## The Gender Revolution and Fertility

## Abstract (updated)

Progress in two halves of the gender revolution is being explored in this paper. The first half, the growth of female labor force participation rates (FLFPRs), is followed by a second half, the growth in men's involvement in the tasks of the family and the home. Our international comparative analysis juxtaposes developments in Leading Gender Revolution Countries (LEAD countries), i.e. Northern Europe, with trends in Lagging Gender Revolution Countries (LAG countries), i.e. other advanced countries. In the quarter century 1990-2014, FLFPRs in LEAD countries were stable and high, around 75 percent, close to men's. In the LAG countries FLFPRs in 1990 were lower, at 40-70 percent. They were increasing in all these countries. Gender revolution's first half was advancing steadily in the past quarter century. -- The gender revolution's second half has been evolving since the 1960s. Men's involvement in household activities has been steadily increasing. As of the early $21^{\text {st }}$ century men's share of housework constitutes between 35 and 40 percent of the total. But there is no clear indication of a fertility increase in the LEAD countries. Cohort total fertility rates (CTFRs) were declining among women born during the 1950s and 1960s, and shares of women with low parity births were increasing. These findings put into doubt the argumentation that fertility reversals have started to take place. Two other findings, however, are noteworthy. One, CTFRs of women born around 1970 in LEAD countries are around the replacement level and are among the highest in the developed countries. Two, there are indications that fertility trends in LEAD countries are stabilizing. Age patterns of childbearing were no longer changing among late 1970s and 1980s birth cohorts. These two findings can be interpreted as trends in LEAD countries associated with a stabilization of fertility trends close to the replacement level.

## The Gender Revolution and Fertility

## 1. Introduction

The historic transformation of the male breadwinner family model has been among the remarkable societal transformations of the past 60 to 70 years. This has occurred in two stages. The first half, the growth of female labor force participation, is apparently being followed by a second half, the growth in men's involvement in the tasks of the family and the home (Goldscheider, Bernhardt, \& Lappegård 2015). This has been the essence of the gender revolution.

The first half of the gender revolution had major consequences for families as women first took on employment that could be fit around a life of family care and then increasingly began to plan for employment as a major adult role. They delayed family formation as they increased their human capital in order to make employment more financially rewarding and they decreased the numbers of children they planned to have in order to reduce the work-family conflict. In the process, unions became more unstable. This produced the package of family changes normally called 'the Second Demographic Transition (SDT).' Beginning with the 1980s, a vast range of studies were undertaken to examine these links (cf. Lesthaeghe 2010, Lesthaeghe and van de Kaa 1986).

In contrast, the progress and potentially family friendly consequences of the second half of the gender revolution were largely ignored. ${ }^{1}$ However, they have recently attracted considerable attention in a number of papers. "A return to 'more family' as gender egalitarianism gains increasingly dominant normative status" (Esping-Andersen and Billari 2015:3) is a common theme elaborated in these papers (Anderson and Kohler 2015, Esping-Andersen and Billari 2015, and Goldscheider, et al. 2015). The authors argue that the second half of the gender revolution has the potential for raising the prevalence of marriages, diminishing the numbers of divorces, and raising fertility, trends that perhaps are already underway. Goldscheider, et al. (2015) have argued that ". . . men's increased involvement in the home, the second half of the gender revolution . . . has the promise of increasing both fertility and the proportions entering and remaining in committed unions."
In the present piece we will focus only on fertility issues and implications of the gender revolution. First, we will briefly discuss and document the progress of both halves of the gender revolution. Secondly, we will explore whether there are nascent characteristics of fertility trends that validate the hypothesis of increasing childbearing in countries in which the gender revolution is most advanced, which will require that we examine fertility is great detail.

## 2. The Two Halves of the Gender Revolution

The growth of labor force participation by women, especially married women and even married mothers, during the second half of the $20^{\text {th }}$ century is well known (Pott-Buter 2003, Rosenfeld 1996, Spain and Bianchi 1996).

As in most such major social changes, there are societies that, for many reasons, were leaders in the growth of female labor force participation, while increasingly, most others have followed (Pott-Buter 2003). We will term the first group "Leading Gender Revolution Countries" (abbreviated as "LEAD countries"), which are not only leaders in the growth in female labor force participation, they are also

[^0]leaders in the growth in men's involvement in the home. We will term the followers the "Lagging Gender Revolution Countries" (abbreviated as "LAG countries"). As established in the literature (Kan et al. 2011, Pott-Buter 2003) and documented by the data below, the "leaders" are the European Nordic countries, Denmark, Finland, Norway and Sweden. In our exploration the "laggards" include selected other European countries and overseas countries with mostly populations of European origin.

The issues to explore are whether the two parts of the gender revolution are continuing in the $21^{\text {st }}$ century and what is the present state of the gender revolution as of the middle of the 2010s.

### 2.1 The first half of the gender revolution

By the 1990s, the first half of the gender revolution appears to have neared completion, or perhaps stalled, in the LEAD countries, i.e. in the countries of Northern Europe. As measured by female labor force participation rates (FLFPRs), in 1990 about 70 to over 80 percent of women aged 15 to 64 were in the labor force (Table 1 and Figure 1). In the subsequent two and a half decades, between 1990 and 2014, FLFPRs were quite stable in these countries and remained around 75 percent.

The situation was very different in the LAG countries. In the first place, there were large differences among the various lagging countries. In some of the laggards the FLFPR was already quite high in 1990, for instance, in the US, UK and Canada, where close to 70 percent of women were in the labor force. On the other hand, even in 1990 only $40-45$ percent of women were in the labor force in South European countries (Table 1 and Figure 1). There was, however, a common feature in all the lagging countries. The FLFPRs were continuing to increase in virtually all of them. Between 1990 and 2014 the FLFPR increased from 68 to 75 percent in Canada, from 58 to 67 percent in France and from 44 to 54 percent in Italy, just to give a few examples. Clearly, in these countries the first half of the gender revolution continued unabated over the past quarter century.

Another feature to investigate is the ratio of women's to men's participation in the labor force (Table 1 and Figure 2). The Nordic countries were ahead of other countries on this measure, as well. In the past two and a half decades, the FLFPRs were almost as high as those of men. However, in Denmark, Finland and especially in Norway, in the early years women's participation in the labor force was still catching up in comparison to men's labor force participation. Nonetheless, by 2014 the difference between female and male LFPRs was almost nonexistent in the leading gender revolution countries, only about five percentage points below those of men (Table 1 and Figure 2). Given the plateau in women's rates in these countries, this near parity is primarily the result of a decline in male rates of labor force participation. It should also be noted that in these countries, women were considerably less likely to work full time than men, although Nordic women working part time tend to work about 30 hours per week (Aisenbrey et al. 2009).

Not surprisingly, there was a considerable variation among individual laggard countries concerning the involvement of women in the labor force compared to men (Figure 2). Nonetheless and importantly, in the past two and a half decades women's LFPRs were noticeably increasing and catching up with men's in all the laggard countries. In part the reason was that men's LFPRs were often either stagnant or even declining, as in the leading countries.

### 2.2 The second half of the gender revolution

Empirical evidence is emerging that the second half of the gender revolution has also been evolving since the 1960s in all the countries for which data are available. Tables 2 and 3, each from a different source, provide data on the shares of men's involvement in household work between the 1960s and the first years of the $22^{\text {st }}$ century. Some of the countries in the tables overlap. Frequently the absolute values for
identical time intervals are different. The important characteristic however is that trends in the both tables are in the same direction and that these shares of men's involvement in domestic work tend to be increasing everywhere. These data also suggest that generally men's involvement in domestic work is higher in the LEAD countries than in the LAG countries.

More specifically, in the 1960s, typically less than one-fifth to one quarter of all domestic work was performed by men. This share has increased to an average of considerably more than one-third. Early in the $21^{\text {st }}$ century, Sweden, the United States and Norway all had around 40 percent of domestic work done by men (Tables 2 and 3). In a number of other countries about one third of domestic work was conducted by men at the beginning of the $21^{\text {st }}$ century. Southern Europe is the exception. In Spain in 2000-04, only about a quarter of domestic work was performed by men and in Italy about one-fifth (Table 2).

## 3. The potential consequences of the gender revolution for fertility trends

The negative impact of the first half of the gender revolution (the growth in female labor force participation) on fertility is widely recognized (e.g., Stycos and Weller 1969). There is clearly a two-way relationship: women in couples who for whatever reason have few children are more likely to be employed, and women who plan substantial labor force engagement expect fewer children (Waite and Stolzenberg 1976). Nevertheless, the dominant causal arrow is from (plans for) employment to childbearing, as a second income has become increasingly important for couples since the 1980s. At the same time, there are numerous dynamics attempting to alleviate the work-fertility dilemma (Gauthier 2010, Thévenon and Gauthier 2011).

But are there fertility impacts of the second half of the gender revolution? The goal of the investigation in this section is to explore whether there are nascent characteristics of fertility trends that validate the hypothesis of increasing childbearing in countries in which the gender revolution is most advanced, in the LEAD countries. In the international comparative analysis that follows these are compared to the LAG countries. Our exploration focuses on the following characteristics: period total fertility rates, cohort total fertility rates, cohort parity distributions, and cohort age patterns of childbearing.

### 3.1 Period fertility trends

In the first decade of the $21^{\text {st }}$ century, period total fertility rates (PTFRs) increased in the LEAD countries as well as in the LAG countries (Table 4 and Figure 3). More recently, however, in 2010-2015, PTFRs have been declining in all these countries with the exception of Austria. Going back further in time, fertility was declining across the board during the 1970s, whereas it was increasing in the 1980s in Finland, and Norway and declining moderately in Sweden, France, the Netherlands, and continued to decline in the LAG countries. Only minor fertility changes were occurring during the 1990s. How should these trends be interpreted?

There is a major problem with this indicator that makes the PTFR trends not particularly relevant for attempting to establish whether a fertility increase is associated with progress in the gender revolution. Period fertility trends are the result not only of quantum fertility trends but they are also sensitive to changes in the timing of childbearing (Bongaarts and Feeney 1998, Frejka 2010 and 2011, Sobotka et al. 2011a). A PTFR decline might not be the result of any drop in the quantum of childbearing but mainly caused by later/postponed childbearing, perhaps as the result of an economic recession; and vice versa a PTFR increase might have been caused by earlier/advanced childbearing or by a slowing down of childbearing postponement due to an economic recovery, not the result of an actual increase in the quantum of childbearing. In other words, the PTFR trends are not suitable for the purpose at hand, namely whether any progress in the gender revolution is associated with specific fertility trends.

Even if the above qualification is dismissed as irrelevant, and PTFR trends are considered a true reflection of fertility trends, the interpretation is inconclusive. Assuming the gender revolution got under way in the second half of the $20^{\text {th }}$ century it would appear that indeed there was a PTFR reversal in the 1980s compared to the 1970s in Finland, and Norway, but not in Sweden; and the differences in the PTFR trends during the 1980s between the LEAD and the LAG countries were significant. Further, it is conceivable that any progress in the $2^{\text {nd }}$ half of the gender revolution did not become apparent in the $20^{\text {th }}$ century but only in the 2000s. But then a question arises as to why there were PTFR trends in the 20002010 of a similar direction and magnitude in the LEAD and in the LAG countries. And why were PTFRs declining in the 2010s? Possibly the world-wide economic crisis had caused this decline (Sobotka et al. 2011b).

In sum, PTFR trends do not provide conclusive indications that the progress of the gender revolution, particularly its second half, is associated with fertility increases, but also not with declines.

### 3.2 Cohort fertility ${ }^{2}$ trends

In contrast to the PTFRs, cohort total fertility trends (CTFRs) are a true expression of trends in fertility quantum (Bongaarts and Feeney 1998, Frejka 2010, 2011, Sobotka et al. 2011a). CTFRs in the LEAD countries were declining among women born in the late 1930s and the 1940s cohorts (Table 5 and Figure 4). Subsequently, the CTFR trends of the 1950s in these LEAD countries were mixed; however among the birth cohorts of the 1960s and early 1970s a moderate declining tendency can be observed. Despite these declines the latest cohort total fertility rates were still close to replacement fertility, namely between 1.8 and 2.0 births per woman.

Overall, the CTFR decline in the LAG countries appears to be continuous and somewhat more pronounced than in the LEAD countries (Table 5 and Figure 4). In general, CTFRs among the youngest cohorts born in the early 1970s in the LAG countries are lower than in the LEAD ones.

### 3.3 Parity distribution

Sobotka and Beaujouan (2014:407) have documented that "a two-child ideal has become nearly universal among women in Europe." The two-child family is indeed the preferred option in most of the LEAD countries especially among the youngest cohorts for which data are available, i.e. for those born in the early 1970s (Table 6 and Figure 5) ${ }^{3}$. Over 40 percent of women have two children. Finland is the exception. Here there are as many low parity women who are either childless or have only one child as there are those with two children.

For cohort total fertility rates to be close to replacement there have to be as many or more higher order births (parity $3+$ ) as there are lower order births (parities 0 and 1$)^{4}$. Indeed in the countries most closely

[^1]identified with the gender revolution, in Norway and Sweden, the parities ratio was close to or below 1.0 even in the youngest birth cohorts (Table 6), i.e. the CTFR was around or above the replacement level. This was not the case in Finland where among women born around 1970 there were over 30 percent more low parity women than those with three or more children. In the Netherlands in the 1971 birth cohort this ratio was much higher. There were almost 80 percent more low parity women compared to those with three or more children.

The shares of low parity women in three of the LAG countries, Canada, Estonia, and the Netherlands were around 70 percent higher than women with three or more children in the early 1970s cohorts (Table 6 and Figure 5). In Austria the share of low parity women was more than double that of women with more than three children.

### 3.4 Age patterns of childbearing

Since the 1970s, starting with cohorts born in the late 1940s, childbearing in developed countries has been shifting into later ages; at first in Western and Northern Europe, North America, Australia and New Zealand, then in Southern Europe, and finally in the formerly communist countries of Central and Eastern Europe (Frejka and Sardon 2007).

This "childbearing postponement and recuperation" process was continuing among the cohorts born during the 1960s and started to settle down among the 1970s birth cohorts in the LEAD countries (Figures 6 and 7). The peaks of the fertility age patterns were already at quite late ages in the LEAD countries in the 1960 cohorts and advanced further thereafter. In Sweden the peak childbearing age rose from 28 in the 1960 cohort to age 31 in the 1970 cohort; in Norway from 27 in the 1960 cohort to 30 in the 1975 cohort. The postponement process was also under way in the LAG countries among the 1960s and 1970s cohorts.

There was one outstanding difference between the LEAD and the LAG countries. Starting with the cohorts of the mid 1970s it appeared that the childbearing age patterns were almost identical from one cohort to the next in the LEAD countries whereas the age patterns were still changing in some of the LAG countries ${ }^{5}$ (Figures 6 and 7). In other words, apparently childbearing age patterns were stabilizing in a number of the Leading Gender Revolution Countries among the younger birth cohorts, i.e. among women born in the mid-1970s and later.

## 4. Summary and findings

Progress in the two halves of the gender revolution is being explored in this paper. The first half, the growth of female labor force participation, is being followed by a second half, the growth in men's involvement in the tasks of the family and the home. As established in the literature and confirmed by evidence in this paper, there were societies that have been leaders in the progress of the gender revolution, most others have followed.

In the Leading Gender Revolution Countries, i.e. in the countries of Northern Europe, already by 1990 about 70 to over 80 percent of women 15 to 64 years old were in the labor force. In the subsequent two and a half decades, between 1990 and 2014, female labor force participation rates (FLFPRs) were quite stable in these countries and remained around 75 percent, very close to the level of men.

[^2]In 1990 there was a considerable variation in the FLFPRs in the Lagging Gender Revolution Countries anywhere from 40 to 70 percent of women were in the labor force. Between 1990 and 2014, however, FLFPRs were increasing in virtually all the lagging countries. Moreover, as female LFPRs were noticeably increasing, they were catching up with men's LFPRs in all the laggard countries. Clearly the first half of the gender revolution continued unabated in the past quarter century.

The second half of the gender revolution has been evolving since the 1960s. Men's involvement in household activities has been steadily albeit slowly increasing. As of the early $21^{\text {st }}$ century men's share of housework constitutes between 35 and 40 percent of the total.

Our exploration based mainly on a cohort fertility analysis indicates that as of the early 2010s there is no clear indication of fertility increasing in countries in which the gender revolution is most advanced. Cohort total fertility rates at age 40 were declining moderately among women born during the 1950s and 1960s (whose principal periods of childbearing took place in the 1980s and 1990s), and the relative amounts of women with low parity births were increasing among these women. These findings put into doubt the argumentation that fertility turnarounds and reversals have started to take place.

Two other findings are noteworthy.

1. Cohort total fertility rates of women born around 1970 in the leading gender revolution countries were around the replacement level and they were among the highest in the developed countries.
2. There are indications that fertility trends in the leading gender revolution countries are stabilizing. The age patterns of childbearing, to the extent these are already known, were no longer changing among the late 1970s and the 1980s birth cohorts.

These two findings can be interpreted to mean that the second half of the gender revolution is associated with a stabilization of fertility trends around the replacement level.

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TABLE 1: Female and male labor force participation rates (in percent), ages 15-64, selected countries, 1990, 2000, 2010 and 2014

|  | Female LFPR ages15-64 (in \%) |  |  |  | Male LFPR ages 15-64 (in \%) |  |  |  | Female as percent of male |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1990 | 2000 | 2010 | 2014 | 1990 | 2000 | 2010 | 2014 | 1990 | 2000 | 2010 | 2014 |
| Leading gender revolution countries |  |  |  |  |  |  |  |  |  |  |  |  |
| Denmark | 78 | 75 | 76 | 76 | 87 | 84 | 83 | 81 | 89 | 90 | 92 | 94 |
| Finland | 73 | 72 | 73 | 74 | 81 | 78 | 77 | 78 | 91 | 93 | 95 | 95 |
| Norway | 70 | 76 | 76 | 76 | 83 | 84 | 81 | 80 | 85 | 90 | 94 | 95 |
| Sweden | 82 | 75 | 76 | 79 | 86 | 81 | 82 | 84 | 95 | 94 | 93 | 94 |
| Lagging gender revolution countries |  |  |  |  |  |  |  |  |  |  |  |  |
| Australia | 62 | 66 | 70 | 71 | 85 | 83 | 83 | 83 | 73 | 79 | 84 | 85 |
| Austria | 55 | 62 | 69 | 71 | 80 | 80 | 81 | 82 | 69 | 77 | 86 | 87 |
| Canada | 68 | 70 | 74 | 75 | 85 | 82 | 82 | 82 | 81 | 86 | 91 | 91 |
| Estonia | 75 | 65 | 71 | 72 | 83 | 75 | 77 | 79 | 91 | 86 | 92 | 91 |
| France | 58 | 62 | 66 | 67 | 76 | 75 | 75 | 75 | 76 | 83 | 88 | 89 |
| Germany | 56 | 64 | 71 | 72 | 79 | 79 | 83 | 83 | 70 | 80 | 86 | 87 |
| Italy | 44 | 46 | 51 | 54 | 77 | 74 | 73 | 74 | 57 | 63 | 70 | 73 |
| Netherlands | 52 | 66 | 73 | 74 | 79 | 84 | 84 | 84 | 66 | 78 | 87 | 88 |
| Slovenia | 57 | 63 | 68 | 67 | 66 | 72 | 76 | 74 | 87 | 88 | 89 | 91 |
| Spain | 42 | 52 | 66 | 69 | 80 | 79 | 81 | 80 | 52 | 66 | 82 | 86 |
| United Kingdom | 67 | 68 | 69 | 71 | 87 | 83 | 81 | 82 | 77 | 82 | 85 | 86 |
| United States | 67 | 70 | 67 | 66 | 84 | 83 | 78 | 77 | 80 | 85 | 86 | 86 |

Source: World Bank Databank 2016

TABLE 2: Men's domestic work as a share of total household work, selected countries, 1961-69, 197075, 1976-84, 1985-89, 1990-94, 1995-99, and 2000-04

|  | 1961-69 | 1970-75 | 1976-84 | 1985-89 | 1990-94 | 1995-99 | 2000-04 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Leading gender revolution countries |  |  |  |  |  |  |  |
| Denmark | 17 |  |  | 36 |  |  |  |
| Finland |  |  | 33 | 37 |  | 37 |  |
| Norway |  | 25 | 31 |  | 36 |  | 39 |
| Sweden |  |  |  |  | 37 |  | 41 |
| Lagging gender revolution countries |  |  |  |  |  |  |  |
| Australia |  | 22 |  | 29 | 32 | 32 |  |
| Canada |  | 27 | 33 | 32 | 34 | 36 |  |
| France | 21 | 24 |  |  |  | 34 |  |
| Germany | 25 |  |  |  | 32 |  | 35 |
| Israel |  |  |  |  | 24 |  |  |
| Italy |  |  |  | 16 |  |  | 22 |
| Netherlands |  | 25 | 26 | 28 | 29 | 32 | 32 |
| Slovenia |  |  |  |  |  |  | 35 |
| Spain |  |  |  |  |  |  | 25 |
| UK | 20 | 23 |  | 29 |  | 33 | 35 |
| USA | 23 | 29 |  | 35 | 37 | 40 | 39 |

Source: Kan et al. 2011

TABLE 3: Men's domestic work as a share of total household work, selected countries, 1961-69, 197075, 1976-84, 1985-89, 1990-94, 1995-99, 2000-04, 2005-09 and 2010-

| 1961-69 | 1970-75 | 1976-84 | 1985-89 | 1990-94 | 1995-99 | 2000-04 | 2005-09 | 2010- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Leading gender revolution countries |  |  |  |  |  |  |  |  |
| Finland |  | 16 | 22 |  | 27 |  | 31 |  |
| Norway | 14 | 21 |  | 23 |  | 32 |  |  |
| Sweden |  |  |  | 38 |  | 40 |  | 44 |
| Lagging gender revolution countries |  |  |  |  |  |  |  |  |
| Canada | 15 | 25 | 20 | 22 | 27 |  | 29 | 32 |
| France 10 | 17 |  |  |  | 19 |  | 26 |  |
| Netherlands | 15 | 16 | 21 | 23 | 25 | 29 | 26 |  |

Sources: Altintas and Sullivan 2016, Stanfors 2016

TABLE 4 - Period total fertility rates, selected countries, 1970, 1980, 1990, 2000, 2010, and 2015, rates of change (in percent) 1970-80, 1980-90, 1990-2000, 2000-2010 and 2010-2015

| Country | 1970 | 1980 | 1990 | 2000 | 2010 | 2015 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Leading gender revolution countries |  |  |  |  |  |  |
| Finland | 1.83 | 1.63 | 1.78 | 1.73 | 1.87 | 1.65 |
| Norway | 2.51 | 1.72 | 1.93 | 1.85 | 1.95 | 1.73 |
| Sweden | 1.92 | 1.68 | 2.14 | 1.56 | 1.99 | 1.85 |
| Lagging gender revolution countries |  |  |  |  |  |  |
| Austria | 2.29 | 1.65 | 1.46 | 1.37 | 1.44 | 1.50 |
| Canada | 2.31 | 1.68 | 1.72 | 1.51 | 1.63 | $1.59{ }^{\text {a }}$ |
| Estonia | 2.19 | 2.03 | 2.06 | 1.36 | 1.72 | 1.60 |
| France | 2.48 | 1.95 | 1.78 | 1.88 | 2.01 | 1.93 |
| Iceland | 2.81 | 2.48 | 2.31 | 2.08 | 2.20 | 1.81 |
| Netherlands | 2.57 | 1.60 | 1.62 | 1.72 | 1.79 | 1.65 |
|  | Percent change during period |  |  |  |  |  |
| Country | $\begin{gathered} 1970- \\ 1980 \end{gathered}$ | $\begin{gathered} \text { 1980- } \\ 1990 \end{gathered}$ |  | $\begin{aligned} & 1990- \\ & 2000 \end{aligned}$ | $\begin{aligned} & 2000- \\ & 2010 \end{aligned}$ | $\begin{aligned} & \text { 2010- } \\ & \text { 2015or } \\ & \text { latest } \end{aligned}$ |
| Leading gender revolution countries |  |  |  |  |  |  |
| Finland | -11 | 6 |  | 0 | 8 | -12 |
| Norway | -31 | 7 |  | 0 | 6 | -11 |
| Sweden | -12 | -7 |  | -3 | 31 | -7 |
| Lagging gender revolution countries |  |  |  |  |  |  |
| Austria | -28 | -17 |  | -2 | 7 | 4 |
| Canada | -27 | -10 |  | 2 | 6 | $-2^{\text {b }}$ |
| Estonia | -7 | -33 |  | -6 | 34 | -7 |
| France | -22 | -4 |  | -4 | 12 | -4 |
| Iceland | -12 | -16 |  | -4 | 10 | -18 |
| Netherlands | -38 | 7 |  | -4 | 8 | -8 |

Source: Human Fertility Database 2016
Notes: a - Canada 2014; b - 2010-2014

TABLE 5 - Cohort total fertility rates at age 40, selected countries, birth cohorts 1930, 1940, 1950, 1960, 1970, and latest available 1972-1974, rates of change (in percent) birth cohorts 193-1940, 19401950, 1950-1960, 1960-1970, 1970 to latest available, and 1950 to latest available

| Country | 1930 <br> Cohort <br> total <br> fertility rate | 1940 <br> Cohort <br> total <br> fertility rate | 1950 <br> Cohort <br> total <br> fertility <br> rate | 1960 <br> Cohort <br> total <br> fertility <br> rate | 1970 <br> Cohort <br> total <br> fertility rate | 1972-74 <br> Latest ${ }^{\text {a }}$ <br> Cohort <br> total <br> fertility <br> rate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Leading gender revolution countries |  |  |  |  |  |  |
| Finland | 2.43 | 2.00 | 1.81 | 1.91 | 1.82 | 1.84 |
| Norway | n.a. | n.a. | $2.03{ }^{\text {b }}$ | 2.05 | 2.01 | 1.96 |
| Sweden | 2.09 | 2.03 | 1.97 | 2.01 | 1.92 | 1.89 |
| Lagging gender revolution countries |  |  |  |  |  |  |
| Austria | n.a. | 2.11 | 1.84 | 1.67 | 1.58 | 1.61 |
| Canada | 3.33 | 2.65 | 1.91 | 1.80 | 1.73 | 1.73 |
| Estonia | n.a. | n.a. | 1.94 | 2.04 | 1.81 | 1.77 |
| France | n.a. | 2.40 | 2.09 | 2.07 | 1.94 | 1.93 |
| Iceland | n.a. | n.a. | 2.65 | 2.46 | 2.21 | 2.19 |
| Netherlands | n.a. | 2.19 | 1.88 | 1.83 | 1.71 | 1.71 |
| Change in percent |  |  |  |  |  |  |
| Country | $\begin{aligned} & 1930- \\ & 1940 \\ & \text { CTFR } \end{aligned}$ | $\begin{aligned} & 1940- \\ & 1950 \\ & \text { CTFR } \end{aligned}$ | $\begin{aligned} & 1950- \\ & 1960 \\ & \text { CTFR } \end{aligned}$ | $\begin{aligned} & 1960- \\ & 1970 \\ & \text { CTFR } \end{aligned}$ | 1970 to <br> Latest available CTFR | $\begin{gathered} 1950 \text { to } \\ \text { Latest } \\ \text { available } \\ \text { CTFR } \end{gathered}$ |
| Leading gender revolution countries |  |  |  |  |  |  |
| Finland | -17.5 | -9.8 | 5.8 | -4.8 | 1.0 | 1.8 |
| Norway | n.a. | n.a. | $-3.5{ }^{\text {b }}$ | -2.3 | -2.2 | -3.5 |
| Sweden | -2.9 | -2.9 | 2.1 | -4.3 | -2.0 | -4.3 |
| Lagging gender revolution countries |  |  |  |  |  |  |
| Austria | n.a. | -12.7 | -9.4 | -5.6 | 1.8 | -12.9 |
| Canada | -20.6 | -28.0 | -5.5 | -4.3 | 0.4 | -9.1 |
| Estonia | n.a. | n.a. | 4.7 | -11.0 | -2.5 | -9.1 |
| France | n.a. | -12.9 | -0.8 | -6.5 | -0.3 | -7.5 |
| Iceland | n.a. | n.a. | -7.1 | -9.9 | -1.3 | -17.4 |
| Netherlands | n.a. | -14.4 | -2.7 | -6.5 | 0.3 | -8.7 |

Source: Human Fertility Database 2016
Notes: a - Latest available birth cohort for 1971 Canada; for 1972 Finland, Netherlands, and Iceland; for 1973
France, Austria; for 1974 Norway, Sweden, Estonia.
b - birth cohort 1952; and 1952-1960.

TABLE 6: Parity distributions at age 40, selected countries, birth cohorts 1930-1973

## A Leading gender revolution countries

| FINLAND | Parities share (in \%) |  | Parities <br> ratio |  |
| :---: | :---: | :---: | :---: | :---: |
| Cohort | $0+1$ | 2 | $3+$ | $0+1 / 3+$ |
| 1967 | 36.4 | 35.7 | 27.9 | 1.31 |
| 1970 | 37.4 | 34.9 | 27.7 | 1.35 |
| 1971 | 36.7 | 35.6 | 27.7 | 1.33 |


| NORWAY | Parities share (in \%) |  | Parities <br> ratio |  |
| :---: | :---: | :---: | :---: | :---: |
| Cohort | $0+1$ | 2 | $3+$ | $0+1 / 3+$ |
| 1952 | 25.1 | 44.3 | 30.6 | 0.82 |
| 1960 | 26.4 | 39.4 | 34.2 | 0.77 |
| 1973 | 27.0 | 43.4 | 29.6 | 0.91 |


| SWEDEN | Parities share (in \%) |  | Parities <br> ratio |  |
| :---: | :---: | :---: | :---: | :---: |
| Cohort | $0+1$ | 2 | $3+$ | $0+1 / 3+$ |
| 1955 | 28.3 | 41.0 | 30.7 | 0.92 |
| 1965 | 27.9 | 44.0 | 28.1 | 0.99 |
| 1973 | 28.9 | 46.6 | 24.5 | 1.18 |


| ESTONIA | Parities share (in \%) |  |  | Parities <br> ratio <br>  <br> Cohort |
| :---: | :---: | :---: | :---: | :---: |
| $0+1$ | 2 | $3+$ | $0+1 / 3+$ |  |
| 1944 | 35.5 | 44.2 | 20.2 | 1.75 |
| 1960 | 29.0 | 48.2 | 22.8 | 1.27 |
| 1973 | 38.6 | 38.2 | 23.2 | 1.66 |


| NETHERLANDS | Parities share (in \%) |  | Parities <br> ratio |  |
| :---: | :---: | :---: | :---: | :---: |
| Cohort | $0+1$ | 2 | $3+$ | $0+1 / 3+$ |
| 1938 | 22.4 | 37.7 | 39.9 | 0.56 |
| 1955 | 32.7 | 42.7 | 24.6 | 1.33 |
| 1971 | 37.2 | 42.1 | 20.7 | 1.79 |

Source: Human Fertility Database 2016

FIGURE 1: Female labor force participation rates (in percent), ages 15-64, selected countries, 1990, 2000, 2010 and 2014


Source: World Bank Databank 2016

FIGURE 2: Female labor force participation rates as percent of male labor force participation rates, ages 15-64, selected countries, 1990, 2000, 2010 and 2014


Source: World Bank Databank 2016

FIGURE 3: Period total fertility rates, selected countries, 1970-2015
A Leading gender revolution countries


B Lagging gender revolution countries


Source: Human Fertility Database 2016

FIGURE 4: Cohort total fertility rates at age 40, selected countries, birth cohorts 1930-1974
A Leading gender revolution countries


B Lagging gender revolution countries


Source: Human Fertility Database 2016

FIGURE 5: Cohort parity distributions at age 40, selected countries, birth cohorts 1930-1973

A Leading gender revolution countries
Finland


Norway


Sweden

$B$ Lagging gender revolution countries


Canada


Estonia


Netherlands


Source: Human Fertility Database 2016

FIGURE 6: Cohort age-specific fertility rates, selected countries, birth cohorts 1960-1990


FIGURE 7: Cumulated differences from previous cohort, selected countries, birth cohorts 19601965, 1965-1970, 1975-1980, 1980-1985 and 1985-1990

A Leading gender revolution countries



B Lagging gender revolution countries


Estonia


France



Source: Human Fertility Database 2016


[^0]:    ${ }^{1}$ Much as the decline in male labor force participation has been largely ignored.

[^1]:    ${ }^{2}$ The cohort total fertility rate at age 40 (CTFR 40) is used instead of the actual CTFR at the end of the reproductive period at age 50. The considerable benefit of using the CTFR 40 is that it provides the possibility to follow cohort fertility for ten additional cohorts. This is justified by the fact that only small amounts of childbearing occur when women are in their $40 \mathrm{~s}-0.6-2.6$ percent in the $1940 \mathrm{~s}-1950 \mathrm{~s}$ birth cohorts in the countries analyzed in this article. It is almost certain that these shares will be increasing in future cohorts. More importantly, the concern is focused mainly on the CTFR trends and these are almost identical at ages 40 and 50.
    ${ }^{3}$ Data for parity distribution were not available for France and Iceland.
    ${ }^{4}$ This is quantified by the "parities ratio," which divides the number or share of lower parity births ( 0 and 1 ) by those of higher parity births (3+). A parities ratio equal to 1.0 denotes replacement fertility. A value smaller than 1.0,

[^2]:    i. e. more $3+$ parity than 0 and 1 parity births implies above replacement fertility, and a value above 1.0 connotes below replacement fertility.
    ${ }^{5}$ The childbearing postponement and recuperation process was very different in Central and East European countries as exemplified by Estonia. It started much later and proceeded rapidly in a tumultuous fashion.

