

SIX BILLION HUMANS

The humanity behind numbers

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Claudine Sauvain-Dugerdil

With contributions by Stéphane Cotter, Ariane Geiser, Beatrice Sartorius and Laurence Charton, with the collaboration of Werner Haug, Jacques Martin, Hermann-Michel Hagmann and Alfred Perrenoud, as well as by the Musée de l'Homme, Paris.

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Foreword

The aim of this publication is to make its readers aware of the prospects and issues involved with the dynamics of the world's population. It also intends to put the notion of «world population» into perspective, by presenting the demographic situation in two countries, Switzerland and Mali, which each face a totally different reality at the dawn of the third millennium. Switzerland is one of the world's wealthiest countries, with a population which is stable in numbers but is ageing rapidly. By contrast, Mali - which is a focal point of Swiss cooperation - is one of the poorest countries, with a very young population and rapid demographic growth. There is a fundamental challenge to be faced, not as regards the numbers, but in terms of human beings' quality of life. According to recent estimates, the Earth's natural resources are sufficient to feed the growing world population. But will it be possible to guarantee a better quality of life for the whole planet? Human rights, access to education and health services - especially for women - employment, a secure supply of food, freedom from violence and peace are other factors contributing towards it. Their implementation depends on political choice and sustained economic and social development at global level.

This publication is issued in the same year the world's population passes the 6 billion human beings mark. It includes elements from the exhibition «6 Billion Human Beings» devised by the Musée de l'Homme in Paris. The travelling version of this exhibition is currently to be seen at the Swiss Federal Statistical Office in Neuchâtel. It is open to the public until March 2000.

The Swiss Federal Statistical Office and the Swiss Agency for Development and Cooperation have different, but complementary assignments. Scientific knowledge and humanitarian political action complement one another in the service of reciprocal understanding and international cooperation. We would like to thank all the partners who have contributed towards producing this brochure, in particular the Musée de l'Homme for kindly authorising the use of certain illustrations.

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Werner Haug

Swiss Agency for Development and Cooperation, Human Resources Service
Jacques Martin



Switzerland

Mali



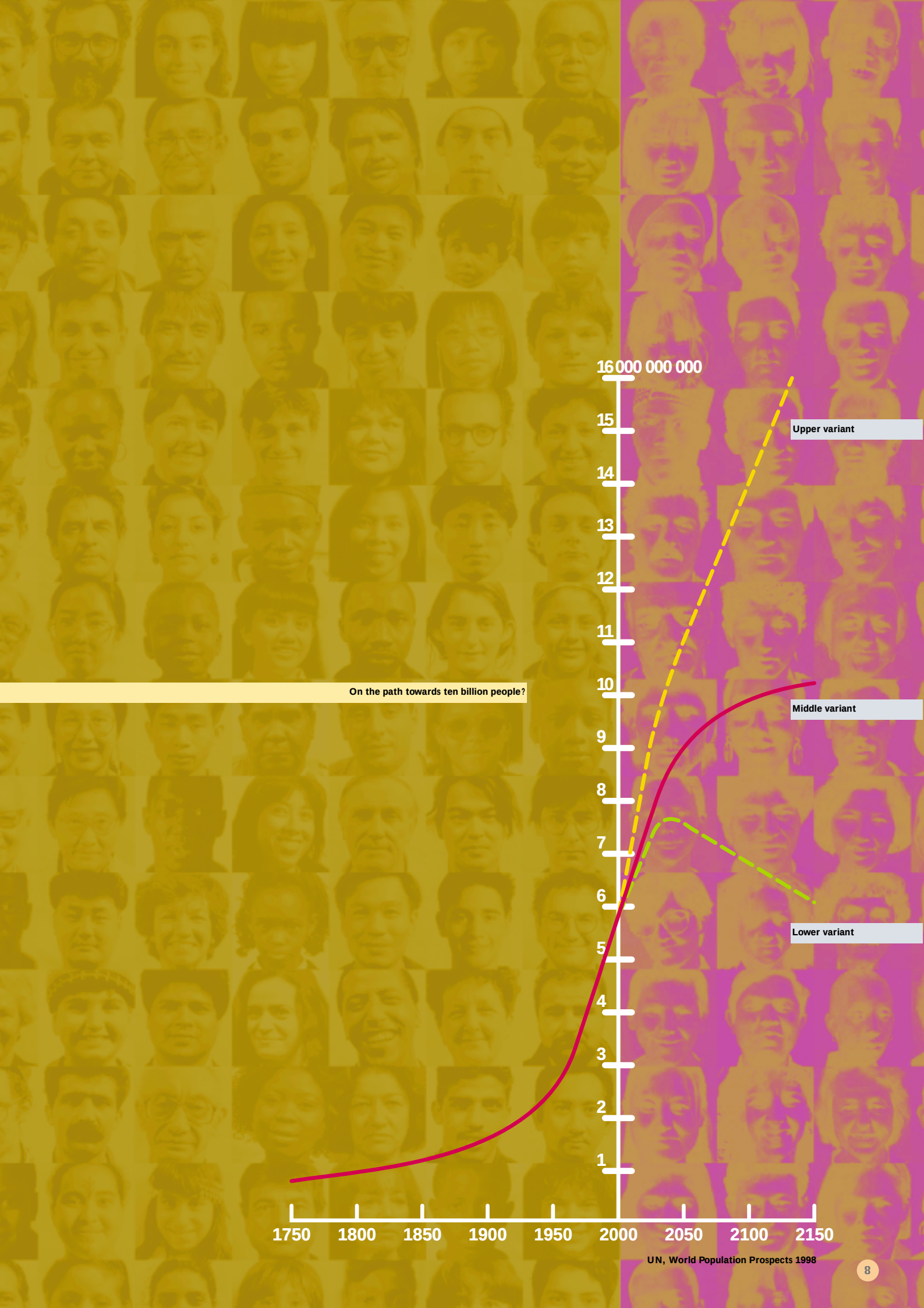
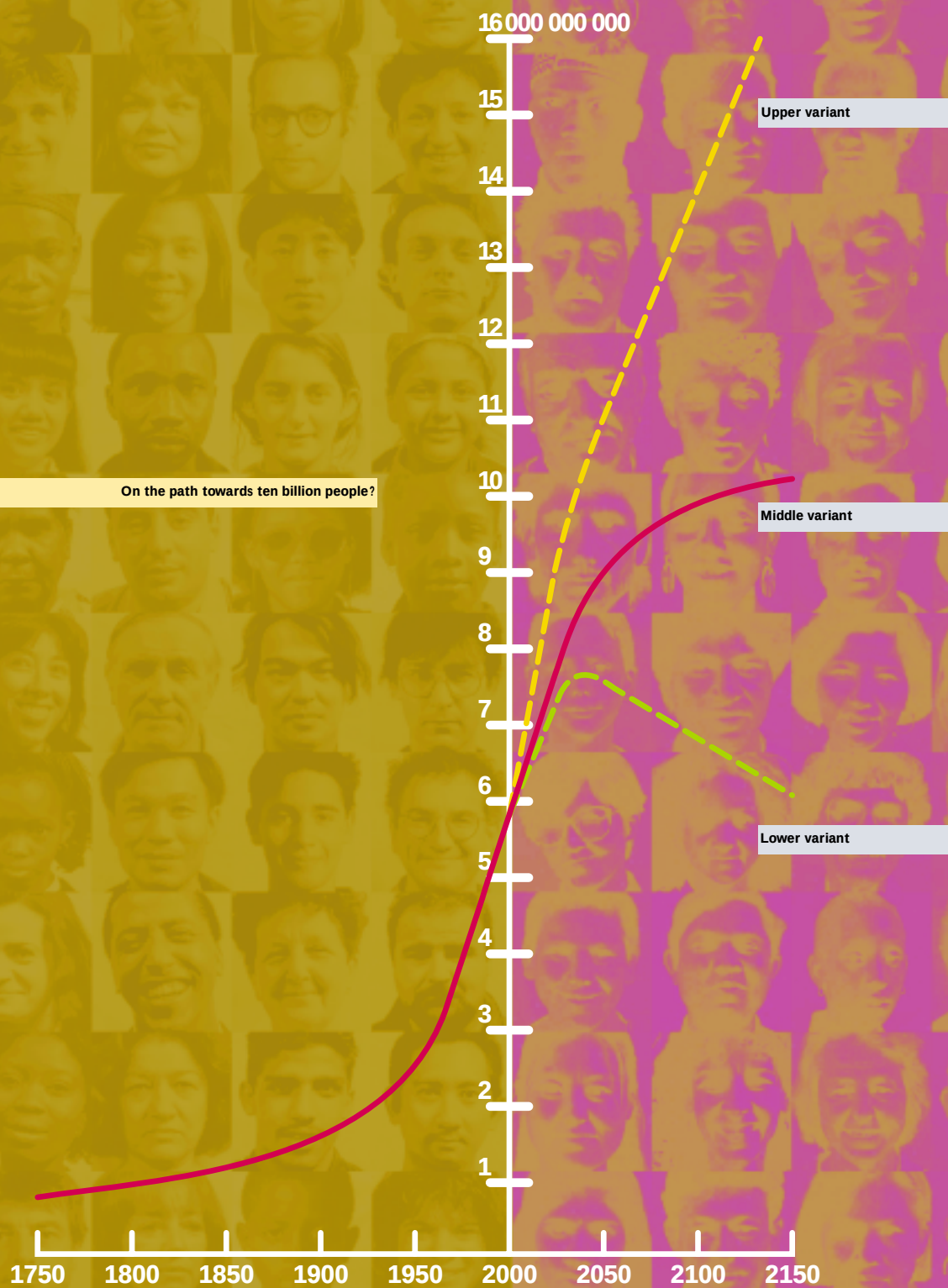
The humanity behind numbers

This year, the world's population passed the 6 billion mark. The United Nations declared that this threshold would be symbolically attained on 12 October 1999, a date appointed the «Day of the six billion». It is estimated that, by then, some 81 billion human beings have populated our earth since the appearance of «homo sapiens».

The demographic growth tells us of the long history of mankind, and the new challenges which confront present-day societies. It also bears witness to the processes of interaction between populations and their environment, as well as to the relations between individuals and between societies.

Births, deaths, marriages, divorces and migrations are all factors influencing the composition of populations and their future dynamics. The trends at world, continental and country level allow light to be thrown on the global changes which humanity is living through. However, the machinery of change can only be understood in the light of the specific dynamics of each population and the behaviour of the individuals who make it up. Each individual life story is unique, nevertheless, it is also linked with global destiny. Together with six billion others, each lifespan goes to form the continuing thread of the adventure.

Demography is not only concerned with the numbers of people, but also with the quality of life of each individual dealt with by it. The diversity of demographic trends and challenges in today's world is illustrated here by taking the example of two countries at different extremes in this respect. With its small families and record life expectancy, Switzerland is typical for ageing Western populations. At the other end of the scale, Mali is marked by the youth of its population.





Mankind's demographic history is marked by periods of more or less dramatic growth, but also by times of stagnation and decline. During the first millennium of our era the number of human beings did fluctuate, but it remained stable in overall terms. The second millennium began with a more sustained growth which was stopped by the ravages of the plague epidemics of the 13th and 14th centuries. Since then growth on a world scale has been regular. Nevertheless, the European expansionism decimated the autochthonous populations of America and, coupled with the slave trade, whole regions of Africa.



An impressive acceleration but which appears to be slowing down



As from the middle of the twentieth century, when the growth of the old Continent was overtaken by that of the other regions of the world, the dynamics of the world's population has given the impression of bolting away. The first billion human beings was reached in 1804, the second in 1927, the third in 1960, the fourth in 1974 and the fifth in 1987. It took 123 years to grow from the first billion to the second, but only 33 years were needed to reach the third billion. Little more than a decade was necessary for each subsequent billion. Nevertheless, this growth now appears to be slowing down.

for the next century downwards. Instead of the twelve billion which were originally expected at an annual growth rate of 2%, there will probably be nine billion people living on our planet in the year 2050. This middle variant, considered to be the most probable, is a long way away from the disaster scenarios of the demographic explosion (the notorious P bomb), but it still does not represent a return to an earlier situation, or even a status quo. The demographic momentum will make the world population continue to grow in the course of the next century.

The number of people on the planet

is currently increasing at the rate of

78 million per year, whereas the increase

between 1985 and 1990 reached

a peak of 86 million per year.

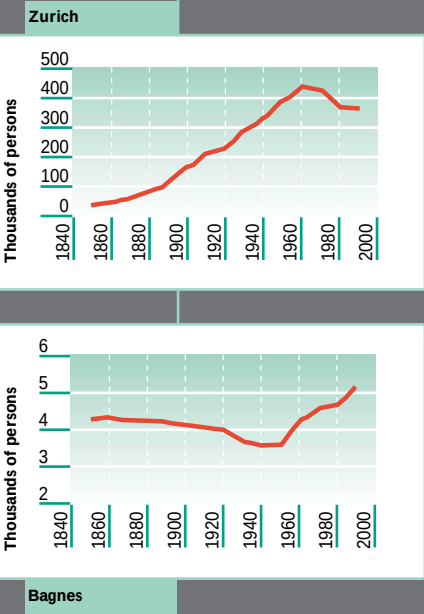
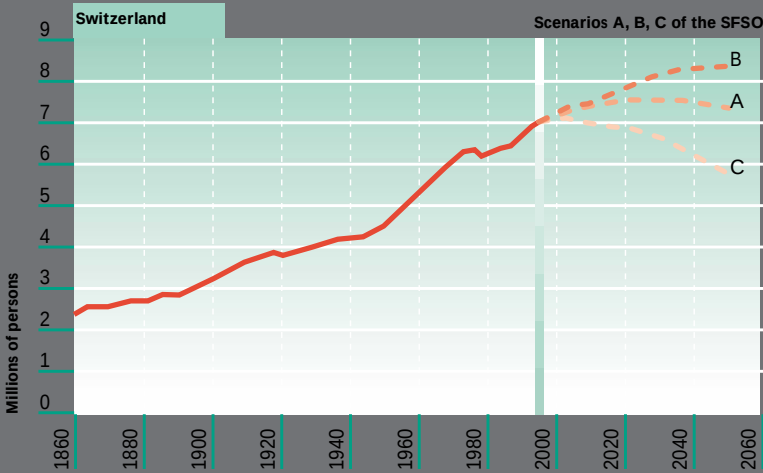
This slowing down has caused the United Nations to adjust its demographic estimates

POPULATION TRENDS HERE AND ELSEWHERE

here... Switzerland ... Although the Swiss heartland and the great Alpine valleys have been well populated since the first millennium before our era, the total population of Switzerland has always remained modest in size compared with the neighbouring countries. Today it only accounts for 0.1% of the world's population. The territory within the present national borders had less than half a million inhabitants in the year 1000. It was only in about 1600 that the one million mark was passed. Like Europe as a whole, Switzerland experienced a marked growth from the 18th century onwards. In 1848, when the Federal State was established in 1848 the number of inhabitants in the country reached 2.4 million. The population has tripled since then, currently amounting to 7.1 million. This growth has varied according to the period in question. It slowed down during both world wars and the economic crises. At present, we can observe a stabilisation in the population, as is typical of the Western world. According to the most plausible estimates, it should only continue to rise slightly in the course of the next decades, reaching a ceiling of some 7.5 million towards the year 2030, after which it will probably decline.

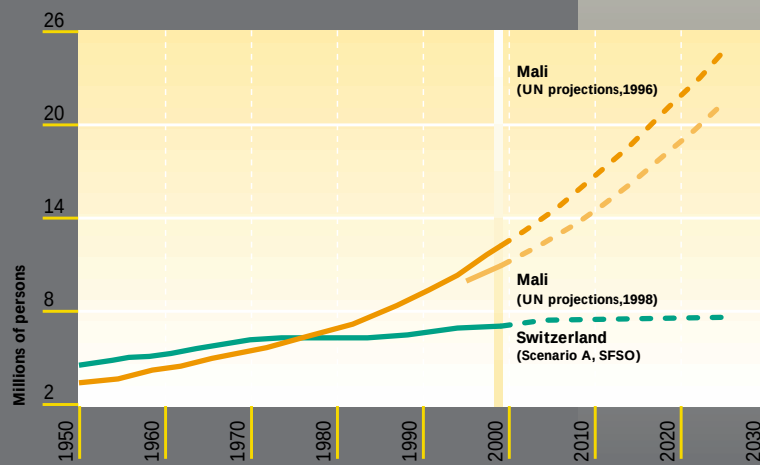
As the two examples taken here show, the demographic trends differ greatly from one region in the country to the other. Nowadays, Zurich is the only real conurbation. However, its growth only began at the turn of the last century. At the end of the 18th century, Zurich had no more than 10,000 inhabitants - that is to say, a third of the figure for Geneva, the first city since the Middle Ages. In 1892, Zurich broke through the barrier of 100,000 inhabitants and since then has been the largest urban area in the country. Since the 1970s, as has been happening in other large cities, the centre has been losing its population to the benefit of the towns and villages on its outskirts.

From the Middle Ages until the beginning of the 19th century, the Alpine regions often benefited from a more dynamic demographic evolution than in the rest of the country. In the Vallée de Bagnes, the trend reversed in about 1850. In view of the difficult economic conditions in the mountain regions, the population declined constantly until about 1950. The construction of the Mauvoisin dam and the development of tourism opened up new economic prospects which in turn lent new impetus to the region's demographic trend. By 1960, the population of this valley had regained the level of 1850, and since then it has grown by a further 40%.



Population trend

elsewhere... Mali... With an annual growth rate of almost 3%, or ten times as high as the figure for Switzerland, Mali's population should double over the next 23 years. This pace is typical for Sub-Saharan Africa and some countries in Asia. In contrast to the general trend in the developing countries, where the growth in population has ceased since the end of the 1960s, the acceleration here is recent. According to the last estimates by the United Nations, Mali should now have a population of nearly 11 million people. This growth is going to continue until at least the middle of the next century, but some indicators suggest that the pace should slow down. In 1996, the United Nations were expecting 37 million inhabitants in 2050, while the revised 1998 estimates cut this figure by six million.



Population trend

Decoding the population dynamics

means looking at the present

from the viewpoint of humanity's adventure.

The number of human beings

is an indicator of changes in the past

and in progress whose varied nature gains

its meaning through the specific history

of each single population.

These histories, in turn, result

from the behaviour in matters of fertility,

life span and mobility.

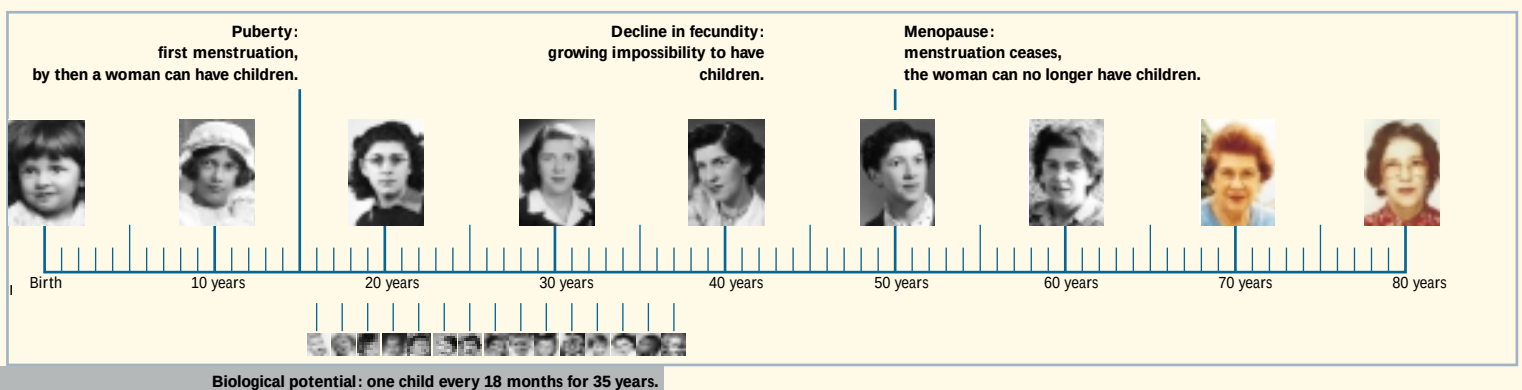
Theoretically, women can have an average of fifteen children. Some women have had far more children than this, as a result of short birth intervals and multiple births. We all have in mind examples of large rural families from the beginning of the century. However, these cases have remained the exception rather than the rule. In reality, even among populations not using modern contraceptive methods, the average number of children seldom exceeds six or seven. Real fertility therefore lies significantly below the biological potential.



Children: mankind's future

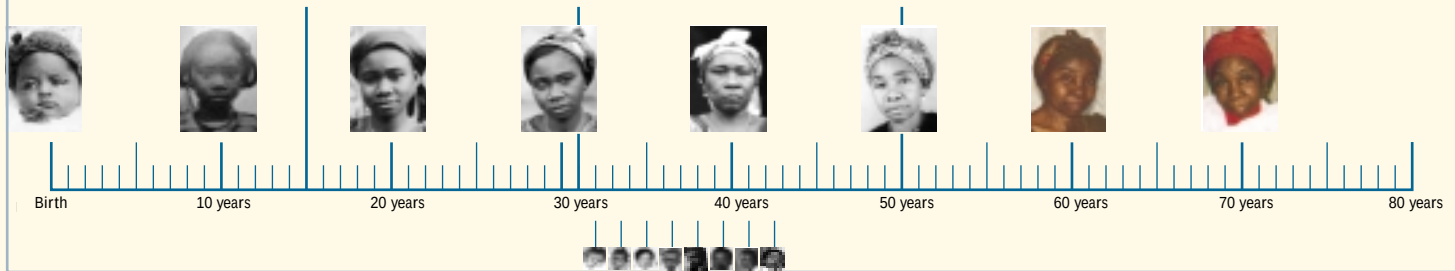
The period during which a woman can conceive depends on living conditions and environmental health. The age of puberty and menopause varies according to the particular population, and it changes over time. The ability to reproduce can also be impaired by temporary infertility due to famine, and excessive stress caused by work or sickness. Nowadays, the fecund phase of life lasts longer than in the past, and it is longer among women in wealthy countries than among their counterparts in poor countries.

The reason why a woman's actual fertility is significantly below her biological potential is that every society has traditions which contribute to limit the numbers of children. The size of the family represents one of the elements in the way a society functions. It is very closely linked to the economic system, the rules governing inheritance, and the cultural values.



Before the introduction of modern contraceptive methods, the number of children was restricted by traditions regarding the age of marriage, by different customs affecting the birth intervals, as well as by abortion and even infanticide in many populations. Over the last century in Europe, marriage constituted the

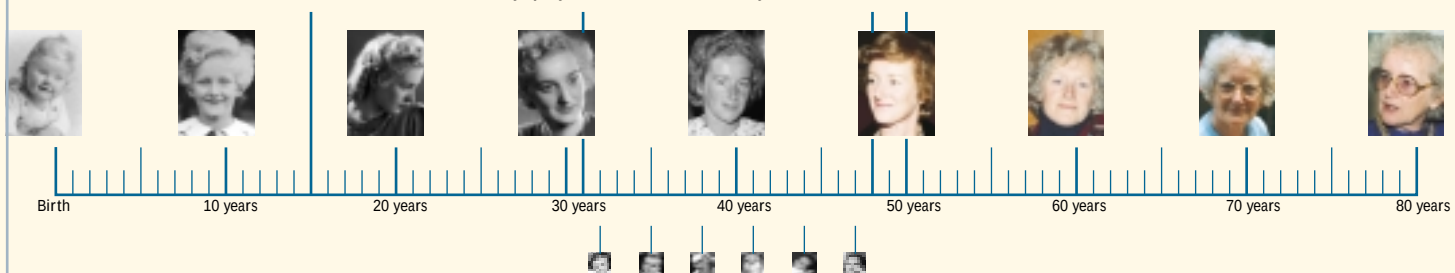
most important mechanism for regulating the size of the family. In order to start a family, it was essential to have property and assets; the marrying age was high, and it fluctuated according to the economic situation. People often remained single.



Couples have fewer children when they marry later.

In those populations which still do not use modern methods of contraception, family size is primarily controlled by birth spacing. Long and intensive breast-feeding postpones the next conception. This contraceptive effect is particularly noticeable among women who suffer from nutritional deficiencies and who carry out heavy physical work. In many societies, this

protection is reinforced by traditions which only allow sexual intercourse to resume several weeks or months after a birth.



The interval between births is extended by a long and intensive breast-feeding.

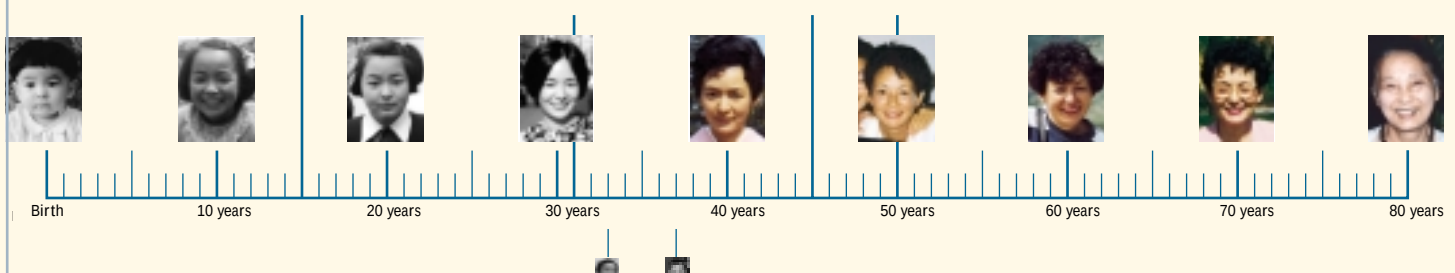
Women who breast-feed for two years remain infertile for an average of 18 months - in this case, they can only have a child every 36 months.

Economic and seasonal factors may also be an element in birth control. The ability to conceive may thus be reduced during periods of heavy work or famine. Moreover, sexual contacts between partners are often discontinued during certain periods. Examples include the fasting periods among practising Catholic populations, emigrant work in cities or on large plantations, and seasonal migrations with herds of cattle entailing the separation of spouses.

the expression of new aspirations regarding the number and timing of births. The family plan has therefore taken on a totally new dimension of individual decision. Nevertheless, it remains embedded within the framework of various constraints which limit personal freedom in every society.

Since the 1960s, the situation in the industrialised countries has changed entirely. The efficiency of modern contraception has allowed

Relations between partners, individual status - especially that of the woman and her access to information, training and gainful work, have thus become decisive factors which influence the number of births.



Having as many children as one likes, when one likes.

THE NUMBER OF CHILDREN HERE AND ELSEWHERE

here... Switzerland... The average number of children, which was still about 4 in the second half of the last century, has been 1.5 since the start of the 1980s. After World War II, the birth rate in Western Europe temporarily experienced a sharp increase. In Switzerland, this «baby boom» started already in 1940 together with a substantial drop in the age at the first pregnancy and a temporary decline in celibacy. Since 1965, a renewed decline in fertility has been accompanied by a continued rise in a mother's age at the birth of her first child. Nowadays, Swiss women are 28 years old on average when they give birth to their first child. Swiss women are thus, together with Dutch ones, among Europe's oldest mothers.

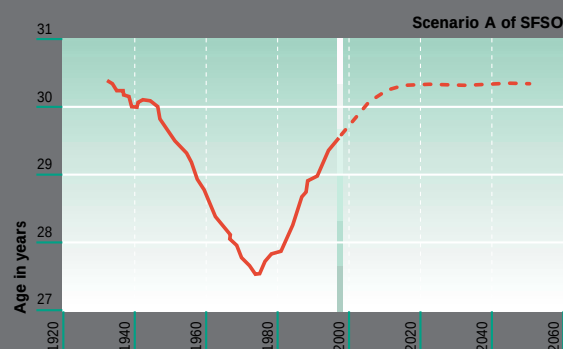
The trends in family size in Switzerland is also characterised by major differences among the regions, and even - on occasion - between adjacent communes. Thus, for example, women in Uri and Fribourg were bearing more than five children at the start of this century, whereas the figure for women in Geneva was barely more than two. This gap reflects differences in birth control, duration of breast-feeding infant mortality, age at marriage and the proportion of single people. In certain regions, especially in the German-speaking part of Switzerland, the right to marry was withheld from poor people, and also from those who were deemed to be incapable of feeding a family. The marrying age and the rate of celibacy were closely tied to the economic system. In the industrial regions, only about 10% of women remained single, whereas, for example, around 1870, in the Val d'Anniviers, almost half the women did not marry. In the Vallée de Bagnes, an increase of two years in the marrying age was observed during the nineteenth century, together with a rise in the quota of celibacy and childlessness.

Nowadays, in Switzerland, there is a general decline in fertility concurrent with the widespread use of contraceptives. In 1995, 90% of sexually active women stated that they used a contraceptive method. The differences in fertility within the country have diminished sharply, and the trend towards small families predominates. However, as the 20 children born to one couple in the Vallée de Bagnes at the beginning of the century bear witness, it was not such a long time ago that the tradition of large families was prevalent.

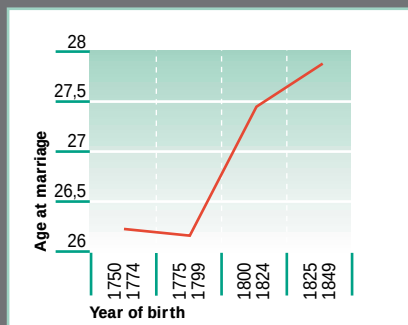
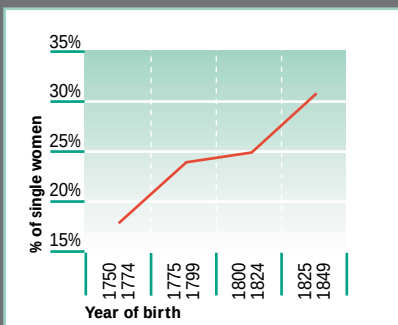
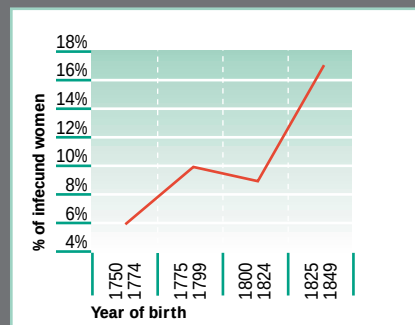
Switzerland differs from the majority of European countries by the low number of births out of wedlock: just over eight births out of 100 in 1997, whereas the corresponding rate is one out of two births in Sweden, for example. The high rate of female celibacy is another specific feature of our country, thus explaining the considerable proportion of childlessness. It is estimated that among the generations of young adults every fifth woman will still be single at the age of 50.



Average number of children per woman in Switzerland



Average childbearing age in Switzerland



Celibacy is measured by the proportion of women still single at the age of 40 and childlessness by the proportion of women who still have no children at the age of 45 although they have been married for at least ten years.

Bagnes before modern time

elsewhere... Mali... In Mali, women have an average of seven children, i.e. one child more than the average for Africa, three more than in North Africa and four more than in South Asia or Latin America. Almost all the women marry, and it is inconceivable to remain childless wilfully. In 1995/6, less than one in twenty women aged over 35 stated that they had never entered into a marital union. In general, women marry at the age of about 16 (their husbands are an average of 10 years older) and they have their first child at the age of 18, i.e. ten years earlier than in the industrialised countries. With an average breast-feeding period of 22 months, they are therefore pregnant or breast-feeding for about 18 years of their lives. In Switzerland, the corresponding period currently limited to a year and a half.

With the exception of Nigeria and Mali, there is a significant decline in the frequency of births in Africa. Furthermore, this decline is proceeding much more rapidly than was predicted. The front-runner has been Kenya, with 7.9 children per woman in 1977 and 5.4 in 1993. In the other countries, the decline started to emerge at the end of the 1980s. In the case of Nigeria and Mali, even though fertility has seen no changes in terms of the overall national average, it has nevertheless fallen substantially in the towns. In Mali, the average number of children per woman in 1987 was 7.1 both in urban and rural settings; in 1995/6, this figure remained more or less the same in the countryside, but fell to 5.4 in the towns. Bamako, the capital city, is the forerunner of the new trends, with an average fertility of only 4.7. The age at first marriage is higher in the urban regions where women are also beginning to use contraceptive methods. In the rural areas, only 3% of women use contraceptives, whereas in Bamako, the corresponding quota is 23%.



Children constitute the individual's and the group's present and future. For centuries, a society's concerns were focused on the future, that is to say on the survival of the community. Nowadays, the emphasis is on the present - children are no longer primarily part of a strategy to ensure the continued existence of the family or group, but rather a component of the individual life plan. The degree of this change varies according to the cultural and religious environment. The person's more or less conscious decisions to enter into a couple-type relationship, to marry and to have children, are inseparably linked to their social and economic duties and tasks and to their resources. In numerous cultures, the number of children goes hand in hand with the prestige which they bestow on their parents.

The place of the child in one's life

depends on other roles which individuals

play within the society, and on the

possibility of reconciling these

with one another.

Planning a family therefore represents a subtle mix of accepted values, rational decisions and compelling social forces. It does not correspond to a plan which has been thought out clearly in advance - rather, it forms a part of each individual's path through life.

Neither the family planning programmes which are intended to reduce birth rates in the developing countries, nor the family promotion policies of the industrialised nations, have always shown the desired results. For example, the Chinese authorities have relaxed their policy of one single child, especially in rural regions. It is not sufficient to make contracep-

tives available to women, or even to force them to employ birth control. Both women and men must be given the opportunity to establish a balance between the roles they play within the family, society and the economy. In Western countries, the low frequency of births can be partially explained because women have difficulty in reconciling their family lives with their professions.

In countries such as Mali, where shortage of food and heavy work are typical features of existence, pregnancies at short intervals may damage the health of women and prevent them from fully carrying out their various duties and tasks.

The transition from childhood

to adulthood is a crucial stage

which forms the basis for all

subsequent experience.

Due to external circumstances, numerous children are unable to complete this maturing process. Armed conflicts or poverty mean that they are robbed of their childhood. At the same time, there is the problem of girls who become wives and/or mothers before they have completed their growth phase and have developed their personalities. Pregnancies among young girls give rise to health-related problems which can have later consequences for an entire lifetime. Moreover, marriage and/or the birth of the first child often endanger women's chances for education and a profession, and hence their opportunities to improve their status. Without such resources, it will be difficult for them to benefit the right to plan their families freely, which has been proclaimed under the auspices of major international conferences.

The end of this millennium is marked by an extraordinary extension of the average lifespan. Until the 18th century, life expectancy at birth was just about 30 years. About half of all children died before they reached the age of five. A first decline in mortality occurred at the turn of the 18th century. But it has only been since the last decades of the 19th century that life expectancy started to rise steadily throughout Europe and, on a world scale, since the middle of this century.



The dream of longevity

The average world life expectancy had reached 60 years around 1990. During the second decade of the 21st century, it is expected to exceed 70 years. Today, more than half of the earth's inhabitants attain at least the age of 65. Growing old has therefore ceased to be the privilege of a small minority. The last phase of life has become considerably longer, and it now includes different stages: the «almost old» (55 to 64 years) are differentiated from the «younger old» (65 to 79 years) and the «oldest old» (80 years or more). In 1998, it is estimated that the planet numbered 135,000 centenarians and that this figure could rise to 2.2 million in 2050.

the average lifespan still differs widely in the various regions of the world. In the developing countries, progress can be discerned - especially as regards infant mortality - thanks to the increase in the standard of living and advances in the areas of medicine, nutrition, education and communications. However, it is minor and very unequal. Almost two million people still fall victim to malaria each year, and the AIDS epidemic is having catastrophic consequences. Among the individual regions and countries, the towns and the countryside, and the poor and the rich, there is an enormous gap in terms of living conditions and access to information and medical care. The difference is particularly evident when it comes to maternal mortality. This represents the dramatic consequence of inadequate access to basic medical care, which primarily reflects the status of women within the society.

Increased longevity

has been made possible

by a change

in living conditions,

an improvement in knowledge

about illness,

causes of death and

conditions for good health.

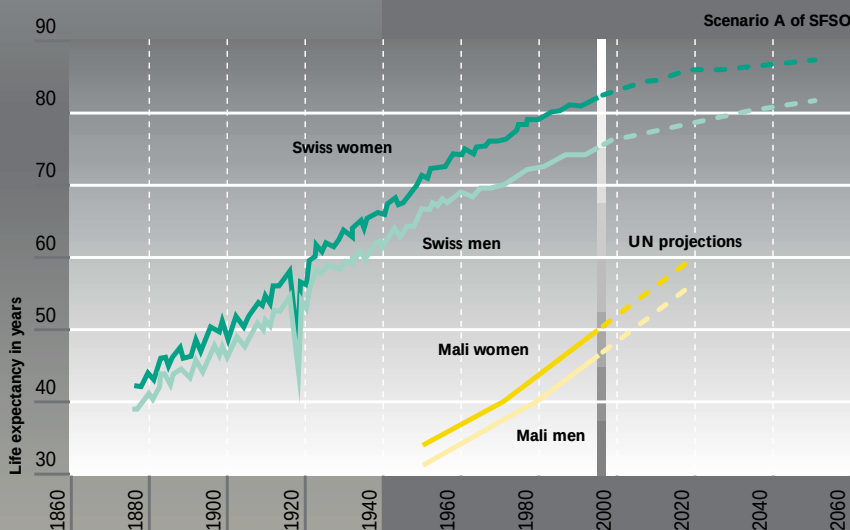
However, this evolution has by no means been a constant one. In general, a great deal of time was needed before striking progress could be achieved, and this was not infrequently preceded by a period of retrogression. Moreover,

THE LIFESPAN, HERE AND ELSEWHERE

here ... Switzerland... Within 120 years, life expectancy in Switzerland has almost doubled. It rose from 43 years in 1880 to 55 years just before the World War I, and in 1997 it was 79 years. This significant increase in life expectancy is mainly due to a sharp decrease in infant mortality. At the start of the century, every fifth new-born child still died before reaching the age of one.

The progress achieved during this century particularly benefits women, who are currently living an average of six years longer than men. Male overmortality is a result of differences in behaviour, in recourse to treatment and more generally in the physiological and biological resistance to health problems.

As in the other industrialised countries, infectious diseases are no longer a major cause of mortality. They have been replaced by the so-called «civilisation diseases» (mainly cardio-vascular diseases and cancer). The stagnation in the decline of mortality among young adults which has been observed for about ten years now is attributable to AIDS and the rise of violent deaths. The longer lifespan is also accompanied in the developed countries by an increase in the number of years in good health. In Switzerland nowadays, a man aged 65 can expect to still live for another 12 years without any major incapacity, and a woman 15 years.



Trends in life expectancy in Switzerland and Mali

Life expectancy is a synthetic indicator of mortality, which represents the average lifespan of all members of a specified population group.

elsewhere... Mali... As in other Sahel countries, life expectancy in Mali remains among the lowest in the world. It rose however from 35 to 47 years between 1960 and 1995. More than one third of the population die before reaching the age of 40. The high mortality rate is essentially caused by infectious diseases, mainly malaria. Due in particular to the low level of immunisation (only just a third of all children are vaccinated) the infant mortality rate is among the world's highest, ten times higher than in Europe. Out of one hundred new-born children, 12 fail to reach the age of one, and 24 will never celebrate their fifth birthday. However, progress can also be discerned, especially in the towns. This does not apply to maternal mortality, a scourge the exact extent of which is not known, with some estimates which can turn out to be twice as high as others. Maternal mortality is about one hundred times higher than the present rate in Europe. This corresponds to the figure for the 18th century in our country when infectious diseases still occurred extremely often, and trained midwives were not usually present at births. In Africa, the risk is increased even further by the high number of pregnancies, thus every 16th woman runs the risk of dying in childbirth, whereas it affects only one woman in 8,700 in Switzerland.

For a long time, mortality was linked to the inability to face up to the various challenges and dangers of the environment. In the poorest regions of the world, this continues to be the case today. The weakest are the infants and the elderly. Nowadays in our country it is rare not to attain adulthood, and more and more people are growing very old.

The principal causes of death

are civilisation diseases

and the life styles throughout

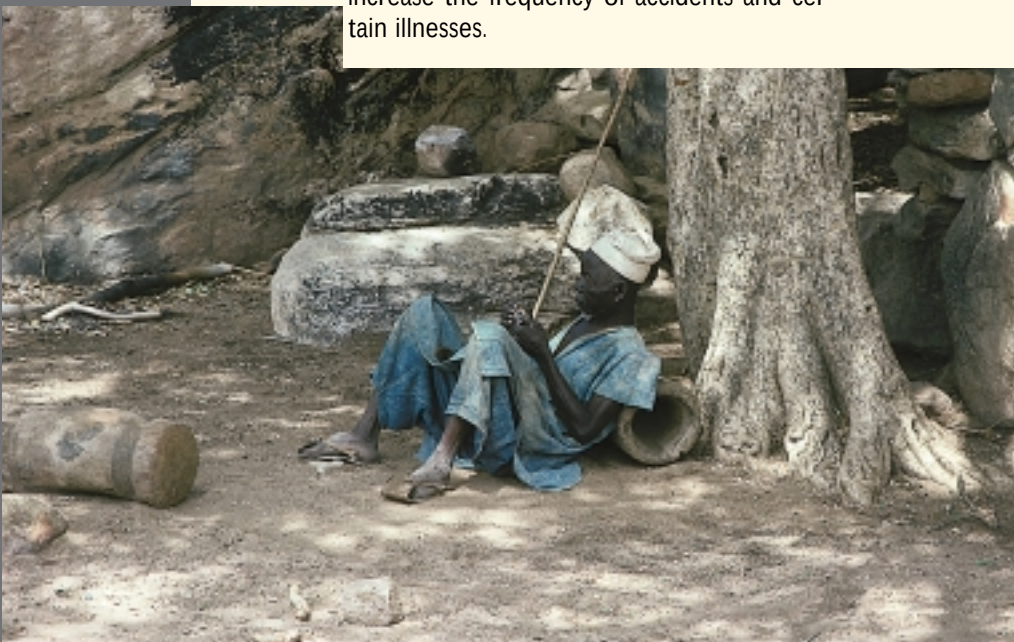
one's existence determine

to a large extent the longevity

and health at later age.

It is also essentially differences in behaviour which explain women's advantage in matters of longevity. The deterioration in the health of young adults, especially men, which can be observed in most Western countries is a consequence of the abuse of tobacco, alcohol and other drugs, as well as risky behaviour patterns associated with them which increase the frequency of accidents and certain illnesses.

Behaviour which endangers health is primarily found among the disadvantaged groups of the population. The gap between socio-economic strata is widening. Unhealthy behaviours are also a reflection of a society's crises which are for instance being expressed by a dramatic deterioration in the health situation of populations in Eastern Europe. In Russia, for example, the life expectancy has fallen by several years. Men are particularly affected: their life expectancy fell by eight years between 1987 and 1994. Inequalities in access to medical care and to other basic resources for a healthy life are also to be seen in the ravages wrought by the AIDS epidemic in the world's poorest countries. According to the last United Nations estimates, death due to AIDS will reduce the average life expectancy in Botswana by 20 years for the period between 2000 and 2005, i.e. from 61 to 41 years.

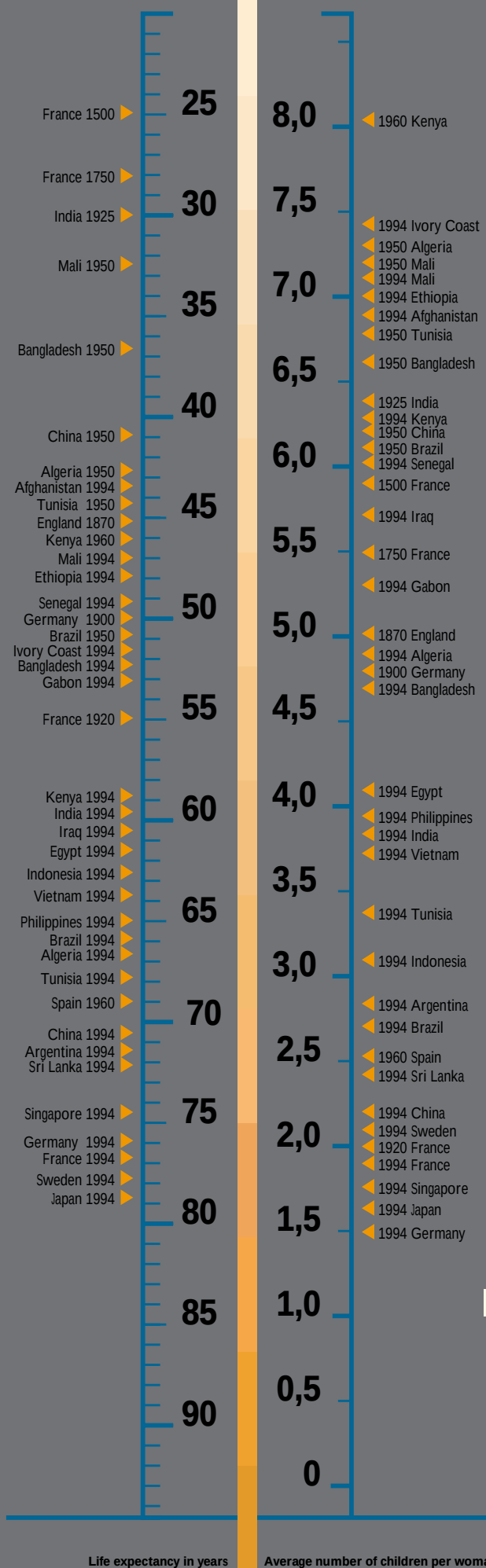


With an average birth rate of almost three children per woman and a life expectancy of about 65 years, the world's population is growing annually by somewhat more than one percent. The balance of births and deaths has changed over the course of history, and it currently shows some considerable variations from one region of the planet to the other.



The demographic transition: a new era in population history

The balance of births and deaths is the result of circumstantial and structural factors. On the one hand, epidemics, famines, armed conflicts and other disasters cause mortality to rise sharply. Crises of this sort also impair the ability to procreate and influence the desire to have, or not to have children. On the other hand, birth and death rates also depend on the age and sex structure of the population. The more women there are of child-bearing age, the larger is the number of births. By the same logic, the number of deaths rises in line with the increase in the proportion of older people in a population.



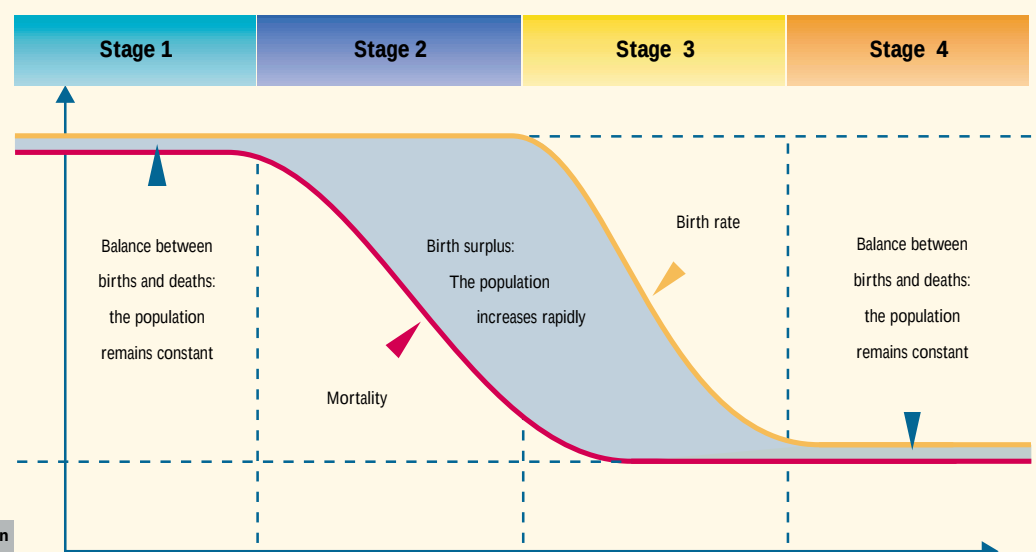
Barometer showing the number of children per woman, and life expectancy

Our knowledge of pre-history and ancient times indicate that the present demographic growth is a unique phenomenon. For millennia, the earth was extremely sparsely populated. The number of people rose only very slowly. However, there were phases of increased growth: in each case, this reflected a fundamental change in the relations between human beings and their environment. A first demographic «revolution» took place when man learned how to handle fire, almost 500,000 years ago. The population increased thanks to the protection against wild animals which fire afforded, and the varied nutrition which became possible by cooking food. The second «revolution» was linked to a change in lifestyle. This typified the emergence of modern man (*homo sapiens*) during a period of climatic warming 40,000 years ago. During this period, mankind attained the five million mark for the first time. The third «revolution» was the transition from the hunter-gatherer economy, a predatory one, to a productive economic mode (agriculture and animal raising). This «revolution» of the Neolithic age, which began ten thousand years ago, led to a tripling of the world's population to reach a figure of 15 million by 4000 BC. However, it must be remembered that these first three demographic «revolutions» were only revolutionary given

the scale of human history, and that they involved processes which stretched over thousands of years.

The current demographic changes, which started in the Western countries at the end of the 18th century, represent a completely new situation in terms of their scope and pace. This stage is typified by humans' increasing mastery over their environment and their own destiny.

Based on an analysis of the history of population in the European countries, experts have developed a model to describe this process, which has become known as the theory of demographic transition. Four stages are identified:



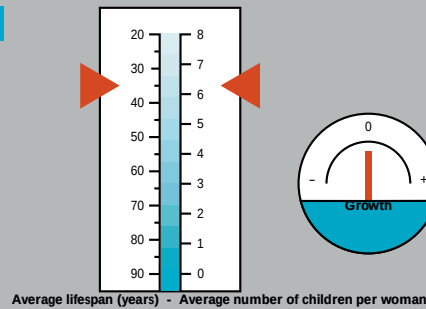
Model of demographic transition

Stage 1

Large number of children

Short lifespan

Population constant



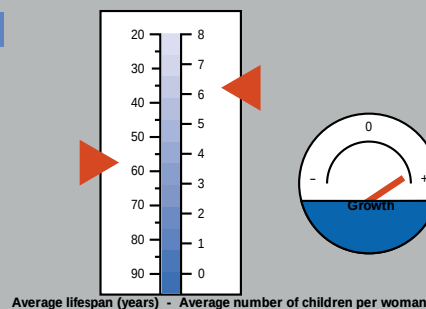
The average lifespan is short mainly due to the high rate of infant mortality. The numerous deaths are more or less compensated by the large number of births.

Stage 2

Large number of children

Increasing lifespan

Population growth



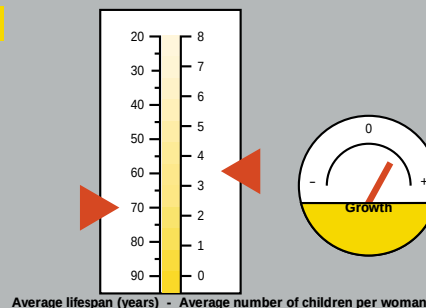
Due to social and economic changes and medical progress, infant mortality declines, and the lifespan therefore increases. This is the start of the demographic transition. The number of children per woman remains unchanged. The birth surplus causes a heavy increase in the population.

Stage 3

Number of children declines

Lifespan increases

Population growth



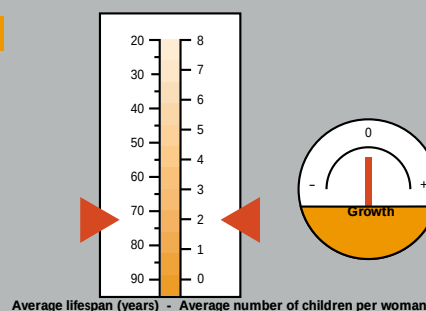
The parents are aware that their children now only die rarely, and that there is no more need to have a large number of children so that at least some of them will survive. The number of children per woman declines. Mortality continues to follow its downward trend, births exceed deaths and the population continues to grow.

Stage 4

Small number of children

Long lifespan

Population constant



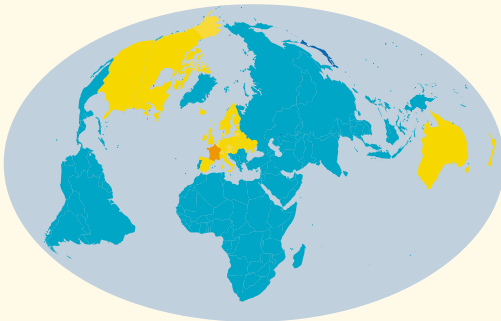
The average lifespan is long, couples have fewer children (two on average). Most children reach adulthood. Births and deaths compensate each other and the population no longer increases.

Demographic transition typified Europe in the nineteenth century, and it has since spread to include the greater part of our planet, albeit at differing paces. Three groups of countries are thus differentiated nowadays in accordance with their situation in this respect:

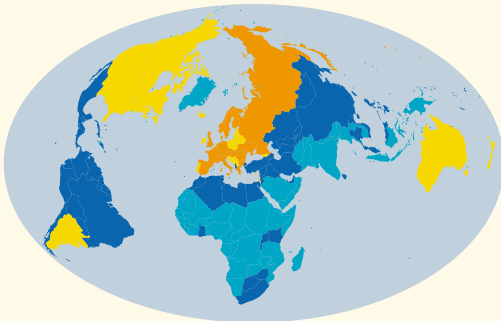
- a) **Transition completed:** high life expectancy and fertility below 2.5 children per woman. More than half (51%) of the world population is already in this situation, specifically the Western countries and most of the countries of the former USSR, East Asia and some countries in Latin America (Brazil, Uruguay, Chile and Cuba).
- b) **Mortality transition completed - fertility transition in progress:** the average number of births is 2.5 - 4.9 per woman. This case applies to 38% of the world population: South Asia (with a few exceptions), North Africa, Latin America.
- c) **Transition starting:** increase in life expectancy, linked in particular to a decline in infant mortality: fertility remains high (5 or more children). Nowadays only 11% of the world's population are still in this situation: practically all the sub-Saharan countries in Africa, a large proportion of the Near East, as well as Afghanistan, Bhutan, Pakistan and Laos.

HISTORY OF THE TRANSITION

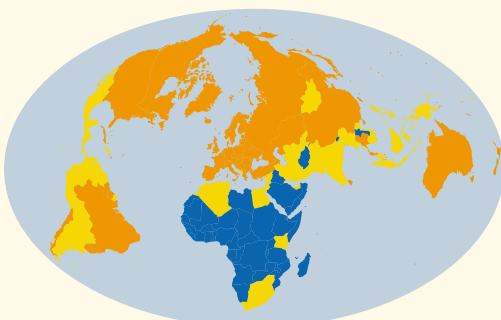
1900



1950



2000



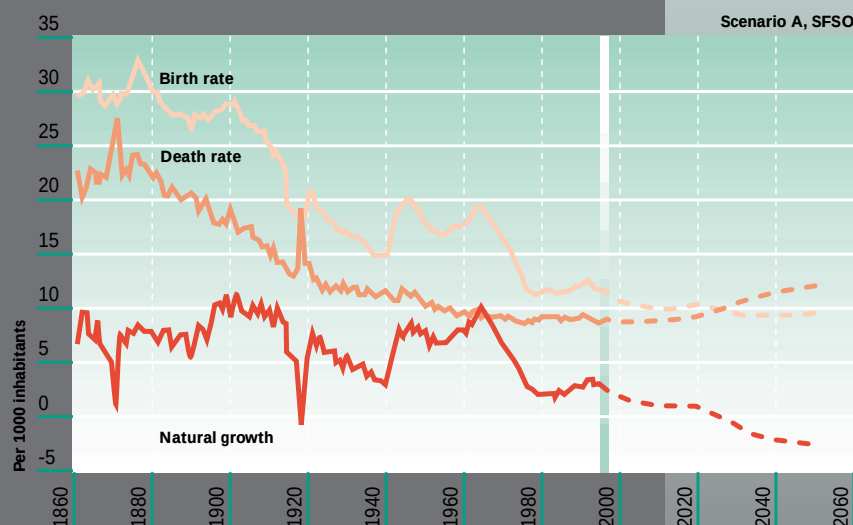
Few children - long lifespan

Number of children declines - lifespan increases

Large number of children - lifespan increases

Large number of children - short lifespan

THE DEMOGRAPHIC TRANSITION HERE AND ELSEWHERE

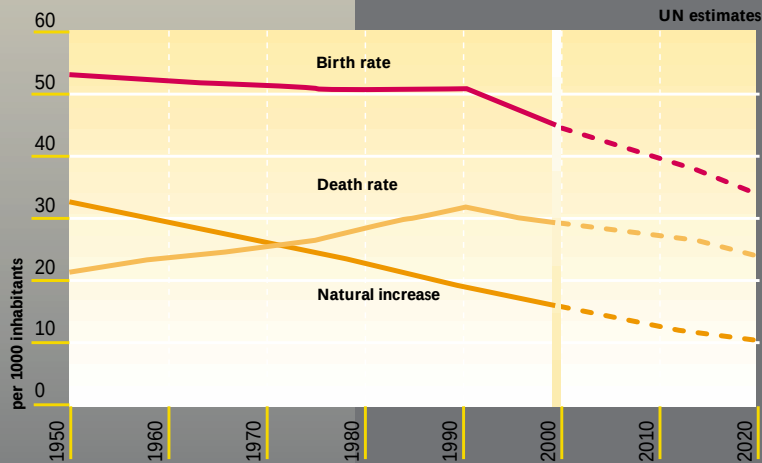


Demographic transition
in Switzerland

here... Switzerland... Mortality fell for the first time towards the end of the 18th century by a drop in the death rate among children attributable in part to vaccination against smallpox. This led to a sharp rise in the population. Between 1830 and 1880, the progression slowed down due to a renewed increase in infant mortality, which was observed almost everywhere in Europe. The decline in mortality resumed afterwards and continued ever since, virtually without interruption. The only exception was the year 1918, when the Spanish influenza caused numerous fatalities. The birth rate began to fall in 1860, but in a less regular manner, marked in particular by two renewed increases: at the beginning of the century, and during the baby boom of the post-war era. In Switzerland, as in the rest of Europe, the dramatic decline in the number of births after the 1965 peak had not been foreseen. Families with three or more children became less and less common, while a constantly increasing number of women remained childless. Childless women were already common in the 19th century. The new aspect is that nowadays they are mainly to be found among women who have completed a lengthy education.

The decline in the birth rate started in the urban centres and the Protestant regions. The renewed rise in the number of births at the beginning of the 20th century only affected the Catholic cantons. Between 1900 and 1930, the downward birth trend accelerated and spread across the whole country. Even so, substantial differences continued to exist between the cantons for a long time. While the gap in birth frequency was mainly linked to religious affiliation, the geographical location and the level of medical care were decisive in terms of life expectancy. It was only in the course of the 1990s that this heterogeneity within the country really faded. Differences linked to religious practice however are still discernible today in the frequency of divorce and births out of wedlock.

elsewhere... Mali... Like most sub-Saharan countries, Mali is going through a phase of population growth which is much more dramatic than the one which took place during the last century in Europe. Mortality, especially among children, is on the decline, but the birth rate remains very high. In the countryside, it is even continuing to increase thanks to improvements in the nutritional and health situation. Another important factor is that the traditional practice of birth spacing has been given up without any compensation in the form of modern methods of contraception.



Demographic transition in Mali

In those countries which have passed through the entire transition process, the dynamics have continued in an unforeseen manner. Instead of the new balance between births and deaths that had been expected, it can be seen that, with the exception of the post-war baby-boom, fertility has dropped further than had been imagined.

Women's new aspirations are often

in conflict with their family plans.

This has largely contributed to lead to an extremely low birth rate in the greater part of the Western world.

In Eastern Europe, by contrast, the slump in the birth rate is attributable to the socio-economic upheaval. Life expectancy continues to increase in most European countries. The opposite trend in the former Communist

countries shows, however, clearly that the improvement in longevity may be cast into doubt by economic and political turbulence. Moreover, the universality of the demographic transition must not conceal the fact that the same process reflects very different situations. It would be wrong to consider the change in countries in the South as a repetition of the European model with a century's delay. The conditions are in fact totally different. In Europe the decline in fertility is to be seen against the background of a system of civilisation based on a strong social control of marriage and a slow improvement in sanitary conditions. The present day demographic transition in the South is linked with a rapid spread of innovations in the health sector and in contraceptive methods. The abrupt changes in the life styles are taking place in extremely diverse economic and sociocultural contexts. The changing behaviour is thus in response to very varied motives. Whereas family planning reflects the aspiration for social advancement among the privileged classes, for many other individuals it reflects rather economic constraints. The small family is thus not always a sign of progress.

The history of mankind is also a history of migrations. Today's human beings probably all originate from one single population which lived in the East African region about 100,000 years ago. The earth was gradually settled from there, starting with the rest of Africa, Europe and Asia, then America.



Migration and urbanisation: a planet with a variable geometry

40,000 years ago, Asian immigrants chanced upon the land passage to Alaska across the Bering Strait, and they began to populate the American continent. Others reached Oceania by the maritime route. In the last five centuries, America has been swept by a second wave of immigration: some 40 million Europeans arrived by ship to seek El Dorado. About 12 million Africans came as well, forcibly abducted to

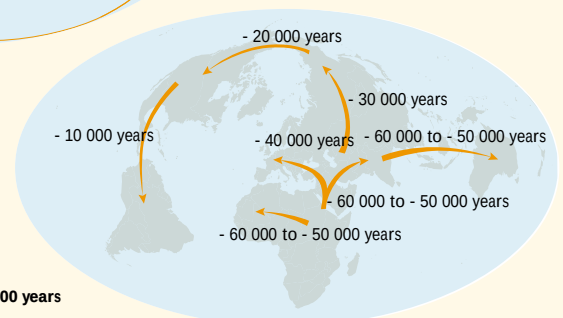
America as slaves. In the second half of the 20th century, the migration flows from south to north (from Africa to Europe and from Latin America to the USA and Canada), and from east to west (towards Europe and Asia) have transformed virtually all the industrialised world into an immigration region. At present, more than a hundred million people are living in countries other than their own.



From 1950 until now



From 1500 until 1950



For 100,000 years

Mobility has two faces which mirror the gap between poor and rich. For the rich, distances are becoming shorter - the earth is becoming a global workplace and leisure area for them, whereas mobility is increasingly impeded for the poor.

The mobility of poverty and crises is assuming different forms: temporary changes of location, migration strategies in which one family member seeks a better living abroad, and forced migrations following natural disasters, armed conflicts or unfavourable economic conditions.

These flows of humanity are largely focused on the cities. The number of people living in urban settings is growing ceaselessly, enlarging the conurbations. Urbanisation is one of the most striking (but frequently underestimated) demographic trends. The 21st century will be urban, and will see an end to the dominance of the rural way of life.

Ten thousand years ago, in the first urban dwellings, the division of labour which typifies city life gradually came into being. The variety of activities and the constant influx of newcomers make urban areas places for exchange and for meeting differences, with an enormous potential for innovation. Large cities were an important hallmark of the advanced cultures of Antiquity, but the population still consisted largely of farmers.

However, this growth will differ widely from region to region. In the industrialised countries and Latin America, the urban revolution has already taken place - three quarters of the population already live in cities in these regions. The phenomenon will therefore merely continue at a very slow rate. In Africa, a continent still slightly urbanised, the urban population is expected to triple by the year 2025, and the figure for Asia is set to double.

The characteristic feature of urbanisation in the 20th century, especially since the 1950s, is the rapid increase in large agglomerations, the so-called «megapolises». No city had reached the million mark by the 18th century, except for ancient Rome, which numbered 1.3 million inhabitants in its heyday. In 1900, 17 cities had passed the million mark, but only London had more than five million. In 1950, there were 11 cities with more than five million inhabitants, and three - New York, Shanghai and London - with more than ten. In 1995, 37 cities had more than five million people and 14 had more than ten. In the year 2015, there will probably be almost 60 cities with five million people, 26 with ten million and 15 with fifteen million inhabitants. 40% of the global population will then be living in megapolises numbering more than ten million inhabitants.

Today,

almost every second person

lives in a city,

and the urban population

on the planet

is expected to double

during the next quarter

of a century.

MOBILITY AND URBAN CONCENTRATION HERE AND ELSEWHERE



A city in Switzerland

here... Switzerland... Despite its small number of inhabitants, Switzerland was long a country of emigration. From the end of the Middle Ages until industrialisation, material needs forced whole generations to emigrate. Between 1474 and 1792, almost one million young people entered foreign military service as mercenaries. From the 18th century on, foreign mercenary service was replaced by the emigration of traders, as well as workers in the construction sector and in the hotel business. The major crises of the 19th century motivated hundreds of thousands of Swiss people to move to the new continents. In cantons such as Glarus, whole villages were left empty. Although this phenomenon slowed down subsequently 312,000 emigrations from Switzerland were still registered between 1868 and 1927, the period for which the first nationwide figures are available.

At the end of the 1880s, the trend started to reverse. With industrialisation, the construction of the railways and the expansion of the building industry, the demand for foreign workers began. Nowadays, Switzerland, with a quota of 20%, is one of the European countries with the highest proportion of foreign residents. This situation can partially be attributed to restrictive legislation and practice in granting citizenship. Half of today's foreigners were actually born in Switzerland or have been resident here for more than 15 years. In recent years, the number of immigrants has fallen substantially. In 1997, the net figure for foreign immigration was just 1700 persons. The central concerns becomes the integration of the resident foreign population and coming to terms with a multicultural society. This is all the more so since the composition of the foreign population has undergone a change. The traditional influx of Italian and Spanish workers has been replaced by immigration from former Yugoslavia and Portugal. There has also been a major increase in immigrants from countries outside of Europe.

The proportion of refugees and asylum-seekers within the total foreign resident population is comparatively low (5.5% in 1998), although it is among the highest in Europe. Due to the events in former Yugoslavia, the number of asylum applications and provisional acceptances has risen markedly in recent years. However, the dimensions of the influx still fall far short of those which Switzerland experienced (for example) at the time of the persecution of the Protestants. During the Counter-Reformation from 1549 to 1560, Geneva accepted 5,000 refugees - equivalent to the city's own population at the time. After the Edict of Nantes was revoked, 150,000 Huguenots flooded into Switzerland between 1685 and 1720, equivalent to one refugee for every eight inhabitants. In the World War II, Switzerland took in 400,000 refugees.

Switzerland has not remained untouched by the phenomenon of urbanisation which Europe has undergone since the Middle Ages, but it is characterised by its dispersion. For a long time, Geneva remained the only major city, followed well behind by Basle, Zurich and Berne. Urbanisation has been intense in the 19th and 20th centuries, but it has led to the creation of centres of medium importance. At present, only five cities have more than 100,000 inhabitants. Since the 1960s, there has been a marked growth of the suburbs and the formation of large conurbations, especially that of the Zurich region.

elsewhere... Mali... Mali has a long tradition of emigration. According to recent estimates, no less than three million Malians are currently living abroad, mainly in the neighbouring countries but also in the Gulf region and in France. Over recent decades, many workers have emigrated to the plantations on the Côte d'Ivoire. Some regions of the country have very ancient traditions of emigration; in these places emigrants make an important contribution to local development. In the north of the country, problems are currently emerging in connection with the return of population groups which have been prompted to leave their habitual territories by drought or armed conflicts.

Mali continues to be a predominantly rural country, but urbanisation is advancing at an impressive pace: 14% of the population were living in cities in 1970, 27% in 1995 and probably about 40% around 2015. Although the other cities are also experiencing substantial growth, the capital Bamako is the main magnet for domestic migration. In 1970, it had 919,000 inhabitants, and in 15 years from now it is expected to reach 2.2 million. Flight from the countryside is an indicator of the impoverishment of the rural areas, and it promotes this impoverishment still further by causing imbalances in the sex and age population structure. In the city, the economic scope is broader, but living conditions are often difficult. For example, a higher percentage of children are suffering from malnutrition in the cities than in the countryside. It seems that the various health and social programmes of recent years have benefited the rural areas more than the cities.



A city market in Africa

Since time immemorial, mobility

has been a powerful factor for change.

Abroad, or in cities, people take

on new behaviour patterns,

and relations between men and women change.

Multiculturalism perhaps offers an opportunity

to promote more open societies.

The administration of the megalopolises,

urban poverty and cohabitation

between a huge variety of cultures are however

major challenges for the next century.

In the short-term, the story of the world's population is predetermined. The majority of mothers who will have children in 25 years from now have already been born, and their behaviour can partially be predicted. The pace of growth is slowing down. However, the demographic challenge remains undiminished.



Demographic challenges for the 21st century

In the middle of the next century, the population of the earth is expected to number about three billion people more than today. There will be more older people than children, societies will be multicultural, and the majority of the population will live in cities. The maximum lifespan should increase still further. Certain setbacks in combating disease (new epidemics, new resistance to viruses, etc.) will probably be only of a temporary nature. It is however difficult to estimate the health effects of environmental pollution, the new poverty and other stress situations which result from present-day forms of living.

The pace of demographic trends varies from one region of the globe to the next. The unequal growth of the different regions of the planet is changing the distribution of the world's population.

DISTRIBUTION OF THE POPULATION AMONG THE CONTINENTS

At the start of the century, half of the population lived in Asia, a quarter in Europe and 10% in America (with half of these in North America). Only 8% lived in Africa, although a fifth

of mankind had lived on this continent before the blood-letting caused by slavery - the same number as in Europe at the same time. Estimates for the middle of the next century lead us to expect a very different distribution: considerably more people will be living in Africa than in Europe.

Out of every hundred inhabitants

of the Earth,

59 will be Asians,

20 Africans,

9 Latin Americans,

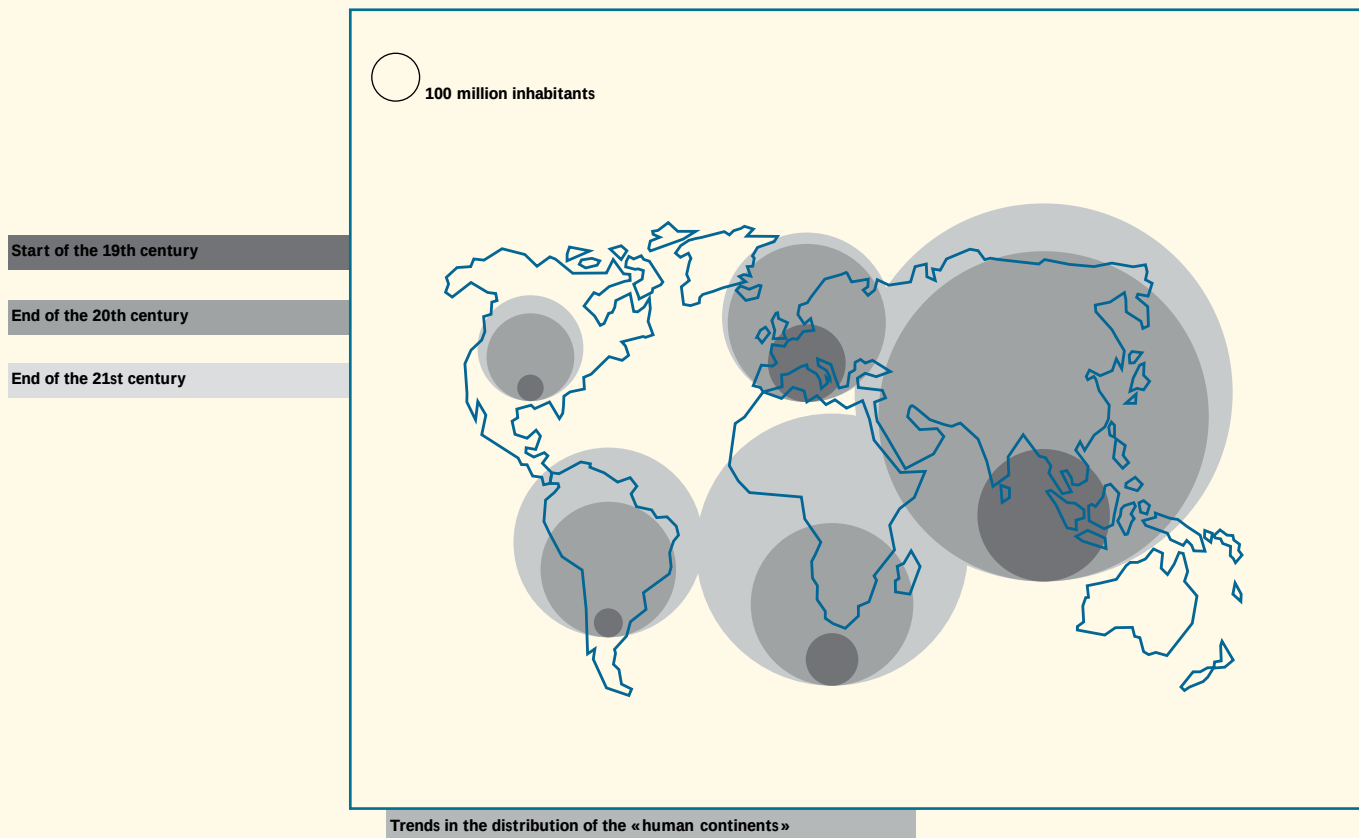
7 Europeans and

4 North Americans.

Of the 26 cities with

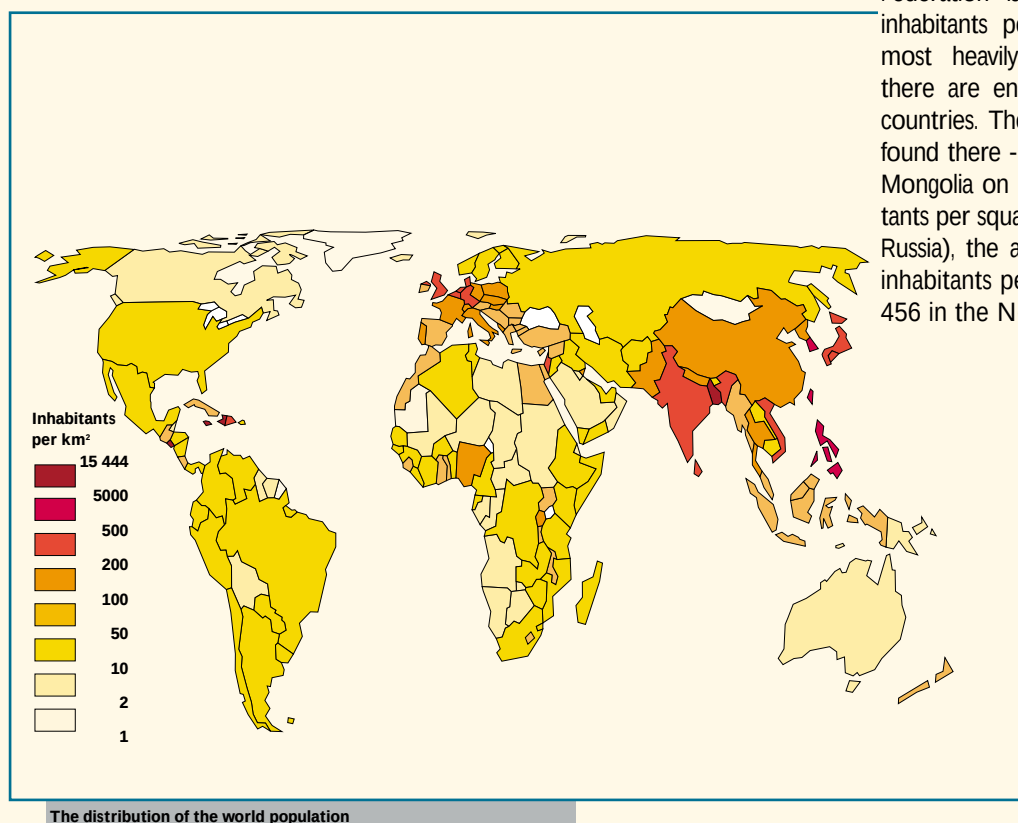
more than 10 million inhabitants

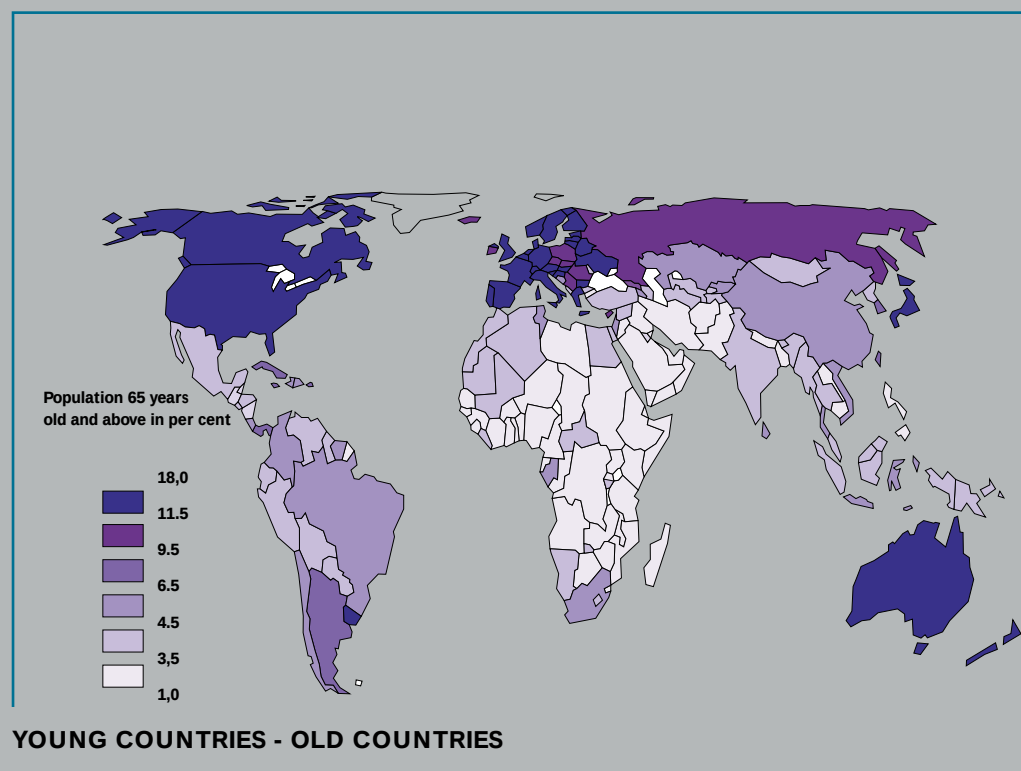
21 will be located in the



POPULATION LOAD

It is often forgotten that many heavily populated countries are also very extensive in area. In 1998, ten countries were counted among the giants on the basis of their populations. These included Bangladesh, with 960 inhabitants per square kilometre, making it the most densely populated country on earth; but the Russian Federation is also on the list, with only 9 inhabitants per square kilometre. Asia is the most heavily populated continent, although there are enormous differences between the countries. The two world extremes values are found there - Bangladesh on the one hand, and Mongolia on the other, with a mere 1.6 inhabitants per square kilometre. In Europe (excluding Russia), the average population density is 102 inhabitants per square kilometre, ranging from 456 in the Netherlands to 14 in Norway.





YOUNG COUNTRIES - OLD COUNTRIES

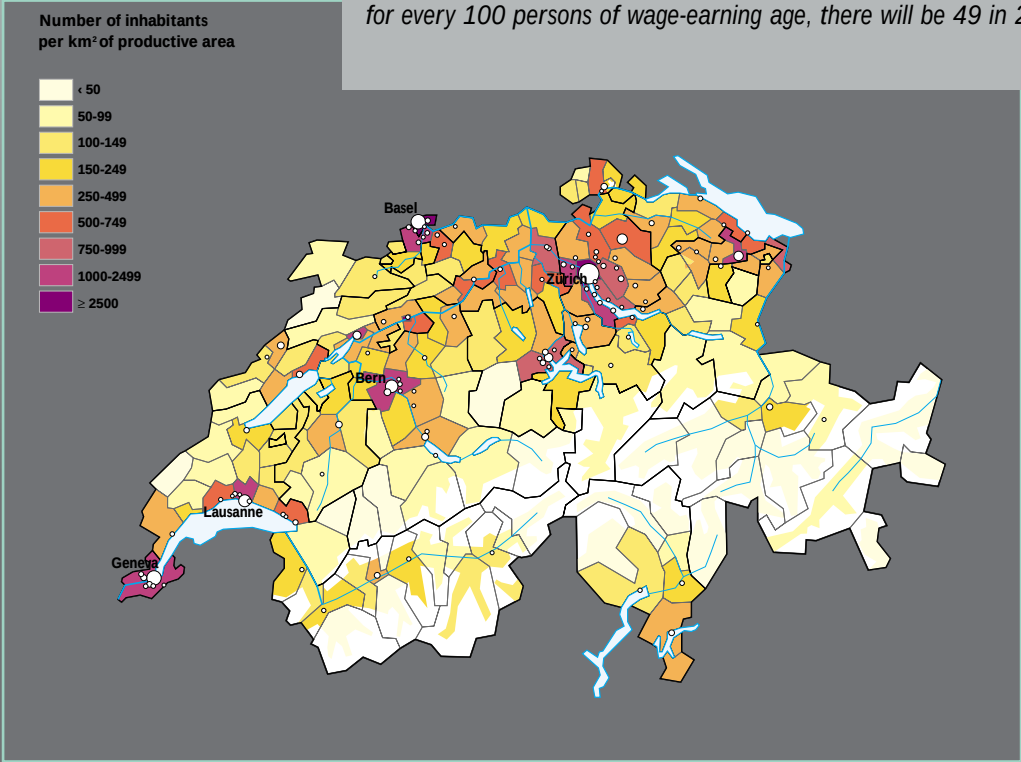
Demographic ageing

The differences in demographic dynamics have effects on the balance between of young and old people. There are «young» countries, where almost half of the population is under 20, and «older» countries where the proportion of pensioners has increased sharply. The ageing of the population, i.e. the increase in the quota of older people in the total population, is a consequence of the decline in the birth rate and of the increase in life expectancy. Depending on the stage in the demographic transition, population ageing affects the different continents to varying degrees. At the world level, there are still three times more children aged below 15 than elderly. In turn, the number of older people in the Western countries has exceeded the number of children since 1998. In Europe, population ageing should have reached its zenith in about 20 years, when the large post-war generations reach retirement age. From 2035 onwards, the children of today's small families will form the older population, what should cause the situation to stabilise. Further development will depend on the trends in both the birth rate and life expectancy.

THE NEW
DEMOGRAPHIC
PICTURE
HERE
AND
ELSEWHERE

here... Switzerland... Half of Switzerland is covered by glaciers, rocks and forests. The country's somewhat uninviting topography is reflected in the uneven distribution of its population. They primarily live at the heart of the country, where the population density is far in excess of the average of 171 inhabitants per square kilometre. In the area surrounding Zurich, for example, the figure is over 300, whereas in the Alpine valleys it is less than 30 (17 in Bagnes). Concentration is continuing. At present, three regions report the heaviest increase in population: the hinterland of the Zurich conurbation, the stretch along the shores of Lake Geneva and its continuation up the Rhone valley, and certain tourist regions and border areas such as southern Ticino.

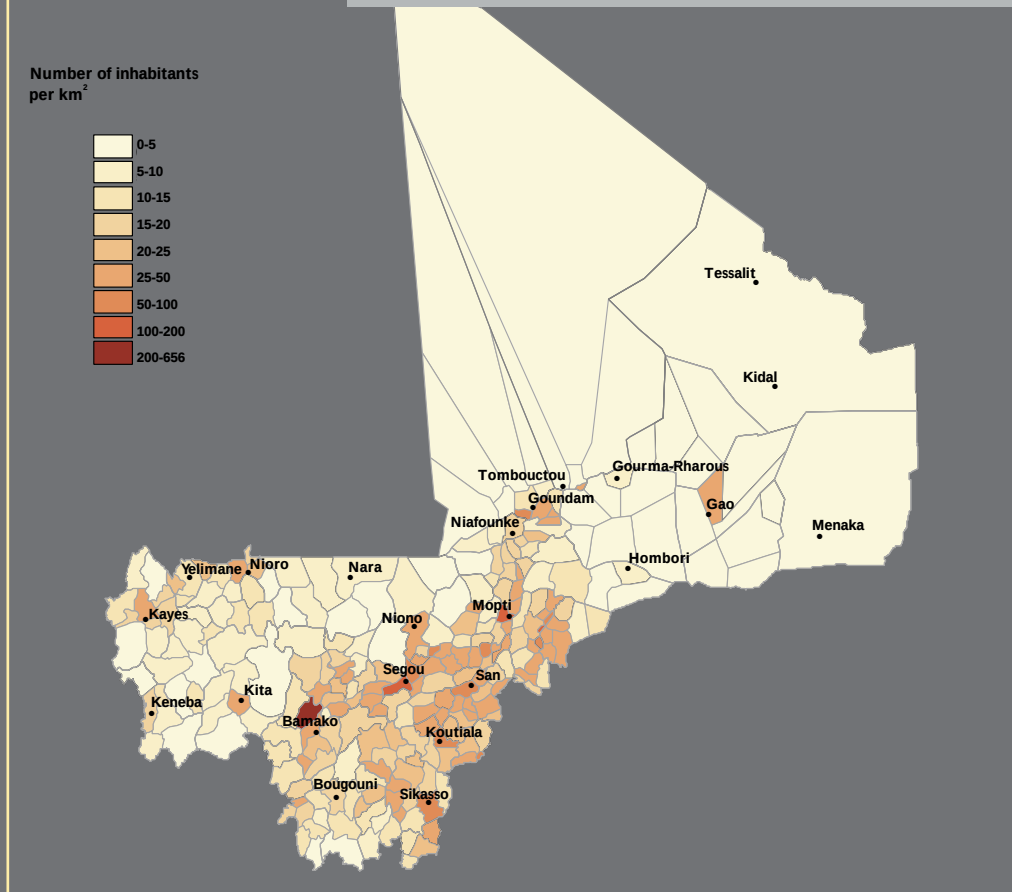
In parallel with the slowing-down of population growth, the scenarios of the Swiss Federal Statistical Office give reason to expect a substantial change in the age structure between 2005 to 2035. The main reasons for this shift are the continual increase in life expectancy in the higher age groups, attainment of retirement age by the baby boom generation, and the declining numbers of children, youths and young adults. A further increase is thus to be expected in the proportion of people aged 65 and older: they represent currently 14%, they will be 17% in the year 2010, and more than 25% in 2050. In other words, whereas there are presently 24 pensioners for every 100 persons of wage-earning age, there will be 49 in 2050.



The population distribution in Switzerland and the five largest cities

elsewhere... Mali... The population of Mali is distributed over a huge area of 1.2 million km² or 29 times the area of Switzerland. Although it has already tripled since the 1950s, the population density is still very low (9 inhabitants per km² in 1995). The majority of the population is concentrated in the southern half of the country. The wide dispersal of the partly nomadic population in the north causes enormous problems when it comes to provide infrastructures and services.

Only 4% of the population of Mali are 65 years or older. Half of the population is younger than 15. The potential labour force is therefore enormous. In view of the poverty and the overall crisis of the system, the requirements for education, employment and health pose a challenge which can scarcely be met. Today, for instance, the public educational sector can provide for only 20 to 25% of all school-age children. It has been estimated that, to maintain this level, a thousand extra teachers will be required each year in order to cope with the rapidly growing number of children.



The population distribution in Mali

The demographic picture

of the earth is changing.

The challenge is to find

a new balance

between the human beings

and their environment,

between the peoples,

between the generations.

The protection of sensitive eco-systems, the control of urban dynamics and the promotion of multicultural societies may provide starting points for re-thinking our institutions and the role of technical progress. Moreover, efforts are needed to avoid different types of social exclusions by redefining relations between young and old, women and men, town and country, the North and the South. The inequalities between the various regions of the world will not disappear. Some gaps have shrunk for example in infant mortality, whereas others, such as maternal mortality, have not. Diseases such as the AIDS epidemic or access to new technologies are opening up new rifts.

Population dynamics vary so heavily from one region to another that one has to wonder whether the overall world population figure itself is meaningful. The significance of demographic trends can only be seen from their specific economic and social environment. The predictable limits of natural resources are more the consequence of production and consumption behaviour in the industrialised societies than of the world population increase. In a context of impoverishment, the population growth presents a major problem - and yet it was one of the key factors in the economic success of a country such as Japan. The feeding of the world population is a challenge not because of a shortage in worldwide production, but because of unequal distribution and local imbalance resulting from politico-economic obstacles and local lack of means of transportation. The quality of the environment, access to health services, a healthy way of living and education are reflected in a long, healthy, life. Population ageing is a particular problem if it occurs during a period of economic restructuring and challenges the old age pension system.

Consequently, the search for future terms must focus primarily on people's behaviour patterns and on satisfying their basic needs.

The issue is not the number

of people as such,

but the conditions

which allow people already born,

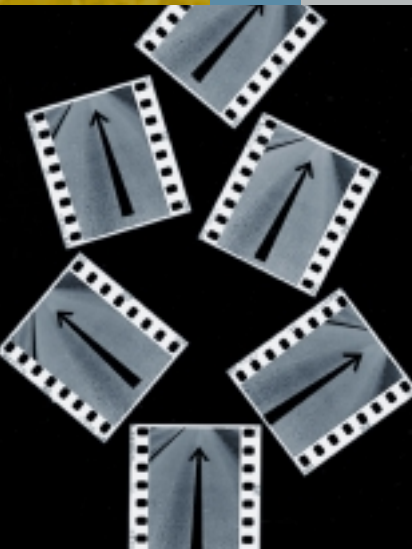
and those to be born,

to enjoy a high quality of life.

This requires that security, health and the provision of food and shelter are guaranteed. Above and beyond this, every person must have the means that allow him/her to determine his/her destiny, primarily by access to education and information. Imbalances are thus essentially a matter of the unequal distribution of all kind of resources. Ultimately, it is a question of giving everybody - woman or man, young or old, from here or elsewhere - his/her place in society thus allowing him/her to play his/her role. This means reconciling family life, economic activity, and social tasks and duties for both women and men. In this context, the free choice of the number of children and the timing of parenthood are especially important.



The size of the population has been a matter of concern to governments for a long time. The first censuses did not, however, primarily serve demographic objectives, but the purpose of recruiting soldiers and levying taxes. There have been nations which developed policies designed to increase the birthrate, in the conviction that a growing population was a source of strength. Demographic growth and the fear of over-population were however old worries even when the world was still lightly populated.



From awareness to an action plan

At the start of the 19th century, the English cleric and economist Thomas Malthus turned his attention to this problem. He feared that the growing population (which barely amounted to one billion at that time) would lead to a shortage of food. To avoid famines, he recommended that the number of births among the poorest should be restricted by late marriage. However, Malthus's fears proved to be largely unfounded.

In the 1960s, the very high population growth in Latin America and Asia motivated the international community to tackle the goal of finding ways and means to control this increase. The debate was opened at the beginning of the 1950s with the holding of various scientific conferences. Over the past 25 years, three major intergovernmental conferences (Bucharest in 1974, Mexico in 1984 and Cairo in 1994) have led to the development of internationally coordinated population strategies. At the outset, concerns were based on the fear that population growth would be an obstacle to economic development. In Bucharest, most of the non-aligned countries insisted that development was the best way to reduce the birth rate, whereas most Western countries were promoting more active policies aimed at limiting births. After the Mexico conference, governments showed increasing agreement on population goals and drew up policies which were integrated into development planning. At the Cairo conference, the 179 participating

states adopted an action plan for the next twenty years. All the countries agreed that population issues were central to sustained development. However, the orientation has changed in comparison with earlier positions.

Individual's needs

and human rights

have become

the central preoccupations.

The concept of a free choice

of the number and timing

of children has replaced

the idea of birth control.

Family planning is being anchored in a wider concept of reproductive health, which is defined as a state of well-being throughout one's existence as far as procreation and sexuality are concerned. Particular stress is placed on education, especially for girls, and on human rights, personal responsibility and the equality of men and women.

***here... Switzerland...** In Switzerland, in contrast to the situation, for example, in France or the North European countries, population issues only play a small part in public discussion. They are generally considered as belonging to the private domain. Moreover, health and family policy lies largely within the cantons' area of responsibility. More global views are beginning to emerge, for example through an intensifying cooperation between the cantons and from national programmes to combat HIV/AIDS or to prevent alcohol and tobacco abuse. The legislation is accommodating major social changes by means of the new marriage law, the law on the equality of the sexes, the revision of the public pension system, of the legislation on divorce, on health insurance, on Federal statistics, on asylum and the reformulation of the law on the settlement of foreigners. The integration of the resident foreign population, the effects of demographic ageing on the old-age pension system and questions of environmental planning and mobility are central elements in Swiss Federal policy. Sensitive population-related issues such as the legalisation of abortion and universal maternity leave are still controversial and have not yet been brought to a definite conclusion.*

Statistical analyses of population trends have been expanded, and national research programmes have been undertaken in the major subject areas. For the first time in 1996, the Swiss Federal administration presented a report on the demographic challenges. The University of Geneva set up the «Laboratoire de démographie» at the beginning of the 1990s. Other academic institutions or research groups are working on topics such as ageing, family transformations, gender issues, or migrations. The Swiss association for family planning and sexual education (ASPFES, founded in 1993) is the main NGO promoting reproductive health.

In terms of international development cooperation, the Confederation is placing special emphasis on social development. It is supporting several international programmes related to population issues. It is contributing to improving health conditions and transforming reproductive behaviour, especially through the promotion of balanced relations between men and women. Switzerland plays an active part in international forums on population issues. In the context of the Five-year review of the implementation of the Action Plan of the Cairo conference, a report was drawn up on the situation in Switzerland and on activities supported abroad.

elsewhere... in Mali... At the start of the 1990s, Mali defined a population policy and an action plan for the next 25 years. However, the country's needs are so huge that it is hard to mobilise the funds required to finance the actions that are envisaged. Mali is largely dependent on international aid: 85-90% of public investments are financed with foreign funding. In 1994, international aid amounted to a total of 426 million US dollars, accounting for 24% of the gross national product. Nevertheless, a vast restructuring process is under way in the health care sector. An attempt is being made to balance out the lack of public sector activity by involving communities more heavily in the management of the health centres.



Five years after the Cairo Conference, the new approach to reproductive health, sexuality and the equality of men and women has become largely adopted. However, integrating it into health and social development policies is still difficult. The international community has fallen far short of fulfilling its commitment to contribute one third of the 17 billion dollars required to cover the needs of reproductive health in the countries of the South and East in the year 2000. Development aid has diminished in recent years, and except for the countries of northern Europe, financial contributions for family planning and reproductive health have remained limited.

The goals of the Cairo Action Plan cannot be achieved until we have eradicated poverty, violence and worldwide inequalities regarding access to education, information and health. Heavy discrimination against women persists in many regions around the globe, and the goal of freely chosen motherhood and well-being at all stages of life have not yet been achieved. In Switzerland, the problems are different: the primary objective is to promote a healthier way of living in harmony with the environment, a redetermination of relations between the generations, and the creation of possibilities for women to reconcile their wishes regarding their families and their careers.



To know more about...

Population issues and demography

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LaboDém, University of Geneva: www.unige.ch/ses/demog
Swiss Agency for Development and Cooperation (SDC), Bern: www.sdc-gov.ch
National Institute for Demographic Studies (INED), Paris: www.ined.fr
United Nations Population Fund (UNFPA), New York: www.unfpa.org
Exposition «6 milliards d'Hommes» du Musée de l'Homme, Paris: www.popexpo.net
United Nations, New York, Population information network: www.undp.org/popin/popin.htm
United Nations, New York, world population projections: www.popin.org/pop1998
Other links to demographic issues: www.nidi.nl/links/nididemo.html and members.tripod.com/~tgryn/demog.html

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the preferences and behaviors of potential customers. Once a need is identified, the next step is to develop a concept that addresses this need. This concept should be innovative and differentiated from existing products in the market.

2. After developing a concept, the next step is to create a prototype. This involves building a physical model of the product to test its functionality and design. The prototype allows the development team to identify any issues or improvements needed before moving forward with full-scale production.

3. Once a prototype is created, the next step is to conduct a feasibility study. This study evaluates the technical, financial, and market viability of the product. It involves assessing the resources required for production, the potential costs, and the likelihood of the product being accepted by the market.

4. If the feasibility study is positive, the next step is to develop a business plan. This plan outlines the marketing strategy, distribution channels, and financial projections for the product. It serves as a roadmap for the development and launch of the product.

5. The final step in the process is to launch the product. This involves manufacturing the product at scale and distributing it to the market. The launch is often accompanied by a marketing campaign to create awareness and generate sales. After the launch, the development team continues to monitor the product's performance and gather feedback from customers to make any necessary improvements.



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The world's population is set to reach the 6 billion mark in 1999. By the middle of the next century, it may well number 9 billion. Why is this increase occurring? Is it going to stop? What are the mechanisms that control population trends? What issues are they raising? Can we really talk about the world population as such, or is it more a matter of different populations following their own demographic rhythms, under a wide variety of economic and social conditions? By touching on these different questions, this publication endeavours to decode the human adventure which is «counted» through demography.



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