# ${ }^{n} P R O G R A M A$ ESTUDIOS <br> UNIVERSTTARIO <br> GENERO" - U. N. A. M. Demographic patterns of motherhood and fatherhood in France 

Laurent Toulemon and Évelyne Lapierre-Adamcyk

IUSSP Anthropology and Demography committee. Seminar on
Fertility and the male life cycle in the era of fertility decline, Zacatecas, November 1995

Fatherhood and motherhood will never be identical. From an anthropological point of view, motherhood is a direct link between the mother and the child, whereas fatherhood is defined from the link between the man and a woman (the child's mother). More generally, human fertility is not only biological, and this holds for men even more than for women. From a demographic point of view, this dissymetry not only induces difficult problems of data collection, but also means that modeling men's fertility is more complicated. Biological constraints are weaker for men, and in particular the age of 45 or 49 is not an adequate limit to measure men's completed fertility. In case of polygamy, the constraints are even weaker: there is no minimum delay between two births, if they come from two different mothers. The relations between fatherhood and motherhood are quite complex. Because of these difficulties, known as the two-sex problem (Pollard 1973), men's fertility has rarely been studied.

In Contemporary France, many conditions are fulfilled, which could lead to very weak differences between men's and women's fertility. The numbers of possible fathers and corresponding mothers are very close, because the population growth is near zero, the age difference between spouses and mortality are very low. But other factors may lead to contrasts between men's and women's fertility. Immigration patterns may not be the same for men and women, and then lead to different average fertility levels. Union disruptions and second unions may be more common for one gender, leading to a larger dispersion of fertility for that gender. Last but not least, children born outside marriage may be registered in France without being recognized by a father, leading to an underestimation of men's "biological" fertility or, when we speak about "social parenthood", to the fact that some children may have no father.

We will first look at some summary index of completed fertility, useful to describe the main demographic differences between fatherhood and motherhood. Using level of education as a proxy for social position, we will look for some gender-specific social contrasts in fertility, and we will describe the impact of union disruptions and second unions on both genders' fertility. Second, we shall focus on couples where there could be no difference between men and women, namely on young couples without previous children. For these couples, fertility behavior is the result of a compromise between fertility intentions of each member (to have a first child earlier or later) and social and economic constraints (does each spouse have a stable job or not). Does the probability to have a first child vary more with men's or women's social characteristics? The answer to that question will help us to understand the current delay in fertility. Third, we will compare men's and women's opinions on fertility intentions and on recourse to abortion, in case of an unwanted pregnancy. In what way are men and women's opinions on fertility and fertility regulation depending of their own and their partner's previous fertility and ideological background?

The results presented here all come from retrospective surveys data.

[^0]
## I - Fatherhood against motherhood

Men and women's fertility levels can differ for several reasons. First, a disequilibrium between the number of men and women could imply that some people of one sex would remain single. This can also result from selective migration or some demographic disaster; in some case, the imbalance may become very large. Second, even if the sex-ratio is balanced, the marriage market may be biased by differential remarriage rates or by polygamy (polygamous marriages or a higher propensity to remarry for one sex could lead to a lack of potential partners of the other sex). In both cases, age at marriage is the key variable for adjustment: in polygamous societies, men marry later than women, so that the "marriage market" is balanced, but men and women's fertility need not be identical ; after a war, women find husbands older or younger than usually ${ }^{1}$. In historical populations, or in contemporary developing countries, men's and women's fertility rates may highly differ. When men are older than their spouses, there is a shortage in men if mortality is high or if the population is growing, and then men have on average more children than women. A global imbalance in the sex-ratio or different ages at marriage may lead to different distributions of the number of children for men and women. Third, parenthood need not to be biological, and fostering may be quite different from one sex to the other ${ }^{2}$.

In France, there is now a small excess of men, mainly due to immigration of men over immigrant women during the past fifty years (Tribalat 1991). This implies an imbalanced marriage market, but we will see that the "exclusion" from the marriage market has a completely different social distribution for men and women. Another difference deals with the links between the children and their parents, after the parental couple breakdown.

## 1) Men are more often childless than women

Women's completed fertility has increased in France from 2.0 for the 1900 cohort to 2.6 for the 1930 cohort, which were 15 years old at the beginning of the post-war baby boom and 34 when fertility began to decline. For cohorts born between 1940 and 1960, completed fertility is stable at 2.1 children per woman, with a possible tendency to decline for more recent cohorts (Festy 1995). This up and down movement of general fertility is the result of different trends, which appear when looking at fertility by parity (Rallu and Toulemon 1993). In particular, there is a regular decrease in childlessness : $25 \%$ of women born in 1900 , but only $11 \%$ born in 1940, did not have any children (Desplanques 1993a ; Toulemon 1995).

Information about men's fertility is not commonly collected (Brouard 1977). In particular, the age (since the year 1975), nationality and profession are known for the father of all children (born inside or outside marriage) in birth registration, but $10 \%$ of children are not acknowledged by their father at the moment of this registration. In that case, no information is collected about the father. Even if the father is known, nothing is collected about his previous children, so that nothing is known on men's fertility by parity. Recognition is possible after birth registration, so that, at the end, only some $2 \%$ to $3 \%$ of children are not acknowledged by any father (Maksud and Nizard 1977 ; Leridon 1994).

Among the surveys conducted by the French national institute of statistics (INSEE, Institut National de la Statistique et des Études Économiques), only one contains a question about past fertility, asked to men as well as to women. This survey, which is dealing with education and social mobility (Formation et Qualification Professionnelle), was conducted in 1985, and is presented in appendix A. This survey provides some information about the fertility of 8705 men and 6273 women aged 40 to 65 in $1985^{3}$. For more recent cohorts, data come from the Fertility and Family Survey conducted by INED in 1994. This survey, presented in appendix B, contains a very complete, but less precise, information. The sample size is smaller, and the respondents are younger : 4900 persons (2 944 women and 1956 men), aged 2049 , were interviewed.

Let us first use the most common definition of fertility, with considering only biological children, and excluding step-children or other foster children (children adopted simultaneously by both parents being considered here as biological children). If we add $2 \%$ to the average men's fertility (to take into account children who are not acknowledged by a man ), men's and women's fertility are very close, except for cohorts 1950-54 (table 1). There is probably some under-reporting of their children by these men, aged 39-43 at the moment of the 1994 survey. The main specificity of men's fertility, compared to women's, is that childlessness is more common for men. Small for the cohorts 1920-24, the gap increases for most recent cohorts (table 1).

Childlessness is more common for men, mostly because men are more likely to remain single than women (table 2). But even for ever-married people, childlessness is more frequent for men. One reason could be that, in case of divorce without children, women, more frequently than men, enter a second union and have children in this second union (Villeneuve-Gokalp 1994). The gap could also be partly due to sample and non-response bias, especially for most recent cohorts (see appendix B). Table 2 b presents estimations made from census and registration data (Toulemon 1995). Actually, the gap between genders is maximum for cohorts born between 1930 and 1940. The gap is reduced for more recent cohorts : $15 \%$ of men born around 1950 will remain childless, to be compared to $12 \%$ of childless women in the corresponding cohorts.

The distribution of parents (people with at least one child) by number of children is not very different by gender. In all cohorts born after 1925, the proportion of parents who have four children or more is higher for men (table 2). The survey does not allow to identify people who married twice, nor to distinguish remarriage after widowhood or divorce, but this contrast is coherent with the fact that men remarry more often in case of divorce or widowhood, if they have children from their first union (Villeneuve-Gokalp 1994).

## 2) The dissymetries of marriage market

In France, immigration has been important during the years 1955-75 (Labat 1993). As most immigrants were young unmarried men, immigration is the main reason for the fact that more men than women do not marry (Tribalat 1991). For cohorts born around 1950, 3\% more men than women are childless ; on these three points, the excess of marriages of a spinster with a divorced man or widower over marriages of a bachelor with a divorced woman or a widow is responsible for one; the excess of men's immigration explains the two other points of difference. This global dissymetry of marriage market is going to disappear for cohorts born after 1950, as recent immigrants are as often women than men (mortality and population growth are low enough to play virtually no role in the marriage market) (Toulemon 1995).

There is another dissymetry in the marriage market, namely the fact that-spinsterhood and bachelorhood are not equally common in different social groups. Here we will use the level of education as a proxy for social position. Table 3 shows the same indicators as in table 2 , by level of education ${ }^{4}$. Spinsters are more common among highly educated women. Among the most commonly quoted reasons for this result are the "marriage squeeze" faced by women who do "enter" too old into the marriage market and the fact that highly educated women have less to gain in marriage than other women, and more to loose (de Singly 1987). For men, the situation is easier to describe : bachelorhood is most common among less educated men, and the term of "exclusion from marriage market" (and from parenthood) seems much more appropriate for men than for women. For instance, the farmers are more often bachelor than wage-earners, but the contrast in the frequency of marriage is greater between "poor" and "rich" farmers than between unskilled workers and managers (de Singly 1987).

Men are more often childless than women ( $16 \%$ vs. $12 \%$ ) and, among parents, men more frequently have four children than women ( $22 \% \mathrm{vs}$. $20 \%$ ). For women, the mean number of children is decreasing with the level of education: highly educated women are more frequently childless ( $22 \%$ ) and have less frequently four children ( $12 \%$ of mothers). The same does not hold for men : childlessness is less frequent for highly educated men, because they
remain single less often, and the decrease in fertility with education is quite less pronounced than for women ( $15 \%$ of highly educated fathers have four children or more) ${ }^{5}$.

## 3) The role of nuptiality. Own children and step-children

Let us now focus more precisely on the links between union and parenthood histories. For more recent cohorts, the increase in the proportion of unmarried couples makes the distinction between ever- or never-married persons less and less convenient to measure the propensity to live as a couple. A union may or may not lead to a marriage ; more and more often, union formation takes place before a possible marriage ; divorces nearly always occur some time after union disruptions, the lag exceeding one year for about $50 \%$ of divorces (Leridon 1990a). We shall then use the notion of cohabiting union (married or not), as defined by the respondents themselves.

The definition of parenthood is also complex since, contrary to fertility, it does not only include biological children. In particular, step-children may be considered as well as biological children, especially if they live in the same household with their step-parent. The 1994 FFS survey contains information about all partnerships, (with or without marriage), with two specific questions about step-children : "Did your partner already have children ?" and, if yes, "How many ?" and "How many came to live with you ?". With these questions, it is possible to have a more complete idea of union and parenthood histories of the respondents. We shall distinguish biological children (who include children adopted simultaneously by both parents), step-children who came to live with their step-parent and step-children who did not came. For the other parent of these children, we will have to use neologisms. Let us call co-parents two persons who share a child. Co-parents may be biological or not, residential or not. We shall speak of biological co-parents for co-parents who have in common a biological children. Biological co-parents are residential ones if they lived in union, with their biological children. Non-biological co-parents are persons who live in a couple, one having had a child before the union. Among non-biological co-parents, we distinguish residential co-parents, whose children (or at least one) came to live with their step-parent. Non biological co-parents may also be biological co-parents, if they have a child during their union.

We will first look at some summary indexes of men and women's union histories, before examining the links between union histories and parenthood. To limit problems of censoring, we will only describe the histories of men aged 40-49 and women aged 38-47. Union histories till the 1994 survey are as complex for men aged $40-44$ as for those aged $45-49$, because of a younger age at first union, and a higher propensity to break the first union. For more recent cohorts, censoring becomes very important, because of a younger age at the survey, combined with a rising age at first union. Low level of education means first level or less, middle means second level, excluding completed non vocational secondary school (Baccalauréat), and high level means third level, plus baccalauréat. This new coding is useful to have enough people in every educational category.

## Unions and co-parents

From table 4, we can see that $16 \%$ of men have experienced two unions or more, and that proportion is very similar for women ( $15 \%$ ). First unions are not always the first union for both partners : $13 \%$ of men and $15 \%$ of women had their first union with a partner who had already lived in a union. Some unions may begin with one child ever born : $4 \%$ of men as well as of women have a child before their first union, and $7 \%$ of men's and women's first partners already have a child. $23 \%$ of men's first unions and $27 \%$ of women's are broken. Breakdowns of unions are a little more frequent than divorces, as non-married couples are five times more fragile than marriages, as measured by instantaneous disruption rates (Toulemon 1994). Nevertheless, $80 \%$ of first unions were marriages without cohabitation, and most cohabitations were quickly changed into marriages (Leridon 1990a).

All these behaviors seem quite similar for men and women. There could be a small underreporting of broken unions by men. But the distinction between cohabiting and non cohabiting step-children points out a dramatic difference between genders. Men's first partners often bring their children into the household ( $5.5 \%$ among $7.3 \%$ ), but this is not the case of women's first partners (only $1 \%$ among $5.6 \%$ do), so that men, more often than women, begin their "conjugal life" with a cohabiting step-child. In case of breakdown of the first union, $40 \%$ of men say they had no child of their own at that moment, as against only $22 \%$ of women. This contrast is only partly due to the lower fertility of broken unions which were the first only for the man ( $75 \%$ of men say they were childless at the end of the union, against only $39 \%$ of women whose first union was not their partner's first union). For all first unions, the difference is statistically significant, despite the small sample size ( 198 men and 463 women), and the same holds for broken unions which were the first for both partners. To explain that gap, we have to think about a non-response bias, an under-reporting of childless unions, especially by women, or a misreporting by men of their (non cohabiting) children from broken unions. Another possibility, namely that women would not speak about childless broken unions, seems less probable because the proportion of broken first unions is higher for women than for men, and because $27 \%$ of first unions broken seems compatible with data on divorce by marriage promotion (Muñoz-Perez 1991).

After the breakdown of the first union, a second union is more frequent (or more rapid) for men than for women ( $75 \%$ vs. $59 \%$ ), contrarily to the propensity to enter a first union. Men have a second union as often if they already have a child or not ( $75 \%$ and $75 \%$ ). The same does not hold for women : childless women have a second union more often than men (78\%), while on the contrary women with children enter less frequently a second union ( $54 \%$ ).

At the beginning of a second union, women who already have children are more numerous than men ( $72 \%$ vs. $60 \%$ ) ; this difference may not be entirely due to non-response bias. The second partners of men and women may already have experienced a union or not, they may have children or not: men's second partners already have a child more often than women's partners ( $41 \%$ vs. $36 \%$ ). Moreover, men's partners bring their children more often, and $28 \%$ of men who enter a second union choose a partner who brings one child or more, against only $8 \%$ of women.

Men have children in their second union less often than women ( $46 \%$ vs. $64 \%$ ). Looking at women, childless couples are a little more frequent if the male partner already had a child before the union, whereas the presence of a child of her own has no impact. Looking at men, previous children of both partners have a similar impact. We have to be very careful here, as the sample sizes become very small ( 130 men and 227 women), and men's second unions are not the same that women's.

Everything being considered, co-parenthood seems as complicated for both genders. The main specificity of men is that the link between unions and children appears to be weaker than for women. On the one hand, men are not necessarily cohabiting with their children; after a union breakdown, being a father does not lead to a lower propensity to live again as a couple, and men more frequently have two unions or more. On the other hand, men more frequently say that they were childless at the end of their first union, or that they had no child during their second union.

Table 5 shows the distribution of men and women by number of co-parents, according to several definitions of parenthood. As we saw, men remain more often childless than women, but they also have children with two different partners less often than women ( $5 \%$ against $7 \%$ ), despite the fact that they more frequently experience two unions or more. Men have step-children a little more often than women ( $14 \%$ against $13 \%$ ). All these differences are small and non-significant, but most of men's step-children live -at least for a while- with them, so that $10 \%$ of men have lived with a step-child, against only $3 \%$ of women. So the total number of residential co-parents (biological or not) are very similar for men and women $(8 \%$ and $7 \%)$. The comparison between genders may be biased, so that the number of men with children from two women or more might be under-estimated, as well as the proportion of
childless women (see table 2), but there surely is a larger compensation between biological and non-biological co-parents for men than for women.

## The impact of education

We saw on table 3 that the impact of education on marriage probability is opposite for men and women. The same holds for the probability to enter a first union (married or not) or, in case of union breakdown, to enter a second union: these probabilities increase with education for men, and decrease for women (table 4).

Children born before the first union are more common for less educated people, men or women, while no contrast by education appears for partners children. There is a compensation between first partners who already had a union (more common for highly educated people) and births born before the first union.

For both genders, union breakdown is more common for highly educated people. In case of a second union, own children from the first union are less frequent for highly educated people, because breakdowns occur at shorter union duration and births occur at later duration. Thus, having children with several partners is less common for highly educated people, despite having several unions is more common (Desplanques 1993b) ${ }^{6}$.

Highly educated men's partners (second unions) less often have children ( $21 \%$ vs. $45 \%$ for men with a low level of education), while there is no such contrast for women. Finally, there is no big impact of education on the number of co-parents : highly educated men remain more often (biologically) childless, despite the fact that they more often live as a couple, and they more often have step-children than less educated men ${ }^{7}$. The same relations hold for women; and highly educated women are the most similar to men : they more often remain childless or single, they less often have a child during their unions, and the probability to enter a second union does not vary much with their previous fertility.

## Number of co-parents, number of children

Men declare a mean of 2.07 biological children, to which we may add 0.18 step-children who came in the household with their mother, and 0.10 step-children who did not came (table 6a). The mean number of children can then be set at 2.07 (biological), 2.25 (cohabiting) or 2.35 (all children or step-children, cohabiting or not). For women, the corresponding figures are 2.21, 2.25 and 2.44 (table 6b). We saw that the gap between men and women "biological" fertility is probably overestimated, due to an under-reporting by men of children from previous unions: the mean numbers of children men have lived with (including step-children) is probably higher for men than for women.

The 36 men who say they never lived as a couple declare having no child at all. This leads to a confidence interval of $[0 ; 0.1]$ child per man, less that the mean number of children of women in a similar position (0.31), even in case of under-reporting. After a birth outside a union, living later with the other parent is more common for men than for women (Leridon 1990b). In case of a single union, fatherhood and motherhood are very similar, respectively 2.22 and 2.26 biological children, and 2.35 and 2.36 children or step-children. As men's stepchildren are more often cohabiting with them, men with an only union have a little more children than women ( 2.33 against 2.28 ). But in case of two unions, the biological fertility of men is lower (2.01), while on the contrary the biological fertility of women is higher (2.46). For both genders, the mean number of step-children is higher in case of two unions (1.0 against 0.1 ), but the increase in the number of cohabiting step-children is higher for men ( 0.56 against 0.11 ) than for women ( 0.17 against 0.02 ). Finally, in case of two unions or more, the increase in the number of cohabiting children is higher for women, despite the fact that men more often have cohabiting step-children.

This replacement of biological children by cohabiting step-children for men also appears when we compare men with step-children (from a non-biological co-parent) with men
without any step-child : the former have 0.54 less biological children, and 1.24 cohabiting step-children. For women, the corresponding figures are only -0.02 and 0.33 . Finally, having two co-parents corresponds for men to 0.10 more biological children, 0.64 cohabiting stepchildren and 0.70 non-cohabiting step-children, a total of 1.44 children more. For women, the corresponding figures are $0.61,0.20,0.83$ and 1.64 respectively : for women, a second co-parent is more often also a biological one, and step-children less often live with their father and step-mother.

To sum up, fatherhood is quite more contrasted than motherhood. For men, social and familial inequalities are cumulative, some men being excluded from the marriage market, while others marry twice or more. Children from the first union do not change the men's propensity to remarry, but decreases women's. Thus, divorces and remarriages tend to increase the variance in male fertility, while on the contrary they imply a decrease in the variance of female fertility. The main question women have to face is to combine professional activity with motherhood, so that spinsterhood and childlessness are more frequent for more educated women. Fatherhood is also less definite than motherhood: men, more often than women, are separated from their own biological children, or living with step-children, and children do not have a major impact on their professional histories. On the contrary, motherhood is more permanent and exclusive : women spend twenty years with their biological children, even in case of disruption with the father, and children have a major negative impact on their professional life (de Singly 1987).

## II - The first child

Contrasts between men and women fertility are mainly due to different propensities to remain single, or to live several times as a couple, after having had children from a first union. We now turn to another question : once a union exists, does the decision of having a first child depend equally on men and women or is one of the spouses more influential?

Our purpose is not to make any hypothesis on the decision-making process inside couples. In particular, if one gender appears to be more influential on young couples' fertility, this would not necessary mean that the "final" decision belongs to this gender. Anyway, comparing the impact of men's and women's features on fertility is useful to know how couples manage with their wishes and constraints. Our hypothesis is that, among young couples where men and women's feature are similar (first union, no previous child), both spouses will appear as influential. Among characteristics of each spouse, we will focus on the impact of education, used here as a proxy of the ability to control his fertility (especially during the first years of union) and on stable professional activity, which indicates economic autonomy and possible confidence for the future.

## Choosing an appropriate group of couples to study the decision to have a first child

In order to answer that question, we decided to select a homogeneous group of couples from the point of view of their previous family formation experience. Conceptions and births may occur before unions, men and women can have more than one union, they also can have children from previous unions; all these circumstances represent elements that are likely to have an impact on the decision to have a first child in a given union. To avoid these complex relationships and to focus on the question of the differential impact of male and female characteristics on the decision of having a first birth, only couples with the following features were retained : no conception and no child born prior to the union ; first union for both spouses ; women less than thirty years old at the time of union ; unions started between 1968 and 1987 inclusively. Needless to say, the individuals belonging to these unions are not a representative sample of men and women entering a first union or having a first child in France during the last two decades, but only of those ones who did not have a conception before they were in their first conjugal union ; since union formation as well as conceptions and births prior to union formation are associated with specific socio-economic features, it is
important to be aware of the biases generated by the selection criteria, namely in terms of education. The first possible source of bias comes from the relationship between ever being in a union and education ; if highly educated persons remain more often single in their lifetime than less educated people, selecting only those who get in a union creates a biased group where more educated persons are underrepresented ; to the extent that the relationship is not exactly the same for men and women, the comparison between these two groups would be biased. Table 7 presents the proportions of the relevant birth cohorts (respondents from the 1994 FFS survey) who were excluded from the analysis because they never entered a union. These exclusions will be examined by sex and education, to study the impact of these factors on the rate of union formation. For older birth cohorts, the proportions excluded because there was no union are low for both men and women and the variations by education are not strong and not systematic ; members of the younger birth cohorts were also excluded because they had not yet formed a union in 1987 ; but these exclusions should not bias our results, since we are not concerned with birth cohorts, but with union cohorts. Only the 1968-72 cohort is slightly biased because some men and women marrying after age 25 during these years belonged to birth cohorts who were not included in the sample. Excluding respondents who did not enter a union does not create a biased group of men and women in union from the point of view of education ; the selection does not affect them differently in a significant way.

However, other criteria were used to exclude couples who started their union in the period 1968-1987. These criteria were the existence of a conception or of a birth prior to union and the fact that one of the spouses had a preceding union (plus the fact that age at union is higher than 30 for women). Regrouping the cohorts in 4 groups in table 8, we see that the overall proportions of couples excluded is decreasing from $36 \%$ to $27 \%$ from the least to the most recent cohorts. The criteria are evolving in opposite direction, conceptions and births before union decreasing while second unions become more frequent ; these evolutions are correlated to education : exclusions because of conceptions before union are less frequent when education increases ; exclusions because of second unions are more frequent when education is high ; this is true for all cohorts, but the decline in the proportion of exclusion because of conception before union is more pronounced than the increase in second unions, particularly when education is high. When sex is taken into account, the relationships stand, but for men the difference between education groups is between high education and others, while for women it is mostly between low education and others.

Globally, one can say that our sub-sample of couples, homogeneous from the point of view of their family formation process, is slightly biased in terms of education groups : higher proportions of more highly educated people were retained, because they were less likely to have conceived or to have a child before a union, this fact not being fully compensated by the increase in the proportions of second unions. Since we are going to control for education in the next steps, our results should not be affected; but nevertheless this bias will be limiting the inference to be made from our selected group of couples on the overall impact of education and other factors on the decision to have a first child.

## Description of the composition of the 1968-1987 first union cohorts

To understand more clearly how the context of having a first child changed over time, it is important to examine how the composition of the various cohorts of conjugal unions changed during the first ten years following their beginning. Table 9 shows the evolution of the proportions, at each duration, of couples who are married, are cohabiting or have separated (before or after marriage). The evolution from the earliest to the latest cohort is remarkable : in 1968-1972, $80 \%$ of first unions were legal marriages, $20 \%$ were cohabitations ; in 1983-1987, the reversal is almost complete, only $35 \%$ were marriages. Not only did the relative importance of each type of unions at the beginning changed, but the proportion who were married declined substantially over time : for example, in the 1968-1972 cohort, more than $90 \%$ were married on the 8th anniversary while only a little more than $60 \%$ were in the same situation in the 1983-1987 cohort. Cohabitations last longer and more couples separate. This evolution has consequences on the tempo of the arrival of the first child : recognizing the fact that married couples are more likely to have a child, the growing importance of cohabiting
couples is likely to provoke delays in the start of the childbearing period. For each cohort, the proportion of married couples among surviving unions is growing with duration, but from one cohort to the other, at each duration, this proportion is decreasing ; this means that cohorts, by choice or because of constraints, reach conditions more favorable to childbearing later and later (table 9d). Secondly, since our interest is to measure the instantaneous rate of first births, it is also interesting to point out the fact that the proportion of married couples among couples still "at risk" (childless surviving unions) grows in the first years of the union : but for recent cohorts, this proportion is lower and starts to decline after the third anniversary (table 9e). One should not be surprised to find declining first birth rates as union duration increases.

## The arrival of the first child: changing unions, changing tempo

The tempo of arrival of the first child in first union cohorts can be measured with indicators developed using a life table approach. Combining the information on the date of birth and date at the beginning of the first union coded to the exact month, life tables were established for the first ten years of the unions ; the event analysed was not the birth, but the conception, supposed to occur at date of birth minus 9 months, to consider conceptions occurring in a cohabitation that was quickly followed by a marriage as having occurred in cohabitation. Date of survey censored those couples who had not reached their tenth anniversary (only the last cohort was subject to censoring) ; separations were considered as censored cases from the date of separation. The results obtained are to be interpreted as the tempo of the first child arrival in surviving couples. The results show that earlier cohorts were more likely to have a child soon after the beginning of the union while late cohorts are more likely to delay the arrival of their first child. For example, the duration of union at which $50 \%$ of couples were still childless varies from less than 18 months for the 1968-1972 cohort to 36 months for the 1983-1987 cohort. For the earlier cohorts, the proportion having a first child after 10 years did not change : couples delaying their first child caught up. It is still uncertain for the latest cohort. (table 10).

The changing patterns of union formation described above are obviously related to this trend. Indeed proportions of childless couples by duration of first union for both married and cohabiting couples shown in table 10 illustrate quite clearly the role of the changing nature of first unions in the postponement of the first birth: while the duration at which $50 \%$ of married couples already had a child is between 12 to 24 months, for cohabiting couples this proportion is reached only after 5 years. The same observation can be made from the evolution of the first birth rates (not shown) : they are much higher for married couples; they also are higher for both groups in the first years of union, more so for the earlier cohorts, then they drop, more quickly among cohabiting, and then fluctuate. Needless to say, these facts have to be kept in mind in the analysis of the impact of socio-economic characteristics on the rhythm at which couples make the decision to have their first child.

## Differential impact of the men's and women's characteristics on first birth rates

This relatively long introduction was necessary to have a clear idea of the context in which we are now going to try to determine if specific characteristics of men and women have an important impact on the first conception rate. It has been shown elsewhere that men and women do not share the same profile in terms of fertility behavior, for example, men's long term commitment to the labor force will bring couples to have more children than an identical commitment by women. The relative impact of income, labor force participation, commitment to a job, level of education and other aspects of men and women life is the object of a continuous debate among economists and sociologists who try to understand family formation process and its various implications for people's lives.

The effect of age at union, of level of education and of labor force participation has often been demonstrated in demographic literature (Kravdal 1994); both theoretically and
empirically, these factors are important to understand how couples reached the decision to have children. We will try to appraise the relative importance of these factors as they characterize men and women. Using survival regression techniques (Phreg procedure from SAS software), a few models were developed to test some hypotheses about the differential impact of men and women's characteristics on first birth rates. Table 11 presents the results of the regressions including the relative risks, their level of significance and the partial logLikelihood statistics for each model.

The first and the second models include only the basic elements of this demographic phenomenon as discussed above ; the dependent variable corresponds to the duration between first union and conception of the first child (event times) ; the maximum duration of observation is ten years ; duration from first union to the date of survey is censored as well as duration from first union to separation, when it occurs (censored times) ; as in the life tables presented earlier, we are talking about first conception (monthly) rates for surviving couples. Union cohort is coded 0 for unions begun between 1968 and 1972, 1 for cohorts 1973-77, 2 for 1978-82 and 3 for 1983-87. As period trends are very regular, union cohort is treated in the models as a continuous variable, the unit being five years. Legal status of couples (cohabitation or marriage) is a time-dependent variable, which value is updated every month.

A model which only includes union cohort as an independent variable confirms the trend of the postponement of first births as one goes from earlier to more recent cohorts : the relative risk is 0.86 , meaning that first conception instant rates, standardized for union duration, are decreasing of $14 \%$ during each period of five years, or of $3 \%$ from one cohort to the next. Our first model, taking the legal situation of couples at each duration into account, shows the highly significant impact of the changing nature of the first union on the tempo of first conception: indeed, the instantaneous rate of first conception is three times higher for married couples than for cohabiting ones; the effect of the period of union looses its importance. The delay in first births related to period of union could thus be mainly due to the fact that during 1968 to 1987 couples in greater proportions choose to start their conjugal life by cohabiting rather than getting married. The third model shows that no interaction between the period of union and the legal status of couples appears to be statistically significant ${ }^{8}$. It was kept in subsequent models to allow the interaction to show, if existing, when other factors are taken into consideration ${ }^{9}$.

The third, fourth and fifth models all include these basic elements to which were added in turn three relevant factors characterizing both men and women. The first one is age of both partners at first union (model 3) ; standardized for age of the men, a later age at first union for the women tends to be associated with lower first birth rates, which means delaying the arrival of the first child; when compared with couples where the women entered the union before age 20, couples where she was older had fewer births, and the trend was stronger for unions starting at age 25 and after. Men's age at first union shows a positive effect on the first birth rate, when standardized for age of women ; the relative risk, when compared with age at first union lower than 22 , is $6 \%$ higher when the men were 22 or older at the start of the union, and $14 \%$ higher for men aged 27 or more. The effect of man's age is not significant, and the crude impacts of each partner's age are even less important, as age of partners are highly correlated, and specific effects go in opposite directions. No interaction is found between the impact of age of men and of the age of woman.

The second factor taken into account was the level of education measured by the highest degree obtained by each spouse (model 4). The effect is in the same direction for men and women: when compared with the lowest level of education, categories with higher levels have reduced first birth rates, more so at the highest levels. No interaction appears to be significant.

Finally, the third factor is an indicator of the stability of the spouses professional situation at the time of the union (model 5) ${ }^{10}$; it tells us not only if each had a job, but if it was a stable one. The results show a significant impact of this factor, with an interaction
between the professional situation of the partners : first birth rates were higher by about 35 to $50 \%$ for those couples with at least one spouse in a stable position compared with couples where no professional stability was achieved by either the man or the woman. The rates are the highest if man only had a stable position, but the contrasts are small (and not significant) when compared to couples where both partners (or the woman only) were working at the beginning of union.

We then examine the simultaneous effect of these three factors (model 6):

- it is first noticeable that they have very little impact on the basic model coefficients, the effect of the legal status of the couple remaining strong and significant (rates for married couples being 2.7 times higher than for cohabiting couples) ;
- the negative impact of the women's age at first union is reduced to non-significant levels ; this change is due to the effect of level of education (models with two variables were prepared but not shown) ${ }^{11}$;
- the effect of education remains negative and strong for the highest level and this is true for both women and men ; women's education makes a difference even at the middle level ;
- last but not least, the stability of the professional situation maintains its strong positive effect when compared with professional instability, but no difference appears anymore between couples where stability is provided by women rather than by men.

Before we discuss these results, one more step is interesting to consider. Since we have seen that couples of later cohorts tend to have fewer births at the beginning of the union and more at longer union duration, it is worth checking for an interaction effect between union duration and all the factors included in the last model. To do so, we developed a series of interaction variables to examine the changing impact of the factors with duration, the cutoff point being at 24 months (model 7). This proved to be quite a revealing move since the direction and the significance of some relationships changed :

- the difference between married and cohabiting couples is stable over duration of union ;
- the apparent lack of impact of the period of union was replaced by a negative impact during the first two years after the union, followed by a positive effect after for both married and cohabiting couples, showing a general delay in childbearing, for married couples as well as for cohabitants ;
- whereas the women's age at first union does not affect first conception rates, men's age at first union more than 27 has a positive impact during the two first years, effect that disappears at longer durations;
- the negative impact of the women's education, both at the middle and highest levels, is significant only at the beginning of the union, after it looses its strength; in contrast, the negative impact of the men's highest level of education is less important, but stable with union duration ;
- The positive effect of the stability of the professional situation tends to loose its strength after the first two years of union. But the decline is not statistically significant, and we must be aware that we only have information on the professional situation of both partners at the time of the union, and not the professional situation of each spouse as timevarying covariates (Kravdal 1994).


## Discussion of the results

Let us recall that the object of this analysis is to determine whether men's characteristics are as important as the women's in the process of deciding to have a first child, once a union,
the first for both spouses, exists. The basic model used confirmed that legal status is a major factor in the decision, whether the couple gets married right at the start or after a period of cohabitation.

Two conflicting arguments are often opposed in attempts to explain recent trends in fertility behavior (Oppenheimer 1994 ; Blossfeld et al. 1995) : some advance the idea that delayed and low fertility is due to the changing conditions of the modern women, who have access to education and participate in larger and larger numbers in the labor force, gaining economic independence and hesitating to have a first child because the opportunity cost is very high both in terms of lost income and professional achievement ; others will rather argue that low and delayed fertility is due to the deteriorating economic situation of young men who have more and more difficulties to reach a stable professional position, a necessary condition to enter a stable relationship and have a first child.

Our results bring some support, although limited, to both arguments. Let us first look at the results from the point of view of the argument suggesting that recent fertility levels result from the changing status of women : certainly French women are more and more educated and engaged in the labor force (Desplanques 1987). We find a substantial negative impact of women's education: for couples where the woman has a middle level of education, the relative risk of having a first conception is reduced by $12 \%$ when compared with low level of education ; the reduction is $20 \%$ for the highest level. But this effect is significantly reduced as union duration increases, especially for those with middle education. In contrast, couples where the professional stability is insured by the woman only are as likely to have a child as couples where both spouses (or the man only) are in a stable position. These results suggest that the new situation of women does not have, in the end, a definite negative impact on first birth rates, when the men's characteristics are controlled for.

On the other hand, men's level of education seem to have a more persistent negative impact on first conception rates : first conception rates are $20 \%$ lower for couples where the man has a high level of education, as compared to low education, and the contrast is stable during the first ten years of union. Professional instability of men as well as of women affects negatively their will to have a child ; since couples where both spouses are protessionally unstable are increasing in numbers, this may induce a delay in first births.

As a whole, the effects of the spouses' characteristics are complex; we have here contributed to clarify the role of education and age at union. The results concerning the stability of professional stability need to be reexamined to understand better what they mean ; it would seem worthwhile to pursue the analysis, putting the emphasis on labor force participation, levels of income, stability of employment, frequency and duration of unemployment, commitment to career and other relevant aspects in terms of bringing stability to the family project. Despite these limits, the main result of our analysis is that, for couples where neither the man nor the woman already lived in a couple or had a child, the propensity to have the first child is affected in a very similar way by the social and professional position of both partners.

## III - Fertility expectations : children of each partner, children of the couple

It seems that for young couples, both men and women characteristics have an impact on fertility. In the first part of this paper, we saw that men's fertility seemed less permanent or exclusive. We are now going to look at the opinions of both partners. First, how do fertility intentions for the future vary with the number of children of each spouse and, second, what is the impact of both partners' religious feelings on the answers about a possible voluntary abortion in case of unintended pregnancy ?

# 1) the influence of children of each partner born before the union on fertility expectations of men and women 

In the 1994 survey, questions were asked about the respondents' fertility intentions as well as partners', for people living as a couple. There is no room here to analyze precisely the answers. We will focus on the impact of the number of children of each spouse on the answers to the questions "Do you wish to have a(nother) child, now or later ?" and "Does your partner wish to have a(nother) child, now or later ?". The possible answers were "yes", "no" and "Don't know". The parental situation of a respondent living as a couple may be summarized by 1) the number of children he (or she) had with his (her) current partner, married or not, 2) the number of children he (or she) had before the union, and 3) the number of children the partner had before the union. For all these children, we know whether they have lived with the respondent and his (her) current partner or not. The answers are not analyzed for all the sample, but only for people living as a couple, aged 22-49 (men) or 20-47 (women), in position to have another child (not sterile, not sterilized).

All in all, $41 \%$ of men and $40 \%$ of women living as a couple and not sterile answer that they wish to have another child ${ }^{12}$. Of course, the number of children has a major impact on fertility intentions of both partners : some $75 \%$ of men and women want a child, if no child is born inside the couple, but only some 10 to $15 \%$ if the couple has already three children (table 12). Among couples with one only child, $55 \%$ of men and $52 \%$ of women wish to have another child. Compared to childless couples, the decrease in the proportion wishing another child corresponds to an odds ratio of 0.4 , for women as well as for men ${ }^{13}$.

Acconding to men as well as women, the presence of a child born before the union has an as large impact than an additional child within the couple (odds ratio $=0.6$ to 0.7 ), with one exception : women wishes are not lower if the man has a child from a previous union (O.R. = 1.0). A logistic regression allows to assess the specific impact of all covariates, which are highly correlated. The presence of a child born before the union leads to a decrease in the proportion of men wishing another child, when controlled for age, number of children born inside the couple and the presence of a step-child (adjusted odds-ratio $=0.44$, compared to 1 for men with no child born before the union). The presence of a step-child has nearly the same impact (adjusted odds ratio $=0.59$ ). On the contrary, the presence of a step-child leads to a non-significant increase in the proportion of women wishing to have another child (odds ratio $=1.26$ ), while the presence of a child of their own has a dramatic negative effect (odds ratio $=0.35$ ) .

No big difference appears between the impacts of cohabiting and non-cohabiting stepchildren on fertility expectations: the fact that men's step-children are often living with the couple, but not men's own children, is not one major reason for this difference - which appears as well from men's and women's answers ${ }^{14}$. These results confirm what we found in the first part of that paper. For men, a union breakdown often implies a separation with their own children, and entering an other union with cohabiting step-children. More than their own number of children, it is the total number of children of the two partners which has to be taken into account. On the contrary, women more often live with their own children after the separation, and less often enter a second union if they have a child. But, in case of a second union, they more often have a child, because what seems to matter for them is the number of their own children, irrespective of the number of their step-children, who are rarely living with them.

Is it to say that men do not have much impact on their own fertility, which would mainly be the consequence of their partners' fertility ? The example of opinions on abortion shows that the implication of men in fertility regulation is not negligible.

# 2) recourse to abortion in case of unwanted pregnancy. Do religious believes and fertility wishes of each partner matter? 

In case of an unwanted pregnancy, the decision to have recourse to a voluntary abortion does not only depend on the ideological and religious beliefs of women. The opinion of their partner (for women living as a couple) and of other relatives are also very important. In France, the use of contraceptive methods is no more an ideological question, and medical methods of contraception (the pill and Intra-Uterine Device) have become very common and contraceptive behaviors do not vary anymore with religious commitment (Toulemon and Leridon 1992a). There is a general agreement on the usefulness of abortion legalization, which took place in 1975, but nearly half the women say that they would never have an abortion ${ }^{15}$.

For abortion even more than for contraception, men's role is problematic : practically, the final decision belongs to women, so men have to be very explicit if they refuse abortion. $43 \%$ of men and $38 \%$ of women say that they would keep the baby "in any case" (table 13). It is not surprising that rejecting any possible abortion is more common for men and women who say that religion is important for them or for their partner, or who say that they or their partner wish to have a(nother) child. The impact of age is more paradoxical, as refusing a possible abortion is more common among young people. The question of a possible abortion is quite more concrete for older people : nearly half the women have recourse to a voluntary abortion in their life (Toulemon and Leridon 1992b), so most women aged 40 or more have themselves had an abortion, or know a friend who had an abortion, and then give more concrete and less ideological answers.

The impact of religion, of age and of the intention to have another child are important, and these variables are highly correlated, so it is necessary to make a logistic regression to compare the specific impacts of men's and women's features on the opinions (table 13). Men's refusal of a possible voluntary abortion depends highly on their own characteristics, but not much on their partners' : compared to men for whom religion is not important at all, the odds ratio is 2.9 for men who think that religion is very important, while the impact of their partners' religious belief is much less pronounced : only 1.2 against 1 , the contrast being not significant. Neither does the answer of men depend of what they say about their partner's wish to have another child : the proportion of men refusing a possible abortion is higher for men who want another child $($ O.R. $=1.5)$, but not for men who say that their partner wants another child (O.R. $=1.1$ ).

On the contrary, women's answers highly depend on what they say about their partner's religious belief or desire of another child. Women more often reject a possible abortion if they say that religion is important for themselves (O.R. $=2.0$ ) or for their partners (O.R. $=1.4$ ), if they say they wish to have another child (1.4) or that their partner wants (1.5).

Of course, the answers about a possible recourse to abortion are not supposed here to be predictors of future behavior, but the contrasts in the influences of men's and women's characteristics on the answers of each partner show that, on the question of abortion, men's opinions do not depend on women's features, and seem more abstract and ideological, while on the contrary women's opinions are more influenced by the real situation of their couple. We can make the hypothesis that, more generally, men's opinions on fertility are quite less concrete, and more ideological, that women's.

## Conclusion

Taking all these results into consideration, the contrasts between men's and women's parenthood appear to be quite important. First, it can be said that men are less fathers than women are mothers : on average, men have fewer children than women. The main reason is the proportionately higher number of immigrant men over immigrant women in the $X X$ th century. This gap is probably going to decrease, as current immigration is more balanced by gender. There is another reason, namely the fact that some $2 \%$ of children are not recognized by any father. In retrospective surveys, to these $2 \%$, we may add $2 \%$ of children who are "forgotten" by men. In addition, one-parent families are most often lone-mother families, men living on average a shorter period of time with children than women. Our evaluation of the differential impact of men's and women's social characteristics on the decision to have a first child shows that professional stability of both partners have a major impact on young couples' fertility. But this is not enough to say that parental roles are becoming more and more similar.

Second, fatherhood is divided between biological and residential children, while motherhood is at the same time biological and residential. After a union disruption, fathers more often have a second union than mothers ; in that case, they do not live any more with their children from their first union, but often live with step-children. On the contrary, mothers keep their children with them and, in case of a new union, have other children, irrespective of the number of step-children who, in most cases, do not live with their father. Fertility intentions of men and women vary more with the mother's number of children than with men's, and the opinions of men face to voluntary abortion are more ideological, and less concrete, than women's.

Third, fatherhood is more selective than motherhood. It is difficult to know why highly educated women remain single (and childless) more often than less educated women. But undoubtedly, some men are excluded from the marriage and "parenthood" markets, as if their social value was not high enough, while other men remarry more often than women. For women, the main problem is to combine motherhood and professional commitment. But for men, childlessness is most common in low educated groups: fatherhood seems to be an element of social achievement.

## Appendix A. The 1985 education and social mobility survey

The surveys on education and professional qualification (Formation - Qualification Professionnelle - FQP) are dealing with education, social mobility, and entries and exit from employment. Such surveys have been conducted by the French Institute of Statistics (Institut National de la Statistique et des Études Économiques - INSEE) in 1964, 1970, 1977, 1985 and 1993. Fertility behavior is not one of the main topics of these surveys, but the questionnaire includes a question about the number of children, "including adopted children and children who do no more live in the household, and excluding children who have died before the age of one month". Hope to this question, which has been asked to men as well as women, the FQP surveys are one major source of data about men's fertility, which is difficult to measure from civil registration. In 1985, 39000 men and women aged 13 to 69 were interviewed ( 22500 men and 16800 women), with a very complex sampling scheme (Gollac, Laulhé and Soleilhavoup 1988). Data from this survey have been used within an authorization by the INSEE.

As in all retrospective surveys, there are some sample bias, mainly due to non-response. Under the hypothesis that the bias in terms of nuptiality and fertility are similar for men and women, comparisons between men and women are not distorted. But under the hypothesis that non-response is higher for people living in households without children, the bias in terms of biological childlessness is more pronounced for men, as the correlation between childlessness and the fact to live without children is very high for women, while on the one hand childless men may live with step-children, and on the other hand men may live without their children.

## Appendix B. The 1994 Fertility and Family Survey

The 1994 Fertility and Family Survey (FFS) has been conducted by the Institut National d'Études Démographiques - INED in 1994. It is a retrospective survey, dealing with family history of one adult and all the children living in the selected households, with fertility history (including contraceptive practice and, for women, pregnancies which did not end in a live birth). 5.000 interviews have been made by INSEE, just after the annual survey on employment, march 1994. The sample ( 3007 women and 1966 men) is representative of people aged 20 to 49 , and also of children aged $0-17$. A sampling scheme, with unequal inclusion probabilities, was used to over-represent one-parent families and step-families. The first results have appeared in (Guibert-Lantoine et al. 1994 ; Toulemon and Leridon 1995).

The survey has benefited of grants by the Caisse Nationale des Allocations Familiales and Direction Générale de la Santé, Ministry of Social affairs and Health. It is part of the international program of comparative surveys in Europe, Fertility and Family Surveys, planned by the European Commission for Europe of United Nations. Similar surveys have been conducted in France in 1986 on family histories (Leridon and Villeneuve-Gokalp 1994) and in 1988 on fertility regulation (Toulemon and Leridon 1992a).

Some $16 \%$ of the selected respondents did not participate to the survey, because they refused to answer, or because they could not be met. Losses were most common for unmarried men and women, aged 40 or more. A post-stratification by sex, age (five-years groups) and marital status (never-married, currently married, others) was used. But it was not possible to post-stratify by number of children, as the distribution is not known. Most probably, the sample lacks in persons living without children (especially childless women and men, or men who do not live with their children) aged 40 or more. This induces an overestimation of fertility (an underestimation of childlessness). For men, a possible underreporting of children could compensate this bias.
${ }^{1}$ During World War I, $25 \%$ of french men born between 1891 and 1895 died. Without any change in mating behaviours, $23 \%$ of women born in 1896-1900 would have remained single, instead of $10 \%$. Actually, the proportion of single women increased only to $12 \%$, while the proportion of men remaining single decreased to $8 \%$, instead of $10.5 \%$ (Henry 1966).
${ }^{2}$ If step-children and other foster children are included in fertility, there is no more any balance between the mean number of children of each gender, nor in the number of "children $x$ years of fostering".
${ }^{3}$ In all tables, the cohort categories are different for men and women, to take into account the age difference between spouses (approximately two years).
${ }^{4}$ The international code ISCED1 is used. First level corresponds to the end of primary school (five years in France, completed at age 11 or 12). Second level is obtained at the end of secondary school (four to seven years in France, ages 15 to 19). Third level corresponds to university diploma
${ }^{5}$ In Denmark, there is no such decrease of childlessness when level of education of men increases, but the increase is less pronounced than for women : childlessness is lowest for men with low education ( $21 \%$ ), but most frequent for men with a middle education ( $27 \%$ ), while most educated men being in an intermediate position ( $25 \%$ ). For women, childlessness increases from $10 \%$ to $23 \%$ and $32 \%$ for women with respectively a low, intermediate or high education. Unskilled workers are more frequently childless than high salaried employees ( $26 \%$ vs $18 \%$ ), while the opposite variation holds for women ( $10 \% \mathrm{vs} 27 \%$ ) (Knudsen 1993:1995).
${ }^{6}$ The same holds true for the evolution of family structure in France : as parenthood is delayed, and disruptions occur earlier and earlier, the increase of divorces and union disruptions will not lead to a comparable increase in the proportion of separated parents and step-families.
${ }^{7}$ The proportion of men who never lived as a couple is probably underestimated, as bachelorhood and childlessness, among men, and particularily among less educated men, due to a lack of old bachelors in the sample. The post-stratification by gender, age and marital status did not take education into account.
${ }^{8}$ If we were looking at fertility rates, prenuptial conceptions would be included in marital fertility. So the contrast between cohabitations and marriage would be more important, and fertility would be decreasing for married couples, because of the decline in pre-marital conceptions (Toulemon, 1994).
${ }^{9}$ We also tested the impact of duration of marriage on first conception rates under the hypothesis that recently married couples would be more fertile at any duration since first union ; the legal status variable was modified to include a specific value for couples married till less than two years; the results were not different for recently married couples and other married couples, when standardized for union duration.
${ }^{10}$ This information comes from a specific question about the professional status of each partner at the beginning of union ; as the date of first stable job is not known for both spouses, it was not possible to built a time-varying covariate with the changing professional status of man and woman.
${ }^{11}$ If we were speaking in terms of births, and then including pre-conjugal births (concieved before union, but born inside union) into couples' fertility, we would find a (misleading) higher fertility for youngest women.
${ }^{12}$ When there is a precise answer for one partner, and "Don't know" for the other partner, it is assumed that the partners' wishes are opposite, to maximise the proportion of discordant couples. Anyway, several ways of taking into account "Don't know" answers lead to very similar results. For the global results or for the impact of several variables, the answers of men for themselves are very similar to what women say for their partners, and the same holds true for women's answers for themselves and men's answers for their partners. For a matter of simplicity, we then put together the two samples.
${ }^{13}$ The odds ratio provides a measure of the contrast between two proportions, which is valid and meaningful for the all range $] 0 ; 1\left[(\operatorname{Cox} 1970)\right.$. The odds ratio of two proportions p and q is $\mathrm{O} \cdot \mathrm{R} .=\frac{\frac{p}{1-p}}{\frac{q}{1-q}}$
${ }^{1+}$ Models inclunding the distinction between cohabiting and non cohabiting step-children do not lead to a better fit, with one exception: women's step children, if cohabiting, have a negative impact on their fertility wishes $(O R=0.8)$, whereas non-cohabiting step-children are associated with an increase in the propensity to wish antother child $(O R=1.6)$.
${ }^{15}$ In the FFS survey, the question was: "If you were pregnant and if you did not want to have a child, would you keep him... -in all cases, -probably, -maybie, -probably not, -surely not, -Don't know, -Refuse to answer". For men, possible answers were the same, and the question was: "If your wife (friend) ivas pregnant and if none of you wanted to have a child, would you keep him...". Only the first answer (keep the baby in all cases) is considered here as a refusal of a possible abortion. The respondants were also asked about "The importance of religion in their daily life", and about "The importance of religion in their partner's life". In France, more than $85 \%$ of people are of a roman catholic origin.

## References

Blossfeld H. P. (ed.) (1995). The Nezu Role of Women. Family Formation in Modern Societies, Social Inequality Series, Westview Press.

Brouard N. (1977) 'Évolution de la fécondité masculine depuis le début du siècle'. Population, 32, 6, 1123-1158.

Cox D. (1970). The Analysis of Binary Data, Methuen \& Co., London.
Desplanques G. (1987) 'Activité féminine et fécondité'. Données Sociales 1987, INSEE, 496501.

Desplanques G. (1993a) 'Un premier enfant de plus en plus tard'. INSEE Première, 247.
Desplanques G. (1993b) 'Les familles recomposées en 1990' in Meulders-Klein M. T. and I.
Thery (eds.) Les recompositions familiales aujourd'hui, coll. Essais et recherches, Nathan, 81-96.

Festy P. (1995) 'L'évolution démographique récente. Population, 50, 3, 723-244.
Gollac M. , P. Laulhé and J. Soleilhavoup (1988) 'Formation. Enquête Formation Qualification Professionnelle de 1985'. Collections de l'INSEE, série D, 129.

Guibert-Lantoine C. de, H. Leridon, L. Toulemon and C. Villeneuve-Gokalp (1994) 'La cohabitation adulte'. Population \& sociétés, 293.

Henry L. (1966) 'Perturbations de la nuptialité résultant de la guerre 1914-1918'. Population, 21, 2, 273-332.

Kravdal Ø. (1994) 'The Importance of Economic Activity, Economic Potential and Economic Resources for the Timing of First Births in Norway'. Population Studies, 48, 2, 249-267.

Knudsen L. (1993). Fertility Trends in Denmark in the 1980s. A Register Based Sociodemographic Analysis of Fertility Trends, Statistiske Undersøgelser nr. 44, Danmark's Statistik.

Knudsen L. (1995) 'Do gender differences in fertility patterns in Denmark reflect different expectations to men and women?'. Paper presented at the European Population Conference in Milan, sept. 1995.

Labat J. C. (1993) 'La population étrangère et son évolution'. Données sociales 1993, INSEE, 37 45.

Leridon H. (1990a) 'Cohabitation, Marriage, Separation: An Analysis of Life Histories of French Cohorts from 1968 to $1985^{\prime}$. Population Studies, 44, 1, 127-144.

Leridon H. (1990b) 'Extra-Marital Cohabitation and Fertility'. Population Studies, 44, 3, 469-487.

Leridon H. (1994) 'Tendances récentes pour les naissances hors mariage', in Leridon H. and C. Villeneuve-Gokalp (1994), Constance et inconstances de la famille. INED, Travaux et Documents, 134.

Leridon H. and C. Villeneuve-Gokalp (1994), Constance et inconstances de la famille. INED, Travaux et Documents, 134.

Maksud M. and A. Nizard (1977) 'Enfants trouvés, reconnus, légitimés. Les statistiques de la filiation en France, aux XIXè et XXè siècles'. Population, 32, 6, 1159-1220.

Muñoz-Perez B. (1991) 'Évolution récente du divorce. Aspects démographiques et juridiques', in Hibert Th., Roussel L. (1991), La nuptialité : évolution récente en France et dans les pays développés, INED, Congrès et colloques, 7.

Oppenheimer V. (1994) 'Women's Rising Employment and the Future of the Family in Industrial Societies'. Population and Development Review, 20, 2, 293-342.

Pollard J. H. (1973). Mathematical models for the growth of human populations, Cambridge University Press.

Rallu J. L. and L. Toulemon (1993) 'Les mesures de la fécondité transversale. II - Application à la France de 1946 à 1989'. Population, 48, 2, 369-404. Translated in Population. An english selection, 6 (1994), 59-93.

Singly F. de (1987) Fortune et infortune de la femme mariée, Coll. Économie en Liberté, PUF.

Toulemon L. (1994) 'La place des enfants dans l'histoire des couples'. Population, 49, 6, 13211345. To appear in english in Population. An english selection, 7 (1995).

Toulemon L. (1995) 'Très peu de couples restent volontairement sans enfant'. Population, 50, 45.

Toulemon L. and H. Leridon (1992a) 'Twenty years of contraception in France : 1968-1988'. Population. An English Selection, 4, 1-34.

Toulemon L. and H. Leridon (1992b) 'Maîtrise de la fécondité et appartenance sociale : contraception, grossesses accidentelles et avortements'. Population, 17, 1, 1-46.

Toulemon L. and H. Leridon (1995) 'La diffusion des préservatifs : contraception et prévention'. Population \& Sociétés, 301.

Tribalat M. (1991) 'Apport démographique d'un siècle d'immigration', in Tribalat M. (ed.) Cent ans d'immigration. Étrangers d'hier, français d'aujourd'hui, INED, Travaux et Documents, 131.

Villeneuve-Gokalp C. (1994) 'Après la séparation : conséquences de la rupture et avenir conjugal', in Leridon H. and C. Villeneuve-Gokalp (1994), Constance et inconstances de la famille. INED, Travaux et Documents, 134.

Table 1a. Distribution of MEN by number of children, mean and standard deviation of number of children, and sample size, by cohort

| Number ofChildren | $1920-24$ | $1925-29$ | $1930-34$ | $1935-39$ | $1940-44$ | $1945-49$ | $1950-54$ |
| :---: | ---: | ---: | ---: | :---: | ---: | ---: | ---: |
| 0 | 18,3 | 17,8 | 17,4 | 13,2 | 13,2 | 14,2 | 18,6 |
| 1 | 19,0 | 19,3 | 16,9 | 18,2 | 16,8 | 17,7 | 16,2 |
| 2 | 24,2 | 26,5 | 27,1 | 30,5 | 37,2 | 35,0 | 31,7 |
| 3 | 19,6 | 17,0 | 17,9 | 19,2 | 19,8 | 21,8 | 21,1 |
| 4 | 9,1 | 9,3 | 8,7 | 11,1 | 7,2 | 5,8 | 8,2 |
| $5,+$ | 9,9 | 10,2 | 12,1 | 7,9 | 5,8 | 5,6 | 4,2 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Mean | 2,22 | 2,24 | 2,35 | 2,29 | 2,14 | 2,10 | 1,98 |
| Std. | 1,79 | 1,86 | 1,94 | 1,68 | 1,47 | 1,47 | 1,38 |
| N | 1073 | 1594 | 1927 | 2123 | 1988 | 261 | 286 |

Table 1b. Distribution of WOMEN by number of children, mean and standard deviation of number of children, and sample size, by cohort

| Number of | Year of birth |  |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Children | $1922-26$ | $1927-31$ | $1932-36$ | $1937-41$ | $1942-46$ | $1947-51$ | $1952-56$ |
| 0 | 16,8 | 14,1 | 11,6 | 9,3 | 9,0 | 10,2 | 7,1 |
| 1 | 22,8 | 19,2 | 17,2 | 20,1 | 19,1 | 22,1 | 17,8 |
| 2 | 23,8 | 25,9 | 31,4 | 33,7 | 37,7 | 36,7 | 35,9 |
| 3 | 16,5 | 18,5 | 19,4 | 21,1 | 21,6 | 20,2 | 24,0 |
| 4 | 8,7 | 9,4 | 11,2 | 8,5 | 6,7 | 7,0 | 9,0 |
| $5,+$ | 11,4 | 13,0 | 9,2 | 7,3 | 5,9 | 3,8 | 6,1 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Mean | 2,29 | 2,46 | 2,39 | 2,33 | 2,24 | 2,09 | 2,33 |
| Std. | 2,09 | 1,99 | 1,68 | 1,69 | 1,48 | 1,43 | 1,35 |
| N | 940 | 1193 | 1288 | 1313 | 1539 | 443 | 516 |

Sources: Cohorts 1920-24 to 1940-44, INSEE, FQP survey, 1985.
Cohorts 1945-49 and 1950-54, INED-INSEE, FFS survey, 1994.
Note that birth cohorts are not similar for men and women :
men may be compared to women born two years later,
as two years is the most usual age difference between spouses.

Table 2a. Some features of fertility and nuptiality, by gender and birth cohort according to FQP and FFS surveys

|  | Year of birth |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men | 1920-24 | 1925-29 | 1930-34 | 1935-39 | 1940-44 | 1945-49 | 1950-54 |
| Women | 1922-26 | 1927-31 | 1932-36 | 1937-41 | 1942-46 | 1947-51 | 1952-56 |
| Proportion childless (\%) |  |  |  |  |  |  |  |
| Men | 18,3 | 17,8 | 17,4 | 13,2 | 13,2 | 14,2 | 18,6 |
| Women | 16,8 | 14,1 | 11,6 | 9,3 | 9,0 | 10,2 | 7,1 |
| Proportion of parents with at least four children (\%) |  |  |  |  |  |  |  |
| Men | 23,2 | 23,7 | 25,2 | 21,9 | 15,0 | 13,3 | 15,3 |
| Women | 24,2 | 26,1 | 23,1 | 17,4 | 13,9 | 12,0 | 16,3 |
| Proportion unmarried (\%) |  |  |  |  |  |  |  |
| Men | 9,8 | 9,2 | 9,6 | 7,9 | 8,8 | 9,6 | 16,2 |
| Women | 8,0 | 6,1 | 5,9 | 5,6 | 6,9 | 8,6 | 12,3 |
| Proportion childless, among married persons (\%) |  |  |  |  |  |  |  |
| Men | 9,8 | 9,8 | 9,2 | 6,1 | 5,3 | 7,0 | 8,0 |
| Women | 10,9 | 9,3 | 6,8 | 5,1 | 3,8 | 5,7 | 1,2 |

Sources: Cohorts 1920-24 to 1940-44, INSEE, FQP survey, 1985.
Cohorts 1945-49 and 1950-54, INED-INSEE, FFS survey, 1994.

Table 2b. , Some features of fertility and nuptiality, by gender and birth cohort.
Final estimations, from the surveys, census data and projections.

|  | Year of birth |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men | 1920-24 | 1925-29 | 1930-34 | 1935-39 | 1940-44 | 1945-49 | 1950-54 |
| Women | 1922-26 | 1927-31 | 1932-36 | 1937-41 | 1942-46 | 1947-51 | 1952-56 |
| Proportion childless (\%) |  |  |  |  |  |  |  |
| Men | 20,2 | 19,0 | 17,7 | 16,1 | 14,8 | 15,0 | 15,4 |
| Women | 18,2 | 14,6 | 12,0 | 11,1 | 11,3 | 11,7 | 12,4 |
| Proportion of parents with at least four children (\%) |  |  |  |  |  |  |  |
| Men | 23,2 | 23,7 | 25,2 | 21,9 | 15,0 | 13,3 | 15,3 |
| Women | 24,2 | 26,1 | 23,1 | 17,4 | 13,9 | 12,0 | 14,0 |
| Propertion unmarried (\%) |  |  |  |  |  |  |  |
| Men | 9,9 | 10,6 | 10,4 | 10,0 | 9,3 | 10,2 | 11,5 |
| Women | 8,4 | 7,6 | 6,9 | 7,0 | 7,6 | 8,8 | 10,5 |
| Proportion childless, among married persons (\%) |  |  |  |  |  |  |  |
| Men | 11,7 | 9.8 | 8,7 | 7,6 | 6,6 | 6,7 | 6,8 |
| Women | 12,0 | 9,0 | 6,9 | 6,1 | 6,0 | 6,1 | 6,2 |

Sources: Estimation from registration data, census data and surveys data (Toulemon 1995)

Table 3. Some features of fertility and nuptiality, by gender and level of education Cohorts 1920-1944 (men) and 1922-46 (women). Proportions standardized for cohort

> Level of education

|  |  | Level of education |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Under first level | First level | Second level | Third level |
| Distribution by level of education |  |  |  |  |  |
| Men | 100 | 28,7 | 27,1 | 34,1 | 10,1 |
| Women | 100 | 29,2 | 32,0 | 30,2 | 8,7 |
| Proportion childless (\%) |  |  |  |  |  |
| Men | 15,9 | 20,1 | 17,0 | 12,7 | 12,2 |
| Women | 12,2 | 11,0 | 9,9 | 12,8 | 22,0 |
| Proportion of parents with at least four children (\%) |  |  |  |  |  |
| Men | 21,8 | 32,0 | 20,6 | 16,0 | 15,1 |
| Women | 20,8 | 32,2 | 20,5 | 12,4 | 12,4 |
| Proportion unmarried (\%) |  |  |  |  |  |
| Men | 9,0 | 14,0 | 9,5 | 5,5 | 5,6 |
| Women | 6,5 | 5,6 | 3,8 | 7,4 | 15,9 |
| Proportion childless, among married persons (\%) |  |  |  |  |  |
| Men | 8,0 | 7,9 | 8,6 | 7,9 | 7,2 |
| Women | 7,2 | 6,8 | 7,1 | 7,3 | 8,3 |

Source: INSEE, FQP survey, 1985.
Level of education is coded according to the International definition ISCED1.
The proportions have been standardized for cohort, by the means of logistic regressions, for each gender separately, the factors being birth cohort and level of education.
Neither for men or women did any interaction between cohort and level of education appear to be significant at the $5 \%$ level (likelihood ratio test).

Table 4. Some characteristics of union history for men and women, by level of education

|  | Men |  |  |  | Women |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Level of education |  |  | Total | Level of education |  |  |
|  |  | Low | Middle | High |  | Low | Middle | High |
| Sample size | 536 | 228 | 222 | 86 | 926 | 408 | 363 | 155 |
| Out of 100 persons of each group, proportion who experienced... |  |  |  |  |  |  |  |  |
| One union | 94,9 | 95 | 95 | 96 | 95,8 | 96 | 96 | 93 |
| One breakdown | 21,7 | 22 | 19 | 28 | 26,1 | 25 | 25 | 30 |
| Two unions | 16,3 | 16 | 14 | 23 | 15,4 | 15 | 16 | 17 |

Out of 100 persons who had a first union, proportion whose partner already had a union

| Total | 13,0 | 11 | 12 | 20 | 14,8 | 13 | 14 | 21 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Out of 100 persons who had a first union, proportion who already had a child at the beginning of union

| Own child | 3,8 | 5 | 3 | 2 | 4,0 | 6 | 3 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Out of 100 persons who had a first union, proportion whose partner already had a child

| Partner's child | 7,3 | 7 | 8 | 6 |  | 6,5 | 7 | 6 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Child came | 5,4 | 4 | 6 | 6 | 1,0 | 0 | 2 | 1 |  |
| Did not came | 1,8 | 3 | 2 | 0 | 5,6 | 6 | 4 | 8 |  |

Proportion of first unions that have been broken (\%)
$\begin{array}{lllll}\text { All first unions } & 22,9 & 23 & 20 & 30\end{array}$
Proportion who had at least one child at the end of the first union (\%)

| All breakdowns | 60,3 | 69 | 53 | 56 | 78,1 | 87 | 80 | 56 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Proportion of breakdowns of first union followed by a second union (\%), by presence of children

| All breakdowns | 75,2 | 74 | 73 | 81 | 58,9 | 58 | 62 | 36 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No child | 75,3 | 80 | 65 | 87 | 77,6 | 83 | 88 | 64 |
| One child ore more | 75,2 | 72 | 80 | 76 | 53,7 | 54 | 56 | 49 |

Out of 100 persons who had two unions, proportion who already had a child at the beginning of second union

| Own child | 60,3 | 66 | 58 | 52 | 72,2 | $\$ 2$ | 72 | 49 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Out of 100 persons who had two unions, proportion whose partner already had a child

| Partner's child | 40,9 | 45 | 48 | 21 | 36,1 | 30 | 45 | 30 |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Child came | 28,1 | 30 | 33 | 16 | 7,6 | 7 | 11 | 3 |
| Did not came | 12,9 | 15 | 16 | 5 | 28,5 | 24 | 34 | 27 |

Proportion of second unions with at least one child (\%), by presence of children born before the union

| All second unions | 46,1 | 49 | 43 | 45 | 60,4 | 64 | 63 | 48 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No own child | 59,3 | 67 | 50 | 64 | 60,4 | 41 | 79 | 54 |
| An own child | 37,5 | 41 | 39 | 28 | 60,4 | 68 | 57 | 41 |
| No partner's child | 63,9 | 67 | 69 | 53 | 67,7 | 68 | 79 | 46 |
| A partner's child | 20,5 | 27 | 15 | 13 | 47,5 | 53 | 43 | 50 |

Men born between 1944 and 1953, women born between 1946 and 1955 (men ages 40-49, women aged 38-47).
Source : INED, FFS survey, 1994.

Table 5. Distribution of men and women by number of co-parents, by level of education,
according to several definitions of parenthood.

|  | Men |  |  |  | Women |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | Level of education |  |  | Total | Level of education |  |  |
|  |  | Low | Middle | High |  | Low | Middle | High |
| Sample size | 536 | 228 | 222 | 86 | 926 | 408 | 363 | 155 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Number of biological co-parents |  |  |  |  |  |  |  |  |
| Zero | 14,8 | 12,0 | 16,8 | 16.3 | 9,0 | 6,5 | 7,4 | 19,6 |
| One or more | 85,2 | 88,0 | 83,2 | 83,7 | 91,0 | 93,5 | 92,6 | 80,4 |
| One | 80,4 | 81,7 | 79,7 | 79,2 | 83,7 | 84,2 | 85,8 | 77,1 |
| Two or more | 4,8 | 6,3 | 3,5 | 4,5 | 7,3 | 9,2 | 6,7 | 3,2 |
| Number of non biological co-parents |  |  |  |  |  |  |  |  |
| Zero | 85,9 | 86,3 | 85,9 | 85,2 | 87,5 | 88,8 | 87,1 | 85,2 |
| One or more | 14,1 | 13,7 | 14,1 | 14,8 | 12,5 | 11,2 | 12,9 | 14,8 |
| Number of residential non biological co-parents |  |  |  |  |  |  |  |  |
| Zero | 89,8 | 91,0 | 89,4 | 87,5 | 97,4 | 98,7 | 96,7 | 95,8 |
| One or more | 10,2 | 9,0 | 10,6 | 12,5 | 2,6 | 1,3 | 3,3 | +,2 |
| Number of residential co-parents, biological or not |  |  |  |  |  |  |  |  |
| Zero | 12,2 | 10,6 | 13,4 | 12,9 | 9,7 | 7,5 | 8,7 | 18,0 |
| One or more | 87,8 | 89,4 | 86,6 | 87,1 | 90,3 | 92,5 | 91,3 | 32,0 |
| One | 79,9 | 80,8 | 79,7 | 77,7 | 83,0 | 83,7 | 84,0 | 78,6 |
| Two or more | 8,0 | 8,5 | 6,9 | 9,4 | 7,3 | 8,8 | 7,2 | 3,4 |
| Number of co-parents, residential or not, biological or not |  |  |  |  |  |  |  |  |
| Zero - | 11,3 | 10,3 | 11,9 | 12,2 | 7,0 | 5,6 | 6,0 | 13,3 |
| One or more | 88,7 | 89,7 | 88,1 | 87,8 | 93,0 | 94,4 | 94,0 | 86,7 |
| One | 78,5 | 77,5 | 79,8 | 77,3 | 82,3 | 83,4 | 82,8 | 78,1 |
| Two or more | 10,2 | 12,2 | 8,3 | 10,5 | 10,7 | 11,0 | 11,2 | 8,7 |

Men born between 1944 and 1953, women born between 1946 and 1955.
Source : INED, FFS survey, 1994.

Table 6a. Mean numbers of children, by kind of children, according to several definitions of parenthood

|  | Men |  |  |  | Women |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sample <br> Size | Mean numbers of children |  |  | Sample <br> Size | Mean numbers of children |  |  |
|  |  | Biological | step-children |  |  | Biological | step-children |  |
|  |  |  | Came | Did not |  |  | Came | Did not |
|  |  | 1 | 2 | 3 |  | 1 | 2 | 3 |
| Total | 536 | 2,07 | 0,18 | 0,10 | 926 | 2,21 | 0,04 | 0,19 |
| Number of unions |  |  |  |  |  |  |  |  |
| Zero | 36 | 0,00 | 0,00 | 0,00 | 54 | 0,31 | 0,00 | 0,00 |
| One | 370 | 2,22 | 0,11 | 0,03 | 645 | 2,26 | 0,02 | 0,08 |
| Two or more | 130 | 2,01 | 0,56 | 0,50 | 227 | 2,46 | 0,17 | 0,81 |
| Number of non biological co-parents |  |  |  |  |  |  |  |  |
| Zero | 424 | 2,15 | 0,00 | 0,00 | 753 | 2,21 | 0,00 | 0,00 |
| One or more | 112 | 1,61 | 1,24 | 0,74 | 173 | 2,19 | 0,33 | 1,49 |
| Number of coparents, residential or not, biological or not |  |  |  |  |  |  |  |  |
| Zero | 67 | 0,00 | 0,00 | 0,00 | 57 | 0,00 | 0,00 | 0,00 |
| One or more | 469 | 2,34 | 0,20 | 0,12 | 869 | 2,38 | 0,04 | 0,20 |
| One | 385 | 2,33 | 0,12 | 0,04 | 707 | 2,31 | 0,02 | 0,11 |
| Two or more | 84 | 2,43 | 0,76 | 0,73 | 162 | 2,92 | 0,22 | 0,94 |

Table 6b. Mean numbers of children, according to several definitions of children and parenthood


Men born between 1944 and 1953, women born between 1946 and 1955.
Source : INED, FFS survey, 1994.

Table 7. Proportion of repondants of each cohort excluded because absence of union, by gender, level of education and birth cohort.

| Year of birth | Men |  |  |  |  | Women |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Never lived in union (\%) |  |  |  |  | Never lived in union (\%) |  |  |  |  |
|  | Sample size | Total | Level of education |  |  | Sample size | Total | Level of education |  |  |
|  |  |  | Low | Middle | High |  |  | Low | Middle | High |
| 1944-48 | 245 | 4,4 | 5,0 | 3,5 | 5,2 | 348 | 4,2 | 2,8 | 3,4 | 10,7 |
| 1949-53 | 291 | 5,7 | 5,4 | 6,9 | 2,9 | 470 | 3,7 | 3,5 | 3,4 | 4,7 |
| 1954-58 | 318 | 7,1 | 8,5 | 4,6 | 10,7 | 563 | 6,7 | 4,7 | 8,9 | 7,4 |
| 1959-63 | 375 | 12,0 | 15,7 | 9,4 | 12,4 | 548 | 6,6 | 8,9 | 6,0 | 3,0 |
| 1964-68 | 360 | 23,8 | 22,8 | 22,7 | 27,0 | 519 | 12,6 | 8,2 | 12,0 | 17,8 |
| 1969-73 | 352 | 68,0 | 69,1 | 68,6 | 64,7 | 496 | 49,5 | 45,9 | 48,1 | 58,4 |

Source : INED, FFS survey, 1994.

Table 8. Proportion of unions excluded by gender, level of education and union cohort.
a) because of a conception or a birth before the union

| Year of union | Men |  |  |  |  | Women |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sample <br> size | Child before union (\%) |  |  |  | Sample <br> size | Child before union (\%) |  |  |  |
|  |  | Total | Level of education |  |  |  | Total | Level of education |  |  |
|  |  |  | Low | Middle | High |  |  | Low | Middle | High |
| 1968-72 | 196 | 29,6 | 30,9 | 36,7 | 5,4 | 384 | 29,4 | 34,0 | 25,3 | 23,1 |
| 1973-77 | 259 | 24,2 | 26,6 | 27,8 | 10,6 | 513 | 26,0 | 36,8 | 17,9 | 13,1 |
| 1978-82 | 299. | 18,1 | 18,4 | 20,0 | 12,2 | 507 | 17,3 | 22,2 | 16,9 | 6,0 |
| 1983-87 | 307 | 12,9 | 15,9 | 11,3 | 11,4 | 444 | 15,5 | 26,9 | 12,0 | 3,3 |

b) because of second union for one of the spouses, or women's age at unions over 30

| Year of union | Men |  |  |  |  | Women |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sample size | Second union (\%) |  |  |  | Sample size | Second union (\%) |  |  |  |
|  |  | Total | Level of education |  |  |  | Total | Level of education |  |  |
|  |  |  | Low | Middle | High |  |  | Low | Middle | High |
| 1968-72 | 196 | 7,7 | 9,2 | 5,5 | 11,1 | 384 | 5,7 | 3,7 | 8,3 | 6,1 |
| 1973-77 | 259 | 9,5 | 6,8 | 11,6 | 10,1 | 513 | 7,5 | 4,1 | 9,4 | 12,9 |
| 1978-82 | 299 | 15,9 | 9,6 | 14,4 | 33,4 | 507 | 10,6 | 7,3 | 10,9 | 17,8 |
| 1983-87 | 307 | 15,2 | 13,0 | 18,3 | 12,2 | 444 | 11,0 | 9,0 | 7,9 | 19,9 |

c) Total excluded

| Year of union | Men |  |  |  |  | Women |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sample <br> size | Excluded (\%) |  |  |  | Sample <br> size | Excluded (\%) |  |  |  |
|  |  | Total | Level of education |  |  |  | Total | Level of education |  |  |
|  |  |  | Low | Middle | High |  |  | Low | Middle | High |
| 1968-72 | 196 | 37,3 | 40,1 | 42,2 | 16,5 | 384 | 35,1 | 37,7 | 33,6 | 29,2 |
| 1973-77 | 259 | 33,7 | 33,4 | 39,4 | 20,7 | 513 | 33,5 | 40,9 | 27,3 | 26,0 |
| 1978-82 | 299 | 34,0 | 28,0 | 34,4 | 45,6 | 507 | 27,9 | 29,5 | 27,8 | 23,8 |
| 1983-87 | 307 | 28,1 | 28,9 | 29,6 | 23,6 | 444 | 26,5 | 35,9 | 19,9 | 23,2 |

Source : INED, FFS survey, 1994.

Table 9. Distribution of 100 first unions by situation (cohabitation, marriage, broken union), by year of union and duration of union
a) still cohabiting outside marriage (\%)

| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 21 | 11 | 7 | 5 | 4 | 4 | 3 | 3 | 2 | 1 | 1 |
| 1973-77 | 32 | 16 | 10 | 7 | 6 | 4 | 3 | 3 | 2 | 2 | 1 |
| 1978-82 | 49 | 33 | 24 | 18 | 14 | 12 | 11 | 9 | 9 | 9 | 9 |
| 1983-87 | 66 | 51 | 36 | 29 | 24 | 21 | 18 | 15 | 14 |  |  |

b) married, and not separated (\%)

| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 79 | 89 | 91 | 92 | 92 | 92 | 92 | 92 | 91 | 91 | 90 |
| 1973-77 | 68 | 81 | 86 | 86 | 86 | 87 | 86 | 85 | 84 | 83 | 82 |
| 1978-82 | 51 | 63 | 70 | 73 | 76 | 76 | 76 | 75 | 74 | 74 | 73 |
| 1983-87 | 33 | 44 | 55 | 59 | 61 | 62 | 62 | 63 | 63 |  |  |

c) separated (with or without marriage, \%)

| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 0 | 0 | 2 | 3 | 4 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1973-77 | 0 | 3 | 4 | 7 | 8 | 9 | 11 | 12 | 14 | 16 | 17 |
| 1978-82 | 0 | 4 | 6 | 9 | 10 | 12 | 14 | 15 | 17 | 17 | 18 |
| 1983-87 | 1 | 5 | 9 | 12 | 15 | 17 | 20 | 21 | 23 |  |  |

d) proportions (\%) of married couples, among subsisting unions $[=b /(a+b)]$

| Year of union | Duration of union (completed vears) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 79 | 89 | 93 | 95 | 96 | 96 | 97 | 97 | 98 | 99 | 99 |
| 1973-77 | 68 | 83 | 90 | 93 | 94 | 96 | 97 | 97 | 97 | 98 | 98 |
| 1978-82 | 51 | 65 | 75 | 81 | 84 | 86 | 88 | 89 | 89 | 89 | 90 |
| 1983-87 | 33 | 46 | 60 | 67 | 71 | 74 | 77 | 81 | S2 |  |  |

e) proportions of married couples, among subsisting childless "non-pregnant" unions

| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 77 | 80 | 82 | 83 | 82 | 80 | 80 | 76 | 83 | 89 | 89 |
| 1973-77 | 67 | 74 | 78 | 81 | 80 | 82 | 83 | 82 | 85 | 88 | 88 |
| 1978-82 | 48 | 56 | 61 | 64 | 65 | 68 | 67 | 65 | 60 | 56 | 57 |
| 1983-87 | 30 | 36 | 42 | 47 | 47 | 44 | 44 | 30 | 30 |  |  |

Source : INED, FFS survey, 1994.
For each promotion of union and duration,
the numbers in tables a), b) and c) add up to $100 \%$.

Table 10. Life table estimates of childless "non pregnant" couples (p. 1000), by year of union and duration of union

| a) all unions (breakdown = censoring) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 1000 | 562 | 407 | 289 | 230 | 198 | 150 | 126 | 116 | 109 | 101 |
| 1973-77 | 1000 | 710 | 456 | 333 | 262 | 206 | 172 | 143 | 131 | 104 | 103 |
| 1978-82 | 1000 | 776 | 595 | 447 | 345 | 264 | 216 | 170 | 140 | 107 | 96 |
| 1983-87 | 1000 | 786 | 646 | 506 | 404 | 294 | 259 | 199 | 160 |  |  |

b) cohabitations (marriage or breakdown $=$ censoring)

| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 1000 | 790 | 730 | 719 | 664 | 664 | 570 | 494 | 480 | 480 | 440 |
| 1973-77 | 1000 | 847 | 770 | 682 | 569 | 507 | 495 | 459 | 459 | 429 | 402 |
| 1978-82 | 1000 | 896 | 784 | 699 | 648 | 575 | 532 | 438 | 438 | 385 | 322 |
| 1983-87 | 1000 | 882 | 823 | 763 | 658 | 553 | 493 | 448 | 366 |  |  |

c) marriages (marriage $=$ entry, breakdown $=$ censoring)

| Year of union | Duration of union (completed years) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1968-72 | 1000 | 513 | 352 | 233 | 180 | 150 | 110 | 92 | 82 | 77 | 72 |
| 1973-77 | 1000 | 655 | 375 | 260 | 202 | 155 | 124 | 101 | 91 | 70 | 70 |
| 1978-82 | 1000 | 673 | 469 | 318 | 222 | 157 | 121 | 94 | 70 | 48 | 46 |
| 1983-87 | 1000 | 611 | 409 | 257 | 189 | 116 | 101 | 62 | 47 |  |  |

Source : INED, FFS survey, 1994.

Table 11. Estimates of covariates effects on first conception instant rates of couples. Relative risks estimated by several models

| Covariate | Distribution $(\%)^{\circ}$ | Model number |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| Legal status (time-varying covariate) |  |  |  |  |  |  |  |  |  |
| Cohabitation | 38 | -1- | -1- | -1- | -1- | -1- | -1- | -1- | - 1 - |
| Marriage | 62 | 3,29 | 2,85 | 2,87 | 2,74 | 2,80 | 2,71 | 2,69 | 2,60 |

Promotion of union ( 0 for cohorts 1968-72 to 3 for cohorts 1983-87)
Cont. - 0,99
Promotion of union, for cohabiting couples
$\begin{array}{lllllllll}\text { Cont. } & - & 0,93 & 0,93 & 0,94 & 0,94 & 0,95 & 0,84 & 1,13\end{array}$
Promotion of union, for married couples

| Cont. | - | 1,00 | 1,00 | 1,02 | 1,00 | 1,02 | 0,93 | 1,17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Woman's age at union formation |  |  |  |  |  |  |  |  |
| Less than 20 | 36 |  | -1- |  |  | - 1 - | -1- | -1- |
| 20-24 | 57 |  | 0,92 |  |  | 0,98 | 0,95 | 1,06 |
| 25 or more | 9 |  | 0,81 |  |  | 0,89 | 0,88 | 0,99 |
| Man's age at union formation |  |  |  |  |  |  |  |  |
| Less than 22 | 33 |  | -1. |  |  | - 1 - | -1. | -1- |
| 22-26 | 55 |  | 1,06 |  |  | 1,06 | 1,08 | 1,03 |
| 27 or more | 12 |  | 1,14 |  |  | 1,13 | 1,32 | 0,88 |

Woman's level of education

| Low | 39 | $-1-$ | $-1-$ | $-1-$ | $-1-$ |
| :---: | :--- | :--- | :--- | :--- | :--- |
| Middle | 41 | 0,87 | 0,88 | 0,79 | 1,04 |
| High | 20 | 0,79 | 0,80 | 0,69 | 0,93 |

Man's level of education

| Low | 34 | $-1-$ | $-1-$ | $-1-1-$ |  |
| :---: | :--- | :--- | :--- | :--- | :--- |
| Middle | 46 | 0,91 | 0,91 | 0,97 | 0,85 |
| High | 20 | 0,77 | 0,80 | 0,81 | 0,77 |

Stable professional activity at the time of union formation

| None | 9 |  | $-1-$ | $-1-$ | $-1-$ | $-1-$ |
| :---: | :---: | ---: | ---: | ---: | ---: | :---: |
| Both | 60 |  | 1,44 | $\mathbf{1 , 2 7}$ | 1,28 | 1,26 |
| Man only | 24 |  | 1,51 | $\mathbf{1 , 2 7}$ | 1,38 | 1,14 |
| Woman only | 7 |  |  | 1,34 | $\mathbf{1 , 3 4}$ | 1,41 |
| -2 Log-Likelihood |  | 34067,2 | 34066,0 | 34060,6 | 34032,1 | 34051,9 |

${ }^{\circ}$ Distribution of 100 couples. For legal status, distribution of 100 "couples $\times$ months at risk".
Source : INED, FFS survey, 1994.
Couples begun between 1968 and 1987, without any child or pregnancy,
first union for both partners, woman aged less than 30 at union formation.
1862 couples are followed; 1513 first conceptions are observed, and 349 are censured.
The first column presents the distribution of the "exposures" (couples $x$ months at risk).

- 1 - : reference group
cont. : continuous variable
Relative risks statistically different from 1 (student test on parameter, at $5 \%$ level) are bold.
For model 7, the first column deals with the first two years of union,
and the second column concerns longer union durations.
For model 7 , second column, relative risks are bold if they are different
from their counterpart for the two first years of union.

Table 12. Impact of the number of children of each partner on the whish to have another child

|  | Unweighted sample size | Proportion (in\%) who wish to have another child |  | Impact of the number of children on the wish to have a child (odds ratios) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Crude O.R. ${ }^{\text {a }}$ |  | Adjusted O.R. ${ }^{\circ}$ |  |
|  |  | Men | Women | Men | Women | Men | Women |
| All | 2596 | 41 | 40 |  |  |  |  |
| Number of children born inside the couple |  |  |  |  |  |  |  |
| Zero | 821 | 75 | 73 | -1- | -1- | -1- | -1- |
| One | 727 | 55 | 52 | 0,40 | 0,41 | 0,42 | 0,46 |
| Two | 675 | 19 | 20 | 0,08 | 0,09 | 0,09 | 0,12 |
| Three | 262 | 14 | 9 | 0,05 | 0,04 | 0,07 | 0,06 |
| Four or more | 111 | 14 | 15 | 0,05 | 0,06 | 0,10 | 0,16 |
| Children of the man only |  |  |  |  |  |  |  |
| Zero | 2234 | 43 | 40 | - 1 - | - 1 - | -1- | -1- |
| One or more | 362 | 32 | 39 | 0,63 | 0,98 | 0,44 | 1,26 |
| and one cohabiting | 102 | 29 | 10 | 0,56 | 0,99 | 0,31 | 0,81 |
| and zero cohabiting | 260 | 33 | 39 | 0,66 | 0,98 | 0,58 | 1,64 |
| Children of the woman only |  |  |  |  |  |  |  |
| Zero | 2180 | 42 | 41 | -1- | -1- | -1- | -1- |
| One or more | 416 | 34 | 28 | 0,72 | 0,55 | 0,59 | 0,35 |
| and one cohabiting | 339 | 38 | 31 | 0,85 | 0,65 | 0,55 | 0,35 |
| and zero cohabiting | 77 | 22 | 18 | 0,39 | 0,31 | 0,79 | 0,39 |
| Age of the respondant |  |  |  |  |  |  |  |
| 20-24 , | 200 | 88 | 85 | -1- | -1- | -1- | -1- |
| 25-29 | 562 | 81 | 80 | 0,59 | 0.69 | 1,10 | 1,28 |
| 30-34 | 573 | 56 | 59 | 0,17 | 0,25 | 0,59 | 0,85 |
| 35-39 | 570 | 29 | 27 | 0,05 | 0,07 | 0,22 | 0,25 |
| 40-44 | 405 | 14 | 8 | 0,02 | 0,02 | 0,09 | 0,05 |
| 45-49 | 286 | 7 | 6 | 0,01 | 0.01 | 0,03 | 0,04 |

- : - 1- for reference group

Men born between 1944 and 1971, women born between 1946 and 1973, living as a couple, not sterile. The effects of age and number of children born inside the couple are significant.
For the effect of the children of each spouse, odds ratios different from 1 (at the $5 \%$ level) are bold.
Source : INED, FFS survey, 1994.

Table 13. Impact of the religious belief and fertility intention of each partner on the refuse to have recourse to an abortion in case of unwanted pregnancy

|  | Unweighted sample size |  | Proportion (in\%) who refuse an abortion |  | Impact of partners' characteristics on refusing an abortion (odds ratios) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Crude O.R. ${ }^{\text {a }}$ | Adjusted O.R. ${ }^{\circ}$ |  |
|  | Men | Women |  |  | Men | Women | Men | Women | Men | Women |
| All | 1019 | 1577 | 43 | 38 |  |  |  |  |
| Importance of religion in daily life for the man |  |  |  |  |  |  |  |  |
| (Very) important | 209 | 338 | 61 | 52 | 2,90 | 2,01 | 2,94 | 1,41 |
| Not very important | 376 | 512 | 39 | 32 | 1,19 | 0,87 | 1,43 | 0.84 |
| Not important at all | +34 | 727 | 35 | 35 | -1. | -1- | -1- | -1. |
| Importance of religion in daily life for the woman |  |  |  |  |  |  |  |  |
| (Very) important | 283 | 459 | 54 | 50 | 1,84 | 1,94 | 1,18 | 2,04 |
| Not very important | 388 | 548 | 37 | 31 | 0,92 | 0,87 | 0,75 | 1.01 |
| Not important at all | 348 | 570 | 39 | 34 | -1- | -1. | -1- | -1. |
| Man's wish to have another child |  |  |  |  |  |  |  |  |
| Yes | 507 | 794 | 55 | 52 | 2,37 | 2,79 | 1,54 | 1,53 |
| No | 512 | 783 | 34 | 28 | -1. | -1. | -1. | -1. |
| Woman's wish to have another child |  |  |  |  |  |  |  |  |
| Yes | 519 | 747 | 52 | 53 | 1,93 | 2,90 | 1,07 | 1,40 |
| No | 500 | 830 | 36 | 28 | -1. | -1. | -1- | -1. |
| Age of the respondant |  |  |  |  |  |  |  |  |
| 20-24 | 82 | 118 | 62 | 54 | -1- | -1. | -1- | - 1. |
| 25-29 | 209 | 353 | 56 | 54 | 0,78 | 1,00 | 0,82 | 0,90 |
| 30-34 | 228 | 345 | 48 | 48 | 0.57 | 0,79 | 0,65 | 0,83 |
| 35-39 | 216 | 354 | 46 | 39 | 0,52 | 0,54 | 0,74 | 0,73 |
| 40-44 | 154 | 251 | 29 | 22 | 0,25 | 0,24 | 0,35 | 0,33 |
| +5-49 | 130 | 156 | 26 | 20 | 0,22 | 0,21 | 0,28 | 0,32 |

○: - 1- for reference group
Men born between 1944 and 1971, women born between 1946 and 1973, living as a couple.
The effect of age is significant.
For the effect of the other covariates, odds ratios different from 1 (at the $5 \%$ level) are bold.
Source : INED, FFS survey, 1994.


[^0]:    *Institut National d'Études Démographiques, 27, rue du Commandeur, F-75675 Paris Cedex 14, France.
    *" Département de Démographie, Université de Montréal, CP 6128, Montréal, Québec, H3C 3J7, Canada.

