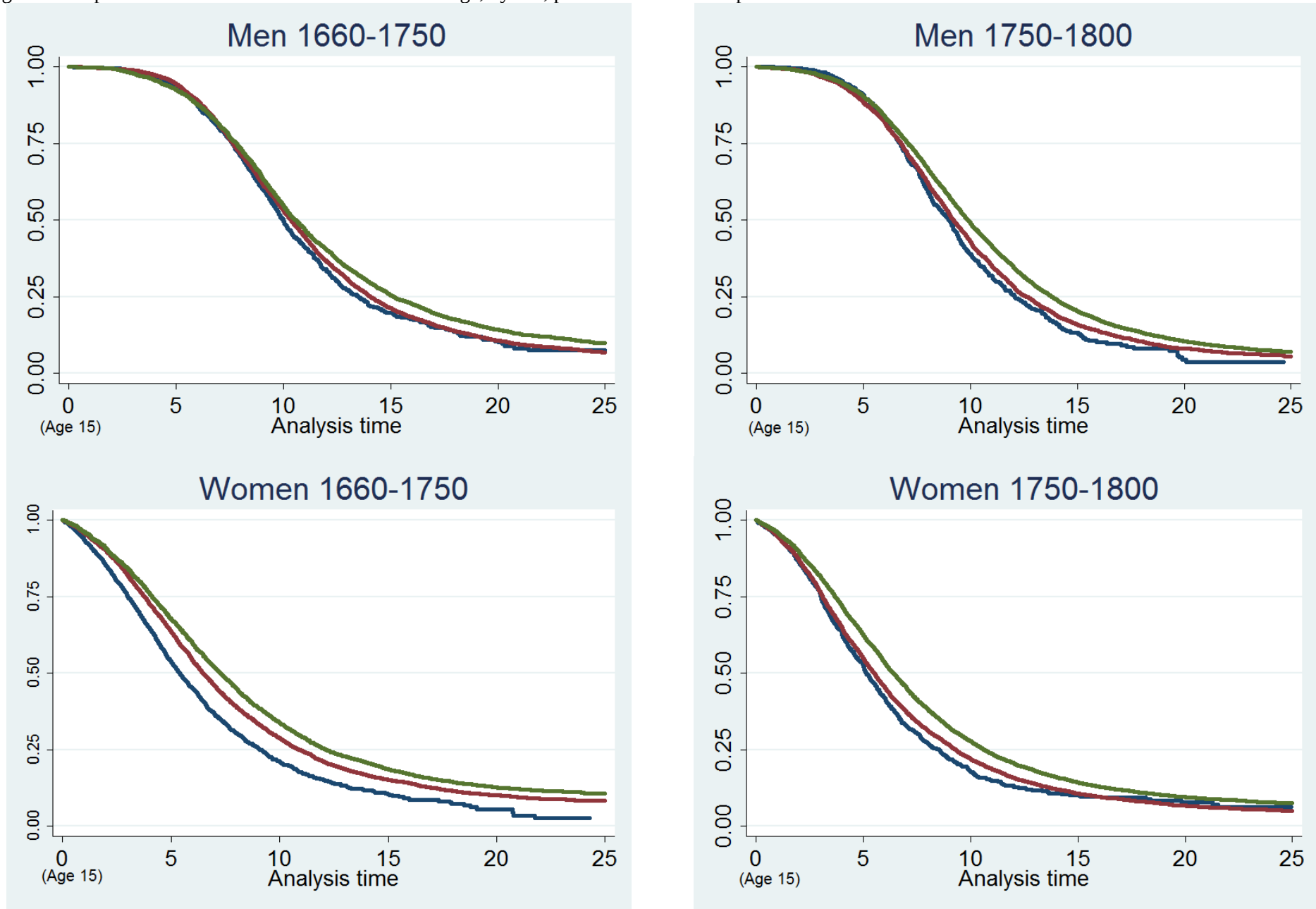
	Men						Women					
	Probability of marriage[1]		Probability of marriage[2]		Probability of marriage before21[1&2]		Probability of marriage[1]		Probability of marriage[2]		Probability of marriage before21[1&2]	
	Prob(%)	OR	Prob(%)	OR	Prob(%)	OR	Prob(%)	OR	Prob(%)	OR	Prob(%)	OR
	95.06		96.72		11.86		93.97		96.01		43.96	
Father occupation												
Higher			95.31	0.914	11.87	0.782***			88.24	0.481	39.65	0.741***
Skilled			90.82	0.622	20.01	1.496***			86.87	0.327**	49.95	1.179***
Farmer			95.37	1.000	13.97	1.000			94.70	1.000	48.07	1.000
Unskilled			95.59	1.001	17.63	1.253***			97.04	3.658+	48.91	1.113***
Unknown			99.00	0.531	9.98	0.744***			98.68	0.649	40.62	0.822***
Parents' presence												
Father alive	94.70	1.000	97.41	1.000	15.12	1.657***	94.12	1.000	96.80	1.000	50.50	1.569***
Father dead	95.64	1.203**	94.78	1.163	9.09	1.000	93.71	0.919	93.80	0.790	37.04	1.000
Mother alive	94.74	1.000	97.78	1.000	11.28	1.095***	94.26	1.000	96.81	1.000	52.74	1.561***
Mother dead	95.37	1.114+	94.00	0.649*	11.90		93.69	0.892*	94.02	0.913	43.42	
Number of married siblings												
No brothers	92.38	0.797*	97.96	0.364**	14.21	1.348***	92.04	0.690***	97.84	1.084	50.65	1.338***
1 to 3 brothers	95.02	1.000	96.44	1.000	10.02	1.000	93.82	1.000	95.88	1.000	36.94	1.000
4 brothers or more	95.89	1.438***	96.82	1.621*	8.97	1.095***	94.81	1.391***	95.51	1.645*	29.25	0.936***
No sisters	92.70	0.712***	96.73	1.006	14.49	1.354***	90.49	0.848+	97.60	1.014	50.46	1.580***
1 to 3 sisters	94.58	1.000	96.62	1.000	10.37	1.000	93.56	1.000	95.80	1.000	39.58	1.000
4 sisters or more	96.27	1.188*	96.89	1.968**	9.90	0.996	95.38	1.164*	95.75	1.256	33.93	0.778***
Type of parish												
Urban	93.94	0.760***			11.57	0.968***	92.50	0.733***			38.07	0.692***
Rural isolated	96.82	1.431	92.86	0.743	10.87	0.908***	96.36	1.561+	97.30	2.265	46.94	1.096***
Rural non-isolated	95.50	1.000	94.52	1.000	12.12	1.000	94.62	1.000	94.12	1.000	46.50	1.000
Time since parish foundation												
Less than 20 years	96.38	1.271	95.08	1.212	13.48	1.204***	94.28	0.927	92.65	0.756	48.15	1.225***
20 to 60 years	95.47	1.000	94.45	1.000	11.87	1.000	94.49	1.000	94.22	1.000	44.23	1.000
60 years or more	94.55	0.921			11.01	0.920***	93.41	0.942			41.51	0.881***
N		22 444		2 043		545 673		22 078		1 850		581 766

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1 Source: [1]RPQA & [2]BALSAC

**For the probability of marriage, we only kept individuals who lived up to age 40; we also run analyses for Québec before 1800 and SLSJ 1842-1912 separately*

*** For the probability of marriage before age 21, all individuals who got married between 1660 and 1912 are kept; both database were pooled to run analyse s*

Figure 3 : Kaplan-Meier survival estimates of first marriage, by sex, period and time since parish foundation



Source: [1]RPQA

Table 8: Event-history analysis of **men** probability to marry , Quebec 1660-1799; SLSJ 1842-1912

	Before 1750[1]			1750-1799[1]			SLSJ 1842-1899[2]			SLSJ 1900-1912[2]		
	M. 1a	M.1b	M.1c	M. 2a	M.2b	M.2c	M. 3a	M.3b	M.3c	M. 4a	M.4b	M.4c
Father occupation												
Higher							0.662*		0.684*	0.952		0.965
Skilled							0.759		0.788	0.918		0.942
Farmer							1.000		1.000	1.000		1.000
Unskilled							1.149		1.198+	1.054		1.070
Unknown							0.862		0.868	0.766		0.740
Parents' presence												
Father alive	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
Father dead	0.933*		0.940+	0.896***		0.901***	0.924		0.933	0.794**		0.798**
Mother alive	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
Mother dead	0.967		0.978	0.876***		0.886***	0.976		0.994	1.055		1.058
Number of married siblings												
No brothers	0.978		0.973	0.986		0.980	1.282***		1.252***	1.158**		1.142*
1 to 3 brothers	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
4 brothers or more	1.086*		1.103**	1.014		1.016	0.895		0.927	1.024		1.031
No sisters	0.853***		0.855***	0.885***		0.886***	1.103		1.074	0.991		0.976
1 to 3 sisters	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
4 sisters or more	1.383***		1.390***	1.207***		1.200***	1.173*		1.201**	1.022		1.026
Type of parish												
Urban		0.974	0.985		0.932**	0.937**						
Rural isolated		0.967	0.989		1.042	1.027		1.364	1.376		0.633	0.618
Rural non-isolated		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
Time since parish foundation												
Less than 20 years								1.413***	1.386***		1.284***	1.272***
20 to 60 years		1.00	1.00		1.00	1.00						
60 years or more		0.793***	0.778***		0.767***	0.771***		1.00	1.00		1.00	1.00
N subjects	13999	13999	13999	22184	22184	22184	4052	4052	4052	4179	4179	4179
LL	-8050	-8118	-8019	-16840	-16822	-16730	-1991	-1997	-1980	-2143	-2147	-2137
Theta	0.275***	0.304***	0.267***	0.159***	0.158***	0.148***	0.340***	0.245***	0.317***	0.124***	0.0965***	0.116***
Exp(theta ^{½}) -1	68,9	73,6	67,7	49,0	48,8	46,9	79,2	64,0	75,6	42,2	36,4	40,6

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Source: [1]RPQA & [2]BALSAC

Table 9: Event-history analysis of women probability to marry , Quebec 1660-1799; SLSJ 1842-1912

	Before 1750[1]			1750-1799[1]			SLSJ 1842-1899[2]			SLSJ 1900-1912[2]		
	M. 1a	M.1b	M.1c	M. 2a	M.2b	M.2c	M. 3a	M.3b	M.3c	M. 4a	M.4b	M.4c
Father occupation												
Higher							0.684*		0.719*	0.617***		0.636***
Skilled							0.927		0.974	0.835*		0.868
Farmer							1.000		1.000	1.000		1.000
Unskilled							1.063		1.114	1.025		1.056
Unknown							1.090		1.074	0.662+		0.626*
Parents' presence												
Father alive	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
Father dead	0.944		0.951	0.948*		0.957+	0.898		0.908	0.829*		0.834*
Mother alive	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
Mother dead	0.922+		0.929+	0.900***		0.905***	1.246*		1.248*	0.882		0.892
Number of married siblings												
No brothers	0.967		0.963	1.050*		1.043*	1.045		1.034	0.941		0.930
1 to 3 brothers	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
4 brothers or more	1.230***		1.249***	1.154***		1.155***	1.052		1.071	1.021		1.026
No sisters	1.134***		1.121***	1.010		1.007	1.107*		1.088	1.017		1.005
1 to 3 sisters	1.000		1.000	1.000		1.000	1.000		1.000	1.000		1.000
4 sisters or more	0.976		0.991	1.085***		1.086***	0.877+		0.904	0.921		0.927
Type of parish												
Urban		1.004	1.009		1.018	1.021						
Rural isolated		1.336***	1.351***		0.806***	0.807***		1.357+	1.317		1.637	1.635
Rural non-isolated		1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000
Time since parish foundation												
Less than 20 years								1.351***	1.331***		1.369***	1.366***
20 to 60 years		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
60 years or more		0.739***	0.736***		0.736***	0.738***						
N subjects	14181	14181	14181	21649	21649	21649	3791	3791	3791	3273	3273	3273
LL	-14618	-14579	-14554	-24661	-24561	-24534	-4594	-4591	-4580	-3245	-3247	-3231
Theta	0.349***	0.310***	0.332***	0.197***	0.199***	0.188***	0.235***	0.205***	0.231***	0.0376***	0.0316***	0.0338***
Exp(theta ^{½}) -1	80.5	74.5	77.9	55.9	56.2	54.3	62.4	57.3	61.7	21.4	19.5	20.2

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Source: [1]RPQA & [2]BALSAC

Table 10: Multilevel analysis of probability to marry before age 21, Quebec 1660-1900

	Men					Women				
	Before 1750 Model 1	1750-1799 Model 2	1800-1849 Model 3	1850-1899 Model 4	1900-1912 Model 5	Before 1750 Model 6	1750-1799 Model 7	1800-1849 Model 8	1850-1899 Model 9	1900-1912 Model 10
Intercept	0,001 ***	0,000 ***	0,047 ***	0,030 ***	0,000 ***	0,499 ***	0,560 ***	0,636 ***	0,446 ***	0,497 ***
Father occupation										
Higher			0,910	0,726 ***	1,861 ***			1,239 ***	0,763 ***	0,606 ***
Skilled			2,344 ***	1,629 ***	0,805 +			1,193 ***	1,196 ***	1,339 ***
Farmer			1,000	1,000	1,000			1,000	1,000	1,000
Unskilled			0,958	1,292 ***	0,260 ***			1,202 ***	1,014	1,179 ***
Unknown			0,428 ***	0,787 ***	3,198 ***			0,722 ***	0,856 ***	0,838 ***
Parents' presence										
Father alive	0,997	1,852 ***	2,071 ***	10,756 ***	13,180 **	1,418 ***	1,264 ***	2,030 ***	5,478 ***	3,794 ***
Father dead	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Mother alive	1,250	1,717 ***	1,963 ***	1,996 ***	2,278 ***	1,232 ***	1,281 ***	1,899 ***	1,741 ***	1,564 ***
Mother dead	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Number of married siblings										
No brothers	1,089	2,174 ***	1,552 ***	1,457 ***	0,956	1,816 ***	1,983 ***	1,659 ***	1,703 ***	1,647 ***
1 to 3 brothers	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
4 brothers or more	1,035	1,269 +	0,994	0,988	1,292 *	0,771 *	0,903 +	0,734 ***	0,693 ***	0,723 ***
No sisters	3,177 ***	2,549 ***	1,255 ***	1,512 ***	1,803 ***	1,821 ***	1,631 ***	1,317 ***	1,481 ***	1,389 ***
1 to 3 sisters	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
4 sisters or more	0,540 *	2,091 ***	1,248 ***	1,228 ***	1,907 ***	0,796 **	0,930	0,948 +	0,815 ***	0,944 +
Type of parish										
Urban	0,392 ***	1,081	0,901 ***	1,055 **	1,752 ***	1,029	1,094 *	0,709 ***	0,698 ***	0,446 ***
Rural isolated	0,506 +	1,029	0,772 ***	1,018		1,306 *	0,759 **	1,102 **	1,035	1,251 ***
Rural non-isolated	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Time since parish foundation										
Less than 60 years	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
60 years or more	0,385 ***	0,897	0,818 ***	0,871 ***	0,566 ***	0,613 ***	0,607 ***	0,757 ***	0,816 ***	0,679 ***
families variance	50.92	74.19	3.568	3.099	105.5	0.9382	0.7492	0.7421	0.7049	0.7457
N subjects	10822	32961	114654	274998	112207	11354	35582	119347	294820	120619
N Families	4941	16696	58199	147424	79491	5272	18156	59623	150628	82326
LL	-2432.8	-10278.3	-39154.1	-97851.4	-32231.4	-7375.7	-23287.8	-78058.9	-190627.4	-75937.7

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Source: [1]RPQA & [2]BALSAC