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A Demographic Implosion In Europe?

G rard-Fran ois Dumont

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The unit of time used in demography is thirty years, the period of one generation. Demographic phenomena unfold slowly over time and therefore there is a time lag for public opinion to perceive and understand them. The expression “demographic implosion” must therefore be handled with care because, while it is true that in Europe there is a decrease in the proportion of youth, this decline will produce its effects very slowly: Population ageing and a decrease in natural growth. The analysis of the implosion allows one to distinguish between two phenomena that often mistaken for each other. On the one side, the proportion of elderly persons grows because life expectancy at birth has increased and mortality has declined. This growth of the elderly is therefore the result of better living conditions, particularly medical advances. On the other side, the fall of fertility implies ageing from the base which reflects the lack of population replacement. One must therefore be careful to distinguish between two kinds of ageing: From the top, which reflects the many benefits of progress for men and women, and ageing from the base, which reflects estrangement regarding life. The seriousness of the demographic situation in Europe is obvious. The population pyramid is inversed. This is the manifestation of the demographic implosion, of a “demographic winter” that threatens the very existence of society. This fact is beginning to be seen by public opinion and in a special way by young persons. (□ Birth Control and Demographic Implosion; Demography, Demographic Transition and Demographic Policies; Domestic Economy: Family and the Principle of Subsidiarity; Family and Sustainable Development; New Models of the Welfare State)

Ending with a question mark, the title “A Demographic Implosion in Europe” seems provocative and inappropriate. Implosion is defined as the “brutal eruption of a fluid inside an enclosure with a lower pressure.”¹ To ask oneself about a demographic implosion in Eu-

rope means to ask whether this continent is experiencing the brutal eruption of a new phenomenon inside of a system whose pressure is weak. Effectively, Europe seems to be undergoing a process similar to that of implosion: the demographic equivalent to the above-described fluid is the continuous ageing of the European population; the low pressure cor-

1 According to the French dictionary *Le Robert*.

responds to a declining birth rate which remains inferior to replacement levels.

AN APPROPRIATE EXPRESSION

In other words, the percentage of old people increases in Europe whether we consider national populations as a whole or populations at an active age. Yet this ageing is a new phenomenon. In 1928, Alfred Sauvy had the idea to use the term “ageing” to designate this new phenomenon. He confirmed the results of his analysis after rewording and deepening it at different points in time: “the percentage of old people has not fluctuated considerably throughout the centuries”² for two reasons: first, before the 18th Century populations had a low life expectancy at birth and a high mortality rate due to the lack of effective medicine. Except in periods of a fall in the birthrate due to declines of civilization, the percentage of old people under these circumstances could only be low, i.e., around 8 %.

Furthermore, populations went periodically through good periods (times of peace which encouraged economic development, or good harvests, or years with propitious weather conditions) or bad periods (famine, malnutrition, bad harvests, wars, epidemics). However, these different events, whether good or bad, did not substantially modify the age pyramid, because they had similar

effects on all age groups: in good years, the whole population was well nourished and in consequence everybody was better equipped to resist factors influencing mortality. During the bad years, all age classes were affected and thus suffering from greater mortality. Thus, in the 14th Century the Black Plague, which provoked a substantial demographic decline in Europe, did not really modify the age pyramid because it killed people at all ages.

Except in periods of decline, ancient populations³ did not age demographically. Therefore ageing, i.e., the proportionate decrease of the young and respectively the increase of old people, is a new phenomenon: it arose for the first time in France in the 19th Century, then started in Sweden at the end of the 19th Century as well as in other countries such as Great Britain and Germany. During most of the 20th Century, this was primarily due to the decline of the birthrate. Alfred Sauvy denounced an error which is still widespread: “It was believed for a long time, and many still do, that the ageing of a population is the result of growing longevity. But this means confusing the general ageing of a population with its members’ longevity.”⁴ This great demographer of the 20th Century does not exclude that

2 A. Sauvy. *Théorie Générale de la population*, Paris, PUF, ³1966, II, 50.

3 We are referring with the term “the ancient populations” to those populations who lived before the general implementation of civil registration, which means in Europe before the 18th Century.

4 Sauvy, *Théorie Générale de la population*, 54.

the new longevity of elderly people is a secondary reason for this phenomenon; but he refers to it as something fortunate for it consists “in the discovery of cures for cancer and other diseases”⁵ and allows for greater “life expectancy without disability.”

Secondly, the younger cohorts decline and this shrinks the age pyramid. So there is in fact an implosive phenomenon taking place in Europe.

A SUDDEN CHANGE?

Nevertheless, this statement could be questioned by pointing out that an implosion would be “sudden” in character; but we are dealing here with the science of demography. In this discipline the basic period of analysis is particularly long because it corresponds to the period between two generations, which amounts to about 30 years. In the financial world changes can occur in a single day (for instance, a stock market crash, the sudden increase in value of a title about which one has learned unexpected results, or of a strategically important acquisition). In climatology the replacing of one season by another takes a trimester (three months). In politics, the replacement of a left-wing politician by a conservative one depends on the period of the electoral mandate, generally a certain number of years. In demography it takes 30 years to renew the younger generations or the active population. So a demographic change

⁵ Sauvy, *Théorie Générale de la population*, 55.

only has a significant effect if it occurs within a period of 30 years. For example, after the First World War the European countries recorded an increase in the birthrate, a sort of a partial “catching-up.”⁶ But this lasted only two years and thus did not have any significant demographic effect. However, after World War II the birthrate increased during the next 30 years in different European countries. This had a real effect upon the age pyramid and this demographic renewal had numerous consequences.

Thus, 30 years is the unit of measure in demography. The decrease of the European birthrate below replacement is coming close to that time span in a growing number of European countries and demographic projections reveal the following consequences: a possible contraction of the European population which is already taking place in some countries despite immigration – hence we have demographic implosion. For instance, from 2000 to 2025 the Italian population will decrease from 57.8 million to 52.4 million inhabitants,⁷ in Spain from 39.5 million to 36.7 million, in Portugal from 10.0 to 9.3 million. If this process continues after 2025 the demographic contraction will be even more clear-cut:

⁶ In fact, we cannot speak in demography about a “catching-up,” because the births in the year $n+3$ do not have the same effect on the age pyramid as those that would have happened in the year n .

⁷ All these numbers come from the *World Population Data Sheet 2000*, Washington.

Italy would lose 27% of its population from 2000 to 2050, Spain 23%, Portugal 20%. The statistics released by the U.N.⁸ give percentages and project a demographic decrease in all European countries until 2050. The most important losses in decreasing order would be taking place in the Russian Federation with -25.9 million inhabitants, in Italy -16.1 million, Ukraine -11 million, Spain -9.4 million, Germany -8.9 million less inhabitants than in 2000.

Such an evolution follows from the current data because the inertia of the demographic phenomena causes the actions of a given period to have long-term effects. The data observed since the 1980s are marked by a European birthrate lower than the minimum replacement level, which is 210 children for every 100 women in countries with good medical conditions.

Before analyzing how all the European countries converged towards low fertility, let us briefly recall the history of the 20th Century, since demographic issues have to be considered over a long period of time. Thirdly, it will be interesting to look at the fertility rates in Europe from a geographical perspective, for the differences will reveal variations in the rhythm of actual and future evolutions. Among other things, the decrease of the natural

birth rate leads one to distinguish a part of Europe where deaths already outnumber births and another where natural increase is still positive. Finally, it will be necessary to consider the causes of this demographic winter, causes that are similar to the behavior of Kronos who ate his own children so as not to have heirs.

THE FIRST TWO PHASES OF THE 20TH CENTURY

The demographic rank of Europe changed profoundly in the 20th Century. In 1900 nobody anticipated that Europe's percentage of the world's population would decrease; no one could have imagined that Europe would be the only continent with a naturally negative growth rate at the end of the 20th Century. In order to illustrate this conviction about the lasting demographic superiority of Europe, let me mention the example of New Caledonia as representative of the European point of view about colonial populations. In 1864, a colonizer discovered the importance of Caledonian nickel, estimated to be a fifth of the world's reserves. After that, the French administration did not stop bringing in immigrant workers from the New Hebrides, Vietnam, Indonesia or Europe. However, there was an unemployed population of about 30,000 indigenous (Kanak people from Polynesia) who lived dispersed among more than 30 tribes in the Caledonian Archipelago (19,058 km²). But everybody was convinced that the indigenous Melanesian

⁸ Numbers come from the *World Population Data Sheet 2000*, quoted in *BIB-Mitteilungen*, periodical of the Federal Institute for Demographic Research, Wiesbaden, 8 March 2000.

population would soon disappear since it was not resistant to diseases.⁹

Contrary to the belief at the beginning of the 20th Century that Europe would remain the demographically dominant continent, it was going to lose its demographic rank while the demographic transition would occur in the countries of the South, especially in the second half of the 20th Century, thus allowing a significant growth in their populations.

Before this, during the first 15 years of the 20th Century, Europe still dominated the world by its demographic dynamism. On the one hand, the European populations had a greater longevity which was increasing because of medical and economic progress. On the other hand, Europe exported its populations to new countries, to the point that the USA was worried about their numbers; therefore they started to enact their first restrictive immigration laws in 1917 and 1921.¹⁰ France, which was the first country whose fertility decreased at the end of the 18th Century, was the only one among European countries to borrow people from its neighbors.

The second demographic period corresponds more or less to the inter-war period. Since 1880, after a delay of a hundred years, Malthusianism or “the French Evil” has seeped into the other colonial powers, especially in Central

Europe. The Germany of 1933 that voted Hitler into power was an ageing country and its birth rate was three times lower than at the beginning of the century (1.6 children to 1 woman in contrast to 5 children in 1900).¹¹ Vienna and Berlin took the lead: while a net reproduction of 1 child per person is necessary for maintaining the replacement of generations,¹² these cities had respectively 0.25 and 0.37 children per woman throughout the 1930s. Nonetheless, France retained the lowest ranking among European countries in terms of fertility. Since its birth rate had started falling a long time before that and furthermore considering the effects of the war of 1914-1918, its natural growth rate was the lowest in Europe and even became negative from 1935 onward.

While fertility decreased in Europe, the first phase of the demographic transition began in what Alfred Sauvy later called the Third World.¹³ The deployment of colonial troops and the arrival of colonizers were accompanied by an increasing number of doctors. In consequences, the basic principles of hygiene were spread widely, thus leading to a decrease in infant and maternal mortality. The demographic growth of populations in the Third World which would become evident in the 1960s began.

9 G.-F. DUMONT, *La population de la France*, Paris, Ellipses, 2000.

10 G.-F. Dumont. *Les migrations internationales*, Editions Sedes, Paris 1995, 91.

11 H. Michel. *L'Allemagne en mutation*, Presses de Sciences Po., Paris 1995.

12 G.-F. Dumont. *Démographie*, Dunod, Paris 1992.

13 A. Sauvy. *L'Observateur*, 14 August 1952.

DEMOGRAPHIC REVIVAL

The third phase in the history of European demography in the 20th Century corresponds to the period after World War II: Europe renewed itself from within while the old colonies experienced the demographic transition intensely before obtaining political independence. The demographic Spring of Europe after the war was sustained by the expansion of pro-family policies. The birthrate returned to an average of 2.5 to 3.5 children per woman. This increase contributed all the more to a European renewal since at the same time the progress made in medicine and hygiene continued to reduce the minimum needed for the replacement of generations which went from 2.3 children to 2.2 children per woman, then to 2.1 children per woman, approaching the obviously absolute floor of two children. Europe regained a natural demographic growth which stimulated and accompanied the economic and social renewal which Jean Fourastié called “the glorious 30 years.” Actually, there were only “20 glorious years” regarding the birthrate in Europe, but they translated into 30 glorious years due to the momentum acquired by the increasing birthrate. At the same time, mortality went down, particularly in the countries of the Third World, and thus the population growth in the South became particularly high, reaching its height at the end of the 1960s.¹⁴

¹⁴ G.-F. Dumont. *Le Monde et les Hommes*,

During these different phases, Europe experienced numerous demographic upheavals, both in its natural movements and in its migratory movements, in particular due to the two European civil wars.¹⁵

EUROPE'S DEMOGRAPHIC WINTER

Beginning with the 1960s the progressive decline of the European birthrate led to a rate that was below replacement; thus in the 1970s the 4th demographic phase of the 20th Century began, namely demographic winter. A quarter century later, at the turn of the millennium, the ancient home of populations which is Europe is now characterized by two fundamental demographic processes: the first is a demographic concentration in larger urban areas to the detriment of middle-sized towns and rural areas which are often being depopulated; the second process consists in a low birthrate, thus increasing the ageing of the population. In 2000 all European countries had a fertility rate which was below replacement, and Europe is the only continent to register a process of natural negative growth.¹⁶

les Grandes Evolutions Démographiques, Editions Litec, Paris 1994.

¹⁵ J.-D. LeCaillon. “La Population de l'Europe au XXe Siècle, » *Population et Avenir* (2000), 646.

¹⁶ Thus there is an annual decline of -0.1%, according to *World Population Data Sheet 2000*.

The greater number of deaths over births which can be observed in Europe as a whole can also be measured in 16 out of 42 countries and in a few dozen regions. It is the result of the convergence of a declining birthrate which came about in several phases from the 1960s until the 1990s. The main consequence of this is a continuous and increasing ageing of the population. Thus, the question of how to finance pensions is a continuous issue in all countries because the number of working people per retired person is decreasing everywhere.¹⁷ This fundamental convergence thus has led to reports, proposed laws, changes in regulations, lawsuits,¹⁸ demonstrations and debates; but the solution which is a demographic renewal is generally not mentioned. "Old Europe"¹⁹ is becoming a continent of old people, and all those who are dreaming of miracles which would solve without effort the growing demographic imbalance between genera-

17 For France, see G.-F. Dumont. "Lumière et Ombres du Rapport Charpin," *Population et Avenir*, (1999) 642.

18 Cf. in France the civil case of the C.G.T. and of the "Familles de France" against Agirc which led in November 1999 to the decision of the Supreme Court of Appeals condemning the "Association Générale des Institutions de Retraites de Cadres" (Agirc) for having retroactively implemented a decision of its board of directors.

19 This expression has often been used: Cf. for instance, the presentation of C. Moindrot entitled "La Vieillesse Europe," in *Les Populations Européennes*, Ellipses, Paris 1985.

tions will be seriously disappointed.

However, despite parallel demographic developments within Europe, there are also some differences, as if the Iron Curtain which fell in 1989 were still exercising some influence demographically speaking. Indeed, the countries which had been under Soviet influence for the longest time also have the lowest birth rates, thus sharing the same status quo with the least fertile countries which were Spain and Italy. Among other things, these countries have the highest mortality rates.

THE GEOGRAPHY OF FALLING FERTILITY

Since the 1960s the populations of Europe have all converged towards a low birthrate; the effect of this is the annual negative growth which was noted since the mid-1990s. This is the result of a low birthrate (10 children per 1000 women), which is also dependent on low fertility. Thus Europe presents itself as the continent unable to replace itself.²⁰ For all European countries without any exception,²¹ though at a different rhythm and with different time-tables, have con-

20 Let us recall that this is the fertility rate (2.1 children for 1 woman in countries with a good health system) allowing one hundred women to be replaced with the same number of women in the next generation that follows 30 years later.

21 Some doubt remains regarding Albania's fertility rate being below or above the replacement rate depending on the sources consulted.

verged in this fertility decline resulting in what I have called a demographic winter. Let us now examine how this convergence came about.

During the general demographic revival in Europe after World War II, the European countries experienced divergent birthrates which did not correspond to the recently imposed political divisions. The lowest fertility rate was detected in a large central corridor from Sweden to Italy, containing Western countries (West Germany, Austria, Switzerland and Greece) and countries from the Soviet Bloc (the Baltic countries, East Germany, Bulgaria and Ukraine). The other European countries made up for this deficiency in this European central corridor until the middle of the 1960s. Afterwards, the decline in fertility followed a general pattern, with geographical differences, until it covered all of Europe following a calendar with four stages.

The first phase takes place in the 1960s. Each year one or more countries record a decline in births from the previous year: Belgium in 1960, the Netherlands, Spain and Italy in 1965, Denmark and Sweden in 1967, Norway in 1970, then France in 1975. The birthrate starts to decline especially in Northern Europe: Finland, Sweden and Denmark have less than 2.1 children per woman after 1969,²² but the average birthrate in Eu-

rope remains firmly above the minimum replacement level.

With the beginning of the 1970s the second stage of the fertility decline in Europe starts, with more countries having a fertility rate below 2.1: Luxembourg in 1970, Austria and Belgium 1972, the United Kingdom in 1973. Furthermore, Western Europe's²³ birth rate slides below replacement in 1974, the same year in which France passes below the mark. In this period, the European countries with the highest birthrates are - excepting Ireland with 3.63 children per woman - in Southern Europe: Spain (2.89), Portugal (2.68), Greece (2.38) and Italy (2.33). Few imagined that these countries would follow the general trend; but they did so with an even faster pace.

Italy began the third stage of fertility decline in Europe between 1977 and 1982, a period in which Southern Europe reached below-replacement levels: Spain and Greece in 1981, Portugal in 1982. Ireland was the only Western country whose birth rate was 2.95 children per woman in 1982 and it went below 2.10 children per woman in 1991.

THE PECULIAR EVOLUTION OF SOVIET EUROPE

During the three stages of the fertility decline in Western Europe mentioned

l'Europe, *Evolution Démographique Récente en Europe*, 1999.

²³ According to the political meaning of the expression used before the implosion of the Soviet Union.

²² These numbers are drawn from: *Eurostat. Statistiques Démographiques, 3: Populations et Conditions Sociales*, 1999 ou de Conseil de

above, the situation of countries under Soviet influence remained unique. These societies were closed to migratory movements (excepting some workers from allied countries), tourism and Western information outlets. The majority of the population could not obtain modern contraceptive devices. The authorities decided to offer abortion as an instrument of birth control: the number of abortions often overtook births. Sometimes there were 3 to 4 abortions for every birth. The marriage patterns remained similar to those of the 1950s and the fertility calendar continued to allow for early child-bearing.

Nevertheless, the evolution appears chaotic because authoritarian policies fluctuated and often brutally changed demographic conditions. In this way, abortion, which had been progressively legalized starting in 1955, was restricted at different points without other means of birth control being put into place. The most spectacular decision was made in October 1966 in Romania where abortion was made illegal without any warning; this brought about a doubling of births in 1967. Access to abortion was also restricted in Bulgaria in 1968 and in Hungary in 1973, because these countries were becoming worried about the decline in births.

In countries such as East Germany where fertility was lowest and whose population was following the behavior of West Germany since 1945, the governments put into place policies to encour-

age an increase in the birthrate (1976 and following years).

Held in check by the Soviet regime, the fertility rate generally resisted decline in the Eastern countries. Then, with the implosion of the Communist regimes, it fell with record speed between 1989 and 1992, in the fourth stage of the convergence of European fertility.

EUROPEAN DIFFERENCES

After this four stage calendar of declining fertility in Europe, the birthrate is now, at the turn of the new millennium, below replacement in all of Europe. However, the low fertility rates reached at the end of the 20th Century are not the same in all countries. In some former Eastern-Bloc countries the decline has exceeded the lowest level recorded in other European regions. In 1986 Italy replaced Germany as the most infertile country in the world with 1.32 children per woman and continued to go down to 1.18 children in 1996. At the end of the 1990s, however, Italy was in "competition" for last place with various countries of the former Soviet Union: the birthrate in Estonia, the Czech Republic, Russia and Slovenia is 1.2 children per woman, and in Latvia and Bulgaria it is 1.1.

The European geography of fertility is divided into 3 levels, all below replacement: Eastern and Southern Europe with 1.3 children per woman, Western Europe with 1.5 and Northern Europe with 1.7. In all of these countries the differences between rural and urban zones

which had previously been significant are largely gone.

The yearly birthrates recorded in Europe reflect this lowered fertility: they were often 18 per 1000 in 1950, and at the end of the 20th Century they were around 10 per 1000, with variations due to fertility and the degree of population ageing in each country. The geography of birthrates²⁴ corresponds more or less to that of fertility. The rate is lower than 10 per 1000 in Estonia, Latvia, Lithuania, Sweden (Northern Europe), Belarus, Bulgaria, the Czech Republic, Hungary, Poland, Russia, Ukraine (Eastern Europe), Italy, Slovenia and Spain (Southern Europe). Around fifteen European countries have a birthrate of between 10 and 12 per 1000. Finally, the birthrate which is the least low, namely 13 or more per 1000, is recorded in Iceland, Ireland, Norway, Liechtenstein, Albania and Macedonia.

The number of births has generally decreased less than fertility because it records for a whole year the fertility of every age group compared to the number of women in fertile ages. A decrease in fertility rates can be compensated for, at a given time, by an increase in the number of fertile women. Thus, in France the number of births increased until 1973 while fertility had been declining for 10 years. This is the effect of inertia which is common (and fundamental) to demography.

THE STAGES OF THE DECLINE IN NATURAL GROWTH

The combination of the mortality rate and the birthrate gives us the natural growth rate which evolved in Europe following three stages. During the first phase (1972-1992) the Germanic peoples were an exception: Already in 1972 Germany registered more deaths than births, exceeding in some years 100,000, especially because of variations in the birthrate. Austria registered a surplus of deaths over births from 1975 to 1980 and then again in 1983, 1985, and 1986. Denmark was slightly negative from 1981 to 1988. These low numbers of births diminished the base of the age pyramid and led to a decrease in the German population, despite the addition of immigrants -- mainly Turks. Then the Soviet implosion generated a strong migration of ethnic Germans from Poland, the Baltic States, Belarus and Russia, which compensated for the negative natural growth rate.

During the second stage, Germany was joined by Italy in 1993 in having more deaths than births. This second phase allows one to envisage a similar development in Southern Europe in general, because the surplus of births over deaths decreased in a regular and almost linear fashion in Greece, Spain and to a lesser extent in Portugal. Spain had its first year of more deaths than births in 1997, as did Sweden.

Simultaneously, another stage was

²⁴ Numbers from *PRB* 2000.

crossed, because several countries from the ex-Soviet Empire, due to their low fertility and higher relative mortality, started having a negative natural growth rate.

After these three stages, the geography of natural growth rates in Europe at the end of the 20th Century shows that 16 of 42 countries have negative natural growth; 7 of 10 countries in Eastern Europe (Belarus, Bulgaria, the Czech Republic, Hungary, Romania, Russia, and Ukraine), 4 of 10 countries in Northern Europe (Estonia, Latvia, Lithuania, and Sweden), 4 of 13 countries in Southern Europe (Croatia, Greece, Italy and Slovenia), and Germany in Western Europe. Twenty other countries had a natural growth between 0 and 5 per 1000. Finally, some countries had annual natural growths equal to or higher than 6 per 1000 (Ireland, Iceland, Liechtenstein, Albania, Andorra, and Macedonia). All European countries nevertheless find themselves following a general trend of decreasing natural growth.

THE DEMOGRAPHIC MECHANISM

How can one explain this convergence towards a low fertility rate in countries having such different demographic histories and characteristics? In fact, if we exclude the socio-cultural factors, this evolution is due to a demographic revolution and more precisely a fertility revolution touching different countries and, more specifically, different regions -- for

example cities before rural areas -- as it spreads.

This revolution is due to the introduction of modern and highly effective contraceptives which completely modified fertility regimes.

Before the 1960s births were characterized by their unpredictability: to the wanted babies were added those who were born because of the absence of contraception or because of traditional contraceptive methods with only limited effectiveness (abstinence, *coitus interruptus*, the Ogino method, and condoms). As Alfred Sauvy said, all the children received a similar education without the possibility of telling the difference.

New medical contraceptives (the Pill, intrauterine device, sterilization) which have become increasingly and more widely used since the 1960s, allowed the control of fertility and the fertility calendar and the separation of sexuality from procreation. In the case of an incorrect use of modern contraceptives, recourse to medical abortion became possible, both in countries where abortion is legal as well as in most others where it is illegal, but generally available.

Thus, in a general context which is unfavorable to the family, the number of children born corresponds to those whose arrival is planned following short-term reasoning to the exclusion of children, who according to studies, would be desired ideally speaking or who would be necessary to stem the demographic imbalance between generations.

THE OTHER IMPLOSIVE FACTORS

Running parallel to this contraceptive revolution and irrespective of the opinions about the ideal size of families, other objective factors led to a declining birthrate. In all of Europe the time taken for schooling and studies has increased, especially women's education. The proportion of women studying for higher degrees has increased. Logically therefore—*ceteris paribus*—the average age for marriage and motherhood has been pushed back: The timing of births is delayed, and at the same time the potential number of children who can be born declines because biological factors making women more infertile with age and limiting the fertile period have remained fairly constant.

Another factor is the economic activity of women. This has always existed to a much greater extent than generally assumed, but in a rural and agrarian society women practiced their familial and professional activities in the same places; sometimes even their industrial activities. In modern society, professional activity occurs mostly out of the home, and many professions often require frequent business travel. Reconciling the legitimate desires for career-advancement and for the founding of a family has raised many complex issues, all the more so since society places its demands concerning the first at the same time when biology demands the second.

These and other factors modify to a large measure the conditions for marriage and this contributes to a brake on fertility. Certainly, the birthrate declined everywhere before marriage rates did; thus the first cause for the non-replacement of generations is not attitudes toward marriage. On the other hand, in a secondary phase, the decrease in marriages encourages the continuation of low fertility and even further decreases.

This last observation is analyzed in different ways depending on the specific cultural characteristics unique to each population.²⁵ In some countries marriage remains a central institution and the birth of children out of wedlock is rare. The decline in the number of marriages leads automatically to a low birthrate, because the percentage of births in wedlock remains very high (Spain 89%, Italy 92%, Greece 97%).

In contrast, in Northern countries such as Sweden or Denmark, marriage is less important; children born out of wedlock have become very common, which is also reflected in the laws: 54% of the total number of births in Sweden and 46% in Denmark were out of wedlock.²⁶ In other countries such as France or England, the percentage of births out of wedlock has increased significantly; however, there are not enough births out

25 G.-F. Dumont, *et.al.* . *Les Racines de l'identité Européenne*, Economica, Paris 1999.

26 Cf., especially "Les singularités de l'eurodémographie," in *Population et Avenir* (1999) 643.

of wedlock to make up for the declining number of legitimate births.

In consequence, in spite of these different attitudes regarding marriage in Europe, declining marriage rates always have a negative effect on fertility.

THE FUTURE OF THE IMPLOSIVE PROCESS

The analysis of the European demographic processes is particularly interesting because this continent is like a laboratory of the post-transitional period. The demographic transition ended in effect after the first third of the 20th Century. The signs of ageing in the interwar period were replaced by a demographic revival after the war. Then the demographic revolution of fertility happened in a context unfavorable to the creation or the increase of the family while its ideal size has remained constant. Thus, the birthrate has become weak and this has provoked the progressive ageing of the population from the base of the age pyramid. At the same time, the increase in life expectancy has led to a progressive ageing from the top of the age pyramid.

The most noticeable aspects of ageing are the decline in numbers of students, the growing need for public services and organizations addressing a larger population of elderly persons, and the problems faced by retirement plans since the dependency ratio of the retired to working members of society continues to grow. The already implemented or projected pension plan financing reforms

in Europe are necessitated because of this ageing problem. They accentuate how demographic changes have basic consequences on the life of societies.

How far will the implosive process marked by ageing and the decline of natural growth go? For instance, if Europe follows the “Italian model” which is already partially the case at the turn of the millennium, the old continent will see its demographic imbalance worsen in the 21st Century and a demographic depression will follow with obviously important geopolitical, political, economic and social consequences.

What is at stake for the future is if “old Europe” will be dominated by the demographic weight of elderly people or, on the contrary, whether it will be able to check the implosive process thanks to more progressive dynamics such as those observed at the end of the 20th Century. The question is if Europe will be capable of replacing its generations and therefore to prevent the feast of Kronos from happening,²⁷ that mythological character

27 G.-F. Dumont. *Le Festin de Kronos. Essai sur la Réalité et les enjeux des Evolutions Socio-Démographiques en Europe*. Editions Fleurus-Essais, Paris 1991, 203; (Italian edition: *Il Festino di Crono. Presento e Futuro della Popolazione in Europa*. Edizioni Arès, Milano 1994, 180; Spanish edition: *El Festin de Cronos. El Futuro de la Poblacion en Europa*. Ediciones Rialp, Madrid 1995, 190; Slovakian edition: *Kronova Hostina. Socialno-Demograficky Vyvoj Europa*. Edition Vydal Charis, Bratislava 1995, 133; German edition: *Europa Stirbt vor sich hin... Wege aus der Krise*. MM Verlag, Aachen 1997).

who rejected the future by devouring his own children.

THE DIALOGUE OF ZEUS WITH EUROPE

Indeed, according to mythology, the son of Kronos was saved thanks to his mother, Rhea. She was desolate and overwhelmed by her grief. Was she fated to see all her children disappear? She went to Crete and, there in a deep cave, under the thick forests of the Aegean Mountain, she brought into the world her son. Gaia took her newly born grandchild and had two nymphs look after him. In the meantime Rhea swathed a big stone in linen and presented it to Kronos who swallowed it without suspecting anything.²⁸ Thus, Rhea allowed the succession of generations to take place.

Recently Zeus, remembering his old love for Europe, addressed to me the following letter:

For the occasion of the year 2000 and of the jubilee, I wanted to climb down from Mt. Olympus and to leave my celestial balconies and my palace. I, who am according to mythology,²⁹ the supreme god, the lord of sky, the god of rain, the one who gathers the clouds and wields frightful lightning at will; I, whose power eclipses that of all the other gods together; I, to whom Agamem-

non in the *Iliad* addressed himself in the following words: 'Zeus, you are the most glorious, the greatest god of the thundering sky, you who are living in heaven.'

With the turn of the new millennium, could I not have another encounter with Europe who shines like the goddess of love? Could I not give her again three new children who would contribute to the reign of justice which the 21st Century so needs? In order to approach Europe as I did before, I became a bull. But it was not a common bull which one sees in a stable or browsing in a field, but a beautiful white bull whose forehead was marked with a silver disc crowned with a horn shaped like the crescent moon on top. I was hoping to see again beautiful Europe, lost in a strange dream she had during the night, to come innocently to me to caress my mane and then to mount me. I was ready to carry her off on the sea to Crete or Boetia and to give her again three sons.

Then the disaster of the European demographic implosion descended upon me. Europe was no longer that young maiden whom I saw bathing in the sea and who made me fall in love. She had become a woman whose wrinkles symbolize the most aged continent on the earth. Europe explained to me that 15 European countries and dozens of regions had more deaths than births; and that

28 F. Guirand. *Mythologie Générale*, Larousse, Paris 1935.

29 E. Hamilton. *La Mythologie*, Marabout, Bruxelles 1986.

the official numbers of the UN anticipated an important demographic contraction in the 21st Century with a substantial ageing of the population.

She said, furthermore, that it was better that she was no longer desirable. For effectively she would no longer have been capable of having three children from Zeus. Europe limited her fertility to 140 children per 100 women; one would therefore have had to deprive of life at least one of our three children, Minos, Rhadamanthys, or Sarpedon and such a choice was unbearable.

I answered Europe, observing that the supreme god who I had become thanks to mythology, was neither omnipotent nor omniscient; and sometimes, destiny, this mysterious power, revealed itself to be more powerful than he.

Europe added that destiny was not the reason, but that the Christian God, proclaimed through His son Jesus, had given liberty to each human being, so that he may choose freely and according to his conscience the responsible path to follow; thus people were free to do evil and free to do good, free to be Malthusians and to reject life and free to love and give life. She concluded by saying that one should hope that the Europeans who were participating in Kronos' feast could find hope again, if they knew how to abandon the perverted

values of evil-bearing ideologies such as selfish individualism, economism or neo-relativism.”

THE MESSAGE OF THIS LETTER FROM ZEUS IS CLEAR

Yes, there is no doubt that, in spite of her refusal to acknowledge this, Europe is at the beginning of the 21st Century in the process of imploding demographically, a demographic contraction that affects mainly the younger generations. Yet, population is like a forest: Without enough young shoots it shrinks.

No, this change is not unavoidable. It would be enough to reject the spirit of Malthusianism and to prioritize the acceptance of life and solidarity between the generations to alter it.