

The Club of Rome: Agenda for the End of the Century

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(Aurelio Peccei dictated the last part of this 'Agenda' less than 12 hours before passing away on 14 March 1984. The document is, unfortunately, unfinished, and he did not see the typed version)

1. Less than 6000 days separate us from the year 2000, which represents not only the end of a century that has seen extraordinary scientific, technological, economic, social, political and military developments, but also the end of a millennium during which humankind emerged from the Dark Ages, set its domain all over the world and its skies, and became the basic factor of change in this corner of the Universe. What will happen in these 6000 days will depend almost exclusively on what humans will do, and on how and when they will do it, and is likely to modify their condition more radically than anything which occurred at any previous time. Momentous events and decisions are in fact maturing which are bound to change the course of human history.

Although the future cannot be prophesied, it is logical to expect that during these 6000 days:

- A supplementary population, almost as large as that which had accumulated during all the preceding ages up to the beginning of this century, will be added to the present one and must be accommodated on Earth by the year 2000, while at the same time provisions must be made for settling many more people later on.
- The already strained relations between our species and its natural environment will continue to deteriorate and the situation must be drastically redressed before it reaches irreversible breakdown.
- Human society will grow increasingly in size, intricacy and internal connections, so that, although highly diversified, it will in reality become a tightly-woven, integrated and interdependent system spanning the entire world, requiring altogether new political philosophies, new institutions and new methods of global governance.
- New high technologies will be developed in such fields as microelectronics, genetic engineering, space, ocean depths and materials, giving humankind even more overweening power to be used for good or ill, and which will thus have a beneficial or a deleterious impact depending on whether or not human development manages to keep pace.
- Fateful decisions will be made on whether to continue or to stop the arms race, and thus the build-up of nuclear warheads will either grow until these weapons will practically start firing by themselves or else they will be cocooned and dismantled and the presently rampant culture of violence will begin to give way to a new culture of nonviolence.

In the light of all these probable evolutions, it is perhaps not beyond reason to affirm that a whole era is now on the wane and a new one is dawning, confronting humankind with a new set of extreme alternatives. These can be cataclysmic if we who live at these hinges of history are unprepared for the change, or rewarding beyond imagination if we understand the mutating realities and face up to them as the responsible protagonists of this novel phase in the human venture.

2. To be true to its vocation of trying to perceive what it takes for our generations to respond adequately to the challenges and opportunities of this age of great transitions, The Club of Rome should, in my view, focus essentially on the crucial issues which are emerging and will affect the future of all peoples and nations.

To do this, we must attempt to envision the overall human condition in an epochal perspective. The fact that nobody else has essayed to do this till now should not deter us, nor should the realization of the immensity and complexity of the facets and problems to be considered, even if we are just to explore them superficially or analyze only some of their main aspects.

However empirical and tentative, an assessment of these issues has become indispensable if we want to prepare for a future which promises to be completely different from anything we have experienced, and try to make it worth living. This is why I am convinced that, even though the odds are great, The Club of Rome should do its best to bring these major issues dramatically to the attention of the public at large and, of course, of scholars, religious leaders and decision-makers, too. Only if all these sectors are sensitized to the obligation to devote all our capacities to confront the unprecedented perils and chances they embody, can our generations adequately play their role as worthy heirs of our forebears and responsible progenitors of future generations.

The Club of Rome and its regional or national associations have a number of other enquiries or projects under way or under consideration. Some of these touch upon these great issues only indirectly or are devoted entirely to other fields, such as global poverty, complexity, the enterprise in flux, microprojects, bioengineering and society, and alternative futures (Forum Humanum, FH). All should of course be continued both for their own merits and because they may provide a valuable background for the study of the main global issues.

3. The analysis of these global issues should not be considered just as an exercise in theoretical speculation. It must have the positive connotation of a search and research on what humankind should accomplish during these 6000 days to prepare and meet with reasonably good chances the extraordinary challenge of the new era. I would label as "missions" the great enterprises of global scope our generations must set to themselves in order to survive the shocks, threats and constraints of the future and at the same time take advantage of the openings it presents for them to reach an unprecedented level of human fulfilment and quality of life.

Put in this way, the objectives of these missions should be recognized to be in everybody's interest, while no peoples or nations have enough power to attain them alone, or to make them unduly serve their specific goals to the detriment of the others'. All human groups therefore should be ready in principle to consider these missions and their objectives as matters for widespread co-operation.

I will now briefly deal with five of the key missions which the human community should undertake before the end of the century, indicating also a few of the ideas which I feel are representative of the thinking which should guide them. Although it is a truism, let me affirm first that this new phase of human history is predicated on the assumption that it will not be preempted by a nuclear war. For this, the world must rely on the restraint and wisdom of the two superpowers, which may seem to be asking too much, since it is their power politics that have brought humankind to this extreme predicament, while a tragic human mistake or rash of folly, or an electronic circuit failure could well trigger off a holocaust. Such a drastic finish to our career looks anyway so unearthly that I propose that we discard it in our reasoning.

Let me recall that some 15 years ago the concept of 'limits to growth', unpopular as it was in that period of euphoria, was undauntedly advanced by The Club of Rome as a warning against the self-complacency of industrial society. Today, in a much more critical world situation, The Club of Rome should not waver over taking an equally determined stand, this time to shake society out of its inertia and resigned acceptance of things as they are. Under the present circumstances, the fundamental concept to be fostered is that it is fully within our powers to reverse the current negative trends and set humankind on the ascent again. To do this is indeed our bounden duty, and we must brace up to accomplish it, while not to do it would render us wholly guilty because it would be tantamount to giving free sway to the worst alternatives of our future.

Now, I would like to submit that the essential role The Club of Rome should try to play in the crucial period ahead should be that of contributing in all possible ways to the renaissance of the human spirit and the redress of human fortunes in a sane society, and that it should focus on the five following great issues I consider among the most decisive for the human future.

Human Settlements

To settle and provide a decent standard of living for the additional population expected on Earth without disrupting the environment irremediably is probably the largest real problem facing humankind during the next few decades. Here are some aspects of the problem:

- From the dawn of time till the year 1900, human population grew slowly to reach a total of 1.6 billion. Then it quickly jumped to 4.7 billion by 1983. This unexpected exponential growth caught the world unprepared, so much so that almost one fourth of the total population has to live near or below the poverty line, which is morally and politically intolerable.
- By the year 2000, a supplementary population of 1.5 billion is expected, while still another 1.5 billion will probably be added in the subsequent 20 years. Then the population will apparently continue to increase, but projections are not very reliable.
- These new waves of people are not going to accept a life of destitution. Yet the problem is that they must be settled in practically the same areas as those already occupied by the present population, since lands fit for human permanent habitation are limited and represent probably the most finite of our finite natural resources. Altogether, what may be considered as the 'human habitat' is only about one quarter of the Earth's ice-free land surface.
- Moreover, these same areas also contain the bulk of the agricultural soils, which should never be sacrificed, no matter how pressing the demand for space for other uses. Soil is our crucial life-support system, and must be protected at all costs against any kind of erosion, because when soil is lost it is practically lost forever. Suffice it to recall that, even with the best protection of a well balanced plant cover, Nature takes from 100 to 400 years or more to generate 1 cm of topsoil.
- The rest of the planet too is indispensable for our existence, of course. The outlying masses, the seas and the oceans, the atmosphere and some superficial layers of the Earth crust are essential as providers of life-support and resources. But they cannot be the permanent home of man.
- The only possibility of accommodating in a fairly orderly way the six, seven or more billion who will soon have to share the Earth, and of doing this while maintaining in a passably good state the natural environment they and their successors will need for all the time to come, is to prepare in advance some kind of overall 'master plan' of global land occupancy.
- It is true that, since rather less than 10% of the new population will be born in the present developed countries, the question more directly concerns the Third World and especially some of the high population growth countries. But it is no less true that the entire world system may be disrupted if a substantial part of it is thrown into chaos by unsettled overpopulation.
- This is why I have proposed a broad-line feasibility study of integral land use, management and conservation, region by region, for the world as a whole. Of course in such a study land must be considered with all its natural characters and appurtenances, such as the nature of the soil, water, climate and biophysical resources, as well as the human population and its artifacts.
- A land use plan, however, is not enough. Actually, to install these additional populations decently, what may be called a fully equipped 'second world' is needed. The physical infrastructure alone of this second world will require construction work comparable to that which humankind has carried

out in the last 1000 years. Just up to the year 2000, housing and facilities must be built for 15,000 cities each with a population of 100,000 (or 1.5 million villages with 1000 people), to say nothing of the need to upgrade the wretched dwellings which today are the abode of the most destitute of our fellow humans.

- An immense corollary problem is that all these people must then earn their living. It is estimated that before the end of the century upwards of a billion new jobs must be created or equivalent occupations found for a swelling workforce which will crowd the cities and the countryside, again mostly in the Third World.

These few observations are sufficient to outline the complexity and colossal dimensions of the tasks incumbent upon our generations; they may also suggest the amount of human suffering and the explosion of rebellion and pent-up violence which may be the consequence of not making timely provision for adequately accommodating the burgeoning human population. Though the problem is rooted essentially in the poor countries, it cannot be attacked adequately if policies, strategies and means are not prepared in advance with the long-term, planned financial and organizational support of the world community. And in turn this will require an uncommon sense of brotherhood and entirely new measures of global solidarity and an enlightened vision of self-interest consonant with this day and age.

Conservation of Nature

Strictly connected with the preceding problem is the greatest danger for humankind, namely that, growing in numbers, power and appetite, our species will tend to live beyond the means offered by the global context of this small Earth of ours. This is something that is already occurring in some sectors and regions even today. The danger does not lie so much in the field of inanimate resources, because the Earth's crust after all is so thick that it can satisfy increasing human demands one way or another; though some shortages may be experienced in certain resources, substitutive materials and new energy sources can probably provide alternative solutions. Quite different, however, is the situation in the more vital realm of the life-support capacity of the world's ecosystems considered in their totality, both inside and outside what I call the human habitat. The state of the planet under these aspects is very little known; and the time has come to assess it with the utmost care before it is too late.

- The all-important place in the Universe is our biosphere, formed by the thin mantle of soil, air and water on the Earth's surface, because it is there where life, as we know it, exists. The human species is part and parcel of the pool of life which thrives there and so it should endeavour to keep it as healthy as possible.

- The biosphere had evolved for several billion years before homo sapiens appeared in its midst about one million years ago and then spread and imposed his presence and his mode of life over all other species.

- Pursuing his ends, humankind has increasingly transformed the natural environment, making many parts of it well suited for its evolving living styles, but at the same time displacing or eliminating plants and animals often so recklessly as to lay waste other areas once prosperous and now no longer productive or inhabitable.

- The result is that nowadays the texture of wildlife on the planet is seriously degraded, and this already affects our life, too. We are confronted with a quite dismaying picture: wilderness, the treasure chest of Nature, disappearing; deserts advancing; tropical forests in rapid decimation; Boreal forests poisoned by air pollution and acid rains; coastal zones and estuaries ruined; vast numbers of animal and plant species in course of extinction, with even more massive hecatombs in sight; wa-

ters, soils and the very air we breathe contaminated with the dust, litter and chemicals of our civilization which change their character; natural cycles, climate and the ozone layer tampered with often irreversibly.

- Even the strategic biological systems on which humankind so heavily depends for its daily life are under stress; croplands are overharvested, pasturelands overgrazed and oceans overfished. Yet, the number of people who are hungry or malnourished is even larger than in the past; and human demands are steadily soaring. It is expected that the present generations will consume more natural resources during their lifetime than all past generations put together, and that henceforth consumption will increase even more quickly than population.

- As an example, food, the primary commodity, is a matter of concern for all the foreseeable future. The existence of a much vaunted theoretical world food potential which is still certainly fairly high, can provide us with little solace in the face of these trends and the disorder of the world markets, not least because of the very serious phenomenon of topsoil erosion caused by our malpractices both where traditional farming prevails and where modern agriculture has been adopted. While no reliable world estimate of the total loss of food productivity due to soil erosion has been made, the figures available give rise to much concern.

- Besides food, the production of foodstuffs, firewood, fiber and other plant and animal products also causes great worries since they are probably heading for an irreversible decline.

- Food security and the availability of these other natural wherewithals for human life, so important in themselves, are doubly important because they are also indispensable ingredients of peace. So, even if their deficit is rooted essentially in the less developed regions, the associated difficulties are bound to have an effect on the entire world system.

- Man, however, is related with Nature in thousands of other ways. He is in fact even more intimately integrated in and more fundamentally dependent on the world of life than may be suggested by any simple comparison with the economics of what we call 'resources'. His psycho-physical existence is the product of myriad interchanges and osmosis with the rest of life. He should therefore abstain from doing anything which may weaken or modify the world biomass- and its habitat. He must be quite sure that any changes resulting from his action do not adversely affect the regenerative capacity of Nature or impair his own balance therewith. More than that, he should engage in a systematic campaign to mitigate at least part of the damage he has inflicted on his natural environment during the past.

- Long-term Nature conservation plans and strategies are thus becoming imperative not only to let humankind obtain and retain the living resources it needs, but also to keep the planet healthy over the years as an obligation towards future generations. The objectives are many in number, for instance; the survival of non human species and protection of ecosystems even when they are not of immediate interest; the safeguarding of marginal ecological processes and life-support systems; and the preservation of the genetic diversity of the biomass which is an expression of the Earth's evolutionary capacity that, among other things, had produced our species and which we may well need again tomorrow.

The establishment of harmony between man and Nature not only responds to considerations of immediate interest and those regarding the existence of humankind in the foreseeable future; it is also a profound cultural value because *Homo sapiens* cannot consider himself as the absolute master of the planet or live here in splendid isolation, and he cannot disinterest himself in the world of life without losing part of his own humanity which throughout the centuries has been nurtured by imageries, fables, myths, poetry and songs inspired by the other forms of life.

Harmony is indispensable too, not least because of the great over-hanging danger that, in a not so distant future, when humankind may have built its splendid technological world and solved all its major economic, political, military and social problems, it will discover to its horror that in the process it has reduced the Earth to such a state that it is no longer capable biologically of supporting our formidable but improvident species. Therefore, the 'carrying capacity' studies started in various places should be stepped up, and must be expanded to embrace all regions and coordinated at the world level.

Governance of the System

The greatest obstacle to embarking on the weighty missions humankind is called upon to perform in this period is the absolute ungovernability of society, as presently organized. In these circumstances, no great enterprise of global scope has the slightest chance of being carried out, or even designed, however essential it may be. Despite the system-like nature of humankind's global body, no political philosophy or institutions have been evolved to ensure its governance. Human development has indeed been bewildering in its accumulation of scientific knowledge, technological proficiency and industrial efficiency, even though these are matters that often proceed more or less anarchically, deepening the divisions among the different societies: but this 'progress' has not been matched by a parallel development in social and political inventiveness, creativity and performance. This mismatch and imbalance between man the inventor and man the administrator begin within the human being himself and spread to all levels of aggregation, creating societies which are thus incapable of effectively and rationally devising ways of controlling, harmonizing and directing to useful ends the immense means, knowledge and experience they collectively possess, with the result that the entire world remains in a state of disorder, instability and unruliness.

- One of the major reasons why the human system remains utterly ungovernable is at present East-West rivalry and tensions and North-South asymmetry and gaps.
- The system is anyhow almost ungovernable because of the fragmentation of the human community into some 160 states, big and small, old and new, powerful and weak, but all 'sovereign', namely self-righteous and self-concerned.
- Functionally, therefore, today's teeming and powerful human community limps ahead as an aggregation of disparate subsystems each trying to go its own way and each defending its own interests independently one from another, except when some of them form groups to oppose other groups.
- Then there is the fact that the levels of development of all these states are so wide apart that, even if they wanted to find common ground for co-operation, they would have great difficulties in so doing.
- Yet, as the global system becomes ever more inter-knit by cross-boundary trade and investment, by communication and transport networks, by tourism, by the worlds of sport, music and entertainment, and not least by atmospheric and oceanic pollution and by the threats deriving from the military build-ups, all its parts are inextricably drawn together willy-nilly into a heterogeneous but unified pool in which all of them are affected by what happens to the others, and so all will have a common destiny.
- Therefore, for better or for worse, overall development of the total system, and hence of all its parts, must be a matter of concern for every human group, whatever its present condition; and in the same way, as democracy, participation and the civic virtues of mutual and solidarity make for the strength of individual societies, the corresponding attitudes must be evolved in the international scene if the whole of the world is not to collapse one day or another.

The time when each nation could try to afford to go it alone, heedless of the others, will soon be over. Even small or weak human groups will be able to destabilize the entire system and therefore they must be given a hearing and to an increasing extent be given satisfaction. Thus, in everybody's self-interest, the sphere of active solidarity must be expanded from the national to the regional and the global realm, and ways and means found to translate this new posture into institutions, policies and strategies.

The first move will probably have to be made by East and West. When they finally come to perceive that their armaments and scheming are cancelling each other out, they will be automatically induced to try to find ways of combining their power and capacity to steer the world in directions agreeable to them. This will be a great step forward, but only a step, because soon after they will discover also that the best way to fare ahead is not to try to impose their will, but to join with others too because only through the creative and responsible participation of all human groups can the state of both the planet and humankind really be improved.

For all this to happen, as I will explain in a moment, the triggering device cannot but be a profound cultural evolution that the Club of Rome should show the way in promoting. It will have to face all kinds of difficulties and pitfalls, but as this is the right way, it will be helped in this by the force of things characterizing the new age.

Human Development

The most valuable assets human-kind can count on to ensure the cultural, political and spiritual evolution required to stop its decline and prepare for the future are to be found in the still untapped resources of comprehension, vision and creativity as well as in the moral energies which are inherent in every human being as a part of his or her genetic endowment.

These resources can and must be developed as an indispensable precondition to make tomorrow's world livable in, and to ensure that there will in fact be a future for humankind. This is a new mission that humanity must set itself, a mission that will have no end. Its rationale is simple and complicated at the same time.

- The extraordinarily great progress made by our techno-scientific and industrial capacity has given us the knowledge and means to change practically everything on Earth more or less beyond recognition, but it has not given us a clear vision of what we are doing, nor the wisdom to do it exclusively for the betterment of self and environment.
- Not understanding the import and impact of the mutations we bring about, we are increasingly lagging behind and at odds with the fast-changing real world. Now, with the advent of even higher technologies and the spread of industrial, superindustrial and postindustrial civilization, there is the risk of incongruities growing still further. People at large will find it difficult to adapt to things ever more artificial, whose logic and even language are so alien to human tradition that only a small 'elite' is likely to find itself at ease with them.
- Progress, as it is now understood, certainly cannot be stopped. Therefore, humankind's only recourse is to enhance the quality and qualities of its members all over the world so that, by learning how to ride the technological tigers they have unleashed, humans and not machines will be tomorrow's protagonists.
- Fortunately, as now widely recognized, the normal human being, even when living in deprivation and obscurity, is endowed with an innate brain capacity and a learning ability that can be stimulated and enhanced far beyond the current relatively modest world average level of utilization.

- A movement which is still incipient was started by a CoR-sponsored project called 'Learning'. This shows that people at large have the capability of vastly improving their understanding of reality and their performance. Indeed, their potential is humankind's greatest resource, and one which is not only renewable but also expandable and ubiquitous.

- Many more reasons than those emerging from what has already been said make this human development most urgent. One reason is the radical change likely to occur in the relations between man and his work. As a consequence of rapidly progressing automation, robotization, informatics and telematics, there is a danger in the developed countries, too, of a sudden, unchecked mass structural unemployment that will affect particularly the young. The social impact will be enormous, unfathomable. The work ethics, the lofty place traditionally attributed to work in man's life and even the Marxist concept of the class structure of society will be revolutionized.

- A few figures are sufficient to illustrate the situation a-building. The average life expectancy in developing countries is upwards of 70 years, or 600,000 hours, of which two-thirds may be supposed to be absorbed by physiological requirements (growing, sleeping, resting, eating, etc.). This leaves about 200,000 hours available for the 'cultural activities' which distinguish man from animal; and, as the average work hours during a lifetime will soon be reduced to 40/50,000 (or less), the non-work hours available for other activities will greatly outnumber the work hours. This 'free' time may weigh on society as a curse, or become the magic key to its self-realization; but to pursue the second alternative, 'human development' is indispensable, while society itself must profoundly change some of its basic tenets, including probably profit as the mainstay of its system of reward.

- Another reason why human development is so imperative is that, to get out of its predicament, humankind must realize where it is at present, where it is going and where it could go instead. The study of the options open to us for 'desirable' alternative futures, rather than the sombre one towards which we are rushing, is the objective of the Forum Humanum project, which represents just a first tentative step in this direction. In this time of accelerating events and extreme alternatives, however, a sense of direction and a high degree of concern for the long-term future must become standard features of a culture of survival and progress accepted by the majority of the world population.

Non-violent Society

As already mentioned, a premise of future-oriented thinking is quite evidently the absence of a nuclear holocaust. This is a necessary but not entirely sufficient condition to bridge this transition period. To ensure the long-term development of the mighty humankind which will live in the new era, it is necessary to banish altogether war and with it military and nonmilitary violence from the parameters of its evolution and culture.

- The primary mutation needed in our traditional outlook and values in that of freeing ourselves and our societies from the 'complex of violence' we inherited from our ancestors. For them, recourse to violent means was natural because, weaker than other creatures and still scantily endowed with experience and tools, they had to be permanently on the alert and the defensive.

- This is why violence is, though wrongly, considered part of the human nature still now, when the concept of nonviolence must instead become one of our basic cultural values. I submit that this reality is progressively recognized, and that violence, erstwhile means of survival or ascent, is seen now as the main cause of our doom. Violence and its ideology of whatever sort are in fact remnants of a past which is no more, cultural derangements and social pathologies as incompatible with the new era as slavery or human sacrifices would be for today's society.

- Peace is the primary factor in any equation in which development, quality of life and self-realization are the objectives to be pursued. And peace is to be understood in its universal depth and breadth of nonviolence not only at all levels and sectors of human society, but also in the relationships between human society and Nature.