

Birth War

(Conflicts at the End of Human Evolution)

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1. Earth, Prison of Mankind?

Space research has brought final assurance: our blue planet is the only place with tolerable temperature, sufficient air and water, to warrant survival of human mankind. In contrast to all fantastic stories of science fiction men cannot escape from here to other possibly existing blue planets hundreds of light years away. Our limits are interstellar distances, which cannot be overcome unless we were able to travel faster than light.

The new hope of mankind, to find a new fertile planet for immigration somewhere in our Galaxy, is far from reality. Already in 1798, Malthus laconically anticipated: "Man is necessarily confined in room" [1]. 200 years later, our planet has become a populous, endangered island, from where nobody can escape. No place on earth is safely protected against an atomic attack. Without much effort men can be traced down to the most remote places on earth. Security agents can dig up inconvenient political refugees in far distant continents. What an enormous invasion would start today to uninhabited, fertile areas like those having existed in North America or Australia in the early 19th century! Meanwhile, many parts of the „New World“, once refuge and future for millions of desperate men, are over-populated themselves. Only deserts or Polar glaciers are still unpopulated, but for how long? The annual birth rate on earth is by far exceeding the corresponding death rate. In many parts of the world the biological balance is profoundly disturbed. But most countries, bound to their old traditions do not show much activity to cure this imbalance, but merely treat superficial symptoms. Politicians in developing countries are inclined to compensate the enormous increase in population with growing industrialization, resulting in physical exploitation of people living in ant-like uniformity. Life-threatening technologies such as huge water reservoirs or atomic plants are supposed to solve the economical problems. There is, however, increasing evidence, that the possibilities to further extend

industrialization and agriculture on earth are limited. Finally, all sophisticated technologies and political programs will not do.

Today, men are able to avoid infancy death, which has always been the mechanism of natural birth control. Most developing countries do not adequately compensate the new possibilities to escape evolution and death by lower birth rates. But a controlled reinstatement of the lost biological balance worldwide would be the only solution for a peaceful development of mankind. Otherwise, in a few decades uncontrolled checks of the huge number of men by war, hunger and global disasters can be predicted.

2. History of Human Replication

In Nature defenseless animal species can only survive, if they compensate high mortality with high fertility. One couple of mice may have a progeny of at least 30.000 animals per year (assuming an offspring of 5 female mice per litter and 6 generations per year). Nevertheless, some rodents, being a preferred food for carnivores, can be an endangered species even with such high replication rates.

In contrast to most other mammals, humans have survived for hundred thousands of years with a low birthrate which was compensated by a comparatively low mortality. Due to the enlargement of the cortex of the human brain, men have developed a special gift to envisage and herewith to avoid life-threatening dangers. But the enlargement of the head was accompanied by increasing birth problems, which contributed to the low number of offspring in humans. Besides, the long period of childhood also reduced the fertility of men. Thus, during thousands of years a mean of eight children per couple had to grant the survival of mankind. The balance between birth and death rates found in most countries up to the middle of the 19th century, relied on the cruel fact that in a normal family six children out of eight had to die during infancy [2]. Up to the beginning of the 19th century almost every child

had to face smallpox infection, which killed one out of ten children [3]. To our present feeling such high death rates during childhood seem unbearable. Similar to other mammals with low birth rates, the survival of human mankind depends on their ability to reduce infant death. As a result of medical progress during the last centuries, a dramatic reduction in human mortality rates can be stated. But mankind has not taken into account that the long-existing balance between birth- and death rates might cause over-population and the world might get too small for the meanwhile billions of men. Theoretically, without starvation and plagues a doubling of human population could take place every twelve years, as calculated by the mathematician Euler in the 18th century [1].

A look at the history of population growth starting from Stone Age to the industrial revolution can elucidate the motives leading to the present misbalance. During Stone Age, lack of food was the most important population check. The quantity of game and wild growing eatable plants decided on live or death. Probably, the rare contacts of the nomadic people to human crowds have prevented larger epidemics or plagues transmitted from men to men. This ancient live must have been similar to the conditions in residual migrating African tribes, where hunger constitutes a greater disaster than infections [4].

About 10.000 years ago, the introduction of agriculture and domestication of animals must have resulted in higher population densities. Farming people, endowed with new skills of planting and harvesting, were clearly superior to nomads in providing sufficient food. In the developing townships specialists were needed to organize public affairs. Thus, in the growing towns new forms of cohabitation with detailed administrative and social structures developed. But in these crowded areas, being rather small villages compared to the

present mega cities, for the first time epidemics must have happened. In spite of this, the foundation of towns turned out to be advantageous for the survival of men. With occasional setbacks, the population of towns slowly increased over the following thousands of years, although this growth is not comparable to the present explosive bursts of population seen in almost all large cities all over the world and especially in many so-called “developing countries”.

For thousands of years the need to increase food supply had been in the center of human development. From antiquity on, the better food supply of the farming population led to a continuous growth of settled farmers and citizens, ending in expulsion and finally annihilation of hunters and nomads in regions with fertile soil. The history of the United States documents the fate of nomadic people: during the numerous fights in North America the European immigrants were clearly superior to the Indians not only by using sophisticated weapons but also by sheer number. The early immigrants from Europe founded settlements, where specialists produced iron tools and firearms. Step by step, white men invaded the whole continent, and due to their knowledge of agriculture, breeding and food production the white population grew much faster than the genuine nomadic inhabitants, who at the same time were deprived of their food supply by mass killing of game [1]. Today in North America nomadic life confines to some remote places in Canada and Alaska, and the hunting tribes in the Amazon region or nomads in Northern Africa have no chance to continue their migrant life. In the near future, any residual nomadic life will be extinguished.

Compared to our present situation, up to end of the 19th century, a high infant mortality continued to exist among the prevailing agricultural societies. Poor harvests were associated with life threatening famine in densely populated areas. Of course, the starving masses were politically

unstable and developed aggressiveness. During the industrial revolution, starting with the “Spinning Jenny” in the late 18th century in England [5], cities like Manchester had a tenfold increase in population during only one generation. Naturally, the local food supply could not keep up with the growing population. Only in the middle of the 19th century, when progress in plant and animal breeding, artificial fertilization and methods for vermin control helped to improve the conditions of farming, a decisive breakthrough in agricultural production took place. Fossil energy was exploited on a large scale, and with the use of the expanding railway systems, food but also coal could be transported to distant areas, to supply engines, vehicles and heaters in greenhouses.

The increase in food was paralleled by the almost compulsory growth of the population in Europe and North America. For the heating of houses and green houses, wood was substituted for coal. Without fossil energy the mega cities would not have developed in the northern parts of Europe. By heating only with firewood without the additional energy of coal and fuel, forests could not have survived in Germany. In fact, the almost complete loss of large forests in Northern Germany in the Middle Ages was due to deforestation. During the 20th century, instead of wood enormous amounts of fossil energy, accumulated by solar energy during millions of years, have irreversibly been burnt. Only some residual forests could survive. But with the end of fossil resources the energy supply of northern towns will cause severe future problems.

Without medical progress, only with improvements of food and energy supply a rather slow increase in population during the 19th and 20th century would have happened. But the explosive growth of the population world-wide was preferentially due to the progress in medicine and in particular to the success in fighting infectious diseases: At the end of the 19th century new insights into the transmission and prevention of infectious diseases reduced the death toll especially in

young children in the prosperous cities of Europe and the US. Human poxvirus infections were no longer threatening children and meanwhile Variola virus is eradicated by global vaccination. Besides, the high death toll both during birth and in the post partum period were reduced by improving gynecological techniques and by controlling birth associated bacterial infections.

Still today, in many regions of Africa or India the vast influence of medicine and hygiene on the growth of the human population can be studied. The control of epidemics and to improvements in obstetrics contributes enormously to the growth of the population of Africa, India or South America. Life saving medical progress is accepted immediately, but slowly men give up old valuable traditions and continue to propagate high birth rates.

The dramatic situation of hunger and war in many African countries could have been predicted, because the food production of the local farmers is limited while the growth of the local population is nowhere restricted. A typical example is Rwanda in Central Africa, where at the end of the 20th century hunger and war corrected the intolerable growth of the population. Unfortunately, even doubling of food supply in such an over-populated country would only result in increasing population figures, and soon the old situation of starving would be prevailing again.

The apocalyptic horsemen of war, hunger and disease will eventually check the uncontrolled growth of the African population to a sustainable number. As Malthus has stated, human populations have a tendency to breed up to the level of their food supply, which usually ends in starvation and mass mortality [1]. In human history a frustrating sequence of events can be observed again and again: Periods of low population and sufficient supply of food are followed by an increase in population, finally resulting in famine and an almost

inevitable readiness for war and mass murder. With a reduced number of people the whole story starts over again.

3. Motives for High Birth Rates

3. 1. Tradition

In spite of all technical and medical progress, extensive investigations on reliable contraceptives did not start before the 20th century.

Malthus at the end of the 18th century could only appeal to sexual self-control [1]. Not before the middle of the 20th century, the first suitable oral contraceptives became available, when investigations on hormonal contraception were successful. Up to this time, in Europe and all over the world a continuous increase in population was observed and in the growing cities poor proletarian masses were accumulating.

During the 19th century, most women were educated in the traditional matrimonial role to bring up numerous children. Married women rarely had any reason to think about unwanted pregnancies. At that time, even in the overcrowded towns of Europe birth control was not popular. Still today, in traditional societies the pride of the “multipara”, including contempt for less fertile women, can be observed. Especially in developing countries this female attitude is still in existence. Therefore, birth control is a taboo in most parts of rural Africa.

In addition, high birth rates are strongly promoted by religion, because all religions and ideologies demand for “rich” progeny. Certainly, in the Bible or the Koran nothing can be found on contraception but much on the blessings of human fertility. This view was justified in times of high childhood mortality when the religious books were written. It rests on the simple fact that a religion or ideology can be expanded almost automatically by recruitment of new followers under age. In line with Islamic religion, the Roman Catholic Church, pretending religious convictions, subcutaneously tries to increase the number of the

followers by propagating high birth rates. The attitude of various religious leaders, to inhibit birth control and responsible parenthood, supports the expansion of slums mainly in Africa, Asia and South America. The religious leaders loudly complaining about social misery, at the same time propagate their expansive population programs, being more interested in the number of the followers than in the quality of their life. This simply reveals an inhuman contempt for the individual. The only excuse for such religious leaders may be found in a deeply rooted traditional thinking. After all, religions want to proclaim final, unchangeable truth. But religious statements often extend to subjects only peripherally related to transcendental questions.

Also, various politicians support programs to increase the progeny in their countries. Dictators misusing ideologies or religion, as in Iran, try to increase the number of their compatriots. In addition, in an impoverished, overpopulated country people will call for a “strong hand” to help them out of their misery. One of the major reasons why dictatorships with nationalistic, communistic or fundamental-religious orientation come into existence can be found in this intimate relationship between over-population and power. But even in populous, industrialized Europe some politicians still want more people in their countries, although this supports economic crises and an unstable policy. Considering the close relationship between religious or political power and the number of followers, it will be more understandable why nationalist or religious fundamentalist systems, such as Islamic states have a common view on population politics.

3.2 Social Security

The fear of insufficient support at old age constitutes a further motif for a large family. This fear is deeply rooted in countries without a social security system. In India and Africa most parents rely on their progeny as the only assurance of age. Naturally, old people in countries without functioning pension systems are frequently dependent on the

direct aid of their offspring, although rich progeny does not always guarantee a protected old age. In particular, the family support seems to fail in periods of hunger. With rare exceptions, during famine in Africa the right of the strongest prevails, even among the members of a family. Investigations during a prolonged dry period in a Central African mountain tribe revealed that first of all children, sick and old people die of starvation [4]. During times of severe famine the tribe survives with the young reproductive people, who take all the residual food.

Nevertheless, many people in Africa or Asia rely on the substantial advantages of a strong “family clan”. Close family relations play an important role especially in poor and underdeveloped regions. The clan structures may be imported into immigration countries, as was the case in the United States in the early 20th century, when Italian immigrants imported the structures of the Italian Mafia into the United States. For several decades, the US Mafia recruited new members from young relatives coming from Roman Catholic Sicily with its high birth rates.

In the western industrialized societies, due to the existing social security systems, clan strategies have become less important. Instead, a new problem has shown up: young people have to bear a steadily rising financial burden to pay for the social insurance of the increasing number of people of old age. To solve these difficulties a strong immigration of young trained people is usually recommended. However, immigration may in turn give rise to further problems: finally the young immigrants are getting old themselves. Then in turn, these former young people will need even more young supporters. In consequence, there would be an endless growth of the population.

4.Overpopulation and Ideology

Natural products like water or air seem to be worthless as long as they are found in abundance although they are essential for human survival.

In contrast, materials of minor practical value like gold or diamonds can be the more precious the less they are found. The same rules of supply and demand also apply to animals and even to humans. On the global market men are first of all rated according to their productivity and economic value. In all countries, where economic demands meet a human surplus, men are going to lose their value on the market. During such an ongoing human inflation the individual worker may become as worthless as a grain of sand in a desert. At present, the symptoms of human inflation can be studied looking at the immigration to Western Europe or to the western part of the USA. Masses of men from Africa, Arabia or Eastern Europe knock at the doors of Western Europe and millions of Mexicans immigrate illegally into the South West of the United States [6]. Being competitors on the job market, the immigrants are worrying the native population, especially the poor and uneducated. The emigration from over-populated southern countries cannot compensate for the steady growing local population, and many frustrated, hopeless and unemployed men, susceptible to revolutionary leaders are left behind.

In a populous country individuals suffer from a depressing feeling of insignificance. Even in wealthy Western European regions unemployed men frequently see themselves as useless and superfluous. In the anonymity of the Western mega-cities they will not easily be perceived while in the cities of Africa half the population seems to wait on the streets for a job. In the impersonal situation of expanding mega-cities the information on men is limited to statistical data nowadays collected and stored in computer databases.

In mass societies, the information on humans confines to animal-like attributes: in what “flock” are you “grazing”, what are you consuming? The administration, but also the political leaders and managers will make use of the information on common trends, to gain a rough picture

of the mood and desires of the masses. Thus, they can manipulate and govern the “flock”. The megalomania of a dictator requires a homogeneous mass of people without individualists, who would only criticize and disturb. In over-populated countries dictators may easily gain followers and power by persuading the many faceless nobodies to belong to an important and superior people.

In recent history, the rapid increase in population has often provoked radical political solutions. The main ideologies of the 20th century, all ending in dictatorship, can be traced back to an uncontrolled increase in population. Over-population cannot only cause an unleashed and uncontrolled capitalism. It may also be the source of Fascism with its contempt of humanity. But it has been also the basis for dictatorships associated with communism or with the fundamental religious systems in various Islamic states. Naturally, in some regimes radical, degrading ideologies may be found in complex mixtures complementing each other, since they have a common root: a surplus of humans.

4.1 Capitalism and Overpopulation

At the end of the 18th century the first machines, to produce cheap, identical mass products for a steadily growing population appeared in England [5], and the feudal system was slowly substituted for Capitalism. In this new economic system successful manufacturers could gain political influence from the still reigning aristocracy. Not only heritage and divine election as with the aristocrats but also economic capability now justified a prominent political role. Accordingly, economic influence and political power was distributed among considerably more people. In contrast to the aristocrats, who had played a traditional role in the welfare of the society, the manufacturers did not feel much responsibility for the welfare and protection of their workers or subalterns. Instead, the chief managers

had to fight for market positions. In this habit of competition, the leaders of the firms wanted to continuously increase the figures of sales and customers. Up to the present, most managers are convinced that their firms can only survive the strong economic rivalry on the global market by steadily increasing the production of goods. Therefore, in industrialized societies economic demands are at work to increase the number of customers and hence the growth of the population.

At the beginning of the industrial revolution, the increasing production induced a corresponding demand for workmen. In the emerging industrial areas of that period a strong rise in population figures was observed which was partially due to migration from rural areas, partially to reduced infant death. Sooner or later, human fertility together with migration resulted in an over supply of men. The proletarian masses noticed by Marx and Engels in the industrial towns of England were a direct consequence of the reduced mortality of the population. During the 19th century a huge number of children borne in rural areas did no longer die during infancy [7]. Instead the numerous children of the farmers, who could not make a living at the countryside, went to the new industrial areas in the growing towns. Everywhere in Europe, many people moved from over-populated rural regions of Europe to the industrial areas of Northern Europe or to the still empty USA. Several decades later, along with medical improvements in underdeveloped European regions a dramatic increase in population was also seen in Southern Europe. Therefore, at the beginning of the 20th century the emigration concentrated on countries like Italy, Spain, Portugal, Poland or Ireland. Here, people were especially exposed to the „birth pressure“ of the Roman Catholic Church. Nowadays, these Catholic countries have been replaced by Islamic states, where one hundred years later a similar connection between religious pressure and over-population can be stated.

Populous industrial regions have an inborn tendency to economic instability. An economic upsurge will result in a demand for more workers and high immigration rates. Almost automatically, the economic upsurge is followed by stagnation or even recession and the manpower of the following generation is no longer needed. Finally, unemployment will cause severe economic problems. In the 21st century the situation will be still more complicated, because even with improving economics additional workers are no longer needed. Due to increasing labor costs, industry is continuously substituting workmen for complex, computerized devices. In the future, these computer directed devices will become so much cheaper and more efficient, that even developing, low cost countries can afford them. Therefore, a worldwide reduction of jobs for manual work can be predicted. At present, low cost unskilled people in developing countries seem to be a cheap alternative for many firms, but finally improvements in the local infrastructure and in the education of people will finally result in higher wages. If, however, an improvement of the economy is not paralleled by reduction in birth rate, the number of poor and unemployed people in developing countries will not decline.

In capitalism mechanisms are at work to continuously stimulate industrial production. For one thing, men have an innate tendency to substitute old products for new and more efficient ones. This behavior, although intelligible and to a certain extent necessary, is further supported by education and continuous advertising. It may end in a „throw away“ society, which only knows industrial products with a half-life of a few years or even less. Moreover, the before-mentioned competition among industrial companies worldwide, requires expensive investments, to produce complicated technical goods like cars or computers at a low price. Meanwhile, it has become possible, to construct sophisticated, expensive, automated engines for the production of identical, cloned goods. Accordingly, the cloned products

will be incredibly cheap, such as microchips, which often do not cost more than a pail of apples although they consist of millions of electrical circuits. Therefore, large firms or agglomerations of firms, which can invest the enormous sums required for automated production, will undercut the smaller ones, which have to produce at a lower rate. The competitive pressure among the globally acting mega firms promotes continuous growth and concentration. A dangerous imbalance is developing: Mass products need masses of people, however merely as customers not longer as workers.

4.2.Communism

The depressing social situation of workers in most countries during the 19th century resulted in a revolutionary ideology for the underprivileged masses, named communism. Put into practice, communism aims at redistribution of private property. Impoverished people in populous, industrialized countries, the so-called proletarians, were especially susceptible to the new message. The reasons for the spread of communism can be found in the dramatic imbalance in the distribution human possessions at the end of the 19th century. But the origin of this imbalance can already be found several thousands of years ago, when the first farmers started to cultivate land and to inherit it to the next generation. Since the number of children may vary considerably depending on the local conditions of life and the genetic background of the individual family, the division of inherited properties must have caused both wealthy and poor farmers. After division among many children, even a substantial property may not be large enough, to make a living for each of the newly founded families. In contrast, with only one or two heirs, a property will remain unchanged or may even grow by marriage. The imbalance between the large landowners maintaining their wealth and the impoverished people in the neighborhood must almost inevitably lead to strain and

tension. Consequently, with a low death rate of children, after several generations and subdivisions many impoverished families will be left, who will demand for participation in the properties of their wealthy neighbors., In many areas of North- and South America, which were still thinly populated in the beginning of the 19th century this imbalance was only observed during the last two centuries. In these early years of immigration, an exact documentation of the borders of the large possessions often seemed to be unnecessary. At the end of the 19th century, many huge farms in North- or South America had survived, although more and more men immigrated and less children had to die due to medical progress. Only some early immigrants with few descendants could keep large parts of their properties and became almost automatically rich in contrast to the many poor but fertile latecomers. In the majority of the cases the division of the land progressed.

A similar sequence of events had taken place in Europe, where an almost complete sub-division of the land had taken place already in the Middle Ages. Due to the limited resources of land and the absolutistic political system, the contrast between large landowners and poor farmers was even more dramatic. The enormous growth of the population as in Germany or England at the end of the 19th century or in Russia in the early 20th century was a prerequisite of the revolutionary activities to come. In Europe the proletarians stemmed from the numerous, superfluous children of the farmers, who could only survive by selling their physical strength in the newly founded factories. The resulting strong differences in wealth and income almost inevitably called for economic redistribution. Thus, unlimited population growth is the most important source for an almost compulsively developing and easily justifiable communism. Unfortunately, the same situation is now met with in Africa, where religious leaders and fundamentalists still propagate high birth rates.

Huge masses of people, who have almost no belongings, gather in slum areas. Certainly, these people are susceptible for communism and call for redistribution of the wealth.

Above all, communist parties propagate an equal distribution of land and industrial properties. The wealth of the country is allegedly distributed among the masses, but in practice it is taken over by the bureaucracy. Finally, with the collectivization of all property an oligarchy of governmental and administrative people is established, whom unofficially everything belongs to. Communism presents as an ideology of redistribution. Accordingly, poor overpopulated countries have are more susceptible to communism than wealthy, thinly populated ones. It is hard to understand, therefore, why many religions even nowadays follow their historical role to propagate „rich“ progeny but at the same time fight communism. Vice versa, the hostile attitude of dogmatic communism against any sort of religion may be explained by the fact, that communism has turned into an atheistic religion itself with dogmas competing with other religions.

Initially, when communism is introduced into a country, the collectivization of larger possessions may be advantageous for poor people. Therefore, political disadvantages, such as loss of democracy and self-determination may be tolerated. However, the economic relief due to confiscation of the property of the comparatively few rich will be only temporary, especially, when a high birth rate is going to destroy the modest economic improvements of the proletarians. Besides, the bureaucrats will administer the collective properties with less commitment compared to the highly motivated expropriated owners. Finally, the economic system will decay and can only be maintained by force. Accordingly, the communistic parties, after having taken over, mutate to dictatorship often with nationalistic or fascistic undertone.

4.3 Fascism/ Nationalism

Various forms of fascism have existed in the past and some are still in existence. Nevertheless, one common feature can be detected among the historical Italian, German or the religious fundamentalist version: the demand for high birth rates among the followers. The predominance and spread of the own race is the central lesson of fascism. For the realization of this aim sometimes a moderate, but more often a highly aggressive strategy was chosen. Looking at the consequences, both forms may cause similar calamity. The soft version of fascism is relying on rich progeny of the members without actively promoting the extinction of other groups or tribes. The aggressive version will not refrain from war and killing of so-call „foreigners“. The soft fascism may easily turn into the aggressive type. The soft version is hardly less dangerous, because the armament with human masses represents a hidden preparation for aggression and war. In a populous country a further increase in birth rates must lead to a „birth war“. The sharpening of this instrument for war is frequently taken into account intentionally, since the impoverished masses will become more dependent on their political leaders in times of aggression. In past centuries, checks of over-population by plagues or hunger may have prevented future „birth wars“. Today, these natural checks do not play a decisive role anymore.

On the long run, to invest into high births rate has turned out to be a better strategy to obtain influence and power than any military action. Frequently, victorious invaders became a privileged, but unsuccessful minority, which was finally absorbed by the defeated but rapidly growing native population. When the growing defeated majority is exposed to political and economic pressure it will assume aggressive fascism and will try to eliminate the foreign influence.

Poor, uneducated people with many children, the so-called proletariat often contributes to a politically unstable situation. The leaders of the underprivileged, often descendents of the proletarians themselves, are susceptible to the old rules of suppression and extinction of foreigners. Today, countries on their way to instability and aggressiveness can be identified by high birth rates. Almost all fundamentalist Islamic and many African but also some South American countries are candidates on the list of repressive political systems. By using the figures on population dynamics in these countries, future riots and civil wars can be predicted. In countries with uncontrolled high birth rates dictatorships and tendencies towards genocide will easily develop. During the recent decades, examples for „birth wars“ due to over-population are found in Rwanda, in Bosnia and in the Iraq. An alleviation of the exhausted population will not occur, unless 10% of the citizens have been killed. After the killing men are looking back with abhorrence to their own cruel actions, and even then they do not understand why the bloodbath has taken place, although the reason is quite obvious: mass murder as a exhaust valve for over-population.

Aggressions in an over-populated country are preferentially directed to foreign enemies, but they may also turn to minorities inside the country. In over-populated countries minorities are often perceived as an imminent competition and danger to the majority. What are the reasons for these hostile attitudes? In fact, without restrictions on immigration and on birth rates ethnic minorities may gain substantial influence and power. In certain areas or special professions the immigrants may dominate the old population simply by number. Depending on the fertility of the immigrants, the prevailing language and culture may change in the cities, like in Budapest at the end of the 19th century or today in the Hispanic quarters of the big west coast cities in the United States. If the new ethnic groups are ready to merge and integrate, they will influence the local culture and politics

positively and often will contribute to dissolute inflexible structures. If, however, the new immigrants are unwilling to integrate and persist in Ghetto-like structures as a power-possessed, multi-branched „clan“, in times of economic stress and hunger the indigenous population will notice them as a threat and competition. Finally, the majority may be tempted to expel or to kill the immigrants. As stated before, history may take an opposite course and the „natives“ may become the threatened minority. Both scenarios may end in a peaceful living together, but also in deadly aggression if the population pressure is too high.

Mass murder among the own population provokes strongly ambivalent feelings, since the murderers are usually connected with and related to their victims. In this respect, the feelings differ from those during wars against foreign countries with a different language and cultural background. Most arguments for the extinction of compatriots would also apply to the murderers themselves, who by their own standards have many features in common with the victims. Thus Hitler, following his own conviction of the high value of the northern race, should have eliminated himself, since he undoubtedly was not the prototype of his preferred race. In Germany with its multiple neighboring countries, Hitler's racial arguments were especially absurd considering the long lasting ethnic and cultural mixing of the population over many centuries. But in over populated regions with many unemployed people vague arguments will do, to find plausible differences between the own group and a “strange” minority. Especially, religious and ethnic peculiarities will be stressed, although clear criteria and sharp dissections between the groups are hard to find, especially when looking at the individual.

All over the world, couples with differing ethnic background are able to have children in common, because genetically all humans are closely related. This biological fact argues against major inborn differences in the behavior of men and supports a strong influence of education. Over many centuries, the USA has demonstrated peaceful co-existence and mixing of the multiple ethnic groups. In fact, convincing arguments to exclude men of a foreign ethnic group from integration do not exist.

Nevertheless, an atavistic impetus to exterminate foreigners with a different cultural background or religion may be located somewhere in a sub-cortical area of the brain, insufficiently controlled by the rational parts of our cortex. Unfortunately, these atavistic emotions are strongly promoted by over-population. In a country with a high population density, the cerebral threshold against killing declines, and worn-out arguments will do to justify brute actions [6]. If men in densely populated third world mega cities are reduced to superfluous nobodies, individual life is not longer of value. In a starving society the death of a surplus consumer may be advantageous for the rest [4]. "Why not?" replied a soldier in overcrowded Monrovia to the question, why he was shooting innocent civilians. It is not surprising, that the killers go home after a massacre, to continue a „normal“ life without much sense of guilt. They only followed an inherited atavistic reflex. An evolutionary, subconscious aggression against minorities can be provoked in most humans, and many are able to participate in genocide. Members of one tribe try to kill members of a foreign tribe, as seen in Africa every week, when the ancient Stone Age behavior is re-emerging. Although one would not like the idea, tribal hostility may have furthered the selection of mankind towards improved intelligence: the less skilled hominids were inferior to their more developed kinsmen and may have been victims of evolutionary selection. Bone finds and genetic analyses indicate that Homo sapiens 300 000 years ago was responsible for the extinction of more primitive humanoid tribes. At least their

mitochondrial DNA differs substantially from that of contemporary ancestors of the modern humans [8]. Perhaps the progeny of the primitive Neanderthal had no greater enemy than our more developed ancestors from the south. It is suggestive to speculate that the urge to eliminate primitive or simply „different“ people is our evolutionary heritage. After all, in mammals the aggressiveness clearly grows with increasing population density. This archaic pattern is still active in the human population. The “kill-or-be-killed” environment of our primitive ancestors can easily be revived. When the conditions of life become tight due high birth rates or mass immigration, a foreign minority may be exterminated without much regret. In a more relaxed situation foreign features would be easily tolerated.

A closer look at the growth of the population in Germany after the First World War would have shown that the prerequisites for future Fascism were already present. After this war, in a region with a population density of about 200/ km² (600/ square mile) an enormous economic pressure had developed. Between 1850 and 1920 the population had more than doubled. In 1918, due to the Versailles treaty, the territory of Germany was considerably reduced. Due to exaggerated financial compensations of the victorious countries the population was impoverished and embittered. Ten years later, the pressure in the boiler, containing „the people without space“, had risen to high. During inflation before the Second World War the economic situation in the big cities had further deteriorated [9]. In the German cities a high suicide rate among the desperate poor people was seen [10]. A population without hope for the future was easily infected with the megalomania of the “Führer” [11]. Hitler precisely hit the prevailing feelings of inferiority. With his massive birth program he intentionally incited the existing population pressure in Germany. As a consequence of the policy of isolation, severe disadvantages for the export industry with economic recession were to be expected. But for radical nationalists, the

only solution to improve the conditions of life in Germany was to increase the territory and to kill or to drive away former inhabitants. The too many Germans should require more land. The alternative, i.e. to reduce birth rates and finally the population figures, would have been successful only on the long run. Besides, the churches would have refused birth control. Accordingly, war was the only solution for Hitler. In the early stages of war he would not realize that the solution of the problem of overpopulation could be the death of millions of Germans instead of the death of „inferior people“. At the end of the Second World War he had just enough time to predict the total ruin of Germany and to recommend suicide to the Germans, who had deeply failed.

Wars have been started for various reasons but in many cases starving of the population has played a decisive role. An empty stomach and robust promise for conquest and catch will guarantee an excellently belligerent mood. Hungry and disappointed men will turn unconditionally to a leader (Führer) promising release from their misery. Motives of a war for food can be found in the Second World War, when the people without sufficient space („Volk ohne Raum“), where for several years men had died of starvation, tried to conquer land in the east. At the same time, Hitler planned a „birth war“ demanding high birth rates from his submissive people to spread the „northern race“. The geographical situation of Germany may have contributed to this atavistic program. Almost no country in the world had more neighbors and had to face so many divisions and alterations of the territory in all directions since the 16th century. The excessive nationalism of the Germans resulted in part from the absence of natural borders.

Surprisingly, when the National Socialists came to power, a new spirit of hope led to more self-consciousness and optimism in Germany and soon the economic situation of the country improved. Hitler did not

hesitate to arrest the reparation payments to France and the UK and used the spare money for employment programs building highways and armament. In fact, the unemployment was reduced and the need of the German population diminished [11]. Hitler wanted to solve the problem of over-population not only by conquering land but also by expelling people of the so-called inferior races. In addition to pretended enemies outside Germany he proclaimed an imaginative internal threat and looked for minorities differing from most other people by customs or religion. Undoubtedly, there were aversions in the German population against Jews and Gypsies, but to extinguish or expel parts of the population had not been discussed seriously before Hitler. Hitler had so much deepened his fundamental- evolutionary strategy that he openly uttered his ideas of extinguishing unworthy life and of spreading the „pure northern race“. Unfortunately, many people took his theses, published before his “grip to the power” (Machtergreifung), for exaggeration and propaganda. Even in 1941, he stated that the Germans were not yet prepared spiritually, to be confronted with his plans for the extinction of the Jews, of the Gypsies or of mentally retarded people. The step backward to the thinking of the “Neanderthal” could not easily be seeded into the hearts of men. Besides, during the permanent chaos of the war after 1941, with most males out at various battlefronts, opposition to deprivation and killing of their neighbors was mainly left to women and children.

The arguments of the National Socialists were rather inconsistent. Hitler persecuted the Jews as protagonists of communism and at the same time of capitalism in the US. Moreover, he tried to make use of the anti-Jewish feelings of Christians, who held the death of Christ 2000 years ago against the Jews and considered the Jews as anti-Christian. At the same time, he tried to suppress Christianity, because the rules of charity were not compatible with his social Darwinism. But he agreed with the birth-promoting rules of the Christian churches and made use

of religious arguments, which have often played a role in the persecution of minorities. Only recently, a similar misuse of religion could be noticed during ethnic hostilities in the former Yugoslavia or in Rwanda.

Over-population can partially explain but cannot excuse the cold-blooded extinction of minorities in Germany during the Second World War. Nevertheless, one major reason for atrocities against minorities can be found in over-population leading almost compulsorily to an unstable economic situation.

During the early 20th century, in addition to Hitler other dictators like Stalin or Mussolini, all of them products of the under privileged masses, tried to rule the expanding population in their countries by merciless persecution of minorities and opponents. To avoid similar moral excesses in the future and to develop strategies for prevention, a more detailed analysis of human motives for killing minorities would be extremely important. Certainly, the murders in Rwanda or Bosnia will not be the last attacks against parts of the own population.

In summary, the essential prerequisites for an archaic regression towards suppression and killing of minorities are:

1. High population pressure
2. Poverty
3. Fanatic religious leaders or populists.

A mixture of these components, showing a mutual relationship, may end in a total suppression of minorities. Applying the above criteria, the countries can be identified where „ethnic disposal“ may take place. In any case, in an over-populated world a tendency towards suppression of minorities will be observed more frequently.

4.4. Religious Fundamentalism

Not only Fascism, but also religious fundamentalism propagate high birth rates and may provoke a „birth war“. In contrast to fascism, religious fundamentalism is not so much interested in promoting the own ethnic group, but exclusively favors the own confession and culture. To increase the number of followers, as many children as possible have to be borne. Involuntary, the children become members of the religious community, because they are members by birth or will be baptized during early infancy. In this manner, members can easily be recruited instead of laboriously convincing adults. This recruitment of followers by high birth rates can be found in practically all religions although it may finally result in over population and war. Even today, the strategy of rich progeny is being practiced by the Roman Catholic Church and with even more passion by the Islamic theocratic regimes. For conservative religious leaders women have the only one duty, to give birth to and to bring up as many children as possible. All contraceptives are satanic inventions and sex without the aim of progeny is sinful if not criminal. The surplus adolescents, resulting from high birth rates, are indoctrinated to fanatically contribute to the spread of the own religion. All critical ideas, questioning religious regulations and dogmas, will be brutally suppressed. In fact, evolutionary behavior is disguised as religion. Men, however, living in poverty and repression, feel revalued as followers of the right religion, as being orthodox. Consequently, without the high death rates of the former centuries, the fundamentalist regimes soon become severely over-populated and politically instable. Since liberal neighboring countries will restrict an export of indoctrinated humans, the regime will risk a war, to „evangelize“ its godless neighbors. Followers, who die during such a “holy war” may count on a favorite position in heaven. Obviously, such a “birth war” may help a religion to growth and power; it is however questionable, whether the produced followers, when

starting to realize the motives for their desperate existence, want to support the inhuman religion any further.

Over-populated countries have a tendency to end dictatorship, in communism or fascism. However, due to the steadily increasing population pressure such political experiments mostly end in poverty and war.

5. Over Population and Ecology

With the advent of the 19th century strategies were developed to fight the frequent famine crises more efficiently. Thus, agricultural experts and visionaries hoped to solve the problems of food and energy supply by increasingly complex techniques. They were convinced that adequate technical solutions could be found to provide sufficient food for the increasing population. Meanwhile, detailed studies have revealed, that due to the shortage of fertile land and of water resources the global food production will reach a final limit [12]. The resources of our planet cannot endlessly be exploited. Certainly, further improvements in food production may be achieved by using artificial fertilizers, better irrigation systems or sophisticated breeding technologies including gene technology. But an even more intensified food production may result in changes of the balance of Nature, which cannot be predicted in all details.

The use of fossil energy for food production is especially problematic. At present, huge amounts of oil are not only used for transportation but also to heat greenhouses, to move tractors, to desalt water or to produce fertilizers. With the end of fossil energy supply a worldwide lack of energy but also of food production can be predicted. A complete switch to sustained energy production will not be possible everywhere, because solar energy is not an alternative in sunless northern countries. Also wind energy is limited and not continuously available. Sunless countries with a dense population, needing sufficient electricity and food, will run into severe dependence on energy importation. With the

exhaustion of fossil energy even dangerous technologies will be tolerated in overpopulated areas, to avoid a severe lack of food and warmth. These dangerous technologies do not only comprise nuclear energy but also certain biologic manipulations using uncontrolled gene technology. The balance of Nature will be disturbed by large monocultivations eliminating plants and animals not directly involved in food production. Besides, the application of drugs in animal breeding may result in increased dependence on antibiotics. Since certain fertilizers or insecticides (nitrogen, DDT), looking harmless on the first glance, later have turned out to cause severe ecological damage, decades of investigations and observations would be required to evaluate the major side effects of certain scientific approaches. But what politician under economic pressure will demand of a detailed risk assessment and postpone the immediate solution of an acute crisis of food or energy supply until after some years all side effects have been studied?

The problems with CO₂ pollution and global warming illustrate the inability of politicians to counteract global risks, although they have been predicted for several decades. The huge hunger for fossil energy cannot be reduced if the world population is steadily increasing. Every man longing for mobility and warmth is producing an excess of CO₂. For billions of men sufficient energy resources for a sustainable CO₂ management are not available. First of all, the rapidly growing CO₂ pollution results from the enormous growth of human population and would require immediate action on human birth rates.

The cycle: growth of population - growth of production- and again - growth of population and so forth, will cause a merciless international competition for the resources of energy and water. In populous countries all economic remedies and concepts to fight impoverishment, hunger and corruption will fail. Besides, Nature cannot be preserved without reducing human replication. With progressing conurbation

wildlife can only survive in zoos. The multitude of species cannot be maintained and rain forests cannot grow. If 100 million people are allowed to settle in the Amazon region, the primeval forest will be gone with or without any ecological knowledge of the settlers on the global warming of the earth.

The constriction of Western Europe without possibilities to escape to an untouched Nature explains the longing of the Germans for lonely regions and the excessive tourism into natural reservoirs. The boom for untouched tropical islands in television meets the longings of people in overcrowded towns. But in the end, along with growing tourism, the last lonely regions with untouched Nature will disappear. When in a remote region the population density increases, Nature cannot be saved, because each new human will use up a small part of the environment. Generally speaking, residual natural reservoirs in densely populated areas cannot survive, if the population growth continues. Restrictions and prohibition signs placed everywhere to protect Nature are without much effect.

6. Men Escape from Evolution

Almost all humans, even those in underdeveloped countries do not want to miss the advantages of modern life. Nobody really wants to go “back to Nature”[13], facing the harsh consequences of evolution. Nobody will voluntarily refrain from the blessings of medicine and science. For only a few centuries, men have discovered mechanisms to reduce the selective pressures of evolution. The advantages of this escape are obvious: first of all, men have enormously improved their chances to survive during infancy and to get old.

The earliest steps towards this escape from evolution were made already one million years ago, when the human brain slowly increased its capacity not only to store but also to communicate detailed information. Until a complex cerebral memory had developed, any long

lasting information for the composition and diversity of plants and animals had been dependant on the four-letter code of DNA. For example, the DNA code for parts of the insulin receptor, participating in fundamental biological regulations during embryogenesis, had to be conserved over millions of years both in insects and humans. In addition to the DNA code, transmitting information to the following generations for billions of years, the development of a nervous system created a versatile, long lasting alternative for the storage of information. Possibly, the nervous system in animals had developed, to enable coordinated movement. In contrast to the DNA database within each cell, the more flexible and complex database of the brain was centralized in only one part of the body. The intellectual improvements increased the chances of survival especially in primates. For the first time, the survival of the progeny did not only depend on the ability to fight or to escape but also on skilful defensive actions and the power to look ahead. During the long lasting process of primordial development of primates, humans appear rather late. The genetic code of men differs from that of chimpanzees by surprisingly few base pairs, while substantial differences exist not only in the dimension but also in the abilities of the brain. Obviously, during the development of primates towards men the increase in brainpower was more important than further improvements of bodily skills and strength. In spite of this, men struggling to survive were still subjected to the evolutionary laws demanding rich progeny and the killing of enemies in order to survive.

Compared to the billions of years for the evolution of complex life, it took only a few hundred thousand years to enlarge the brain volume of *Pithecanthropus erectus* until that of the present human beings was reached. The increase in brain volume from 800 to 1400 ml during the appearance of *H. erectus* 1.7 million years ago, as documented by old cranial specimens, reflects the continuous improvements in brain functions [14]. With the ability to speak and paint a new dimension was

introduced into evolution, when in addition to DNA a new kind of information was created which could be passed on to the following generations. More farsighted than the genesis of the Old Testament the evangelist St John muses on the creation of the human world „in principio erat verbum”.

The mental input and data processing requires a long period of learning during childhood. For this long lasting learning and transfer of knowledge to the next generation a prolonged and intensified care of the parents became vital to the proper development of the offspring. With the long childhood a prolonged lifetime was required. But to improve the primate brain over hundreds of centuries, DNA mutations, including evolutionary selection had to take place. Consequently, the human database, filled with lifelong experiences, had to be thrown away at the end of each life. Therefore, to continuously pass on the knowledge and experience of their ancestors, men developed the art of writing as a highly sophisticated tool. By inventing written information men created a reliable memory independent of evolution and exceeding human lifetime by far.

The fight against a continuous, dramatic loss of information due to forgetting and death begins with the first paintings during Stone Age and continues with the pictographs of the ancient Dynasties in Egypt, finally resulting in the perfect phonetic writing of the Greeks. The letter code shows the superiority of a flexible system of writing, able to imitate the different pronunciations of words in the various languages. It enabled men to depict and pass on complicated feelings and considerations. The ancient novels of Homer document our close connection to sentiments, opinions and attitudes of humans living 3000 years ago. The fascination of books and nowadays also of electronic data essentially rests on the possibility, to enter an immortal world, unaffected by the continuous cycle of birth and destruction, necessary for evolutionary adaptation

With the creation of papyri and books, human information became timeless. Written laws, based on experience and religion allowed, to pass on obligatory rules to the following generations. The first writings regulating the relations among humans enabled long lasting tradition and culture. During this progress toward immortality the various religious books have played a decisive role. A written codex was now at hand to describe and explain the complex events in the world like birth and death and the various phenomena in Nature. The steadily increasing number of scientific books was stored in large libraries, and a burnt down library must have been a greater cultural shock than a lost battle. At present we are facing a enormous progress in the intellectual word because scientific books are more and more substituted for electronic media enabling an immediate access to almost every subject of interest.

During classical antiquity, writing a manuscript must have been incredibly cumbersome, considering the various technical and economic requirements of that time. Besides, in contrast to present researchers with their strong impact on the society, scientists in antiquity were not much respected. The Romans assured by dozens of successful wars, preferred physical strength and strategic thinking to scientific abilities. Insights into natural science, resulting in powerful, superior war engines were accepted to maintain power. War was said to be the father of all human progress. In contrast to the belligerent Romans the authors of the Old- and even more of the New Testament stressed the importance of a peaceful relationship among men. In the Old Testament this preferentially includes the own tribe, while later with Christianity at least in theory a peaceful live should comprise not only the believers but also all humans independent of their cultural background. However, charity is in direct opposition to the evolutionary pressure preferring the strongest and most adapted. The

demands of charity imposed a new challenge to human intelligence and foresight. Not only late Roman emperors introducing the Christian religion, but also crusaders and the inquisition, persecuting alleged witchcraft, ignored this difficult Christian demand for charity and peacefulness. In spite of such massive regressions, some Christian leaders tried comply with the principle of charity. Christian philosophers, like Francesco of Assisi, changed their lives according to these new rules and tried to escape from the evolutionary demands of “eating or being eaten”.

To pass on these new ideas, in the Middle Ages monasteries were founded, where monks could live in secluded institutions studying the Christian but also the scientific writings of the Greeks and Romans. In the monasteries the human brain, being itself a product of evolutionary selection, tried to get rid of the rules of evolution. Apparently, on the long run evolution had created a tool to obstruct its own adoptive DNA strategy. But we should not forget, that in the old sub-cortical parts of the brain evolutionary important centers have survived, where emotions, sexuality and perhaps xenophobia, the aversion against the unknown foreigner, are located.

Copying primarily Christian but also of philosophic and scientific pre-Christian writings constituted the most important task of medieval monks in the monasteries. With the books they were able to fight effectively against the threats of forgetting. As an alternative to Christian writings, the Greek and Roman heathen novels may have stimulated their love of reading. In some of the monasteries a special interest in science, philosophy and arts was slowly developing. Religious but also profane questions of human live were discussed and finally published. The monks in the monasteries experienced the evolutionary demands of life as vile and anti-intellectual and tried to withdraw from worldly activities by copying, collecting and reading books. The daily family problems of the farmers were not allowed to

infiltrate into their lives. They tried to live without the boundaries of marriage in celibacy, devoted to their books in a new intellectual world. Towards the end of the Middle Ages the monastery schools transformed to universities where religion still played a leading role, since all foundations had to be approved by the pope.

The predominant role of writings for a future intellectual world already started with the outstanding literature of the Greeks. In Christian religion this intellectual world gets a metaphysical background with the metaphor of a Holy Spirit. Pentecost celebrates the universal intellectual power by multilingualism. The divine influence is personalized in the Holy Spirit enlightening the human mind. In contrast, the evolutionary behavior is identified with the evil, the devilish, leaving aside the fact that up to the present the evolutionary demands are an indispensable prerequisite to adopt and optimize the genes of all creatures to the slowly but steadily changing conditions on earth. Instinctively, during the Middle Ages, the evil, the “original sin” is depicted in the religious paintings as a dragon, the prehistoric saurian, as a symbol of the old demand of “eating or being eaten”. It is unlikely to assume that the monks with their new rules and principles deliberately tried to suspend these evolutionary demands, which were understood only centuries later by Charles Darwin. Today, after 2000 years of Christianity we are able to escape the evolution, the evil, more and more effectively. Accordingly, we often attribute evolutionary motivated behavior to bad habit, although it may often save our lives. Very likely, the evolution has somewhere survived in our brain, and it would be highly informative, to pinpoint the atavistic habits in the human brain, in order to understand and to influence these centers.

During the Middle Ages the discrepancy between evolutionary demands and Christian rules resulted in severe tensions and inconsistencies.

Thus, the church supported a rich progeny of the general population, partly to increase the number of followers, but in the first place to enable human survival in times with a high death rate. On the other hand, the church demanded childlessness from monks, nuns and priests. The Christian exegetes and later the humanists criticized selfishness and personal interests often ending in quarrelling and aggression and proclaimed tolerance even to non-Christian neighbors. But “holy wars” and crusades against other religions were allowed and heathens were to be converted by force. The strict social and hierarchical separation between the literate priests and the illiterate peasants, left more or less to the evolutionary rules, reflects these discrepancies, which are still in existence.

Today, men being a product of evolution, are still trying to escape from the selective mechanisms and rules of evolution by using their analytical intelligence; but at the same time the evolutionary principles of selection, which were required to create and maintain mankind, cannot completely be neglected. If we do not want to comply with the cruel principles of evolution, we have to imitate them at least. In contrast to all other species, humans have substantially intervened into the old laws of evolution. But finally mankind will not survive without strategies to compensate the deficits in evolutionary behavior. We should try to reintegrate the evolution into our life, however controlled by humanity and intelligence. Even confirmed Christians have to compromise with the evolution, because this inherited sin, resting in the genetic material, has created the human beings. Such compromises between humanity and evolution can be provided by science. Research has opened a broad field of possibilities, to free men from the cruel demands of evolution without completely abolishing them. In future, there will be an enormous challenge for the human mind to escape from evolution without at the same time risking human survival. Here, among many other questions concerning the present imbalance in

Nature, the question of a sustained development of the human population is on top of the agenda.

7. Sustained Population Figures

With the first foundations of townships, ten thousand years ago, the local representatives and governors tried to systematically increase the number of their local population. Considering the high mortality rate among citizens at that time, this was well motivated. But today, the old strategy of propagating an unlimited growth of the own population is producing vast problems, leading almost compulsory to civil wars and destruction of all biological resources. Many leaders in developing countries have not yet understood, that the old demand of the bible for rich progeny, which was generally accepted by almost all authorities throughout all centuries, is now directly leading into war and hunger. In developing countries the dramatic drop in infant death results in a “youth bulge”. Here the fierce fight against birth control promotes more misery, hunger and death than both Hitler and Stalin were able to evoke in the 20th century.

What measures have to be taken, to reach a realistic check of human growth in developing countries? First of all it has to be realized everywhere in the world and especially in the underdeveloped countries, that against all ancient rules an increase in population does no longer mean human progress. Instead, all governments should analyze the future consequences of a further growth of their population.

A critical analysis of the population growth in most parts of the world will show that an uncontrolled growth of the population is no longer tolerable. Instead a sustainable population density has to be determined for each country or political unit. The term “tolerance density” is used to characterize the upper limit of population figures.

The limit can be defined as the number of men/km² or square miles, who can survive autonomously on the food, water and energy resources of their country. The only source of energy for the population of any country would be the continuously radiating solar energy, directly warming the earth, taken up by plants, by solarthermal and photovoltaic devices or indirectly produced as hydro- or wind energy. Geothermal energy may also play a limited role. Fossil and nuclear energy should not be included in the calculations, since fossil energy is limited and may destroy the biosphere and atomic energy is still hard to control. The same restrictive view should apply for the water resources in a country. Only the amount of water should be used that is easily substituted by natural resources. The transgression of “tolerance density” will result in “conflict density”, which finally ends in the devastation of Nature and in ethnic and economic conflicts with neighboring countries.

When defining “tolerance density”, the quality of human life may also be considered. In certain towns a high density of people may be tolerable concerning food or energy supply, but men cannot be kept as hens in huge chicken farms without producing irritations among the individuals. Healthy air, calm sleep and sufficient education are prerequisites for continuous human creativity. In spite of this, in a state of “tolerance density” the most severe social problems of a mass society will disappear anyway. Therefore, purely resource-oriented considerations have priority.

What figures of “tolerance density” can be predicted for individual countries or larger coherent areas? For Germany, according to the criteria, mentioned above, the number of people has to be determined, who can exist over generations without any importation of energy or food, living only on their local resources. Of course, all scientific improvements using solar energy, such as solar collectors, wall isolation, sophisticated systems of water or geothermal energy and also biotechnological methods for food production, can be

included in this calculation. Thus, the amount of energy, but also of food and water, which can be obtained from the local resources of the country in question, has to be calculated. These figures may vary due to the technical progress. Probably, in a densely populated country like Germany, the technical progress will be rather marginal during the next decades. In the end, German population figures as reported in the beginning of the 19th century might result. Today, Germany has certainly exceeded “tolerance density”. In the various economic and political crises of Germany this excess of people has had dramatic consequences. If the population had been lower in 1933, the destitute, hopeless proletarians in the country would not have been susceptible to the catchwords of both communism and fascism. As already pointed out, radical political solutions are easily spread among masses living in poverty. Still today, due to the strong dependence of Germany on exportation, unemployment may cause social frictions and even minorities may again be endangered. Compared to Germany, some other countries of the world may have higher “tolerance density” figures, but in most areas lower figures are to be expected. In deserts without sufficient water supply the conflict density can already be reached with few humans per km², whereas in mild sunny counties with sufficient water the figures may be higher. In regions with a high risk of earthquakes, at the lopes of volcanoes or in areas with frequent flood disasters low population figures would be advisable. “Conflict densities” may be easily reached in some sunny holiday islands. To these places not only the tourists but also most of the food has to be transported. Enormous lots of water have to be desalted, requiring huge amounts of fossil energy. With a future shortage of petrol such a holiday resort might suddenly be unable to support the vast number of inhabitants and visitors. The optimistic calculations of certain experts (15) saying that sufficient food and water could be produced even for 11 billion of men obviously deny the catastrophic ecologic consequences (16).

Compared to the problems of overpopulation the advantages of a sustained development are obvious: A region or even a continent in a state of “tolerance density” will be more resistant to crises of local or international origin. A county with sustainable population figures will be less dependent on imported food and energy, when during an

economic crisis the export declines. The permanent problem of overpopulated countries, to pay for the necessary importation of food and energy, would disappear. In a state of “tolerance density” the present worldwide economic competition among different countries would decrease. With a reduced population, the essential prerequisites for a food war or a war of “people without space” would disappear. In many populous parts of the world the vicious cycle of growth of population followed by growth of production and so forth, would finally be interrupted. With the low birth rate in Germany in a few years jobs will be available for all young Germans even in a world, where due to the progressing computerization unqualified manual work and physical strength will no longer be needed.

In the state of “tolerance density” not only the economic but also the social situation of workmen will be improved. With a reduction of the population the humiliating effects of mass societies will disappear. Men would not longer have to fiercely fight each other for better positions. At present, life in an over populated society as in Germany results in permanent stress.

On the other hand, the reduction of birth rates in densely populated countries will cause serious problems, until a sustainable balance between birth- and death rates has been re-established. In a society with low birth rates and a high proportion of old people slightly reduced pensions have to be tolerated for one or two generations and a high fraction of pre-pensioners will have to work longer. After reaching the retiring age most old people can easily support themselves. Due to various devices like cars or household appliances most seniors in industrialized countries are no longer as helpless and dependent on their children as they had been some decades ago. However, in a society of people getting older dementia such as Alzheimer’s disease will be an increasingly severe problem and research on this future

challenge would be highly important. Anyhow, simply propagating more children, to pay the future pensions, cannot permanently solve the financial bottleneck. Finally, young people supporting the old ones will be pensioners themselves.

Besides, reduced population figures will have consequences on the industrial production, simply because fewer customers need fewer goods. How can industry survive without continuous growth? The answer might partially be found in an improvement of the quality of the industrial products instead of producing second-rate mass goods. As can be learned from countries like Sweden, in thinly populated areas science and technology must not necessarily suffer [12]. To solve the sophisticated and complex technical tasks of the future, educated and innovative workmen will be preferred to people working at monotonous conveyer belts producing the old mass goods. But in a society with a sustained population density a thorough and creative education of the children can be more easily granted.

A serious problem of countries having achieved “tolerance density” will result from the immigration pressure executed by populous regions. Almost automatically, people of poor, over populated regions will try to participate in the wealth of their rich neighbors. Such participation may be reached by peaceful, controlled immigration [6], but it may also turn into invasion and war. It is therefore necessary to allow a political unit in pursuing “tolerance density”, to establish suitable control mechanisms to restrict immigration from uncontrolled growing countries. Unless restrictive controls have been installed, an effective check of the immigration from over populated countries will not be possible. As an alternative to completely ban immigration, men from populous, poor countries can be allowed to work for a limited time in a country approaching “tolerance density”. At the same time, “working visitors” should agree to return to their homeland after several years

Finally, they could bring home not only some money but also new ideas of how to improve the social and economic conditions in their own country. In any case, countries going for “tolerance density” should encourage “developing” countries with a rapidly growing population to implement strategies for birth control programs. This will be the only way to avoid future conflicts.

8. Sustained birth regulations

In thinly populated countries some centuries ago death and birth rates were more or less in balance. But in over populated countries a multitude of public regulations have to be installed to control human fertility. Surprisingly, most governments are not concerned with regulating programs, although the absence of such regulations may have even greater consequences on human survival than ignoring the rules of public traffic.

During the whole human history up to the middle of the 20th century, there were only two alternatives to reduce an excessively growing population: either people died of hunger and plagues or they started to kill each other during pogroms or wars. Unfortunately, in many developing countries these “evolutionary” controls are still in existence. In the starving suburbs and slums of African mega cities a reduced birth rate is nowhere to be seen, although it would be much more humane to regulate human fertility by birth control compared to hunger or plagues. Of course by peaceful means a “tolerance density” can be attained only very slowly and will remain a distant aim. It would therefore be essential to immediately start suitable birth control programs. Here education and information of women would be the most effective. The hidden relationship between over-population and poverty, resulting in aggression and war has to be explained to people, who have suffered from war. However, simply appealing to common sense, which had been successful in controlling various plagues during

the 19th century, will not motivate people to accept birth control, because the positive results will not be seen immediately, but only one or two generations later. Governed by ancient instincts and customs many people in developing countries are still dreaming of a large family, although in most cases the economic situation would not allow many children. Admittedly, the advantages of a family clan as the substitute of a social security system in undeveloped regions of the world cannot be denied. But must be made clear that intensified neighborhood help can compensate poverty and desolation of old people with only few children.

Children are of course necessary to preserve cultural identity. Therefore, the right balance between birth and death rates has to be determined, especially in situations where initially the population has to be reduced but later has to be maintained at the level of “tolerance density”. The regulation of birth rates cannot be left to fascistic politicians or religious leaders, who simply want a continuously growing number of dependent followers. Political and religious pressures aiming at high birth rates appallingly illustrate, how birth control can be misused. Also, it cannot any longer be a matter of chance, as in most countries of the world, nor can it be left to the commodity of young people in Western countries where the birth rate may be too low. Official institutions may not order or ban but instead should inform and convince. Clear understandable directives can be effective without prohibition and pressure. After having calculated the “tolerance density” for a country, it can be determined statistically, what birth rates would be needed to approach sustainable figures and how to maintain them. Thus, a financial support up to the second or third child might help to maintain balanced population figures, while at the same time governmental money for too many children should be avoided. In contrast to the present practice in Germany, people have to understand that it is as egoistic and adverse to abstain from children in

wealthy conditions only to increase the own comfort, as to bring up many children in poverty at public expense. Financial and logistic support for employed women would be required. In families with a high standard of living a campaign for more progeny should be initiated while antisocial parents, who send their healthy children to public homes, should refrain from giving birth to an unhappy offspring.

Besides, the propagation of high birth rates should not be left to ethnic or religious power groups. Women of such groups should realize, that political or religious leaders are exploiting them as objects in a birth war. Immigrants should adapt to the lower birth rates in the industrialized immigration countries, to avoid conflicts with the indigenous population. It cannot be tolerated that due to an inadequately high number of children immigrants try to establish their own cultural ghetto among the indigenous population.

Free access to cheap contraceptives would be most important especially in Africa. But cheap, easily applicable contraceptives enabling family planning of an illiterate population are not available. Therefore, new easily applicable contraceptives for both sexes are needed. At least AIDS is going to reduce unprotected, promiscuous sex in Africa and may result in a broader acceptance of condoms.

Medical progress has prolonged the medium lifetime of Europeans and North Americans to more than 70 years, but medicine has also caused the problems of over-population. Therefore it is only reasonable to call for medical strategies counteracting the disastrous side effects associated with over population. Millions of men in Africa do no longer die of plagues like yellow fever or Malaria. In consequence, the survival of millions of children leads to an unbearable increase in the local population, which finally results in general starvation. Consequently,

the high birth rate in Africa, which over centuries has maintained the population, must be reduced.

To imitate the old control mechanisms, every severely sick man, who is going to die without medical help, would have to agree to sterilization. Death would have sterilized him or her anyhow and would not have asked for consent. In over populated mega-cities (Cairo, Lagos, Mexico-City, Bombay or Calcutta) it would be reasonable, to combine life saving medical aid for people, who have already one or tow children, with obligations to birth control. All physicians, who contribute indirectly to over population, should realize the undesirable side effects of their activities. If people have been saved from immediate death they must be given a future perspective of continual survival. No sympathetic man wants back the ancient selective checks of Nature associated with high infant mortality, although all humans are the product of this natural selection process. Despite the fact that our feelings refuse this merciless selection, we cannot completely ignore the regulatory effects important for the adaptation to environmental challenges and for human survival.

Up to the 19th century, the natural selection was still in existence due to severe infectious or hereditary diseases. But gradually medical progress abolished all biological checks. The present selective mechanisms in industrialized countries differ completely from those existing for millions of years. Now religious, political or social (sometimes antisocial) motives play a much greater role for the number of children in a family than the resistance to diseases or the general skills of our ancestors to provide sufficient food. In Western Europe and North America capable and healthy people have no longer a selective advantage to survive, and men need no longer intelligence and a healthy condition to avoid life-threatening dangers and diseases. The natural selection for our genes, optimally adapted to human survival has been given up without reflecting future consequences.

With respect to a negative selection, also the problems originating from the introduction of anti-conceptive drugs must be considered. In Europe and North America unwanted offspring can effectively be avoided and birth control is universally used. However, in contrast to the evolutionary selection of the past, depending on responsibility and intelligence of the individual, a negative trend can be observed. Unreflective people, who live without family planning, may have many children in contrast to intelligent responsible people, who tend to control the number of their children more carefully. Probably, nowadays people with a low IQ replicate much faster than intelligent, educated people, who simply make a better use of anti-contraceptives and whose long education collides with the ability to bring up children. Concerning the chances of future generations to survive we may be facing a dangerous negative selection for men with a low IQ.

Considerably more research is needed to monitor the growth of the population and the consequences of family planning in countries practicing birth control. For instance, it would be interesting to know, in which way families with only one child, are going to impede the principles of evolutionary selection. Certainly, a composer like J.S.Bach as the fifth child of his parents would hardly have been borne in Germany today.

The question has to be raised by what means, both intelligent and ethically acceptable, the evolutionary selection might be imitated. Unfortunately, the contemptuous racial ideologies of Fascism have discredited eugenic considerations. Nevertheless, at least for our descendants, who will not like to be entirely dependant on medial aid, the question of the future of the human genes has to be discussed. Clearly, nobody should be preferred or discriminated due to his ethnic background. Not for the suspect predominance of a northern human race but for the sake of physical and mental health of mankind we should avoid to pass on severe genetic defects. In the first place, severe genetic defects, normally incompatible with prolonged survival of the

individual, should be considered. Preferentially, malformations and severe hereditary defects should be diagnosed during pregnancy. Today, the diagnostic possibilities have been improved due to the progress in DNA research, but DNA analysis will be improved further. It is, for example, not understandable, why people with inherited diabetes, who owe their fertility only to insulin substitution must pass on their genetic defect to their children. Of course, the situation might change, if the genetic defect can be cured. If we ignore the demands of human eugenics, we have to face an increasing dependence of large parts of our population on medical aid (antibiotics, insulin etc.). On the long run, even a slow dying out of mankind has to be taken into account. All the same, we should prefer such future perspectives to an uncontrolled replication of men with the inhuman checks of starvation devastation of Nature and war. For more than two centuries, men have accelerated their steps leading out of evolution. As there is no tendency to go back, we must find ethical solutions for sustained human survival.

9. Too late for a change?

Although in the meantime many parts of the world are too populous to avoid local wars, a certain possibility still exists to avert global conflicts on resources like oil or water. It is too early for fatalism. There is some hope, that men will find ways, to correct the consequences of the dissolution of human evolution. But a change in human thinking can only be reached if we understand that more people in the world do not mean more progress. Those, who try to promote a balanced birth rate in developing countries, will not live through their aim. A controlled reduction of human replication rates is rather complicated to obtain. It is an enormous challenge to human mind. But it could improve the ecology of the world more profoundly than all programs on the reduction of energy consumption and on the preservation of the biosphere.

In Germany most of the present economic and ecological problems would be solved with a population of only 40 millions. But at the same time a sustained replication rate and a normal distribution of all age groups and has to be achieved. In the south of Germany sufficient solar and in the north sufficient wind energy would then be available for private use and for industrial production. Nuclear or fossil energy would no longer be needed. The present competition for resources with other industrialized countries would no longer exist. We would no longer need an annual increase in export to pay for the steadily rising energy and food importations. Unemployment would disappear, because there would be less people looking for a job. Due to better training with fewer classmates young people would have a better education. As can learn from thinly populated countries like Sweden, factories at high technical standards would survive. We would certainly not return to agriculture. Industry and science can flourish with 40 millions of inhabitants as well as with 80. Looking back to famous musicians, writers or scientists at beginning of the 19th century, the proportion of innovative men in Germany must have been higher among the only 20 millions of inhabitants compared to the 80 millions of today. Even the cities would continue to exist but also sufficient untouched Nature would be left. In Germany many natural reservoirs would reappear. Besides, the aggression in daily life would be reduced. In an overpopulated country, where unemployment is a continuous threat, even during a good economic situation the fear of an energy- or employment crisis is always present.

The fight for every new privilege, for every square meter of land reflects the emotions (“Angst”) of people in populous countries and has determined the behavior of men in Germany for several generations. In such an atmosphere no poets or philosophers will thrive but egoists and psychopaths. Crammed highways and holiday resorts everywhere; residual areas of lonely Nature are treated as secret tips. Probably, the greatest advantage in a region with a reduced population density will

be a friendly neighborhood instead of competition in the daily work and in the traffic of the towns. Lower population figures will enable men to grow up with less fear of the future.

At present, for the 80 million people living in Germany sufficient food and energy cannot be produced by local resources, and the shortage of energy supply resulting in continuously rising prices is an unsolved problem. During the next decades, it will be increasingly difficult to sell more and more technical equipment to other countries, in order to buy and import more expensive raw materials and energy. It must be understood that the economy cannot grow forever. Due to the technical progress worldwide, the export to developing countries like China will stagnate. Even in the United States steadily rising population figures, which are not paralleled by an increase in farmland, will reduce the present surplus in food production. Even a lack of the food production can be expected, if the agricultural production can no longer count on the supply of cheap fossil energy.

Humans have learned to overcome the restraints of evolution; in particular they have learned to reduce the former high death rate in infancy. During the last two centuries a steadily increasing survival rate has led to an enormous growth of the population worldwide. For the next decades, new methods to further improve human fertility can be envisaged. Although a reduction of population figures in most parts of the world would be highly desirable, politicians or religious leaders want to increase the number of followers. We had been confronted with this misuse of “men- breeding” by various dictators either during fascism in Germany or during the Communistic regimes in Albania or Romania. Today, we realize a variant of fascism, the religious fundamentalism, where the main role of women is confined to reproduction.

But in the long run men will only survive, if they regulate the number of their offspring with sustained, rational concepts. These concepts have to imitate the old regulatory systems of Nature, which has enabled men for hundred thousands of years to adapt to the conditions of life on earth.

Only a permissive, open-minded society can attain controlled human reproduction figures, orientated at “tolerance density”. Here, the industrialized Western countries have to walk in front of developing countries still bound to their traditional life.

Our grandchildren will know, if we had been able to put up with the challenges at the end of human evolution or if we had left the word to uncontrolled migration and war.

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