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Below-Replacement Fertility in the European Union (EU-15): Facts and Policies, 1960–1997

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Abstract Throughout the developed world the total fertility rate (TFR) has dropped well below the replacement level. The theory of demographic transition has to be reconsidered: post-transitional societies will face a permanent disequilibrium (hyperaging and ultimate population implosion). The basic paradigm has reversed: in the past, there was a large proportion of unwanted pregnancies and family planning programs were designed to reduce them; now, in post-industrial contexts, the opposite is true. Many desired pregnancies do not occur; in the European Union, for example, the TFR is 1.4 whereas the desired number of children is 2.1. Thus, there is a *latent demand for family support*. In countries where family support is better (like those in Scandinavia), the gap between the ideal and the real family size is narrow, whereas in societies where family support is minimal (as in sexist societies such as Germany, Italy, and Spain), this gap is maximal. This is the essence of the present feminist paradox: feminism and pronatalism work together; in societies that alleviate the burden of working — or potentially working — mothers, the fertility rate is higher than in societies where traditional roles prevail. Two basic measures have a decisive impact: the implementation of parental leave and the allocation of pension benefits to parents for each child. Both of these measures tend to alleviate the cost of child care for the mother and the family and to reduce the main obstacles to childbearing.

1. Introduction

"Demography is destiny." At first glance this statement seems strong or a bit exaggerated, but it is historically true for human entities like nations, civilizations, religions, or even commercial blocks such as the European Union, North American Free Trade Agreement (NAFTA), Association of South East Asian Nations (ASEAN), etc. In the short run demographic trends have no impact, but in the long run they have a cumulative, multiplicative effect. For example, a population with a constant net reproduction rate (average number of surviving daughters per mother) of 1.5, such as Germany under Bismarck's rule, tends to *multiply* its number *by 10* in about two centuries; conversely, a population with a constant net reproduction rate of 0.7, such as Germany during Helmut Kohl's regime, tends to *divide* its number *by 10* in about two centuries. In other words, the same population can end the period

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of simulation (two centuries) with a ratio of 1 to 100. With the present example, the population of Germany in 1900 (about 60 million inhabitants) would have exploded to reach 600 million in 2100 under the traditional fertility conditions prevailing one century ago; reciprocally, the same population would shrink to only 6 million in 2100 if the present fertility pattern had been applied throughout the 1900–2100 period. Fertility thus shapes the fate of a population in terms of growth and structure.

The case of Europe best illustrates this point. Throughout the eighteenth and nineteenth centuries and until the 1930s, the population grew faster in Europe than in the Third World (Asia, Africa, Latin America). This was the era of undisputed European supremacy: territorial expansion, political domination (colonization of the New Worlds — the Americas, Australia, Siberia, etc. — and occupation of old civilizations such as Caucasia, central Asia, Africa, Middle East, India, and Indochina), unprecedented emigration (more than 50 million people) during the peak of the European population explosion (1850–1913), and economic leadership. Retrospectively, who could have imagined that a small island lost in the fog (England) could have been a superpower dominating the world throughout the nineteenth century until the interwar period? It is impossible to understand such a paradox without introducing the population factor into the strategic equation. The population of England increased sixfold between 1750 and 1900 (it, along with that of Russia, experienced the fastest growth in the world at the time) and provided a massive emigration to North America, Oceania, and other regions (more than 8 million emigrants). English became the first language of the Western world, replacing the formerly predominant French language. And the United States, England's daughter, became the only remaining superpower at the end of the twentieth century. Here again, growth is significant. The population of the United States was only 9 million in 1820, but it reached 150 million in 1950 and 270 million by the end of 1997; America ranks third in population after China and India (1.3 and 1 billion respectively), both of which are handicapped by a big technological gap.

Since the 1930s and especially since World War II, the second phase (decline) of the European cycle has been under way. The reverse mechanism is at work: the divergence is growing between a potentially shrinking Europe and expanding numbers in the so-called Third World. European fertility has fallen to low levels while the benefits of mortality decline have rapidly spread throughout the developing continents, thus creating a huge population explosion (the rate of growth culminated at 2.5% per year during the 1960s). By contrast, the population growth in Europe has been relatively slow and regularly diminishing. Between 1930 and 1997, Europe's share of the total world population (excluding the European part of the former Soviet Union) fell from 18% to 8%: added to the European civil wars of the century, this was a major argument for the construction of a European Com-

munity. The corresponding (or contemporary) period has been one of relative economic and political decline: the decolonization process began with the independence of India (1947), then extended to Africa (by 1960), to generalize until the splitting of the former Russian-Soviet empire (1989–1991). After Europeanization of the planet (1492–1942), the process of de-Europeanization is under way (1942–1997); similarly, after centuries of forced Russification under the czars and then Soviet rule, the era of de-Russification (emigration of former colonizers in the newly independent states back to the slavic republics) has begun. Once again, the *fertility differential* has been a key factor in that historical shift. Europe, which was traditionally the *first continent of emigration*, is presently (since the beginning of the 1980s) becoming *the first continent of immigration*: the region has no more surplus to export, and the labor scarcity in some sectors is so acute that wages are high and thus attract people living in poor areas of Africa and Asia that are characterized by high fertility, massive unemployment, and low pay.

Since fertility differentials are — along with technology and ideology — among the major engines of history, this paper will focus on this demographic component of the change in societies. Specifically, it will examine the following issues:

1) Global population and fertility trends in the European Union (EU-15) and among its major member countries over the period 1960–1996. A more precise view will be given on the geography of fertility inside the EU, showing the surprising contrast between the Mediterranean countries like Spain or Italy, with a total fertility rate of 1.15–1.20 children per woman in 1996 (an unprecedented world record), and the Nordic countries like Sweden, whose TFR never fell below 1.6 and whose replacement level even experienced a recovery at the end of the 1980s.

2) The possible "causes" and "consequences" of below-replacement fertility (consequences may become causes in the long run, thus generating an exponential spiral of population implosion); at this stage, we will try to identify strategic — or reversible — factors that offer a margin for action by policymakers.

3) The preliminary conditions for an effective policy response leading to fertility change, including public awareness, political legitimacy and willingness, the latent demand for a family policy (as measured by the difference between the desired family size and the real family size), and improvement of the status of women and children.

Finally, on the basis of historical evidence we will show that if family policy is responsive to the public's expectations regarding social orientation and economic content, it will offer a wide margin for action, thus creating a potential for fertility recovery and for bringing the TFR close to the replacement level. Fertility is elastic; it can be reduced by family planning programs when it is considered too high (according to Population Inquiries conducted by the United Nations); it can also be stimulated by social policies when it is considered too low.

2. The Diagnosis: A Permanent Disequilibrium

2. 1. Births in Europe

On the eve of World War I, the average number of annual births in Europe was 10 million for a total population of 300 million inhabitants; by the year 1995, this number had dropped to 6 million for a corresponding population of 500 million; hence, the population had increased by two-thirds while the number of births fell by 40%. Such a decline was structural and even rather linear; the following data represent the number of births (in thousands) from decade to decade throughout the twentieth century:

1910	9,900	1960	7,980
1920	9,500	1970	7,600
1930	8,700	1980	6,860
1940	7,900	1990	6,240
1950	8,040	1996	5,900

The post-World War II baby boom was limited in time, space, and magnitude; it occurred only among the Western allies and its duration was usually short (15 to 20 years). In 1960 as well as in 1950, the number of births in Europe was similar to its 1940 level: around 8 million; the idea of a fertility cycle had no meaning for Europe as a whole. The 1940s and 1950s marked a *stagnation*, not an upswing. Then the secular movement resumed steadily, but it is very difficult to predict the bottom line since we have no comparable reference in our past. In 1996 the total fertility rate for Europe, with or without the European part of the former Soviet Union, was 1.4 — the lowest in the world. For Europe alone the birth deficit — defined by the difference between the number of births required for replacement and the number observed — now reaches 2 million per year.

2. 2. The Demographic Landscape of the EU-15

The EU-15 is a commercial unit comparable in numbers with NAFTA: 370 million inhabitants. But the dynamics are quite different; the population of NAFTA countries has grown ten times faster than that of EU-15 members; the age pyramid of North America is still relatively young, at least rectangular at the basis, thus incorporating a future potential increase. Conversely, on the other side of the Atlantic, in Western Europe, the number of youth has dropped severely, with the risk of an exponential decrease in the future when the corresponding birth cohorts reach childbearing ages. Within the present borders, the population of NAFTA could reach 500 million by the year 2030, while it should diminish or, at best, remain

constant in EU-15. The contrast in age structure is also crucial for the economic future of the two entities.

In EU-15, the rate of population growth is slowing down and now close to zero; immigration is the unique factor that has had a dampening effect on this slackening process (in many cases, it prevents a depopulation). Between the mid-1960s and the mid-1990s, the natural increase fell by more than two million, from 2.56 million in 1965 to 0.33 million in 1995. As the number of deaths was approximatively constant, this phenomenon essentially can be attributed to a substantial drop in the number of births, which declined by more than one-third in only three decades (from 6.1 million in 1965 to 4.0 million in 1995). Despite the fact that the EU has 100 million more inhabitants than the United States (370 million versus 270 million), the number of births is similar (3.915 million in the United States in 1996). During the last few years, for the first time in the history of the European community the contribution of immigration to population growth is stronger (indeed, much stronger) than the impact of natural increase (which, in turn, is stimulated by past immigration); see Table 1. The lesson is clear: the EU is entering a new historical stage, the age of *migratory dependency*.

This movement toward population stagnation is similar for all nations within the European Union. To simplify the presentation, we have produced population figures for the five largest member countries (France, Germany, Italy, Spain, and the United Kingdom), which together comprise 80% of the total population of EU-15. The German population has tended to stabilize around 80 million; the French, Italian, and British a bit below 60 million; and the Spanish slightly below 40 million (Table 2). The total population of these five countries could peak at about 300 million and then, if present fertility trends persist, begin to shrink.

Table 1 Population, natural increase, and net migration in the EU-15, 1960–1995

Year	Population* (millions)	Births** (thousands) B	Deaths (thousands) D	Natural increase (thousands) B – D	Net migration
1960	314.8	5,784	3,386	2,398	43
1965	328.6	6,097	3,542	2,555	80
1970	340.0	5,495	3,679	1,816	– 390
1975	348.6	4,748	3,793	955	295
1980	354.6	4,630	3,737	893	588
1985	358.5	4,275	3,765	510	156
1990	363.7	4,379	3,721	658	1,030
1995***	371.6	3,980	3,650	330	600

* As of January 1.
** The peak was reached in 1964 with a total of 6.25 million births.
*** Preliminary data.
Source: Eurostat, *Population statistics* (Luxembourg, 1996).

Table 2 Population of the five largest member countries of EU-15 (millions), 1960–1996

Year	France	Germany (United)	Italy	Spain	U.K.	Total
1960	45.5	72.5	50.0	30.3	52.2	250.5
1970	50.5	78.3	53.7	33.6	55.5	271.6
1980	53.7	78.2	56.4	37.2	56.3	281.8
1990	56.6	79.1	56.7	38.8	57.5	288.7
1996	58.3	81.8	57.4	39.3	58.8	295.6

Source: Eurostat, *Population statistics* (Luxembourg, 1996).

Table 3 Number of births (thousands) in France, Germany, Italy, Spain, and the United Kingdom, 1960–1995

Year	France	Germany	Italy	Spain	U.K.	EU-15
1960	816	1,362	910	660	918	5,784
1965	862	1,325	990	674	997	6,097
1970	848	1,048	901	661	904	5,495
1975	745	782	828	669	698	4,748
1980	800	866	640	571	754	4,630
1985	768	814	577	456	751	4,275
1990	762	906	569	401	799	4,379
1995*	729	765	515	357	732	3,980

* Provisional estimates.
Source: Eurostat, *Population statistics* (Luxembourg, 1996).

2. 3. The Variation in the Number of Births: A Key for Management

In the United Kingdom as well as in Italy, the annual number of births in the mid-1960s was close to 1 million; it has fallen by one-quarter in the United Kingdom and by nearly one-half in Italy. In Germany, the absolute decline is still more impressive: 1.3 million in 1965 compared to about 0.8 million in 1995; the difference is 500,000 births per year (Table 3). The case of France differs for two reasons: there the fertility decrease was not as steep as in neighboring countries of continental Europe, and the age structure had a protective impact; France had more baby boomers at childbearing ages. These crude data on births are important because they shape the age structure, and finally they constitute the most essential variable for political authorities at all levels (local, regional, national, and international). Under present conditions of very low mortality, they determine the number of students, the number of future inflows in the labor market, the number of consumers, of taxpayers, etc.; they have a decisive impact on long-range variations in demand, on investment (infrastructure, housing), and on corresponding sectorial labor needs (teachers, doctors, builders, etc.). For businessmen, marketing lays on

people and money. We will come back to this point.

2. 4. International Differences in Total Fertility Rates

To design a population policy, the decision maker has to use an index that is not biased by age structure and that reflects the sheer propensity to have children: the total fertility rate. The indicator is permanently calculated for the purpose of international comparisons, and it is widely produced to show the impact of a given plan (antinatalist or pronatalist) of action. Table 4 shows that the European trends are radical. In most of the "big" countries of the EU, the total fertility rate fell on average by 1.0 to 1.4 children per woman. In Spain, the decline was much sharper: 2.90 at the beginning of the 1960s but only 1.15 in 1996, 1.75 in absolute terms and hence a relative decline of 60%. There is no more Mediterranean or Catholic fertility, since Italy and Spain have experienced the lowest fertility ever seen in the history of mankind.

A comparison between northern and southern Europe through the examples of Sweden and Italy is instructive. Until the 1970s the Swedish fertility rate was lower than the Italian rate, and it was under the EU curve (Fig. 1). Now the opposite is true; new generations of Swedish women have more children than corresponding Italian women. The budget cuts initiated in 1992 (to follow the Maastricht criteria) by the Swedish authorities had a negative impact both on family support and youth employment, and the recent decline in the Swedish TFR (from 2.1 in 1990 to 1.6 in 1996) is likely due to this short-run political effect. Still, the Swedish fertility rate remains higher than the Italian TFR and the EU average.

Another characteristic of the Swedish pattern is that Sweden, along with France and the United Kingdom, was one of the few EU countries where the total fertility rate never fell below the level of 1.6 children per woman. A historian of the welfare state might be tempted to remind us that public officials in these three countries

Table 4 Total fertility rate (average number of children per woman) in France, Germany, Italy, Spain, Sweden, and the United Kingdom, 1960–1996

Year	France	Germany	Italy	Spain	Sweden	U.K.	EU-15
1960	2.73	2.37	2.41	2.86	2.20	2.72	2.59
1965	2.84	2.50	2.66	2.94	2.42	2.89	2.72
1970	2.47	2.03	2.42	2.90	1.92	2.43	2.38
1975	1.93	1.48	2.20	2.80	1.77	1.81	1.96
1980	1.95	1.56	1.64	2.20	1.68	1.90	1.82
1985	1.81	1.37	1.42	1.63	1.74	1.79	1.60
1990	1.78	1.45	1.34	1.34	2.13	1.83	1.57
1996*	1.70	1.30	1.20	1.15	1.60	1.75	1.40

* Preliminary data.

Source: Eurostat, *Population statistics* (Luxembourg, 1996).

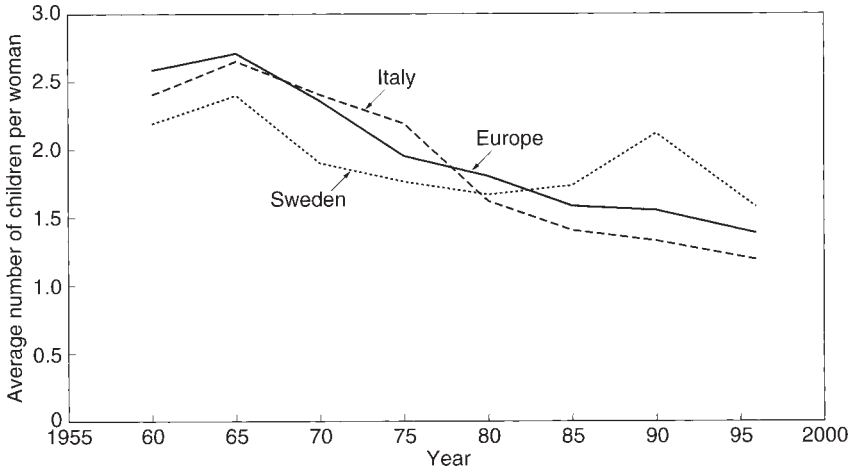

Figure 1 Total fertility rate in Italy, Sweden, and Europe, 1955–1996

Table 5 Net reproduction rate in France, Germany, Italy, and the United Kingdom, 1900–1995

Period	France	Germany (United)	Italy	U.K.
1901–10	0.97	1.48	1.38	1.23
1921–30	0.93	0.90	1.31	0.93
1931–40	0.89	0.88	1.17	0.83
1941–50	1.10	0.83	1.08	1.03
1951–60	1.26	1.01	1.04	1.11
1961–70	1.29	1.12	1.15	1.28
1971–80	0.98	0.74	0.98	0.92
1981–90	0.88	0.70	0.68	0.87
1991–95*	0.80	0.60	0.59	0.83

* Preliminary data.

feared a population decline in the 1930s and that the creators of the social security systems (William Henry Beveridge in England, Pierre Laroque in France, and the Nobel Prize winner Alva Myrdal in Sweden) had comparable views — i. e., pronatalist — on population matters and implemented a family-oriented social policy at the time of World War II. This explicit demographic preoccupation progressively eroded or vanished in the following decades, but family support is still a non-negligible component of the welfare state. Few experts could imagine that the Italian TFR was lower than the British rate in the 1950s and 1960s (Table 5).

A close look at the data suggests that there is no clearcut correlation between family formation/dissolution patterns and fertility levels. The percentage of "illegitimate" births in Mediterranean Europe is minimal (about 1 out of 10 births in Italy and Spain), whereas it reaches approximately one-third of all births in France

and the United Kingdom and over one-half of those in Sweden. This percentage tends to rise steadily from year to year in spite of sizable short-term fertility fluctuations, namely in Sweden and France. The case of Germany, however, is noticeable since the percentage has stabilized (around one-sixth): marriage and the family are protected by the German Constitution and the number of births has been halved in the east, where "illegitimacy" was massive (Table 6).

Countries with so-called traditional family structures (high marriage rate, low divorce rate, low illegitimacy rate, etc.) like Italy and Spain were totally "detraditionalized" in terms of fertility in less than two decades. Their paucity of births has skyrocketed to a wholly unpredicted level. No official population forecast, either national or international, had anticipated a total fertility rate of 1.2 for any country, no less for Mediterranean countries, which are still commonly viewed as "laggards" and usually family-oriented. This outcome is probably the biggest surprise of European demographics at the end of the present century.

In addition to this inversion of the geography of fertility between southern and northern Europe, another puzzling — and little studied — secular phenomenon has to be stressed: the peculiarity of *both* British and French fertility since the middle of the eighteenth century (Table 7). The British and French societies were the first to have nation-states and, as a consequence, a possibility of foreign influence. The French Revolution (and subsequent troubles and wars) marked the beginning of the secular fertility decline and weakened the relative economic position of the country, whereas the industrial revolution in England encouraged family formation (earlier marriage, higher fertility). Throughout the nineteenth century, the fertility gap between the two rival nations was hugely detrimental to France (Fig. 2). During the 1800–1880 period, the difference ranged between 1.3 and 1.8 children per woman: that is *the same value as the difference between the prevailing present fertility and zero*. As noted, this fertility differential had tremendous implications for foreign policy and for the

Table 6 Percentage of out-of-wedlock births in France, Germany, Italy, Spain, Sweden, and the United Kingdom, 1960–1995

Year	France	Germany	Italy	Spain	Sweden	U.K.	EU-15
1960	6.1	7.6	2.4	2.3	11.3	5.2	5.1
1965	5.9	5.8	2.0	1.7	13.8	7.3	5.0
1970	6.9	7.2	2.2	1.4	18.6	8.0	5.6
1975	8.5	8.5	2.6	2.0	32.8	9.0	6.8
1980	11.4	11.9	4.3	3.9	39.7	11.5	9.6
1985	19.6	16.2	5.4	8.0	46.4	18.9	14.9
1990	30.1	15.3	6.5	9.6	47.0	27.9	19.6
1995*	36.8	15.4	8.3	11.5	52.0	32.5	23.0

* Preliminary estimates.

Source: Eurostat, *Population statistics* (Luxembourg, 1996).

fate of European colonies. France lost its position of leadership to England; the French language regressed all over Europe and, contrary to English, never acquired a world status; moreover, French emigration was very limited. By contrast, from the beginning of the nineteenth century British emigrants exported their ideas, their ideals, and their language on all continents. In "northern" America (north of the Rio Grande), only 2% of the entire population (namely, in Quebec) uses the French language to communicate in daily life.

Table 7 Total fertility rate (average number of children per woman) in England and France, 1750–1996

Period	England*	France	Difference	Period	England*	France	Difference
1750–59	4.77	5.41	– 0.64	1881–90	4.36	3.25	1.11
1760–69	4.88	5.21	– 0.33	1891–00	3.76	2.93	0.83
1770–79	5.21	5.07	0.14	1901–10	3.27	2.69	0.58
1780–89	5.24	5.13	0.11	1911–20	2.62	1.95	0.67
1790–99	5.67	4.92	0.75	1921–30	2.20	2.36	– 0.16
1800–09	5.77	4.44	1.33	1931–40	1.79	2.11	– 0.32
1810–19	6.08	4.38	1.70	1941–50	2.20	2.55	– 0.35
1820–29	5.98	4.18	1.80	1951–60	2.35	2.71	– 0.36
1830–39	5.25	3.75	1.50	1961–70	2.72	2.72	0.00
1840–49	5.00	3.57	1.43	1971–80	1.93	2.06	– 0.13
1850–60	4.97	3.43	1.54	1981–90	1.79	1.82	0.03
1861–70	5.19	3.50	1.69	1991–95	1.76	1.70	0.06
1871–80	4.92	3.43	1.49	1996	1.71	1.72	0.01

* England and Wales for the period 1850–1980, United Kingdom from 1981 onward.

Sources: Jean-Claude Chesnais, *The Demographic Transition: Its Stages, Patterns and Economic Implications* (Oxford University Press, 1992), chap. 11 (for historical statistics, 1750–1940); Vital statistics of each country since 1940.

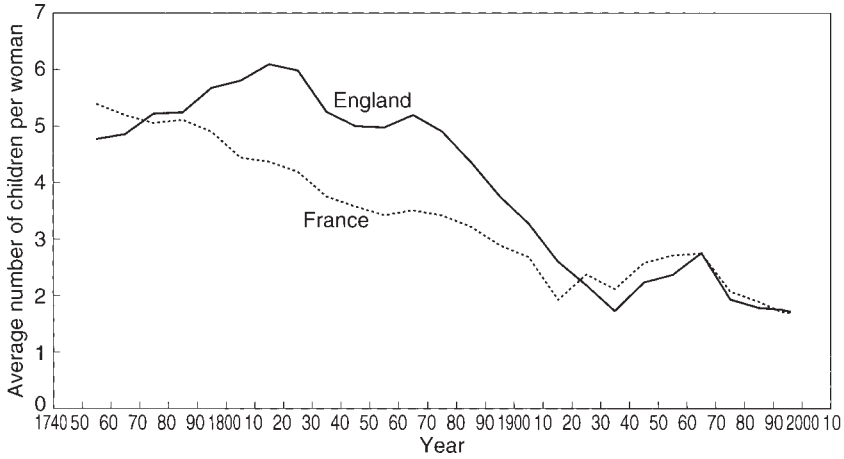

Figure 2 Total fertility rate in England and France since the mid-eighteenth century

3. Possible Causes and Consequences of Sustained Below-Replacement Fertility

3. 1. The Determinants

The factors underlying the fertility decline are manifold; demographers do not have a clear causal framework, only intuition regarding a puzzle of changes affecting all spheres of daily life; it is basically a demographic revolution directly linked to all facets of modernization and globalization. Some of these determinants are included in the classical theory of the demographic transition. This is true of the decline in premature mortality, which depressed child demand; the urbanization and densification process (people abandon villages to live in crowded areas where space and time become scarce); the virtual disappearance of illiteracy; the diffusion of Malthusian culture (fear of a food shortage, job shortage, etc.); the shift in occupational structure (reproduction is limited to biological aspects, not to location, profession, or lifestyle).

Since the initial formulation of the demographic transition theory, other factors relating to postmodernity and persistent obstacles to fertility have emerged. The list is endless, but for the sake of simplicity, let us consider only five: (1) new antinatalist biological technologies (the Pill, condoms, IUDs, safe abortion and sterilization, contragestion: RU 486, etc.); (2) social atomization and related feminism (new generations of women are highly educated, sometimes with higher degrees than their partners, and cannot accept subordination); (3) the implementation of collectivized pension benefits (under prevailing rules, DINKS — Double Income No Kids — couples enjoy high pension benefits, paid mostly by the children of large families; old-age security has been totally disconnected from personal fertility); (4) the explosion of mobility or generalized nomadism: traveling is part of the modern lifestyle (as a career necessity, geographic mobility if often required, and since the number of bi-active couples (father and mother on the job) is expanding, this works against family formation and harmony, except in very high income brackets); and (5) the loss of youth as a majority. In traditional societies with high mortality/high fertility regimes, the vast majority of people were below the age of 30. Now we are experiencing an inversion of the age pyramid, as the majority of people progressively tends to belong to the 50-and-over age group (present and potential retirees). Although policymakers are adjusting to this shift, most advanced countries of the West face a growing intergenerational inequity: relative prosperity and income security for the elderly versus unemployment, job insecurity, or declining wages for young adults and potential parents.

The baby bust is, however, not a fatality. Many determinants of the recent fertility decline are reversible, such as consumerist preferences, materialistic/individualistic lifestyles, state-driven welfare states, and economically deprived youth

(the decline in the value of assets and housing can improve the purchasing power of young adults). But the main point is that *the desired family size is usually close to the replacement level*, whatever the member country of the EU-15 considered; young couples predominantly still wish to have two children (the preference of this model varies from one-half to two-thirds of them) and sometimes three children (second choice). Of course, the reality is far from this wish in countries like Italy and Spain where the obstacles to childbearing are enormous and the economic sacrifices made by mothers are viewed as unbearable. This contradiction between the cultural setting (family orientation, respect for tradition) and the economic circumstances (high youth unemployment, gender discrimination in the labor market, rising opportunity cost of children, etc.) has a devastating impact on fertility. Young women invent alternatives to family building, such as permanent celibacy, career-centered life, or new leisure patterns.

3. 2. The Consequences

The impact of the reversal of the age pyramid extends far beyond the usual description, which was commonly based on the assumption that below-replacement fertility was transitory and limited. But this is no longer the case: the post-transitional fertility is permanently depressed, and the birth deficit is massive.

The direct — mainly financial — consequences of this change are widely recognized. Explored by institutions like the International Monetary Fund, the Organization for Economic Cooperation and Development (OECD), the Bundesbank, and national planning agencies, these consequences relate to pension and health costs and show similar results. This is purely a matter of arithmetic: the number of retirees will grow rapidly (usually double) in the next three or four decades, while the number of potential contributors to pension funds will shrink.

But the indirect, less visible, and deeper consequences are more complex and have more to do with psychology than with sheer numbers. It is probably difficult to imagine what the future of inverted age pyramid societies will be like. But some solid insights can be made.

First, the percentage of people living below the poverty line is increasing among young adults and their children, whereas it is diminishing among the elderly and mature adults. The demographic squeeze tends to play a role in this shift, since the political power of young parents is fading. But other mechanisms are at work here, such as the economic globalization that reinforced the competition between younger generations of very different countries, particularly among semiskilled or unskilled workers, on the one hand, and the present technological revolution, on the other hand. Automation and new information technologies are massively labor saving — hence the growing difficulty in finding long-term jobs in the internationalized and export-oriented sectors of the economy.

Second, the significant reduction in the number of young households and in the number of children has had a major depressive impact on internal demand and economic competitiveness. The growth of cities and their markets was due to rural out-migration and natural increase; now the rural exodus has ended and depleted birth cohorts have reached the peak ages for demand (in terms of housing, equipment, building, and infrastructure). The need for new houses, furniture, schools, roads, cars, etc., is shrinking, especially in mature economies like those of the West and Japan where the consumption level is already very high. The issue of competitiveness is similar: the direct and indirect cost (pension, health, taxes) of labor rises in aging societies, and this movement generates a permanent migration of capital, a delocalization of enterprises. Foreign capital is highly volatile, depending on short-term profit perspectives; one can bet that shrinking markets will lose their potential attractiveness. Confidence vanishes among investors; one can also guess that graying societies are more past-oriented than future-oriented, hence less dynamic.

And third, there is a greater need for immigrants. New generations that have been educated in small and rather well-off families are no longer willing to perform dirty or demanding tasks. Since many of these jobs cannot yet be mechanized or robotized, employers are forced to recruit, legally or not, foreign labor. This phenomenon occurs in all below-replacement societies, whether European, American, or Asian; although motivated by economic considerations, it raises fundamental issues concerning the national identity, social cohesion, and integration of foreigners. In the first stages of depopulation (slow decrease), immigration can have a sizable effect on numbers (it can delay or limit the population decline) but its impact on aging is marginal or negligible; thus, demographically speaking, immigration is not a response to the birth deficit. The question is to repair, to rectangularize the age pyramid: this would logically, mechanically, imply a massive immigration of children without their parents; immigration should explicitly be selective by age with a proper balance between male and female children. Because the deficit is stronger among younger children (babies), the younger the children, the stronger the preference for them. But who could implement such a drastic solution, which is contrary to basic human rights and recalls universally condemned racist (or agist) practices like the slave trade?

4. Legitimacy and Efficiency of Population Policy

4. 1. Legitimacy

The rationale behind a fertility reduction plan and a fertility increase program is basically the same: to ensure a societal equilibrium by filling the gap between the

number of desired children and the number of existing children. When the fertility rate is too high, the proportion of unwanted children is important and there is, according to the coined expression, a "latent demand for family planning." Conversely, when fertility is too low, many desired children never enter the world: there are obstacles to family formation and growth, and there is a corresponding *latent demand for family support*. One of the key aspects of this response is the equalization of women's status; historical and cross-sectional data suggest that there is a negative correlation between fertility and women's status; this is either only partially true or no longer valid at the latest stages of development, namely in post-transitional societies. In fact, the relation describes a U curve: in feminist societies like those in Scandinavia, the fertility rate is not as depressed as it is in the sexist societies of southern Europe. Having a child is an irreversible choice, a lifelong commitment; it requires time, energy, and money. Most of the effort is expended by the mother. The sacrifice is heavy for women who have invested more in education than their partners; if there is no measure to alleviate the burden — in terms of money, time, child care facilities — of young mothers, most of them stick to the one-child pattern. Feminism and pronatalism work together. The primary reason for public intervention (state, regional, and local bodies, or private sector corporations and enterprises) is to alleviate women's burden and improve their living conditions.

A second key motivation is the *public interest*: the well-being of future generations is jeopardized by the collapse of fertility. The survival of civilizations is also threatened, and such an argument is essential in an international community that stresses a respect for cultural originality (or ethnic difference) and the value of biodiversity. In any country with an initial rectangular age structure, the perpetuation of very low fertility patterns along the European or Japanese lines results in the progressive extinction of new birth cohorts. After just about a century, the application of the present total fertility rate of Italy to the French population would create an *exponential decrease in the number of births* from 750,000 to approximately 100,000 (Fig. 3). The issue is critical; the willingness to keep population constant or to avoid depopulation would imply a total renewal of the human stock by massive immigration. It is obvious that under these circumstances, a country's native-born inhabitants would constitute only a small minority of the population. Is the citizenry, together with its business and political leaders, ready to face this historical challenge? *In the name of equity and solidarity, the couples who accept the responsibility to have children should be rewarded and not penalized*, as is the case with social status and standard of living. The survival of the cultural heritage and the viability of the welfare system are in their hands, and this deserves more than lip service.

Beyond the consideration of equality, any pluralistic democracy has to preserve the possibility of *free choice* for all individuals. When it deals with the number of children, free choice is purely theoretical: the cumulative cost of a child for his

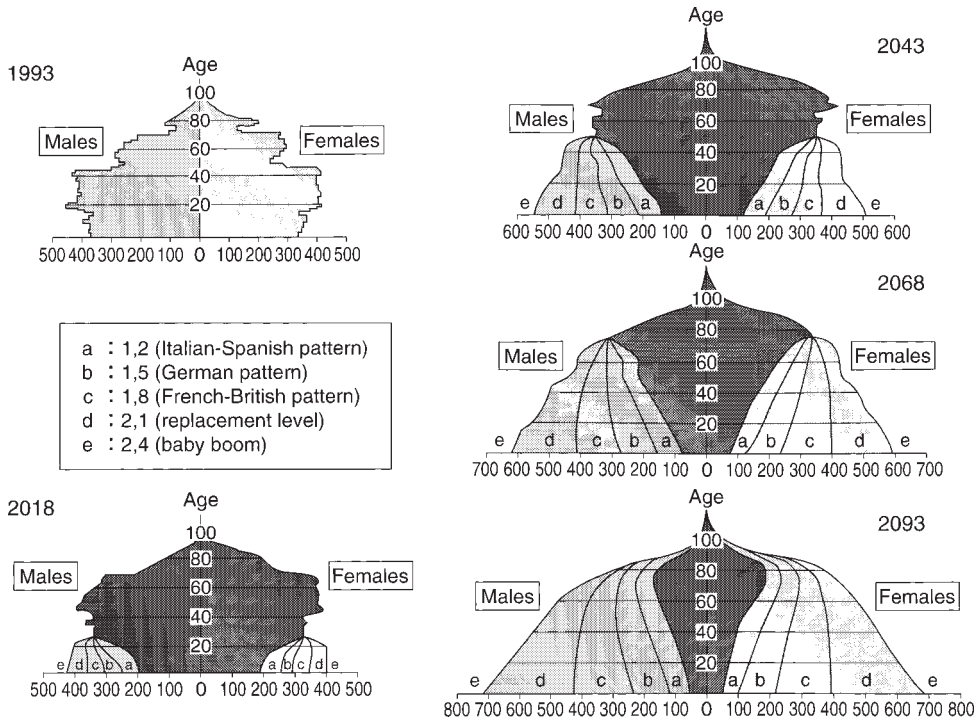

Figure 3 Fertility and age structure: Possible futures as illustrated by the case of France

parents in terms of time, energy, and money from birth to adulthood is huge. It is a massive investment in human capital. The return on this investment is also huge, but it is not returned to the investors (the parents); rather, it is absorbed by the state, pension funds, private companies, and various other organizations.

Many intellectuals tend to associate population policy with dictatorship or imperialism; this is an oversimplified view. Pronatalist policies were implemented by both "rightist" (Hitler, Franco, Mussolini, etc.) and "leftist" dictators (Stalin, Ceaucescu, Honecker, etc.) at a time characterized by the scarcity of democracies, but pronatalist policies were also launched in democracies like France and Sweden. A similar argument could be used for antinatalist policies: strong family planning programs were imposed by authoritarian regimes, either military or communist, all over the developing continents. The most extreme case is that of contemporary China. There, the underlying problem concerns the respect of human rights; this is a matter of political regime. Whether anti- or pronatalist, a population policy can work in a pluralistic democracy provided (1) it is given financial and political priority, and (2) it is built in accordance with social demand (improvement of the working mother's daily life, greater economic consideration for children, compensation for the cost of children: family allowances, tax rebates, grants, parental leave,

etc.). If adapted to the needs of parents and well explained to citizens, such a policy is likely to become popular, even among the elderly; as they become older, they feel frustrated if they do not have grandchildren.

4. 2. Efficiency

There are many paradoxes in conventional demographic thinking. One of them relates to the impact of population policies — the message that family planning (reduction) programs are efficient well received and even fashionable among experts and the international community. Few statisticians would dare to say that fertility decline is a matter of timing and that the state policy does not alter the ultimate number of births, but only delays them. Practitioners who suggest social measures to stimulate fertility when it is too low are regularly opposed the argument: "you will waste money: young couples will anticipate their family formation to take advantage of the benefits, but they will not change their ultimate family size." This view is in vogue, but strongly biased.

All the historical evidence shows that the opposite is true. When a pronatalist policy is well designed, it is efficient. Let us examine some well-known examples. France was not really a victor of World War II, but the country paradoxically experienced a stronger and longer baby boom than other continental Allies. Because until then France had had the lowest fertility rate in the world for many decades, there is no other convincing explanation than the vigor of the family policy of the time: by the year 1950, the proportion of expenditures devoted to children was 40% of the nation's total social budget (compared to 10% in 1996). In the same period (1945–1957), when the German state of Saar was under French rule and thus benefiting from a generous family policy (high family allowances, significant tax deductions), the fertility rate was the highest of all German regions. When the territory of Saar was ceded back to western Germany, where family incentives were small, its TFR dropped to the lowest level in the country.

Another prominent example comes from the former East Germany when the GDR was facing the consequences of heavy emigration, below-replacement fertility, and depopulation. By 1976, when the government implemented a pronatalist policy, the difference in the TFR of the two parts of Germany began to grow markedly. But this policy was dismantled after reunification. As a result, working mothers, who were the norm, lost their social protection and the fertility rate was cut in half in only two years (from 1.50 in 1990 to 0.86 in 1992). There is nothing comparable in world peacetime history. Among birth cohorts fully affected by the family policy from 1976 onward, like the 1955 female birth cohort, the percentage of women remaining childless was only 6% in eastern Germany, whereas it was 19.4% in western Germany; for the same birth cohort, the proportion of women having two children was 54% in eastern Germany, as opposed to 37% in western Germany.

The strongest lesson can be derived from the present Western Europe. The fertility differential between north and south that has emerged in the last two decades is linked to the contrasting status of women. In Italy, for example, girls now have higher average levels of schooling than boys; the age-old division of labor between man (the provider) and woman (the tender of the home) is no longer accepted. Young women wish to have roles in life other than that of spouse or mother, but the labor market is rigid and demanding, offering few part-time jobs in the private sector. These young women no longer comply with the family arrangements their mothers or grandmothers considered natural; they have invested a lot in education and have other expectations and ambitions. Having experienced equality during childhood, adolescence, and early adulthood, they are looking for financial autonomy, and they cannot tolerate subordination. The link between these attitudes and fertility behavior is direct (the TFR in Italy has fallen to 1.2). A woman who engages in repeated childbearing runs the risk of being relegated to roles from which young women struggle to escape.

By contrast, Sweden presents the highest level ever registered for female participation in the labor force in a high-income, industrialized country. But about half of the jobs held by women are part-time, thus limiting the conflict between economic activity and fertility. For most women in Sweden, as in other advanced societies, career and family are both important. Social arrangements help assure that these two objectives can be balanced. Paid parental leave, provided from the first child, currently replaces 80% of the former wages or salary of either parent for at least one year; access to creches is nearly universal; and family allowances are relatively high. Moreover, women have a strong presence in political bodies; thus their voices are heard and, through them, the interests of mothers and children are represented. Empowerment of women ensures against a very low birth rate: despite severe budget cuts in the social protection of families, the Swedish fertility rate remains higher (1.6 in 1996) than the Italian or Spanish TFR. It is the essence of the feminist paradox in advanced societies.

5. Conclusion

The logic behind the population policy is basically the same for countries where fertility rates are too high or too low. As a mediator and a protector of the national interest, the state must help its people to realize their wishes and, as a consequence, to reduce the gap between the desired number of children and the real one. Appropriate measures, as shown by public opinion polls, can be implemented to remove the obstacles to family reduction or to family increase. If these measures, as is usually true in politics, are based on social demand and well explained to the electorate, they will presumably become popular, particularly among women. This

Table 8 Total social expenditure per inhabitant and percentage spent for child support in France, Germany, Italy, Spain, Sweden, and the United Kingdom, 1994

Country	Social expenditure per head*	Share of family support (%)
France	5,500	9.6
Germany	5,514	7.6
Italy	4,312	3.6
Spain	3,020	1.7
Sweden	6,750	16.6
U.K.	4,649	—

Note: Excludes support for health, education, and housing.
* in ECU (European Common Units); 1.00 ECU = US$1.10 in July 1998.
Sources: Eurostat, *Basic statistics* (1996); *Statistical Yearbook* (Sweden).

prospect is certainly stronger in a society having a deep sense of identity (like the Japanese one) than one with a different social fabric.

In any case, the resistance motivated by the potential cost of such a policy is not convincing in the long run; it only shows a preference for blockage, for immobility (or future depopulation). *The cost of population overaging would be much higher than the cost of a sound family policy*. Even in Sweden, where the social protection of children is the best in the OECD region, the proportion of social expenditures devoted to children represents only one-sixth of the total budget (Table 8). A sound family policy is the core of human investment and a key to the future.

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