Children of the Revolution: Women's Liberation and Children's Success

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ABSTRACT

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In many countries, the Sixties marked a turning point in the history of women's emancipation. Using data with information on the birth order of large samples of individuals, we show that the first to be affected by this revolution were the first-born of the early 1960s: they grew up much more often in "modern" families (two children max, working mother and significant likelihood of parental divorce) than children of higher birth orders born at the same time in other families. However, this change in family environment did not coincide with any decline in their educational or occupational achievement.

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1 Introduction

At the end of the 1960s, the women's liberation movement challenged the patriarchal values of Western societies and led to major reforms in many countries, resulting in much freer access to contraception, abortion and divorce. In just a few years, norms change and children grow up in completely different environments, in smaller families, where the mother works outside the home, and where parental separation is no longer a fault or a taboo. This political and cultural revolution is cherished by many for the wind of freedom and democracy it blew across the world. But it is also often blamed for the inexorable decline into which it is accused of having thrown post-war societies. In the US as in Europe, many leading politicians have anchored their political vision in the idea of a moral decline of their country that began in the sixties (Hartman [2015]). For many, the decline that began in the sixties is first and foremost that of the traditional family, resulting in new generations of children far more exposed to poverty, poor school results and family insecurity (Popenoe [1993]). In this article, we use a new research strategy and new data covering cohorts born in the post-war decades to shed light on this debate and assess whether and how the emancipation of women and the accompanying transformations of the family have affected the educational and occupational outcomes of the children concerned.

From a theoretical point of view, it is not easy to predict the effect that the emancipation movement may have had on children's outcomes, and even less easy to predict whether this effect was the same for all children. Family size, parental divorce and mothers' labor force participation are dimensions whose effects on children are the subject of long-standing and

abundant literature, often with contradictory results.[1] These dimensions have all been simultaneously affected by the female emancipation movement, and our aim is to explore the combined effect these transformations may have had.

Our main research strategy is based on the fact that the first children affected by the movement were the first-born children born just a few years before the movement began. After their birth, their mothers benefited longer from the reforms than those of the second-born children born at the same time as them, in other families. Using a series of French surveys with information on the birth order of large samples of individuals born in the post-war decades, we first show that the first-born children born in the early 1960s (i.e. a few years before legalization of abortion and contraception in France) were indeed the first whose family environment was disrupted: they grew up in significantly smaller families, with mothers more often participating in the labor market or divorced than the second-born children born at the same time as them (and with whom they went to school, with the same teachers, in the same classes). These within-cohort differences in family environment between first-born and second-born children did not exist in the cohorts born before the sixties and they will disappear again for later cohorts. In this context, the question arises as to whether there is also a widening (or narrowing) of educational inequalities between first-born and second-born children born in the sixties.

We show that the answer is negative: we do not detect any significant shift in the relative outcomes of first-born and second-born children for co-

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[1] On the effects of divorce laws see, e.g., Gruber [2004], or Wolfers [2006] ; on the effects of family size see, e.g., Black et al. [2005], Angrist et al. [2010] or Mogstad and Wiswall [2016] ; on the effects of maternal employment on children outcomes see, e.g., Brooks-Gunn et al. [2002], Baum [2003], Baker et al. [2008] or Bettinger et al. [2014].

horts born in the sixties. Put differently, there is no evidence that the rise in "modern" families led to any general decline in the educational outcomes of affected children. Within each cohort, first-born children tend to do better at school, but the gap remained on average almost exactly the same across cohorts born before, during and after the sixties.

The Sixties movement had many different facets, and the fact that their combined effect on children's outcomes was small does not mean that they were all negligible. In particular, we might ask whether the drop in unwanted births (a direct consequence of the new birth control techniques) had the same effect as the drop in wanted births and the advent of new family norms.[2] To shed some light on this question, we developed a second research strategy based on the idea that the legalization of new birth control methods benefited more mothers who did not aspire to have a large number of children. Our data confirm that the Sixties were indeed followed by a particularly sharp drop in the probability of having a third child for mothers whose two eldest children were of the opposite sex, i.e., those who are generally the least keen to have a third child (because the gender mix of their siblings is already achieved). Our data also reveal that this drop in unwanted births in families with opposite-sex elders did not coincide with any increase in maternal work or parental divorce, in line with the idea that maternal work and parental divorce evolve primarily in response to changes in family norms, much more than in response to changes in the number of unwanted births. Finally, we show that the drop in unwanted births in families with opposite-sex elders (and the rise of "modern" families that went with

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[2]Surveys carried out by the French *Institut National des Etudes Démographiques* (INED) suggest that the drop in fertility observed between the mid-sixties and the mid-seventies in France reflects half a drop in unwanted pregnancies and half a drop in the ideal number of children and desired fertility (Leridon [1985]).

it) did not coincide with any drop (or rise) in children's school performance. In the context of the changes in family environment that followed the Sixties, this second strategy likely isolates the effect of the drop in unwanted births and suggests that, as such, it had no significant effect on children's educational and occupational achievement.

All in all, we have a set of results to suggest that the various changes in the family brought about by the emancipation movement of the sixties had no major repercussions on the subsequent trajectories of the children most directly concerned. This basic result remains true when we analyze the male and female samples separately. On the other hand, the results tend to be different when we analyze the groups of children from modest and affluent backgrounds separately. Specifically, this heterogeneity analysis is suggestive that the Sixties depressed the academic performance of lower-SES children and boosted that of higher-SES ones.

Further explorations reveal that the social movement led to a greater increase in maternal employment in lower-SES than in higher-SES families, while sibships with 3 or more children declined less rapidly in lower-SES families than in higher-SES families. In the end, the probability of growing up with a mother doubly constrained (by her job and a large number of children) decreased for higher-SES children, but not for lower-SES ones. These divergent developments in family contexts represent one possible explanation for the fact that the changes brought about by the Sixties mainly benefited higher-SES children.

This article contributes to the rich social science literature on the female emancipation movement and the decline in patriarchal family at the turn of the sixties.[3] It has long been recognized that this movement may have

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[3]On the effects of the liberalization of oral contraception and abortion, see e.g., Goldin

had both positive and negative effects on children's development, without a clear consensus emerging (e.g., Kain [1990], Popenoe [1993], Houseknecht and Sastry [1996], McLanahan [2004], Furstenberg [2019]). We contribute to this literature by developing a new identification strategy based on the fact that the social movement under consideration first affected the firstborns born just before the start of the movement before affecting all the firstborns and secondborns of the following cohorts. Because it is based on comparing the eldest siblings across families (and not on comparing "average" children), this research strategy overcomes the selection problems usually encountered in the literature assessing the impact of the reforms of the sixties on children's outcomes (e.g., Gruber et al. [1999], Bailey et al. [2019]).

Our approach also suggests that the emancipation of women and the change in the family model catalyzed by May 1968 ultimately benefited children from affluent backgrounds more than those from modest ones. It has often been pointed out that social mobility increased little in developed countries in the post-war decades, despite the unprecedented expansion of education systems (e.g., Erikson and Goldthorpe [1992], Shavit and Blossfeld [1993]). Our results suggest that the explanation lies partly in the transformations of the family model that accompanied the educational expansion, the consequences of which were not the same for children from different social backgrounds.

The remainder of the paper is organized as follows. In section 2, we present the major reforms relating to abortion, divorce or contraception which were implemented at the end of the sixties and the beginning of the seventies in France. In section 3, we specify the conceptual framework

and Katz [2002], Pop-Eleches [2006], Bailey [2006], Bailey [2010]), Ananat and Hungerman [2012], Myers [2017] .

within which our empirical explorations can be interpreted. In section 4, we present the data. In sections 5 and 6, we develop an empirical analysis (first graphic then econometric) of the effects of the sixties movement on the family environment in which first-born and second-born children grow up and on their educational outcomes. In section 7, we develop an alternative research strategy based on a comparison of families with two elders of the same sex and families with two elders of the opposite sex, before and after the great wave of reforms. Section 8 concludes.

2   Historical and institutional context

In this article, we use a large corpus of French surveys covering cohorts born in the post-war decades with information on respondents' birth order to explore the effect of the 1960s emancipation movement on the family environment in which children grew up as well as on their educational and occupational attainment. The French experience is particularly interesting for the strength of the social movement that shook the country and the suddenness with which society was transformed at the turn of the sixties. The legalization of the contraceptive pill, abortion and divorce by mutual consent all came into effect almost at the same time, in just a few years.

2.1   Legalization of contraception and abortion

Until the late 1960s, the contraceptive pill was banned in France, and abortion was considered a crime. A major breakthrough came in December 1967, when, after heated debates, Parliament passed a law authorizing the contraceptive pill. By 1968, about 5% of women aged 20-44 had already

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used the pill and around 29% by 1974 (Leridon et al. [1979]). The proportion of contraceptive pill users then continued to rise steadily, reaching 50% in the late 1970s, boosted by the vote authorizing reimbursement of the pill by the Social Security system in 1974. That same year, free access to the pill was extended to women aged 18-21, who until then had to obtain parental authorization.

With regard to abortion, a decisive moment came in January 1975, when Parliament passed a law giving women the right to have an abortion up to 10 weeks after conception. A major shift in jurisprudence towards the decriminalization of abortion had already taken place in 1972, following the trial of a 16-year-old teenager who had had an abortion after a pregnancy resulting from rape (a trial known as the "procès de Bobigny"). Following highly publicized debates, the teenager was acquitted in court. This trial marked the advent of an age when abortion was effectively decriminalized.

As in the case of contraception, French women did not wait for the law before resorting to abortion, even though it is not easy to agree on the number of clandestine abortions that took place in the 1960s. Based on statistics on obstetrics deaths, the French demographic institute (INED) estimates that there were around 250,000 clandestine abortions per year in the mid-1960s. According to the INED, the number of abortions then increased slightly in the 1970s, after legalization, despite the spread of oral contraception. In the early eighties, the number of abortions slightly fell back to its initial level and then stabilized (Rossier and Pirus [2007]).

2.2 Divorce liberalization

In 1975, French law also extended the possibilities for divorce beyond fault-based divorce, notably by introducing divorce by mutual consent. Divorce by mutual consent is a civil divorce in which the spouses agree on the breakdown of the marriage and its consequences (custody of children, compensatory allowance, etc.). The law also introduced a compensatory allowance designed to reduce the income disparities that might arise between spouses as a result of separation. This reform contributes to reducing the sense of guilt felt by those embarking on divorce proceedings (there is no longer any need to find someone at fault). It coincides with an upward trend in the number of divorces, the vast majority of which are initiated by women. As with the contraceptive pill, the rise in divorce rates began in part before the law came into force, but the law marked a clear acceleration, with the divorce rate rising almost twice as fast at the end of the 1970s as at the beginning (Sardon [1996], Solaz [2021]). About 22% of marriages celebrated in the late 1970s ended in divorce, compared with just 12% of those celebrated in 1970 (Bellamy [2016]). It should also be noted that the divorce reform had been preceded in 1965 by a law allowing women to work and open bank accounts without their husbands' authorization. Until then, in a distant legacy of Napoleonic laws, husbands had a veto over their wives' participation in the labor market.

All in all, from the mid-1960s onwards, the evolution of French laws accompanied and amplified a deep movement giving women greater control over the number of children they have and their personal lives. In the rest of this article, we will explore how these changes have impacted the family environment in which children grew up, and the consequences this may

have had on their education and occupational outcomes.

3   Conceptual Framework

In this section, before moving on to the empirical analysis, we develop a simple conceptual framework to clarify the reasons why comparisons of first-born children and second-born children born on the same date into different families can be used to identify the effect of birth control reforms that affect all families at a specific point in time.

Time is assumed to be discrete and families ($i = 1, ..., N$) are assumed to have their children in consecutive periods. We denote t_i the date on which family i has its first child. For the sake of simplicity, we assume that all families have at least two children, and that only a fraction want a third. After the reform giving families control over births, only those desiring a third child actually have three, but before the reform, some families desiring just two children may nevertheless have an unwanted third. Whether desired or not, the third child of family i is born in period $t_i + 2$.

The reform giving families control over births is assumed to take place at period t_0. From period t_0 onwards (inclusive), there are no more unwanted births. For families having their first child more than 2 periods before the reform (i.e., $t_i < t_0 - 2$), the final number of children can be written

$$n_i = 2 + S_i + (1 - S_i)x_i \tag{1}$$

where S_i is a dummy variable taking the value 1 for families who want and have a 3rd child, and x_i is a dummy variable taking the value 1 for families who have a 3rd child even though they did not want one. S_i is a variable

expressing a choice made by family i, while x_i is a variable reflecting an exogenous shock affecting this same family. For families having their first child after $t_0 - 3$ (i.e., $t_i \geq t_0 - 2$), there are no more unwanted 3rd children and we can write :

$$n_i = 2 + S_i \tag{2}$$

In this context, first-born and second-born born *before* $t_0 - 2$ grow up in a family of the same size, given by equation 1. Likewise for first-born and second-born children born *after* $t_0 - 2$: they too grow up in a family of the same (smaller) size, given by equation (2). On the other hand, if we look at the intermediate period $t_0 - 2$, first-born children born at this date grow up in families where there will already be no more unwanted children (equation 2), while second-born children belong to families that had their eldest in $t_0 - 3$ and where there will still be unwanted children (who will be born in $t_0 - 1$). In other words, the model predicts that first-born children born in $t_0 - 2$ grow up in families with a number $\Delta = (1 - S_i)x_i$ less (unwanted) children compared to second-born children born on the same date. In this set-up, the evolution of outcome differences between first-borns and second-borns born before, during and after $t_0 - 2$ makes it possible to identify the effect of the reduction in the number of unwanted children induced by the reform.

So far, we have assumed that family preferences (as captured by S_i) do not change at the time of the reform. It is possible to lift this assumption and suppose that t_0 coincides not only with an increased capacity to control births, but also, for example, with a drop in S_i : from t_0, the desired family size is no longer S_i, but $S_i' \leq S_i$.[4] Under these new assumptions,

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[4]As mentioned above, it is estimated that half of the decline in fertility in France in the

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first-born children born in $t_0 - 2$ grow up in families with $2 + S_i'$ children, while second-born children born on the same date grow up in families with $2+S_i+(1-S_i)x_i$, i.e. a gap $\Delta = \Delta S+(1-S_i)x_i$ where $\Delta S = S_i-S_i'$. Put differently, first-born children grow up in families with not only $(1-S_i)x_i$ less unwanted children, but also with ΔS less wanted children. In this augmented model, by comparing the differences in outcomes between first-born and second-born children born in $t_0 - 2$ with the differences in outcomes between first-born and second-born children born at earlier dates, we identify the combined effect of a drop in the number of desired children and a drop in the number of unwanted children.

Insofar as mothers participate more in the labor market when they have fewer children, the model also predicts that first-born children born in $t_0 - 2$ will grow up (and finish their schooling) more often with an employed mother than second-born children born on the same date. Furthermore, to the extent that women are more in a position to request a divorce if they are financially independent, the model also predicts that first-born children born in $t_0 - 2$ will be more exposed to parental divorce than second-born children born on the same date. This increase in divorce is even more likely when t_0 also coincides with a reform liberalizing divorce, such as the one passed in France in the early seventies.

In the following sections, by comparing rank 1 and rank 2 children within cohorts born long before, just before or after the combination of reforms of the late sixties and early seventies, we will be able to test the predictions of our model. It will then be possible to evaluate the consequences that may have had for first-born children born in the sixties of being the first exposed to both the decline in the size of siblings, the rise in maternal

1960s and 1970s was due to a drop in desired fertility (Leridon [1985]).

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employment and parental divorce.

4   Data and samples

The data used in this study comes from the series of five surveys on *Formation et Qualification Professionnelle* (hereafter, FQP surveys) conducted by the French Statistics Office (INSEE) in 1977, 1985, 1993, 2003 and 2014-2015.[5] Each of these surveys is conducted on a representative sample of the adult population, ranging in size from about $N = 45,000$ for the 1977 and 1985 surveys, $N = 18,000$ for the 1993 survey and $N = 40,000$ for the 2003 and 2014-2015 surveys.

These surveys provide detailed information on respondents' education and occupation as well as on their demographic characteristics. In particular, we know the number of brothers and sisters (including half-brothers and half-sisters) and the birth rank of each respondent. We also have information on the education of the parents as well as on their employment status and occupation at the time the respondent completed his/her education. The date of birth of the parents is available in the surveys conducted in 1993, 2003 and 2014-2015. For the surveys conducted in 2003 and 2014-2015, we have also information on whether the parents had divorced by the time the respondent finished school. Pooled together, these surveys make it possible to construct a sample of about 45,000 respondents aged 26-65, born between 1945 and 1989 with a birth order 1 or 2, with information on their date of birth, number of siblings as well as on their educational attainment and their parents' education or occupation. For a representative subsample of about 32,000 respondents, we also have information on parents' divorce.

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[5]For an early use of the FQP surveys, see, e.g., Goux and Maurin [2000].

Finally, in 2003 and 2014, additional information was also collected on one of the respondent's siblings (if any) drawn at random. For this particular sibling, we know his or her date of birth, birth rank, level of education, employment status and occupation. From these two surveys, we can build a sub-sample of about $N = 19,000$ individuals with a birth order 1 or 2, with detailed information on the education and occupational status of the two eldest siblings of their family. It is made up of observations where the respondent is rank 1 and the sibling drawn is rank 2, as well as observations where the respondent is rank 2 and the sibling drawn is rank 1.[6] We will use this sub-sample in the final section of the article to compare same-sex and opposite-sex families before and after the wave of emancipatory reforms.

5 Graphical Analysis

Before moving on to the regression analysis, this section provides a graphical analysis of changes in family size, maternal employment and parental divorce over the cohorts born between 1945 and 1989. To begin with, Figure 1 confirms that the liberalization of contraception and abortion coincided with a sharp drop in family size. From the children's point of view, the decline in the number of siblings began with the cohorts born in the early 1960s and ended with those born in the early 1970s.

Women who started having children in the sixties, before the contraception and abortion reforms were passed, were nevertheless able to benefit from these reforms later in their fertile lives. This helps to understand why

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[6]The probability of drawing a sibling of rank 2 (resp. rank 1) when the respondent is of rank 1 (resp. rank 2) is inversely proportional to w_i = (number of siblings - 1). To account for this differential representation of sample observations according to the number of siblings, we weight each observation by $\frac{w_i}{\sum_i w_i}$

the first children affected by the decline in sibship size were born in the sixties, several years before the reforms were passed. Further explorations show that this decrease in sibship size essentially reflects a fall in the proportion of families with 3 or more children, with the proportion of families with 2 or more children remaining more or less the same over the cohorts (around 90%, see Figure 2). When we compare cohorts born in the early 1960s with those born in the early 1970s, the proportion of children growing up in families with 3 or more children has fallen by about 20%, from 0.70 to 0.55.

Importantly, in line with our conceptual framework, the decline in sibship size came earlier for first-born children than for second-born children. As a result, first-born children born in the 1960s grew up significantly less often in families with 3 or more children than second-born children born at the same time as them in other families, whereas this was not the case for either older or more recent birth cohorts (see Figure 3a). The gap created in the 1960s between first-born and second-born children is far from negligible: the difference in the proportion who grew up in families with 3 or more children is about 7 percentage points stronger in the early 1960s than in the 1950s or the 1970s (Figure 3b).

Accompanying the strong decline in family size, the 1960s also coincided with an unprecedented growth in the proportion of children whose mother held a job before they left school. As with sibship size, and following the same logic, the upward trend came again earlier for first-born children than for second-born children (see Figure 4a). The gap in maternal work between first-born and second-born children is more than five percent points larger for cohorts born in the sixties than for those born in the fifties or the seventies (Figure 4b).

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Finally, as expected, the economic emancipation of mothers has been followed by a rise in divorce rates, all the more rapid as the early 1970s saw a far-reaching reform of divorce law. The first cohorts of children to be affected are those born a few years before the law was passed, namely in the late sixties and the early seventies. For cohorts born in the immediate post-war period, the proportion of children of divorce remains marginal. From the cohorts born in the early sixties to those of the early seventies, the effects of the reform are felt and the proportion of children whose parents divorce before they finish school rises rapidly, reaching almost 10% for children born in 1965-1969 and 15% for those born in 1970-1974. Consistent with our conceptual framework, the upward trend came again earlier for first-born children than for second-born children (see Figure 5a and Figure 5b). As the liberalization of divorce came after that of contraception, the gap in exposure to parents' divorce between first-born and second-born children reaches its maximum later than that of exposure to the decline in sibship size, namely for cohorts born in 1965-1974 rather than for cohorts born in 1960-1964. Among cohorts born in the late 1960s, the probability of experiencing parental divorce before the end of schooling is about 40% higher for first-borns than for second-borns, whereas there was virtually no difference between first-borns and second-borns among cohorts born in the 1950s.

6 Regression Results

The graphical analyses in the previous section confirm that the reforms of the late sixties and early seventies coincided with significant changes in family environments, with fewer siblings, parents more often divorced and

mothers more frequently employed. Consistent with our conceptual framework, they also reveal that these changes first affected first-born children born a few years before the reforms. In this section, we use a simple regression model to test the robustness of these results, as well as to explore whether these changes in family environment affected all social groups and whether they were followed by changes in educational and occupational outcomes.

6.1 Impact on Family Environnement

To begin with, Table 1 considers the sample of first-born and second-born respondents born between 1945 and 1989 in families with at least two children, and shows the results obtained by regressing the main variables characterizing the family environment in which they grew up on a dummy variable indicating whether the individual is a first-born child, a set of birth cohort dummies and a set of dummy variables interacting the birth cohort dummies and the first-born dummy. We also use a gender dummy as a control variable. The dependent variable is in turn (a) a dummy variable indicating whether the respondent's mother had 3 or more children, (b) a dummy variable indicating whether the respondent's mother held a job before the respondent left school, (c) a dummy variable indicating whether the respondent's parents were divorced when the respondent left school, (d) a dummy variable indicating the father's occupational status when the respondent left school (where the lower positions correspond to blue-collar workers and farmers, and the upper positions to white-collar workers, professionals and employers). The table reports the regression coefficients that correspond to the interactions between the first-born dummy and the birth

cohort dummies. They show the extent to which differences in family environment between first-born and second-born children have changed over the cohorts born before, during and after the 1960s.

Consistent with previous graphical analysis, the table first confirms that first-born individuals born in the 1960s grew up significantly less often in families with 3 or more children and significantly more often with a mother who had a job than second-born individuals born at the same time in other families, whereas this was not the case either in the earlier birth cohort (i.e., born before 1960) or in later cohorts (i.e., born after 1975). Focusing on the sub-sample for which information is available on parental divorce, the table also confirms that first-born individuals born in the late sixties and early seventies were significantly more likely than second-born individuals born at the same time to experience their parents' divorce before finishing school, whereas this was again not the case either in earlier or later cohorts. Finally, the table shows that the differences in occupational status between fathers of second-born and first-born children varied very little across birth cohorts. This result is in line with the idea that the Sixties primarily affected mothers.

When it comes to maternal work and family size, it is worth pointing out that the gaps between first-born and second-born children that appear in the sixties are very similar in timing and magnitude, in line with the idea that fertility and labor market participation decisions are closely connected. To further explore this idea, Table 2 focuses on the four outcome variables defined by interacting the family size dummy and the maternal work dummy. Specifically, the table shows the regression results when the dependent variable is in turn (a) a variable indicating that the respondent has grown up in a family with 2 children and a stay-at-home mother (i.e., a mother who never had a job), (b) a variable indicating that the respondent

has grown up in a family with more than 2 children and a stay-at-home mother ("traditional" families), (c) a variable indicating that the respondent has grown up in a family with 2 children and a working mother ("modern" families) and (d) a variable indicating that the respondent has grown up in a family with more than 2 children and a working mother.

The results suggest that the Sixties primarily impacted the proportions of children growing up in either "modern" or "traditional" families, but had very little impact on the proportions of children growing up in the other two family types (i.e., neither "traditional" nor "modern"). Specifically, the regression results suggest that the changes brought about by the Sixties essentially boil down to the substitution of "modern" families for "traditional" families. Once again, first-born children born in the early 1960s are the first to experience this major change in family environments. For cohorts born in the early 1960s, the proportion of first-born children growing up in "modern" families is almost 25% higher than that of second-born children, whereas there was no gap for earlier cohorts, and this gap will disappear for cohorts born in the 1970s.

Beyond family size or maternal work, Table A.1 in the online appendix explores whether parents' age at birth and education (as measured by high school graduation) have evolved differently for first-born and second-born children over the cohorts born before, during and after the 1960s. Using again the same regression model as Table 1, the table confirms that within each cohort, first-born children are born to parents significantly younger than second-born children, but the table shows that this gap (of around 3 years) fluctuates little over the cohorts studied. Similarly, first-born children are born to parents with slightly more education on average than second-born children, but again this gap fluctuates little over the cohorts under

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consideration.

6.2 Impact on Children's Outcomes

The previous regression analyses show that the main impact of the Sixties concerns the type of family environment in which children grew up: compared to second-born children born at the same time into other families, first-born children grew up in smaller families, where mothers are more involved in the workforce and parental divorce is more frequent. In this subsection, we explore whether these fundamental changes in family environment affected children's educational and occupational outcomes.

To begin with, Table 3 considers the same sample as Table 1 and shows the results obtained by regressing several measures of the level of education attained by individuals on the same set of explanatory variables as Table 1. The variables used to measure individuals' level of education are (a) a dummy variable indicating that the individual has left school without any diploma, (b) a dummy variable indicating that the individual has obtained a high school diploma and (c) a variable giving a (standardized) continuous measure of the level of education attained.[7] We also look at the effect of the Sixties on a measure of respondents' occupational status, namely a dummy variable indicating whether the respondent is a highly skilled employee. [8]

These regressions first confirm that, on average, first-born children achieve significantly higher levels of education than second-born children,

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[7]We use the standardized version of a variable that takes the value 0 for people with no diploma, the value 1 for people with a short vocational diploma, the value 2 for people with a high school diploma and the value 3 for people with a higher education diploma.

[8]Specifically, the variable indicates whether the respondent is a *cadre* (executives, engineers, managers...) or a *profession intermédiaire* (technicians, mid-level managers...), i.e. items 3 and 4 of the French classification of occupations.

which is consistent with the literature on birth rank effect (e.g. Black et al. [2005]). However, this advantage does not appear to be significantly different for cohorts born in the 1960s than for older or more recent cohorts. In the sixties, as in the fifties and seventies, the proportion of high school graduates was around 4 percentage points higher among first-born children than among second-born (i.e. between 10% and 15% higher). Important as they were, the changes in the family environment experienced by first-born children born in the 1960s did not coincide with any significant average improvement or decline in their school performance.[9] Consistent with the absence of any effect on education, we also detect no effect on the probability of having a highly-skilled job. The proportion of highly skilled employees is estimated to be about 3 percentage points higher among first-born children than among second-born, but this gap is not significantly different for cohorts born in the sixties than for those born in the 1950s or for those born in the 1970s.

6.3 Heterogeneous Effects

The Sixties movement was driven by university students, many of whom came from the middle and upper classes of society. We can speculate that the movement did not have the same impact in all social circles. To explore this question, Table 4 replicates the analysis of changes in family environment and educational outcomes developed in previous tables

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[9]Figure A.1 in the online appendix shows the detailed evolution of the gap in educational attainment between first-born and second-born children over the cohorts born between 1945 and 1989. It confirms that this gap has remained very stable for the cohorts preceding the reforms of the sixties (in line with the parallel trends assumption) as well as for subsequent cohorts. It also confirms that there is no shift in this gap for cohorts born in the 1960s.

separately for the sub-sample of individuals whose father has a higher socioeconomic status and for the sub-sample whose father has a lower socioeconomic status.[10] For the higher-SES group, estimated effects on family environment are most noticeable on the probability of growing up in a family with 3 or more children, i.e., this probability declined particularly sharply for higher-SES first-born children born in the 1960s. In this higher-SES group, when comparing first-born and second-born children in terms of the probability of growing up in a family with 3 or more children, a gap of almost 10 percentage points widens for cohort born in the early sixties. In this group, we also detect a significant increase in exposure to parental divorce for first-borns born in the late 1960s and early 1970s. On the other hand, we observe only limited (and not statistically significant) effects on maternal work. Conversely, for the lower-SES group, estimated effects on family environment are most noticeable on maternal work, i.e., it increased particularly sharply for lower-SES first-born children born in the 1960s. On the other hand, the effects on the probability of having 3 or more children appear to be much more limited than for higher-SES families. [11]

These contrasting effects on family environment coincide with a significant fall (-9% of a SD) in the level of education for lower-SES individuals

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[10]As we saw earlier, the proportion of individuals with higher-SES fathers does not change differentially for first-born and second-born children born in the sixties (see Table 1, column (4)).

[11]When we further compare the proportion of first-born and second-born individuals who grew up in a family where the sibling size is 3 *and* the mother has a job, we find that the gap between first-born and second-born decreased in the early sixties for the higher-SES group by about 4 percentage points, but increased by a similar proportion for the lower-SES group (although these effects are only marginally significant), as shown in Table A.2 in the online appendix. These effects suggest that the Sixties led to a reduction in the probability of growing up with a mother who is doubly constrained (by her job and the number of children) for individuals in the higher SES group, but not for individuals in the lower SES group.

and with a marginally significant increase (+8% of a SD) in the level of education for higher-SES ones, as shown in Table 4. Among cohorts born in the early 1960s, the educational gap between first-born and second-born is doubled in the higher-SES group, while it is reduced to zero in the lower-SES group. In the end, the significant rise in maternal employment in the lower-SES group seems to have had a more negative effect, as it was only offset by a relatively modest fall in the number of siblings with 3 or more children. Conversely, the significant drop in sibling size in the higher-SES group seems to have had an even more positive effect on educational outcomes, as it was accompanied by only a relatively small rise in maternal employment. It should also be noted that the significant increase in exposure to parental divorce for children in the higher-SES group born in the late 1960s and early 1970s appears to have had no impact on their educational outcomes.

In Appendix Table A.3, we explore another basic source of heterogeneity: gender. The reforms of the late sixties and early seventies have profoundly altered the place and role of women in the family, and we may wonder whether the repercussions have not been even greater for girls than for boys, particularly at school. Our analyses reveal nothing to suggest this, as the gaps observed in the sixties between first-born and second-born did not evolve differently for girls or boys.

7 Alternative Identification Strategy

In the previous sections, by comparing first-born and second-born children across cohorts born before and after the 1960s, we assessed the cumulative effect of the various facets of the emancipation movement that took

off at that time. The Sixties were accompanied by a decline in unwanted births (thanks to the liberalization of the pill and abortion), but also by a decline in desired births (reflecting new family norms), and the combination of these trends has coincided with a marked increase in mothers' participation in the labor market and in parental divorce. Our approach suggests that, on average, these changes in family environment ultimately had little effect on children's subsequent educational and social trajectories.

However, the fact that the combined decline in wanted and unwanted births had little cumulative effect does not necessarily mean that each of the two trends had little effect. It may also mean that they had opposite effects of their own, which offset each other. In this section, we develop an alternative strategy to shed light on this issue and better isolate the effects of the decline in unwanted births. This strategy uses the fact that more effective birth control did not affect all families in the same way. Specifically, improved birth control likely mainly benefited families who did not want large families. It enabled them to avoid unwanted birth, to have a smaller number of children, closer to their desired number.

Using the conceptual model of section 2, if we compare families wishing to have a third child (i.e., S_i=1) and those not wishing to (S_i=0), we see that the former have three children before and after $t_0 - 2$, while the latter have $2 + x_i$ children before and 2 children after. As a result, the reform does not change the number of wanted births in these two types of families, but does induce a drop in unwanted births for families who only want two children. Assuming that we can observe an exogenous predictor Z_i of the probability of wishing a third child, we can isolate the effect of a drop in unwanted births by comparing families of type $Z_i = 1$ and $Z_i = 0$ before and after the reform.

To implement this strategy, we will use the gender mix of the two eldest children as the Z_i variable.[12] It has long been noted that a significant proportion of parents have a preference for mixed-gender sibships, so that the sex of the two eldest children makes it possible to distinguish between groups of families that are ex ante similar in every respect, except possibly in terms of the desire to have a third child, those whose elders are of the opposite sex having a lower propensity to desire a third child. Our approach will be first to check that this link between the sex of the two eldest children and family size is indeed verified in the data we use, and that the decline in family size post-sixties has indeed primarily affected families whose eldest children are of the opposite sex, in line with our conceptual framework. We will then explore the consequences of this decline in family size on children's subsequent trajectories.

Table 5 shows the results obtained using this approach. It focuses on the sample of first-born and second-born respondents from families with two or more children for whom we know the sex of the two eldest children and it shows the results obtained by regressing the variables characterizing the family environment in which respondents grew up as well as the respondents' achievements on a dummy variable indicating whether the two eldest siblings are of the opposite sex and on the interaction between this variable and a dummy variable indicating whether the respondent was born before or after 1974, controlling for gender and cohort effects.[13]

The first three columns of the table confirm that, for the oldest cohorts,

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[12]For an early use of sibling gender composition as a predictor of family size, see Angrist and Evans [1998].

[13]We use the 1974 threshold, after which all children are affected by the Sixties reforms, whatever their birth rank. We have verified that the results remain similar using the 1964 threshold, after which children of rank 1 begin to be affected by the reforms.

mothers whose two eldest children are of the opposite sex are not particularly exposed to divorce, but are significantly less likely to have a third child (-4.6 percentage points) and more likely to have a job (+1.8 percentage points) than mothers whose two eldest children are of the same sex. The first column of the table also shows that for respondents born after 1974, the gap in family size between opposite-sex and same-sex families widens even further (by about -3.8 percentage points), in line with the idea that opposite-sex families were more exposed to unwanted births before the birth control reforms and have benefited more from these reforms than same-sex families. The second and third column show, however, that this is not accompanied by any significant change in the difference in maternal work or in parental divorce.

Following the liberalization of contraception and abortion, opposite-sex families have been able to limit significantly unwanted births, but this has not translated into increased maternal work or parental divorce. The lack of effect on maternal work suggests that the spread of new birth control methods and the reduction of unwanted births mainly concerned mothers who wanted to participate in the labor market anyway. The use of new birth control methods was a way for them to better realize their aspirations for an independent working life. Table A.4 in the online appendix confirms that the specific decline in family size observed for opposite-sex families for cohorts born after 1974 mainly concerns families in which the mother works. Compared with same-sex families, the proportion of opposite-sex families where the mother works but has 3 or more children declines by around 5.3 percentage (i.e., a drop of about -15%) while the proportion where the mother works but has 2 children ("modern" families) increases by 4.0 percentage points (i.e., an increase of more than 10%).

The two last columns Table 5 explore how these developments have affected children's educational and occupational outcomes. They show no change in gaps between control and treatment groups for cohorts born after 1974. The Sixties were followed by a rise in "modern" families that was significantly stronger for opposite-sex families, but this did not translate into a particularly unfavorable evolution of the performance of their children at school. The social movement of the sixties brought about several important changes in the family environment in which children grew up and the research strategy developed in this last section provides new elements suggesting that these changes ultimately had little effect on the schooling of the children concerned.

8 Conclusion

In this article, we studied the impact of the women's emancipation movement of the 1960s on the family environment in which children grew up, and the consequences this had on the educational and occupational trajectories of the children concerned.

By analyzing changes in the relative situation of first-borns and second-borns over the course of birth cohorts, we show that the social movement has led to a significant rise in "modern" families (two children max., mothers with jobs and a non-negligible probability of parental divorce) to the detriment of "traditional" families (three or more children, mother does not work, very rare parental divorce), but that this transformation of the family model had no effect on average on children's outcomes. The emergence of a new family model at the turn of the sixties did not coincide with any general decline in the educational or occupational level of successive cohorts.

Critics of the Sixties often point out that the revolution harmed children by encouraging women's emancipation and exposing children to parental separation and family insecurity. We show that the legacy of the Sixties is more complex, since they also and above all favored the emergence of smaller siblings, with fewer unwanted children, for an overall effect on schooling that is not negative. Closer examination suggests, however, that not all children experienced the family transformations in the same way, with children from wealthy backgrounds increasing their lead in school competition to the detriment of children from modest backgrounds.

In France, as in many other western countries, social mobility has increased little in recent decades, despite an unprecedented expansion of secondary and higher education. The causes of this stagnation are not easy to identify. They probably lie partly in the fact that affluent families are also the best equipped to help their children cope with longer schooling. Our article suggests another explanation, namely that the transformations of the family at the turn of the sixties did not have the same impact in all social classes.

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Figure 1: Decline in Family Size across Birth Cohorts
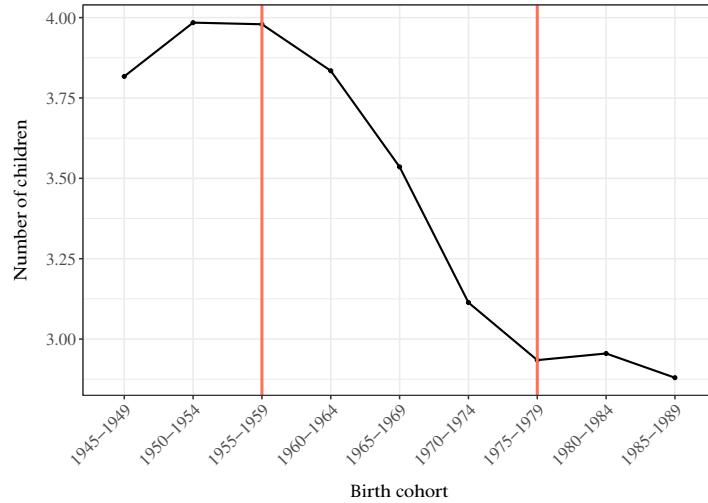
Notes: The figure refers to the sample of individuals born between 1945 and 1989. It shows the evolution of the number of children in families across the birth cohorts of individuals. Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Figure 2: Change in the Distribution of Family Size across Birth Cohorts
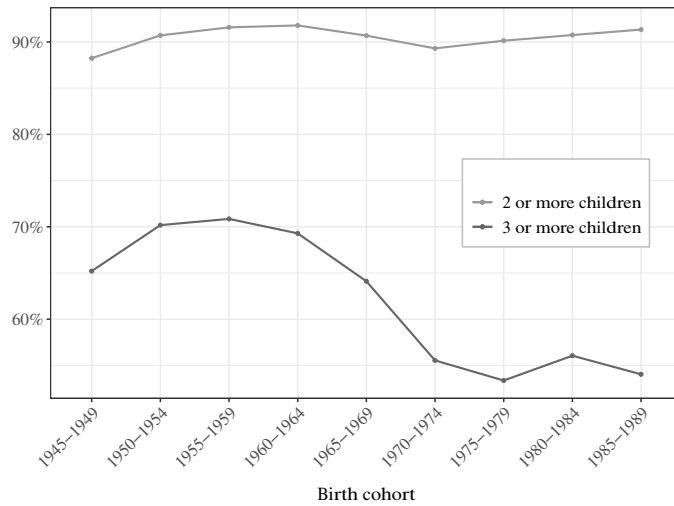
Notes: The figure refers to the sample of individuals born between 1945 and 1989. It shows the evolution across birth cohorts of the proportion growing up in a family with 2 or more children, as well as the evolution of the proportion growing up in a family with 3 or more children. Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Figure 3: Decline in the Proportion of Families with 3 or more Children, by Birth Order
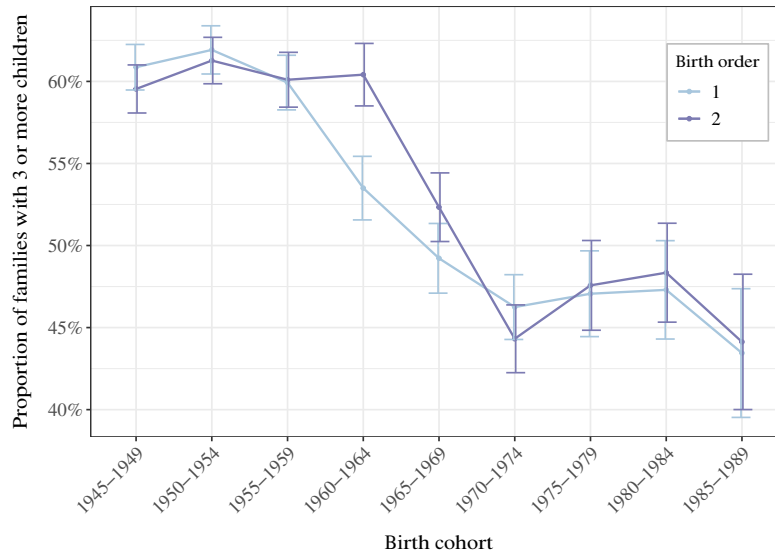
(a) Raw
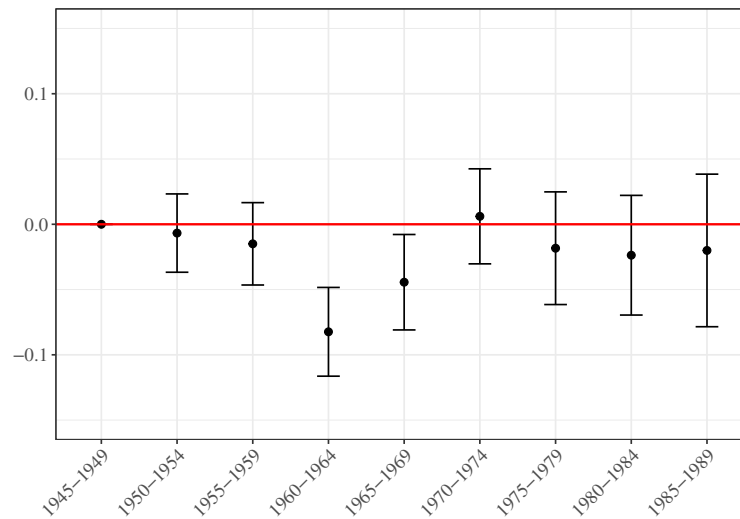
(b) Difference

Notes: Figures 3a and 3b refer to the sample of first-born and second-born individuals who were born between 1945 and 1989 and who grew up in families with 2 or more children. Figure 3a shows the evolution across birth cohorts of the proportion growing up in families with 3 or more children, separately for first-born and second born individuals. Figure 3b shows the evolution of the estimated difference between the two curves in Figure 3a, as well as the 95% confidence interval (using the difference for the 1945-1949 cohort as a reference). Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Figure 4: Rise in Maternal Work across Birth Cohorts, by Birth Order

(a) Raw

(b) Difference

Notes: Figures 4a and 4b refer to the sample of first-born and second-born individuals who were born between 1945 and 1989 and who grew up in families with 2 or more children. Figure 4a shows the evolution across birth cohorts of the proportion of respondents whose mother ever held a job before they left school, separately for first-born and second born individuals. Figure 4b shows the evolution of the difference between the two curves in Figure 4a, as well as the 95% confidence interval (using the difference for the 1945-1949 cohort as a reference). Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

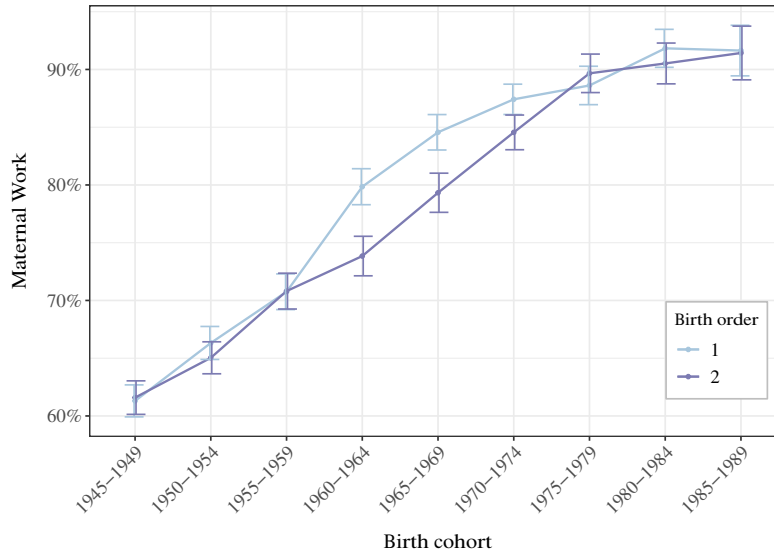Figure 5: Rise in Parental Divorce across Birth Cohorts, by Birth Order
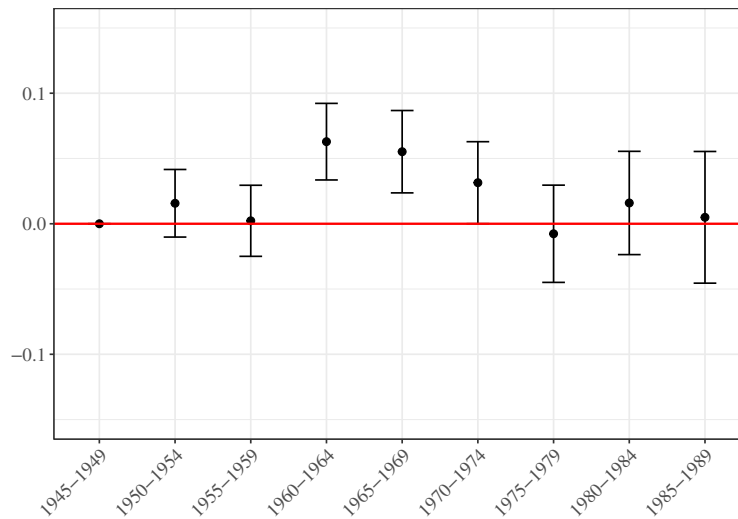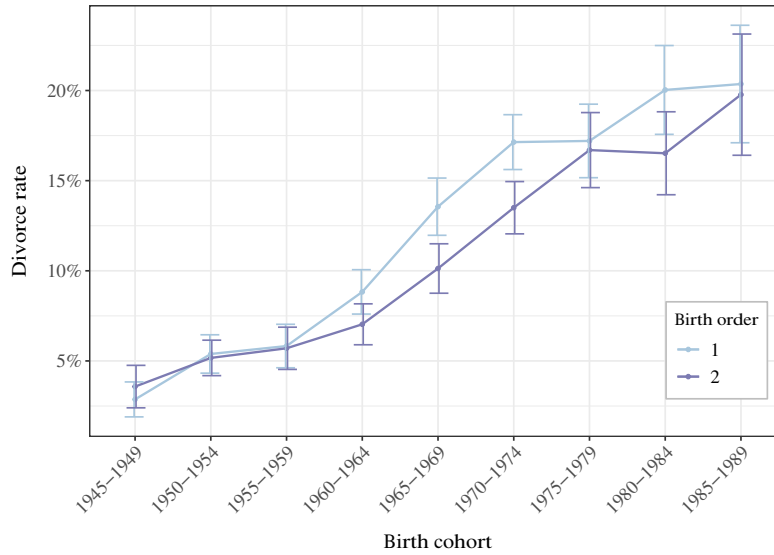

(a) Raw
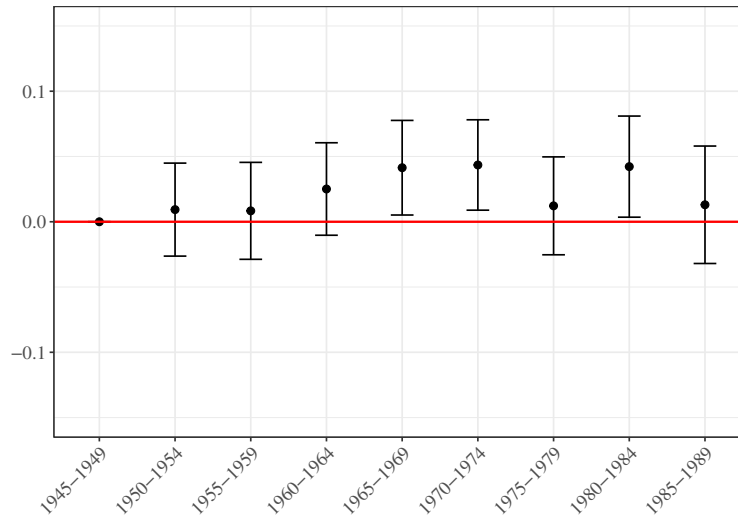
(b) Difference

Notes: Figures 5a and 5b refer to the sample of first-born and second-born individuals who were born between 1945 and 1989 and who grew up in families with 2 or more children. Figure 5a shows the evolution across birth cohorts of the proportion whose parents divorced before they finished school, separately for first-born and second born individuals. Figure 5b shows the evolution of the difference between the two curves in Figure 5a, as well as the 95% confidence interval (using the difference for the 1945-1949 cohort as a reference). Sources: FQP surveys 2003 and 2014-2015 (INSEE).

Table 1: The Impact of the Sixties on the Family Environment in which Children Grew Up

	More than 2 Children	Maternal Work	Parental Divorce	Higher SES Father
	(1)	(2)	(3)	(4)
First-born	0.006	0.004	0.000	0.008
	(0.007)	(0.007)	(0.005)	(0.007)
First-born × Born 1960-1964	-0.075**	0.056**	0.017	0.005
	(0.017)	(0.015)	(0.010)	(0.017)
First born × Born 1965-1969	-0.037*	0.048**	0.034**	-0.003
	(0.019)	(0.015)	(0.012)	(0.019)
First born × Born 1970-1974	0.013	0.025*	0.036**	-0.031
	(0.017)	(0.013)	(0.012)	(0.017)
First born × Born after 1974	-0.014	-0.003	0.016	-0.008
	(0.015)	(0.010)	(0.012)	(0.015)
Mean before 1960	0.61	0.66	0.05	0.46
Nb. Obs.	44534	44534	26572	44534

Notes: The table refers to the full sample of first-born and second-born respondents born between 1945 and 1989 and who grew up in families with 2 or more children. It shows the results obtained by regressing four dependent variables describing the respondents' family environment on a dummy variable indicating whether the respondent is a first-born child, a set of four variables interacting the first-born dummy variable with dummies indicating the birth cohort of the respondent, controlling for a full set of cohort of birth effects and a gender dummy. The dependent variables are a dummy indicating that the respondents have more than one sibling (column 1), a dummy indicating whether respondents' mothers ever held a job before the respondents left school (column 2), a dummy indicating parental divorce (column 3) and a dummy indicating whether the respondent's father has a higher socio-economic status. *p<0.05, **p<0.01.
Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE)

Table 2: The Impact of the Sixties on the Type of Family in which Children Grew Up

	2 Children Maternal Work = 0 (1)	> 2 Children Maternal Work = 0 (2)	2 Children Maternal Work = 1 (3)	> 2 Children Maternal Work = 1 (4)
First-born	-0.008	0.005	0.002	0.002
	(0.004)	(0.006)	(0.006)	(0.007)
First-born × Born 1960-1964	0.000	-0.056**	0.075**	-0.019
	(0.009)	(0.013)	(0.016)	(0.017)
First born × Born 1965-1969	-0.016	-0.032**	0.053**	-0.005
	(0.010)	(0.012)	(0.018)	(0.018)
First born × Born 1970-1974	-0.017*	-0.008	0.004	0.021
	(0.008)	(0.010)	(0.017)	(0.016)
First born × Born after 1974	0.006	-0.003	0.008	-0.011
	(0.006)	(0.009)	(0.015)	(0.015)
Mean before 1960	0.11	0.23	0.29	0.37
Nb. Obs.	44534	44534	44534	44534

Notes: The table refers to the same sample as Table 1. It shows the results obtained by regressing four dependent variables describing the respondents' family environment on a dummy variable indicating whether the respondent is a first-born child, a set of four variables interacting the first-born dummy variable with dummies indicating the birth cohort, controlling for a full set of cohort of birth effects and a gender dummy. The dependent variables are the four dummies obtained by interacting a dummy indicating that the respondent has more than one sibling and a dummy indicating whether respondents' mothers ever held a job before the respondents left school. *$p<0.05$, **$p<0.01$.

Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE)

Table 3: The Impact of the Sixties on Children's Educational and Occupational Achievement

	No Diploma (1)	High school grad. (2)	Educational attainment (3)	Highly Skilled Occupation (4)
First-born	-0.025**	0.042**	0.091**	0.033**
	(0.005)	(0.007)	(0.014)	(0.007)
First-born × Born 1960-1964	-0.006	-0.002	0.001	-0.019
	(0.012)	(0.017)	(0.036)	(0.017)
First-born × Born 1965-1969	0.004	0.002	0.017	0.018
	(0.012)	(0.018)	(0.038)	(0.018)
First-born × Born 1970-1974	0.015	-0.019	-0.036	-0.017
	(0.010)	(0.016)	(0.035)	(0.017)
First-born × Born after 1974	0.011	-0.010	-0.013	-0.018
	(0.008)	(0.014)	(0.029)	(0.015)
Mean before 1960	0.13	0.34	0.08	0.40
Nb. Obs.	44534	44534	44534	44534

Notes: The table refers to the same sample as Table 1. It shows the results obtained by regressing four dependent variables describing respondents' educational and occupational achievement on a dummy variable indicating whether the respondent is a first-born child, a set of four variables interacting the first-born dummy variable with dummies indicating the birth cohort of the respondent, controlling for a full set of cohort of birth effects and a gender dummy (and further by age in the last column). The dependent variables are a dummy variable indicating that the respondent left school without any diploma (column 1), a variable indicating that he/she graduated from high school (column 2), a (standardized) continuous variable indicating educational attainment (column 3) and an dummy indicating whether the respondent has a highly skilled occupation (column 4). *$p<0.05$, **$p<0.01$.

Sources : FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Table 4: The Impact of the Sixties on Children's Family Environment and Achievements, by SES Group

	More than 2 Children (1)	Maternal Work (2)	Parental Divorce (3)	Educational Attainment (4)	Highly Skilled Occup. (5)
Panel A: Lower SES Father					
First-born	0.007	-0.009	0.000	0.088**	0.029**
	(0.009)	(0.009)	(0.006)	(0.015)	(0.008)
First-born × Born 1960-1964	-0.051*	0.088**	0.025	-0.093*	-0.036
	(0.024)	(0.021)	(0.013)	(0.044)	(0.021)
First born × Born 1965-1969	-0.004	0.053*	0.023	-0.002	0.024
	(0.027)	(0.022)	(0.017)	(0.054)	(0.025)
First born × Born 1970-1974	-0.023	0.023	0.009	-0.042	-0.019
	(0.025)	(0.020)	(0.017)	(0.051)	(0.023)
First born × Born after 1974	-0.001	0.012	0.029	0.003	-0.020
	(0.022)	(0.016)	(0.017)	(0.042)	(0.021)
Mean before 1960	0.65	0.66	0.04	-0.22	0.28
Nb. Obs.	22633	22633	12542	22633	22633
Panel B: Higher SES Father					
First-born	0.007	0.019	-0.001	0.083**	0.034**
	(0.011)	(0.010)	(0.008)	(0.021)	(0.010)
First-born × Born 1960-1964	-0.096**	0.022	0.011	0.082	-0.006
	(0.024)	(0.021)	(0.016)	(0.051)	(0.024)
First born × Born 1965-1969	-0.066*	0.039	0.042*	0.039	0.013
	(0.026)	(0.020)	(0.018)	(0.051)	(0.026)
First born × Born 1970-1974	0.033	0.023	0.057**	0.003	-0.003
	(0.023)	(0.016)	(0.017)	(0.044)	(0.023)
First born × Born after 1974	-0.024	-0.021	0.008	-0.014	-0.014
	(0.020)	(0.014)	(0.016)	(0.037)	(0.020)
Mean before 1960	0.56	0.50	0.06	0.42	0.55
Nb. Obs.	21901	21901	14030	21901	21901

Notes: The table refers to the same sample as Table 1. Panel A (Panel B) refers to the sub-sample of respondents whose fathers have a lower SES (higher SES). The three first columns show the replication of Table 1 separately for the lower SES subsample and the higher SES subsample. The last two columns show the replication of the last two columns of Table 3 separately for the lower SES subsample and the higher SES subsample. *p<0.05, **p<0.01.
Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Table 5: The Impact of the Sixties on Opposite-Sex Eldest Siblings

	More than 2 Children (1)	Maternal Work (2)	Parental Divorce (3)	Educational Attainment (4)	Highly Skilled Occup. (5)
Opposite Sex x Post 1974	-0.038*	-0.013	0.004	-0.036	0.014
	(0.019)	(0.015)	(0.016)	(0.039)	(0.019)
Opposite Sex	-0.046**	0.018*	-0.003	0.031	0.003
	(0.009)	(0.009)	(0.006)	(0.020)	(0.010)
Mean before 1964	0.55	0.76	0.09	0.25	0.43
Nb. Obs.	18799	18799	18199	18799	18799

Notes: The table refers to the sample of first-born and second-born respondents born between 1945 and 1989 into families where we know the sex of the two eldest children. It shows the results obtained by regressing variables characterizing the respondents' family environment, level of education and occupational level on a variable indicating whether the two eldest siblings of the family are of the opposite sex, a variable interacting the opposite-sex dummy and a dummy indicating that the respondent was born after 1974, controlling for a gender dummy as well as for a full set of cohort dummies. The five dependent variables are the same as in Table 4. *p<0.05, **p<0.01.
Sources: FQP surveys 2003, 2014-2015 (INSEE)

Appendix

Table A.1: The Sixties and Parent Characteristics

| | Mother | | Father | |
| | High School Dropout | Age at Birth | High School Dropout | Age at Birth |
	(1)	(2)	(3)	(4)
First-born	-0.030*	-3.212**	-0.019	-3.344**
	(0.014)	(0.094)	(0.015)	(0.115)
First-born × Born 1960-1964	-0.036	0.025	-0.034	0.275
	(0.040)	(0.175)	(0.040)	(0.195)
First-born × Born 1965-1969	-0.055	-0.306	-0.049	-0.356
	(0.044)	(0.184)	(0.042)	(0.208)
First-born × Born 1970-1974	-0.073	-0.114	-0.052	-0.342
	(0.047)	(0.166)	(0.042)	(0.192)
First-born × Born after 1974	-0.094*	0.003	-0.033	0.161
	(0.046)	(0.144)	(0.039)	(0.172)
Mean before 1960	0.02	25.57	-0.05	28.74
Nb. Obs.	44534	31889	44534	31085

Notes: The table refers to the same sample of first-born and second-born children as Table 1. It shows the results obtained by regressing four dependent variables describing socio-demographic characteristics of parents on a dummy variable indicating whether the respondent is a first born child, a set of four variables interacting the first-born dummy variable with dummies indicating the birth cohort of the respondent, controlling for a gender dummy and a full set of birth cohort dummies. The dependent variables are a dummy indicating whether the mother dropped out of school before completing high-school (column 1), a variable giving the respondent's mother's age at birth (column 2), a dummy indicating whether the father dropped out of school before completing high-school (column 3), a variable giving the respondent's father's age at birth (column 4). *$p<0.05$, **$p<0.01$.
Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Table A.2: The Impact of the Sixties on the Type of Family in which Children Grew Up, by SES Group

	2 Children Maternal Work = 0 (1)	> 2 Children Maternal Work = 0 (2)	2 Children Maternal Work = 1 (3)	> 2 Children Maternal Work = 1 (4)
Panel A: Lower SES Father				
First-born	-0.011	0.012	0.004	-0.004
	(0.007)	(0.009)	(0.007)	(0.008)
First-born × Born 1960-1964	-0.022	-0.088**	0.074**	0.037
	(0.016)	(0.022)	(0.021)	(0.023)
First-born × Born 1965-1969	-0.021	-0.033	0.026	0.029
	(0.019)	(0.023)	(0.025)	(0.025)
First-born × Born 1970-1974	-0.019	-0.016	0.042	-0.007
	(0.017)	(0.020)	(0.023)	(0.024)
First-born × Born after 1974	0.001	-0.006	0.000	0.005
	(0.013)	(0.016)	(0.021)	(0.021)
Mean before 1960	0.18	0.40	0.17	0.25
Nb. Obs.	22633	22633	22633	22633
Panel B: Higher SES Father				
First-born	-0.012	-0.007	0.005	0.014
	(0.009)	(0.010)	(0.009)	(0.009)
First-born × Born 1960-1964	0.018	-0.056**	0.078**	-0.040
	(0.017)	(0.022)	(0.022)	(0.022)
First-born × Born 1965-1969	0.004	-0.037*	0.061*	-0.029
	(0.020)	(0.019)	(0.024)	(0.024)
First-born × Born 1970-1974	-0.027	0.003	-0.006	0.031
	(0.015)	(0.016)	(0.022)	(0.021)
First-born × Born after 1974	0.012	0.007	0.012	-0.031
	(0.013)	(0.014)	(0.020)	(0.019)
Mean before 1960	0.21	0.29	0.23	0.27
Nb. Obs.	21901	21901	21901	21901

Notes: This Table refers to the same sample of first-born and second-born children as Table 1. Panel A (Panel B) refers to the sub-sample of respondents whose fathers have a lower SES (higher SES). The table shows the replication of Table 2 separately for the lower SES subsample and the higher SES subsample. *p<0.05, **p<0.01.
Sources: FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).

Table A.3: The Impact of the Sixties on Educational and Occupational Achievement, by Gender

	No Diploma (1)	High school grad. (2)	Educational attainment (3)	Highly Skilled Occupation (4)
Panel A: Women				
First-born	-0.026**	0.041**	0.095**	0.036**
	(0.007)	(0.010)	(0.019)	(0.010)
First-born × Born 1960-1964	0.003	-0.013	-0.019	-0.028
	(0.017)	(0.024)	(0.050)	(0.023)
First-born × Born 1965-1969	0.008	0.025	0.052	0.031
	(0.016)	(0.026)	(0.053)	(0.026)
First-born × Born 1970-1974	0.017	-0.036	-0.046	-0.023
	(0.013)	(0.022)	(0.047)	(0.023)
First-born × Born after 1974	0.024*	-0.031	-0.056	-0.020
	(0.010)	(0.018)	(0.039)	(0.021)
Mean before 1960	0.13	0.35	0.10	0.35
Nb. Obs.	22022	22022	22022	22022
Panel B: Men				
First-born	-0.024**	0.041**	0.086**	0.030**
	(0.006)	(0.009)	(0.019)	(0.010)
First-born × Born 1960-1964	-0.014	0.009	0.022	-0.008
	(0.018)	(0.024)	(0.051)	(0.025)
First-born × Born 1965-1969	0.001	-0.024	-0.022	0.005
	(0.018)	(0.026)	(0.054)	(0.027)
First-born × Born 1970-1974	0.014	-0.001	-0.024	-0.010
	(0.015)	(0.023)	(0.051)	(0.024)
First-born × Born after 1974	-0.004	0.012	0.029	-0.021
	(0.012)	(0.021)	(0.043)	(0.022)
Mean before 1960	0.12	0.32	0.05	0.45
Nb. Obs.	22512	22512	22512	22512

Notes: This Table refers to the full sample of first-born and second-born children as Table 1. Panel A (Panel B) refers to the sub-sample of female respondents (male respondents). The table shows the replication of Table 3 separately for women and men. *p<0.05, **p<0.01. Sources: FQP surveys 1977, 1985, 1993, 2004, 2014-2015 (INSEE).

Table A.4: The Impact of the Sixties on the Family Type in which Opposite-Sex Eldest Siblings grew up

	2 Children Maternal Work = 0 (1)	> 2 Children Maternal Work = 0 (2)	2 Children Maternal Work = 1 (3)	> 2 Children Maternal Work = 1 (4)
Opposite Sex x Post 1974	-0.002	0.014	0.040*	-0.053**
	(0.006)	(0.015)	(0.018)	(0.020)
Opposite Sex	0.006	-0.025**	0.039**	-0.021*
	(0.004)	(0.009)	(0.008)	(0.010)
Mean before 1974	0.08	0.16	0.37	0.39
Nb. Obs.	18799	18799	18799	18799

Notes: The table refers to the same sample of first-born and second-born respondents as Table 5. It shows the results obtained by regressing the variables characterizing the family environment in which they grew up on a variable indicating whether the two eldest siblings of the family are of the opposite sex, a variable interacting the opposite-sex dummy and a dummy indicating that the respondent was born after 1974, controlling for a gender dummy. The four dependent variables are the same as in Table 2. *p<0.05, **p<0.01.
Sources: FQP surveys 2003, 2014-2015 (INSEE)

Figure A.1: Evolution of the Education Gap between First-born and Second-born Children across Birth Cohorts
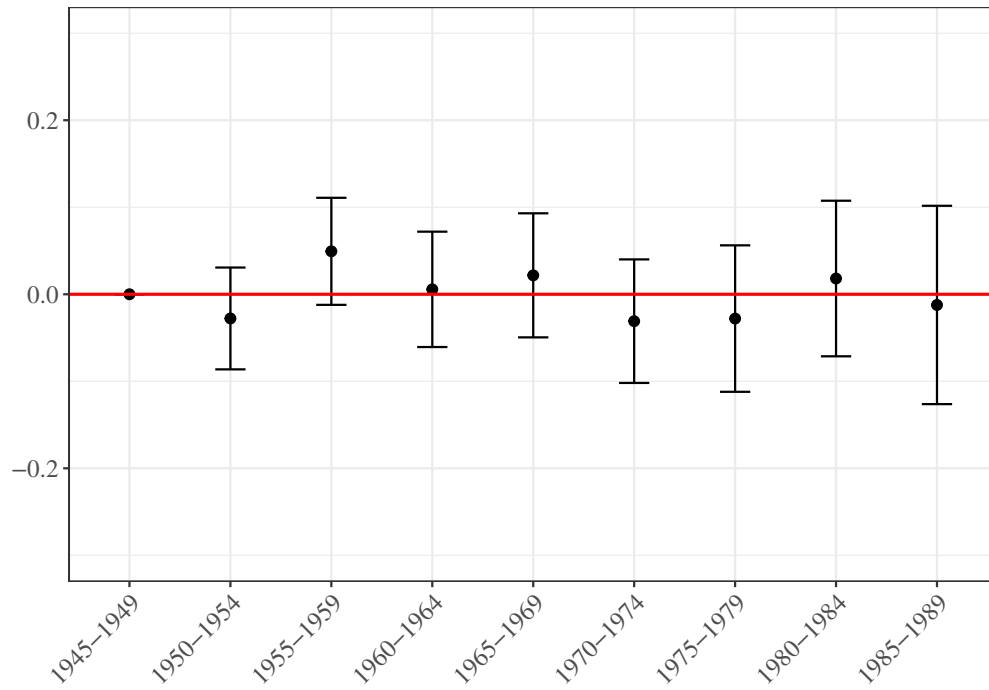
Note: The figure refers to the sample of first-born and second-born individuals who were born between 1945 and 1989 and who grew up in families with 2 or more children. It shows the evolution of the difference between the average educational attainment of first born and that of second born, as well as the 95% confidence interval (using the difference for the 1945-1949 cohort as a reference). FQP surveys 1977, 1985, 1993, 2003, 2014-2015 (INSEE).