

# Population & Societies

## France and Great Britain: rising educational participation results in later births<sup>(1)</sup>

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Women everywhere are having their children at progressively older ages. In developed countries, where the first birth is already later than elsewhere, the age of first-time mothers continues to rise. In a comparison of France and Great Britain Máire Ní Bhrolcháin and Éva Beaujouan examine the influence and role of longer participation in education.

Women in developed countries have been having their first child at progressively later ages. Between 1970 and 2004 the mean age at first birth increased from 24.0 to 27.8 years in England and Wales, and from 24.0 to 28.1 years in France, a delay of close to 4 years over a 36 year period [2]. Later childbearing depresses annual birth rates in the short to medium term because older generations have already had their children while younger women are delaying motherhood. Final family sizes may also be lower if the postponed births do not ultimately occur. The phenomenon is not confined to France. It has occurred also in Great Britain, despite considerable differences in the timing of childbearing. A comparison of the two countries gives a better understanding of the changing transition to adulthood.

What accounts for the trend to later childbearing that has been occurring since the 1970s? A range of factors are routinely cited: the expansion in education, the increase in female labour force participation and in women's economic independence, the conflict between employment and family life, labour market uncertainty, and near-perfect control over fertility through contraception and abortion. Some authors look beyond such factors. Attempting to explain why so many countries have established a demographic

Table: Change in the age at first birth and at completing education in Great Britain and in France

	Calendar period		Change 1980-84 to 1995-99
	1980-84	1995-99	
<b>Mean age at first birth (years)</b>			
Great Britain	25.5	26.9	1.4
France	25.1	27.5	2.4
<b>Mean age at end of education and training (years)</b>			
Great Britain	18.3	19.7	1.4
France	19.8	21.6	1.8
<b>Mean time from end of education to first birth (years)</b>			
Great Britain	7.8	8.4	0.6
France	5.8	6.2	0.5
<b>Source:</b> Ní Bhrolcháin and Beaujouan [1].			
<b>Note:</b> the estimates are based on a period life table for each event (first birth, completing education).			

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(1) This report is based on a more detailed account published elsewhere [1].

regime in which partnerships and childbearing are delayed to the extent that fertility rates have dropped below replacement (sometimes termed a “second demographic transition”), they appeal to cultural influences such as the declining influence of religion (secularization), the growth of individualism, and a retreat from family values.

Our study addresses a more concrete factor, the effect of the expansion in educational participation. Educational expansion arises both from a rise in the minimum school leaving age and from the increasing demand for a more skilled workforce rooted in macro-economic trends. In turn, this has stimulated national policies raising compulsory school leaving ages and encouraging post-compulsory education and training, and has also provided the economic rationale for individuals to invest further in education [3]. It has long been known that the better educated become parents at older average ages than the less well educated. It is also well established that birth rates are low among those in full-time education. But studies examining the role of changing educational participation in delayed childbearing are rare (Box 1). In both Great Britain and France, first birth rates shifted systematically up the age scale between 1980 and 1999, with the age at first birth peaking at progressively later ages. And while in France the entire schedule shifts up by age, in Great Britain the rates shift only from age 18 and above, with little or no change in the frequency of births at younger ages during this period. The British figures thus show signs of the bimodal pattern of fertility found in recent decades in other English-speaking countries such as the US and Australia.

**Similar delays in completing education and first birth**

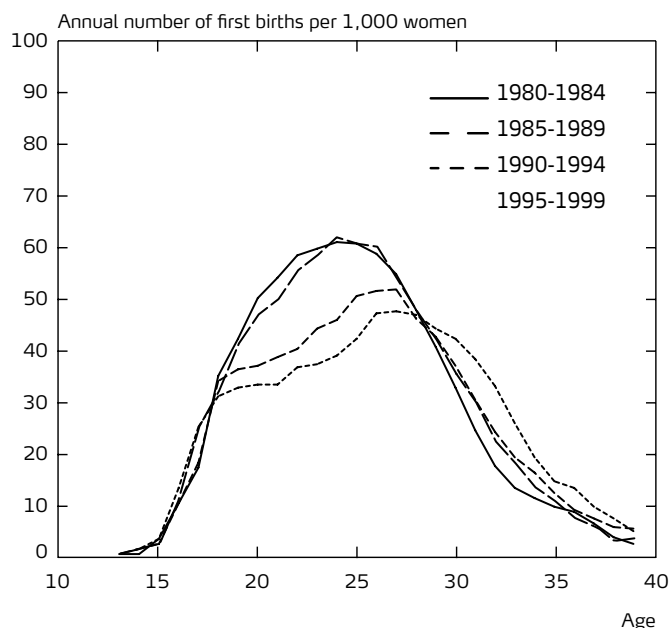
Over a 15 year period, from 1980-1984 to 1995-1999, first births were delayed in Great Britain to the same extent as the age at completing education (by 1.4 years) and in France by a slightly larger margin (first births by

2.4 years and end of education by 1.8 years). The similar shift in these two ages in both countries suggests that the second event is connected with the first.

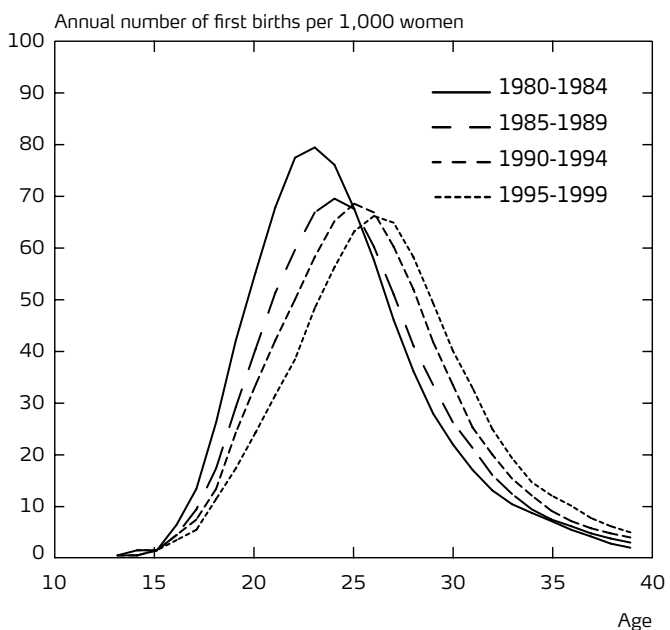
The close link between time trends in the ages at these two events becomes evident when we measure fertility from the end of education, rather than in years of age. In both countries, the time to first birth

**Figure 1. Age-specific first birth rates by calendar period (smoothed)**

**A. Great Britain**



**B. France**



(Bhrolcháin and Beaujouan, *Population and Societies*, no. 495, INED, December 2012)

**Box 1**

**Previous studies**

Earlier analyses of the link between fertility timing and education have focused largely on the individual level. With a few exceptions [5] they have looked at educational attainment rather than the age at completing education examined here. A few studies have analysed directly the issue of aggregate change and mainly reported that the changing composition of the population by educational level does not explain the growing delay in parenthood. An exception, however, is the analysis of Belgian cohorts by Neels and De Wachter, [6] whose findings are consistent with those of the present study.

lengthened by just half a year from the early 1980s to the late 1990s (Table 1). This increase is much less than the additional 1.4-2.4 years increase in the age at first birth. The link between the rising age at completing education and at first birth is somewhat stronger in France: the longer time spent in education accounts for 79%  $(2.4-0.5)/2.4$  of the rise in the age

at first birth in France, and 57%  $((1.4-0.6)/1.4)$  in Great Britain, between the early 1980s and the late 1990s.

### The end of education, key marker of the transition to adulthood

The time since completing education emerges from these results as a more natural time scale than chronological age for tracking demographic events in early adulthood. While first birth rates by age shift decidedly up the age scale over a 15 year period (Figure 1), there is much greater stability of the profile of first birth rates by time since completing education (Figure 2). First birth rates reach a maximum at around 6-7 years following the end of education in Great Britain, and around 4 years post education in France, and in each case the peak has been relatively stable over the period examined. This suggests that the time since completing education is a better measure of social age than is chronological age and, perhaps, of age of economic relevance [4]. Education and training are a transitional, pre-adult phase in the human life course, an extension of social and economic adolescence. In this perspective, in the late 1990s young adults in their twenties were younger in social age than their counterparts 15 years before.

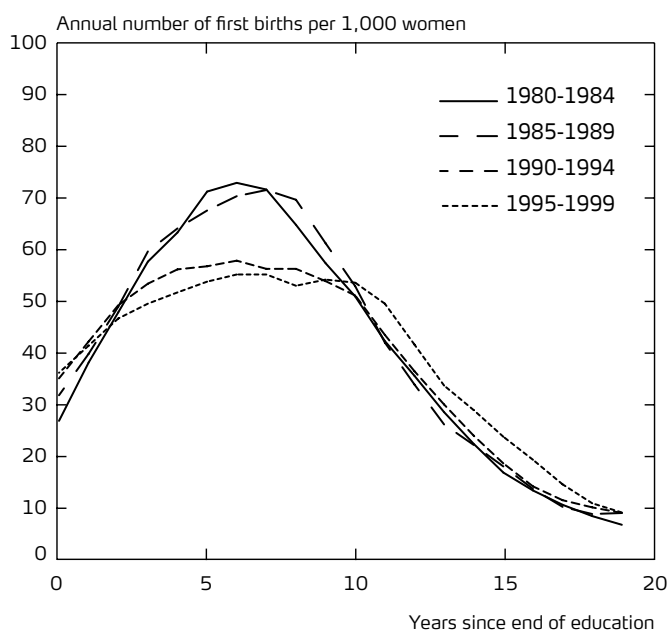
### The better educated have a greater incentive to delay childbearing

Though the increase in enrolment accounts for most of the delay to first birth, this mechanical effect does not fully explain the move to later childbearing. Beyond enrolment itself, delayed childbearing has a further component linked to educational attainment as distinct from straightforward enrolment.

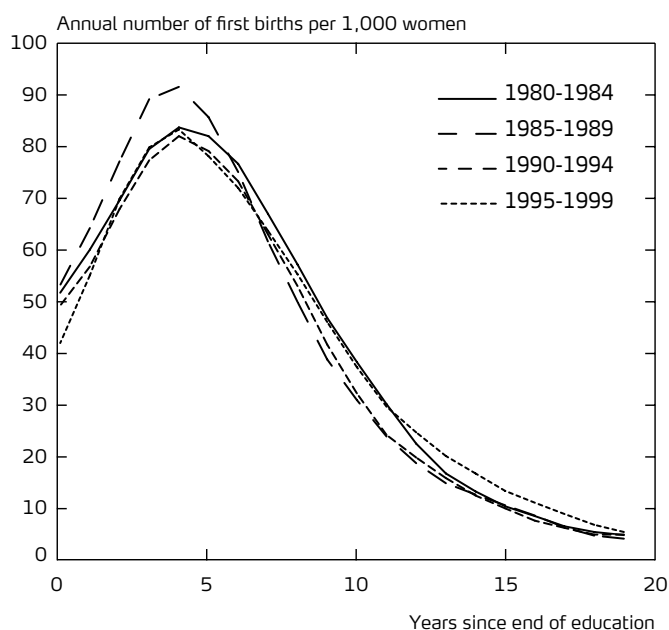
In both Great Britain and France, the best educated women experienced the longest additional delays to first birth from the early 1980s to the late 1990s (figure 3). Hence, part of the lengthening of time to first birth in recent decades not attributable to longer enrolment is also related to education, and specifically to the level of education attained.

**Figure 2. First birth rates by time since completing education, 1980-1984 to 1995-1999 (smoothed)**

#### A. Great Britain



#### B. France



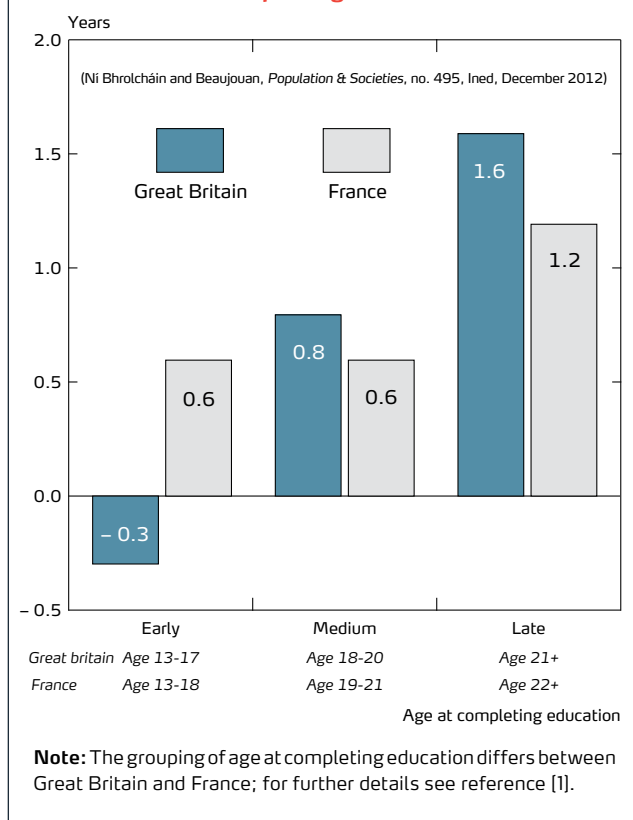
(Bhrolcháin and Beaujouan, *Population and Societies*, no. 495, Ined, December 2012)

#### Box 2

##### Data and methods

This study is based on two nationally representative surveys. For Great Britain, we use a pooled set of the General Household Survey (GHS) rounds from 2000-2007. Fertility histories are collected in the GHS for women aged 16-59 [7]. For France, we use the Family History Survey (FHS) linked with the French census of 1999. For comparability with the GHS, we use the period 1980-1984 to 1995-1999 for France also, and confine the study to women as the GHS did not collect men's fertility histories. Further details are given in [1].

**Figure 3. Change in the time from completing education to first birth in Great Britain and in France, from 1980-1984 to 1995-1999, by age at completing education**



Births are rare among women enrolled in education mainly because of the conflict between student and parental roles. But in the post-education phase, the increase in educational attainment has contributed to delaying fertility for other reasons. Women can now expect to be economically active for much longer than in the past. Forgone income due to time devoted to childbearing (the “opportunity cost”) is therefore higher.

Findings to be presented elsewhere show that, in Great Britain and France over the same time period, longer educational enrolment has also resulted in a delay to the first partnership. It would be useful to assess whether educational participation rates could be employed as predictors of future aggregate fertility trends.

The age at completing education emerges as a critical point in the transition to adulthood, at both individual and aggregate levels, and particularly in relation to the first birth. The changing timing of fertility is a response to macro- economic forces driving up demand for a more skilled workforce.

Beyond the mechanical and economic effects of rising enrolment, increases in education may, of course, also have other impacts – on attitudes and values, on contraceptive knowledge, with further implications for childbearing that remain to be studied.

## References

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## Abstract

Women are having their first child at later ages in developed countries. The mean age at first birth is now four years later in England and Wales and in France than in the mid-1970s. The expansion in education and the longer time enrolled in education are the principal factors explaining this delay. In both countries, the age at the completion of education and at first birth have in fact risen by about the same margin. The time from the end of education to first birth rose by only half a year in the 15 years between 1980-84 and 1995-99. The link between the two trends emerges clearly when we measure fertility by time since completing education rather than by chronological age. And while longer educational enrolment explains most of the delay to childbearing, it is also the best educated who have delayed childbearing the most after completing their education.