

How many children and how many siblings in France in the last century?

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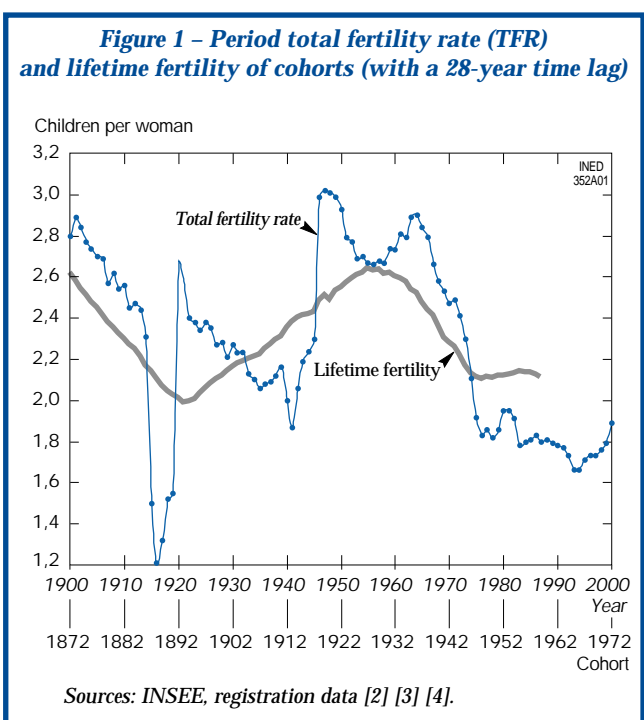
The baby-boom of the 20th century was a unique and major demographic event. In France, after having steadily declined in the 1920s and 1930s, the period total fertility rate (box 1) suddenly rose between 1945 and 1947 (see figure 1). It remained high for about twenty years, and then, in 1964, it began to decline again, ending the baby-boom in France as well as in most industrialized countries. Since 1975, TFR has remained more or less stable in France at around 1.8 children per woman.

◆ The most fertile women of the century were those born in 1930

How did the different cohorts of the 20th century experience the baby boom? Women born in 1900 are not concerned: they were 45 by the end of World War II and had their children between 1920 and 1950. The same is true for women born in 1950: they were fifteen in 1965 and had their children after the baby boom. On the other hand, those born in 1930 were 15 in 1945 and 35 in 1965, which means they were involved in the baby boom. Their completed fertility was over 2.6 children on average, which is 0.5 more than women born in 1900 or 1950 (see figure 1).

The lifetime fertility of the next cohorts, those born between 1950 and 1960, has settled at an average of around 2.1 children. Fertility under age 25 has considerably declined, but it has increased above that age, with one trend offsetting the other. However, this compensation may be incomplete for the more recent cohorts and the lifetime fertility could decline slightly, stabilizing perhaps at about 2 children among women

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born after 1970. Women born in 1970 had one child on average before the age of 30; if fertility continues to rise among older women, they will have a second child after the age of 30.

◆ A sharp increase in the age of mothers at childbirth

Women born between 1940 and 1945 were the youngest mothers of the 20th century (see box 2). They had their children at 26.1 years on average, against 28.4 years for women born in 1920 (figure 2). At the age of 25, two out of three already had one child. On average,

they had their first child at 24.0 years and their last child at 29.0 years, against 24.9 and 31.5 for women born in 1920: women often had their children at closer intervals, and large families became less frequent [8]. The decline of the average age at childbirth (all birth orders considered together) can be explained half-and-half by the fact that first-time births occurred at an earlier age and by the fact that large families became fewer [3]. Among women born after 1945, the trend is reversed: they had their children at a later age, and this fact alone accounts for the increase in the average age at childbirth. For women born in 1970, the average age at the birth of the first child may approach 27, and the average age at childbirth may be close to 30 (1).

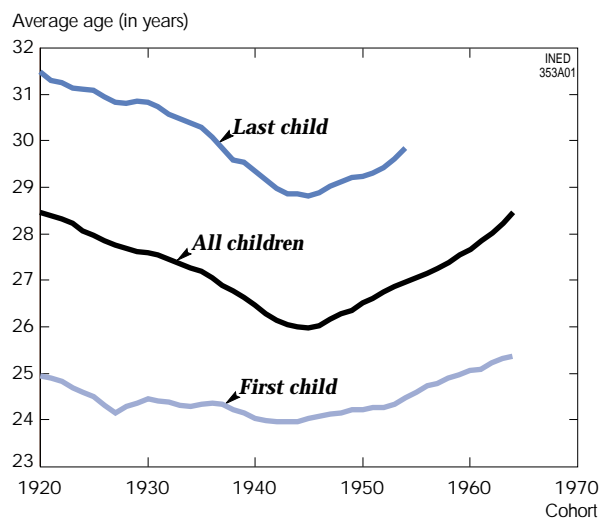
◆ Controlling fertility: four out of ten women have two children

Although women born in 1950 had, on average, the same number of children as those born in 1900, their fertility was in fact very different. Earlier, families were of a variety of sizes. 23% of the women born in 1900 had no children — not only because many never married, but also because many couples remained childless — and barely over half had two or more; 8% had four children and 10% had five or more (figure 3). Some families were very large, and children born in the higher ranks (fifth child or more) were proportionally quite numerous, since they represented one out of seven children. Women born in 1930 gave birth to more children of all orders, but the highest increase concerns the first birth orders. Indeed, the proportion of women who had given birth to at least one child had probably never been higher. This proportion increased still more among women born in 1950, since 90% had at least one child, and 70% at least two. On the other hand, the end of the baby boom was expressed by a decline in large families (especially families with four children or more). Family sizes became distributed according to a symmetrical pattern, with two-child families being the mode: of ten women born in 1950, four had two children, two had one child, two had three, one had none and one had four or more (see figure 3).

The desire to have fewer children, along with effective means of birth control reduced by half the number of mothers of very large families. But at the same time, for various reasons — in particular the high percentage of marriages and at an early age, the social

(1) Average ages are much older when calculated on the basis of the fertility rates of recent years: according to fertility rates of the year 2000, the average age of women at childbirth is 29.7 years and the average age at first childbirth is close to 28 [9]. The trend towards a later fertility should thus continue for women born after 1960.

Figure 2 – Average age of mothers at childbirth, according to birth cohort of mothers



Sources: INSEE, Family Surveys 1982, 1990 and 1999 [5] [6] [9].

Box 1

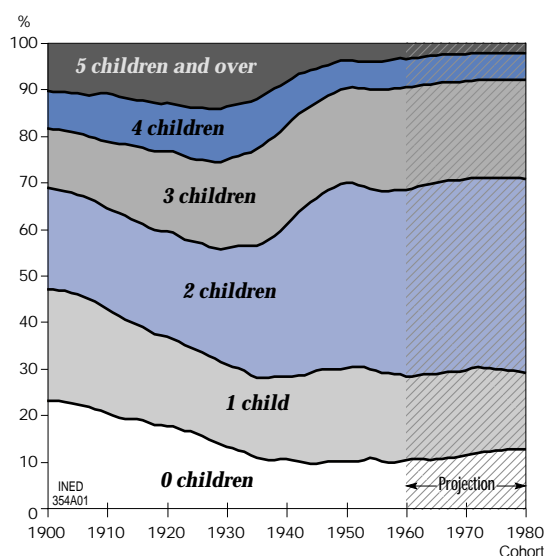
Measuring fertility

The lifetime fertility of a cohort represents the average number of children of all the women born in a given year and having survived until the age of 50 at least. This figure is directly estimated from survey data, or indirectly estimated from registration data, by summing the age-specific fertility rates observed year after year, as the cohort grows older.

Women born during the 1950s, now between forty and fifty years old, have had on average 2.1 children (see figure 1). This level corresponds to generation replacement: since 105 boys are born for every 100 girls, and given that, in present mortality conditions, 1.1% of girls die before reaching the age of childbirth, 100 women must give birth to 207 children in order to be themselves “replaced” by 100 daughters who will in turn reach childbearing age.

The period total fertility rate (TFR) is the sum of the age-specific fertility rates observed in a given year. It indicates the total number of children borne by women of a fictitious cohort who would have, at each age, the fertility observed at that age in that given year. During the past 25 years, TFR has been under 2.1 children per woman. Generations are being replaced, but the age of women at childbirth is increasing and the cumulated delaying of childbirth by each cohort means that the annual number of births is reduced [1].

Figure 3 – Percentage distribution of women according to final number of children



Note: Fertility by birth rank can only be determined with certainty for women aged over 50, and with a slight uncertainty for women over 40 (born before 1960). For the following cohorts, the projection is based on parity-specific fertility rates in the years 1996-1998, on the assumption that fertility will remain stable in the future.

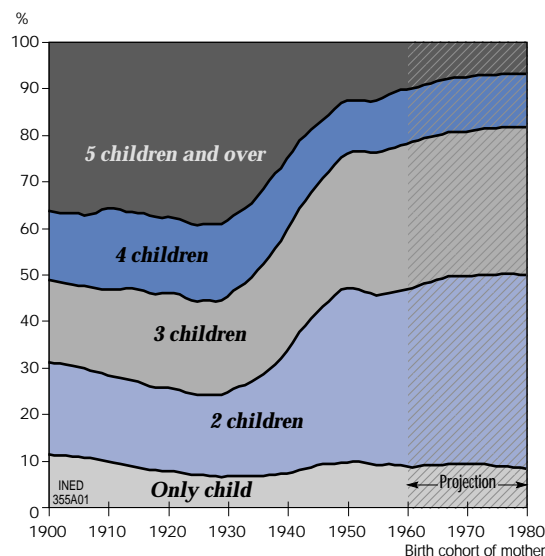
Sources: INSEE, registration data [2] [4], Family Surveys 1982, 1990 and 1999, census of 1946 and projections [5] [6] [9].

Box 2

Sources of information on birth order

Vital records register the birth rank (the order of birth of a woman's children), but the rank of children born out of wedlock is not always mentioned; furthermore, birth rank often counts only the children born within the current marriage. Thus, the birth order of all the children borne by one mother cannot be identified very precisely on the basis of registration data. In 1946, the census included a question concerning all the children a woman had given birth to. This question was removed in 1954, but the Family Surveys conducted since 1982 by INSEE with one in fifty women have collected this type of information [5] [6] [7]. The different editions of this survey and the 1946 census — after adjustment for non-response — made it possible to establish the fertility of women born throughout the 20th century and to calculate their average number of children, their average age at childbirth, and their parity distribution, as well as, for women born after 1920, their age at the birth of each of their successive children.

Figure 4 – Percentage distribution of children by size of sib group they belong to



Sources: see figure 3.

advances linked to the development of salaried labor (maternity leaves, job security) and the increase in the medical supervision of pregnancies and births — a very high proportion of women, nine out of ten, were able to become mothers. Women born after 1960 benefited from the “second birth control revolution” [10]: since they could control their fertility and since abortion became more accessible, they had fewer unwanted children. Overall, two children per family became the dominating trend.

◆ Family size seen from the standpoint of siblings

This trend is all the more striking if one looks at family size from the standpoint of children rather than mothers. Of course, children belong to a group of siblings of at least one child, and families without children are not included. However, the perspective gained from shifting the point of view from mothers to children is quite revealing (see box 3).

Among the children of women born between 1900 and 1930, over half belong to a group of siblings of at least four children, whereas only 20 to 25% of women had four or more children (less than 30% of those who had at least one child) (see figure 4). Only children are less frequent among the children of women born in 1930, but overall, the composition of sibling groups does not change much. On the other hand, however, there are significant changes among the children of mothers born in 1960: though only children remain few

Table 1 – Distribution of 100 women by parity and 100 children by sib group size, for three birth cohorts of women

Number of children	Women born in...			Size of sib group (1)	Children whose mothers were born in...		
	1900	1930	1960		1900	1930	1960
0	23	13	10	0	0	0	0
1	24	18	18	1	11	7	9
2	22	26	40	2	21	19	38
3	13	18	22	3	18	20	32
4	7	10	7	4	14	16	12
5	4	6	2	5	10	11	5
6+	7	9	1	6 et +	26	27	4
Total	100	100	100	Total	100	100	100
Average	2.1	2.7	2.1	Average	4.2	4.5	2.8

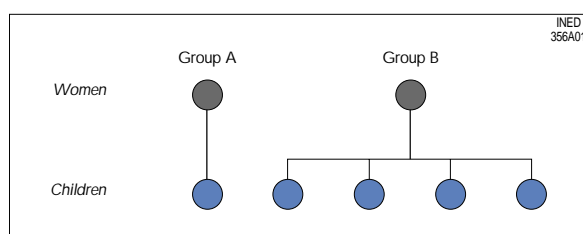
(1) Number of brothers and sisters including the reference child.

Sources: see figure 3.

Box 3

The number of siblings: the family seen from the standpoint of children

Let us take a group A of 100 women who each had one child and a group B of 100 women who each had four children. Both groups of women are identical in number, but the sib group B is four times as numerous as the sib group A (400 against 100). In general, large families weigh heavier among children than among women. For this reason, the size of the sibling group (the average number of brothers and sisters, reference person included) in a population is higher than the average number of children among the women who gave birth to this population.



	Number of children			Average number of children or average size of sib group
	1 (group A)	4 (group B)	Total	
Women	100	100	200	2.5
Children	100	400	500	3.4

(about one in ten), the children that belong to large sib groups (5 or more) account for only 10%, as opposed to 40% thirty years earlier.

These profound changes can be summed up by comparing four cohorts of women born in the 20th century: women born in 1900, their daughters born around 1930, their grand-daughters around 1960 and their great-granddaughters around 1990 (see table 1).

One quarter (26%, or 7% + 19%) of the children of women born in 1930 (who were thus born around 1960) are only children or have only one brother or one sister, and as many (27%) belong to a group of siblings of at least six children. Almost half their children (47%, or 9% + 38%) belong to or will belong to a small group of siblings (one or two children), whereas less than one out of twenty (4%) will belong to a very large family (six children or more).

To these brothers and sisters born of the same mother, one can add the half-brothers and half-sisters born of the same father but of another mother: these are not included here [11]. However, overall, today's sib groups are much smaller than were those of their parents. Since the end of the baby boom, the two- or three-child family model has become dominant (over two thirds of children), whereas more than half of today's parents were born in families of at least four children.

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