

## THE CLUB OF ROME

### THE CLUB OF ROME -- THE NEW THRESHOLD

The purpose of this note is to recapitulate the concern and convictions of the members of the Club with regard to the present state of world society, to assess the position reached by our initial efforts, to discuss the strengths and weaknesses inherent in the nature and concept of the Club and to enumerate some of the problem areas which we feel demand urgent investigation.

### THE PREDICAMENT OF MANKIND

The initial impulse of the Club was a common concern regarding the deep crisis faced by humanity -- a crisis which we feel is different in kind from those of the past and which the societies of today are ill-equipped to face with their present attitudes, values, policies and institutions. Men everywhere are perplexed by a range of elusive problems--deterioration of the environment, the crisis of institutions, bureaucratisation, uncontrolled urban spread, insecurity of employment and loss of satisfaction in work, the alienation of youth, questioning of the values of society, violence and disregard of law and order, educational irrelevance, inflation and monetary disruption in the face of material prosperity, the unbridged gap between rich and poor within and between nations--to mention only a few.

These difficulties appear to be world-wide symptoms of a general but as yet little understood malaise. It is this cluster of intertwined problems which we term the Problematique. Their interactions have become so basic and are so critical that it is ever more difficult to isolate from the tangle of the problematique single major issues and to deal with them separately. To attempt to do so only seems to increase the difficulties in other and often unsuspected parts of the mass.

For the same reason no nation, not even the biggest, can hope to solve all its own problems since these involve other nations and interact with the global system as a whole. Interdependence is not, however, restricted to the political context; it also regards to energy resources, food and industrial raw materials, markets for products, transfer of

new technology, even the explosion of violence. Beyond these material concerns, the problematique is all-pervasive, because human aspirations can no longer be bounded by a particular environment or culture. What we term the Predicament of Mankind is our own limited perception of many individual symptoms of a profound illness of society for which we are unable to prescribe an effective remedy in the absence of a reliable diagnosis.

### THE CLUB OF ROME AND ITS FUNCTIONS

The Club of Rome, an informal association of some eighty-five individuals in more than thirty countries, crystallised around a mutual concern with the problematique and the need to delineate it and understand its nature. The totality of the membership meets only occasionally, on average once a year, but most of the individual members are in frequent contact with their colleagues. The Club emerged, somewhat hesitantly, at the end of an exploratory meeting held at the Accademia dei Lincei in Rome in 1968. Most of the (then very few) members met again in Vienna in 1969 at the invitation of the Austrian Chancellor, while the full membership was convened to a meeting in Bern, Switzerland in 1970 as guests of the Swiss Confederation and in Montebello, Quebec in 1971 as the guests of Canada. A full meeting of the Club took place at Jouy-en-Josas near Paris in January 1973, made possible by French industry, while a further meeting will be held in Tokyo in October 1973, preceded by a Technical Seminar, both supported by the Japanese members of the Club.

Chartered under the laws of Switzerland, with a membership at present limited to 100, the work of the Club is carried out by an Executive Committee, whose membership is at present: Frits Böttcher, The Netherlands; Alexander King, OECD, Paris; Saburo Okita, Japan; Aurelio Peccei, Italy; Eduard Pestel, Federal Republic of Germany; Hugo Thiemann, Switzerland; Victor Urquidi, Mexico; Carroll Wilson, United States of America.

As an informal association, with a minimum secretariat and without any staff or formal budget, the functions of the Club were conceived as essentially catalytic. It has the following main objectives:

- to stimulate research and encourage the development of methods to elucidate and delineate the elements and interactions within the problematique, to understand better the workings of the world as a finite system and to suggest alternative options for meeting critical needs;

- to provoke a dialogue with political decision-makers, industrialists, academics and many groups in many places, to arouse appreciation of the nature of the crisis and the need to consider new policies, attitudes and courses of action to ensure the continuity of mankind and to cultivate a new humanism conducive to world peace, social justice and individual self-fulfilment.

### THE INITIAL PHASE

After an initial period of intense discussion among the few, original members of the Club, it was agreed that concern with the world problematique was its central feature. A series of conversations was therefore begun with political and intellectual leaders in many parts of the world, but very soon it was realised that policy and institutional change could only result from a more precise understanding of its nature and interactions. It was decided to attempt, by any appropriate methods which might exist or be developed, to quantify the scale and time dimensions of the world problematique and seek to identify the needs for revision of values and institutions which govern man's capability to adapt to change. It was understood that this would entail extensive research effort in what is virtually a new and unexplored field.

After prolonged search for a methodology which would embody both the scale and time dimensions of the world problematique, it was decided to invite the Systems Dynamics Group at the Massachusetts Institute of Technology, under Professor Jay Forrester, to undertake the construction of a world dynamics model, and the Volkswagen Foundation of Germany agreed to provide the necessary financial support. An international team, led by Professor Dennis Meadows, was formed to carry out this work.

The findings of this first project are presented in a book, entitled The Limits to Growth, by Meadows and co-workers and containing a commentary by the members of the Executive Committee. Initially published in the United States on 6th March, 1972, at the initiative of Potomac Associates, The Club of Rome has arranged for editions to appear in some twenty languages. As to date, the American, British, French, Italian, Dutch, German, Japanese, Danish, Norwegian, Swedish and Spanish editions have appeared and have been widely distributed, attracting exceptional press comment and generating much controversy.

A Technical Report, Dynamics of Growth in a Finite World, describing the

work done at MIT, is now available. It contains full details of the assumptions made and an exposition of each of the inputs into the model. Toward Global Equilibrium: Collected Papers is another volume of studies in depth of population, natural resource depletion and other key variables of the model. Both books can be obtained from Wright-Allen Press, 238 Main St., Cambridge, Mass., USA.

Important as the MIT report is as a pioneering entry into the new field of investigating the world problematique, it by no means represents the totality of the Club's concern and approach. Much new research into global, regional and national systems is required, as well as extension towards the consideration of broader social and value issues and a penetration into some of the deeper problems of the human future. The Limits to Growth is not a statement of The Club of Rome credo, but a first hesitant step towards a new understanding of our world.

#### LIMITS TO GROWTH - INFLUENCE AND CRITICISM

It is difficult at this stage to assess the significance of the report. Reactions to the book, both positive and negative, have been remarkable, both in the United States and Europe and indicate that despite criticisms of its scientific accuracy and even its basic validity, it confirms the qualitative and intuitive conclusions of many. Many government departments and international organisations in different countries are discussing it and, in some cases, setting up models to test and extend it. Literally hundreds of conferences and seminars, round tables and public debates, television discussions and parliamentary questions have taken place on this subject. In several countries it has become a matter of party political controversy. It has been discussed by the boards of multinational corporations. It has become a matter of controversy between members of the Commission of the European Communities. An important rencontre internationale was organised in Paris by the French Minister of Finance, Monsieur Valéry Giscard d'Estaing, with the participation of leading world personalities with, as a key theme, 'where does growth bring us?'. It has been discussed by the Parliamentary Assembly of the Council of Europe. A paper prepared at the request of the Council of Europe on The Limits to Growth in Perspective can be obtained by writing either to them or to The Club of Rome. In the paper a summary of the criticism is given in the form of 'point and counterpoint'. An interesting visual presentation of the ideas of The Club of Rome has been

arranged in Rotterdam, in three beautiful and centrally located pavilions made available by the municipality. This exhibition was opened by the Queen in the presence of the Prime Minister and many other high officials. A more permanent and extended exhibition is now being planned. Most of the serious press, as well as the radio and television of many countries, have carried features on the growth issue or have taken sides in the debate.

Criticism of the report has come mainly from the traditional economists, from people who expect solutions to all the problems of the world from the cornucopia of science and technology and those who maintain that growth is an inbuilt characteristic of our system and that without growth, stagnation, decay and finally death will result. The reactions of the economists have been most violent and at times highly emotional, but there are signs in several places that many of the younger economists look upon the whole issue quite differently. Positive comments have come primarily from environmentally-oriented groups, political and social observers, and many of the commentators in the press, as well as from members of the general public.

It may be useful to comment on the nature of the main lines of criticism. Some of these are in fact criticisms of what the study does not set out to do. For example, both the work team and the Club stated clearly that it should not be regarded as a scenario for the future, but an analysis and projection of trends and their cross impacts to indicate the consequences of continuing with present attitudes and policies with the express purpose of inducing deliberate change in these attitudes and policies in order that the projected future shall never materialise. It is therefore a complete misunderstanding of the aims of the study to dismiss it on the grounds that projections of the future from the present are always falsified by time, by the appearance of new factors and discontinuities. The MIT model hopes indeed to pave the way for the introduction of such discontinuities, rather than to rely on the haphazard intervention of external events or natural catastrophe. Again, many berate the model for pretending to provide a basis for policy change, stressing as does the book itself that even, if current trends are true, they will never manifest themselves uniformly or simultaneously in the different environments of our heterogeneous world. This is true; the MIT model cannot in its present preliminary state provide a sure basis for policy change. It is, however, highly significant as a first attempt, crude and tentative as it may be, to look at the operation and interactions of a few of the more important and quantifiable variables of the world system. With our growing appreciation of the interdependence of peoples, such an approach, subject to validation, extension and refinement, provides a perspective against which regional

or national systems can be studied and developed with a realism which can never emerge from approaches isolated from the current of global forces. We are, of course, fully aware of the need for studies of disaggregated projects within the world perspective.

We freely accept that there are many gaps and imperfections in The Limits to Growth, not at all surprising in a first pioneering attempt to probe into a new field of research. However, the book seems to us to be outstandingly important for three reasons:

- it has been most timely and successful in focussing attention on essential problems which, irrespective of the validity of the detailed findings of the study, may determine the future of society, and in initiating a debate throughout the world on the dominant uncertainties of our times;
- it has opened up a new field of extension of human knowledge, namely understanding of the operation of the world system as a whole, and in the process will inevitably have a considerable influence on the science of economics, despite current protests: some of the new approaches are mentioned below;
- it gives a perspective and some base, albeit tentative, within which national efforts in science and technology can be reoriented towards the general well-being of our species.

#### UNDERSTANDING THE PROBLEMATIQUE – THE NEXT PHASE

As already said, the MIT research, while a magnificent pioneering effort, is only the first step in this important task of understanding the problematique, on which so much depends. It has already stimulated much new work, a few items of which are mentioned below. Members of the Executive Committee receive many communications from colleagues in different parts of the world, whether proposals for new research or requests for advice concerning the desirability of new approaches. It may be useful to summarize briefly a number of areas where, in the view of the Executive Committee, new research is urgently required, with indication of existing initiatives.

##### 1. Refining, Deepening and Extending the Present Model

There is an obvious need to reassess the validity and implications of



the initial model, taking account of technical criticisms, new data and more accurate assumptions, as well as of adding new variables as and when these may become quantifiable. Professor Meadows, in his new location at Dartmouth, will no doubt be concerned with this. The Science Policy Unit of the University of Sussex, a British Government Department, the World Bank, a group of scientists at CERN and many others are attempting to repeat, modify or discredit the model. A Washington analyst, Michael Deutsch, is undertaking a thorough analysis of the MIT model and findings. We can only say that this will be an unending activity.

## 2. Disaggregations

It is evident that studies of a similar type, but confined to particular countries or regions, are required; and no doubt some of the above models will develop in this direction. A series of models of Japan as well as of world nonrenewable resources are in construction and one of West Germany in the enlarged European Community is contemplated by German scientists with a side study of the relationship of Europe to three large developing areas beset by serious population growth problems. Professor Timman of the Technical University, Delft, also intends to work on a project concerning a large area of the European Community where further growth may determine unmanageable crises. Such disaggregated models may well enable social and other factors to be taken into consideration and will throw light on the dependence of the industrialised countries on raw materials from abroad and particularly from the less developed countries. It is probable that many such national or sectoral models will be developed in the next few years.

## 3. New Methodologies and Steps Towards Practical Action

Already many months before the appearance of the limits book, Professor M. D. Mesarovic of Case Western Reserve University in Cleveland, Ohio, and Professor E. Pestel of the Technological University of Hannover initiated a new research project entitled Strategy for Survival in order to provide a systemic policy instrument as an aid for the formulation of adaptive social, political and economic policies to combat the multivariant crises which are to be faced in different parts of the world in the coming years and decades. The decision tools to be developed by this project will be in the form of a set of interactive computer models which crisis-analysts and policy-makers can use effectively. The thereby achieved provision for the

heuristic uncertainty, unpredictability and variability of human responses and actions is essential for an adequate realistic modeling of the dynamics of mankind's present situation and future development.

Hence, the construction of the model is based on the multilevel, hierarchical systems approach. In its present version the world model consists of seven interacting regions: (1) industrialised countries (free market), (2) industrialised socialist countries, (3) China, Mongolia, North-Korea, (4) Rest of Asia, (5) North Africa and Middle East oil countries, (6) Rest of Africa and (7) Latin America. Each of them is represented by a three-strata structure:

- the causal stratum containing all processes whose future evolution is fully determined by internal dynamics, present conditions and external impulses. In addition to physical and ecological processes, the causal stratum contains other processes, for example, operational and short-term economic activities which through feedback-loops respond to immediate conditions and influences;
- the decision-making stratum (goal seeking) representing the response of society and its institutions to ever-changing crisis situations in an adaptive manner;
- the norms-formulation stratum representing the values and needs which guide and constrain the goal-seeking processes.

In a recently completed Progress Report the feasibility of the project has already been demonstrated.

Even without the decision-making and norms-formulation stratum, the regional computer models, having been integrated into a single regionalised global model, will yield a deeper insight into the evolution of the Predicament of Mankind than was achieved by the limits model since it will indicate in a more realistic manner the time and nature of the specific different crises to be expected in the seven regions, and thus will, even in this preliminary stage, provide a scenario for realistic political, economic and technological alternatives in the various regions and their regional and global impact. The first results of this study were demonstrated on the computer at the recent meeting at Jouy-en-Josas with particular reference to energy problems. Members of the Club were impressed by the real possibility which this



approach provides of enabling policy analysts to dialogue with the computer, present policy makers with sets of options, and test the consequences of alternative decisions.

#### 4. Problems of Development (and Economic Justice)

To some the MIT report appears to be a somewhat technocratic, defensive and even politically reactionary manifestation of the fears of over-industrialised countries. This is far from the intention of its authors and of The Club of Rome--which takes no sectoral approach on behalf of the affluent, industrialised countries but is concerned with the world situation and the human condition in the total sense. The limits book, it is freely admitted, makes all too clear the plight of the developing countries within our closed system, but it does at least pose the problems in an inescapable manner. It is urgent, however, that in a more disaggregated approach to the world problematique particular attention be given to the problems of the less developed countries in the context of our finite planet. This is inherent in the Mesarovic/Pestel model. The scientists at CERN hope to follow separately the evolution of the rich and the poor parts of the world and find out whether the present world organisation and wealth distribution confirms or worsens the predictions of the MIT model. The need to study separately the economic and social pathos of highly industrialised and underdeveloped regions is all too obvious when one remembers (to quote Barbara Ward) that a child born in the United States is likely to consume 500 times more material resources than one in poor areas of Africa or India.

Following the seminar held by The Club of Rome at Rio de Janeiro in July 1971, a group of Latin American scientists decided to undertake a study of the world from the point of view of the developing countries. A project was elaborated and is now in operation at the Fundación Bariloche in Argentina. This study, known as The First Alternative World Model, is being undertaken by a team from a number of different Latin American countries, led by Dr. Amílcar O. Herrera. The project will include a thorough analysis and criticism of the MIT model and its implications from the point of view of the less developed countries and will then proceed with the building of a new model. A basic feature of this will be the working out of a welfare index which should be a minimum reasonable and attainable birthright of every inhabitant of the earth. Growth hypotheses will be developed to see how such a level could be achieved in 30-50 years, how the economic gap which separates developed from underdeveloped countries could be eliminated and to determine the extent to which these objectives are compatible with the limitations of the ecosystem.

## 5. The World Population Problems

Rapid increase in world population, especially in regions already ill-favoured, appears to us to be at the centre of gravity of the problematique and we feel that the establishment of wise policies for the stabilisation of population levels and the technical and educational measures which must accompany them are of top priority. We particularly welcome the activities of the United Nations in this field, which will culminate in a World Population Conference in 1974.

Following discussion by representatives of the Club with Mr. Rafael Salas of the United Nations Population Fund, a grant has been authorized by the latter to El Colegio de México for a study of critical areas in the population field, in preparation for the debates which will take place during the United Nations Population Year. This study will be supervised directly by Victor Urquidi and be developed in cooperation with outstanding experts in various parts of the world.

However, while there may be reason to hope that as a result of wise policies, economic improvement and natural causes, the growth of world population will be slowing down by the end of the century, it is generally considered that a further doubling will be inevitable, probably within the next 30-40 years. A special study is therefore being elaborated under the general guidance of Professor Jan Tinbergen. The project, called Population Doubling Problems, will be led by Professor Hans Linnemann of Amsterdam Free University. This study (not strictly a model) will investigate the ways and means required to accommodate the second wave of inhabitants of our planet and then to supply them adequately and decently with food, goods and services, without impairing the natural and human ecology. Its objectives are thus rather similar to those of the Bariloche project. Since some parts of the world are already achieving a population equilibrium, while others are in an explosive phase, this project will have to be disaggregated. While essentially economic in concept, it will include special studies, particularly with regard to food production and the possibilities of alternative, non-traditional food sources. The project will also attempt to identify various alternative 'solutions' and policy instruments. Although the work will be based in the Netherlands, coordinated studies will be undertaken in other European countries, such as Sweden, Belgium, and elsewhere. It is hoped that a series of deep complementary studies of population trends, looking towards a global population strategy, will also be undertaken, concerned not only with total population increase but also its concentration in urban areas.

## 6. Another Kind of Growth

The research areas described above have already attracted scientific interest and work has begun. There are, however, a number of fields related to the problematique where, although many specialised studies are in progress, little comprehensive work is planned as yet. One of these is the growth process itself.

One of the most striking features of The Limits to Growth is the demonstration of the possibility of creating an equilibrium state for the world, which would depend on population stabilisation and an end to undirected economic growth as we conceive it today. To many, this seems a bleak possibility. Economists tend to regard continuous growth as an essential concomitant to the operation of our present system, both market economy and Marxist. It is abhorrent to the industrialised countries which count on further growth to provide the resources for social development through education, health care, urban improvement, etc. It is equally menacing to the developing countries who see, in the suggestion that growth should be slowed, the end of development aid and prospects of continuing poverty and misery. The whole question of the growth process requires urgent study as well as what might be the nature of a world equilibrium state. Following the March 1972 meeting at the Smithsonian Institution of Washington, the Woodrow Wilson International Center has started an important investigation into Aspects of Sustainable Growth taking into account many of the preoccupations of The Club of Rome. It will pay serious attention to 'qualitative' elements of growth and endeavour to identify social as well as economic indices of welfare and to quantify diseconomies. Many other institutions and international organisations are, of course, also attempting to measure social as well as economic costs and benefits, and some progress can be expected in relation to the development of acceptable social indicators and national welfare indices to complement Gross National Product as a measure of growth.

The concept of an equilibrium state of no-growth is ill-defined and easily misunderstood. The term is generally conceived as one of a static equilibrium which conjures up images of inertia, decay and boredom. On the other hand, various types of dynamic equilibrium can be postulated which would make possible social, cultural and quality developments--certainly no less rich than the material products of the quantitative growth of today. There is great

need for deep study of the nature of possible alternative systems in dynamic equilibrium, the development of growth indices which, unlike GNP, distinguish between the purely material aspects and the quality elements and even within the purely material aspects of economic growth itself, there are wide variants of possibility which might well permit desirable and sustained growth, tolerable within planetary limitations and free from the undesirable features of our present economy of consumption and waste. The institution of new growth forms would, of course, necessitate radical changes in both government and industrial policy and would further have to be derived from new socio-economic theory. It is not inconceivable that a new school of quality entrepreneurs will arise as agents of such change. It is to be hoped that the work of The Club of Rome will stimulate serious studies on all these matters in the very near future.

#### 7. The New Research Imperative

The findings of the initial project and the general approach of The Club of Rome have much significance for science policy and for the reorientation of research. As already stated, the present crisis in society cannot just be blamed on technology and on the science which gave it birth. It is rather man's wisdom which has been lacking, his lack of sense of direction in his probing for new knowledge and the absence of control and management of technology.

The time has come for a fundamental reassessment of science and technology, their place in society and the promise which they offer for the future. At a meeting of Ministers of Science of the OECD Member countries held at the end of 1971, there was unanimous agreement that scientific research and technological development held great promise for the future but that research programmes would have to be reoriented profoundly, particularly in the direction of solving social problems. It was agreed that science could no longer be regarded as an autonomous area of policy but as one which would have to evolve in articulation with economic, social and other aspects of national and global policy. But herein lies the difficulty. It takes a period of upwards of ten years between the initial comprehension of a new scientific concept or of a new research discovery and the first appearance of its application as a product on the market or as a social innovation. If this research is developed in relation to current social or economic policy, its results will always tend to come too late. We are likely to see this happen with regard to the impending energy crisis--with petroleum products becoming scarce and costly, yet

alternative sources, such as those from breeder reactors and nuclear fusion, still in the future, and research on coal gasification and the like, which has been relatively neglected in the years of oil supremacy, being resuscitated with crisis priority too late to provide a solution.

In the field of science and technology, therefore, the needs seem to be:

- a reassessment of technological potentialities vis-à-vis the problematique, reorientation of effort in many new directions apart from defence, national prestige and economic growth--which have been the main goals and money sources of research in recent years;
- the creation of more dynamic research structures and non-institutionalised methods, the serious cultivation of the multidisciplinary approach which the multivariant nature of the problematique demands, with corresponding changes in the educational system;
- the development of new methodologies of long-term scientific planning in an economic and social perspective;
- considerable effort to tackle problems in the social and service sectors and of the achievement of innovation in such areas where the incentives of the market play little part;
- the development of a range of technological software to attack problems of society and government;
- comprehensive work on the assessment of social and cultural as well as economic consequences of new technological processes and fields, to ensure that alternative paths of development are selected which can be socially acceptable;
- assessment of the energy requirements of the new processes which, through substitution, recycling of materials, etc. may provide alleviation and partial solutions;
- study of global problems, not only in terms of the models and approaches outlined above, but in relation to the total use of resources, exploration of marine possibilities of a new energy sources, etc.; also the establishment of a world conservation centre;

- the establishment of a world industrial bank to ensure that major new technological developments, which in the next generation are in any case likely to be beyond the possibilities of the individual firm and the individual country, are made possible for mankind as a whole, avoiding wasteful duplication;
- in technology, special attention to the development of new approaches and systems appropriate to the needs of an equilibrium society, such as pollution-free processes and anti-pollution devices; efficient materials, recycling processes, work on lower grade materials, the evolving of efficient labour-intensive industries .

The Executive Committee has invited Professor Dennis Gabor, assisted by Professor Umberto Colombo and in cooperation with some of the scientist members of the Club, to explore the possibility of setting up a high-level scientific group to determine some of the scientific research priorities, problems requiring immediate attention and those of phased research planning, to attack some of the more vulnerable points of the problematique.

### 8. The Lemming Syndrome

Evidence seems to be accumulating that social unrest and individual dissatisfaction reach a crisis level in biological systems, including that of homo sapiens, well before food runs out and material arrangements begin to crumble. This is already noticeable in some areas of exceptionally high population and industrial density. The great increase in world population to be expected in the next few decades, as well as the migration to cities, which will be speeded up as demands for food intensify and require a high capital intensive agriculture, will give rise to huge urban conglomerations which will multiply the psychological effects of overcrowding and proximity. We know little about this problem in depth; indeed it is not certain that it is a real phenomenon. It is, therefore, important to begin work on it in case, as is not improbable, it proves to be a major agent of disruption and chaos.

### 9. Social Problems – The Value System and Survival

We have already stressed the importance, within the problematique, of social elements and social symptoms and have indicated how these



were necessarily excluded in the initial world model of MIT. Indeed, until there is a more sure development of social indicators, the inclusion of such factors is extremely difficult. The importance of including social factors and consequences, however, cannot be overstressed.

It is naturally easier to include social variables within disaggregated models of particular countries or regions with a certain degree of cultural homogeneity than it is in the global approach. We are particularly glad, therefore, that our Japanese colleagues have already started work on a model of their society in which these factors will dominate and in which the significance of recent social events will be included. Interesting also is the new Dematel (decision making and trial evaluation laboratory) project of the Battelle Institute of Geneva which is conducting a survey by an intensive modification of the Delphi approach, of the relative gravity and interconnections of the various elements of the problematique as seen by decision makers in many parts of the world.

Many of the manifestations of the problematique are already causing people, and especially the young, to question the validity of our present socio-economic philosophy. Others, such as Dennis Gabor, remark that our present civilisation is based materially on the solid foundation of scientific technology and 'spiritually on practically nothing'. Over centuries, our society has ostensibly operated, albeit somewhat hypocritically, on the Christian ethic of 'love thy neighbour' and the hope of future salvation. This has been tempered, it is true, especially in the Protestant countries, by acceptance of the virtues of hard work and the respectability of success. Nevertheless, it constituted a raison d'être for the individual and society. More recently, socialism raised the standard for the creation of heaven on earth, of equity and human betterment--at times with the fervour of a true religion. However, as affluence increased and the rationalism of science prevailed, faith in the traditional religions faded and social reform as a result of its own successes has less allure and indeed its cultural and institutional manifestations seem strangely dim. So we are left with our material successes gone sour on us and with little motivation or collective emotional drive towards worthwhile goals for our race. Our rational-material, neochristian system of values including those of individual freedom and human dignity are questioned, with little in the way of an evolving replacement. Many of those who question our present values most bitterly are merely destructive in their approach. The Tolstoy reaction of 'back to nature' becomes ever more unrealistic as population increases and technology dominates.



For reasons already explained, the study on limits to growth was unable to include the values problem. However, the debate on the problematique may well generate a new search which the social scientists, including the behaviourists, have hardly dared to tackle.

In the meantime, as the crisis mounts, we may have to adopt a supreme ethic of survival for the human race and in our decisions measure the possible effects of alternative actions in the light of their possible positive or negative influences on the probability of survival, and at the same time consider the extent to which the quest for quality of life can pave the way towards a new system of values.

#### 10. Man and His Destiny

These comments on the need for a new value system lead to questioning of whether we are not indeed facing a deep and basically biological crisis of the human species. Until recently, the average man, fully occupied with his struggle upwards from subsistence, had little time to think. He was tranquilised by the conventional religions, kept docile by 'bread and circuses' and, despite many notable exceptions, left the basic problems to priests and philosophers. Towards the end of the last century, with the rise of the physical sciences, a wave of materialism and rationalism intervened and began to question the traditional tenets. Freud, Marx and a host of others deepened the questioning, but recognition of the Darwinist principle of natural selection seemed to provide some keys. Survival for the fittest, leading to the evolution or annihilation of species, gave a tangible, if vague, hope for the future. The secularisation of society and of its purpose has now spread, with education and affluence, until in the rich industrialised countries it is now generalised and has become one of the causes of the contemporary questioning of our values. It is also a cause of present-day violence and crime, of the alienation of individuals from their society and of general aimlessness. On the other hand, it leads the young to seek new forms of religious satisfaction, to experiment with mysticism, to seek new and heightened perception through drug-taking on the part of those who feel alienated and distrust rational scientific approaches.

Organic evolution in fact holds little promise for the further evolution of man; its processes are too slow in the face of man's potential for self-destruction. His societies will either disrupt or he will design

his own betterment long before nature can evolve a higher form for him. In the last 2000 years, man has developed his physical power and increased his information base to an incredible extent, but there is little sign that he has increased his wisdom or spiritual capacity during that period. He is presumably the only planetary species aware of his own predicament and with the potentiality of self-development, yet the very forces in his nature which have raised him above the animals weigh against deliberate self-evolution. The struggle to survive has cultivated aggressive characteristics, vanity, greed, desire for power, etc., which are not the elements on which to build the wisdom he now requires. On the other hand, men have learnt to cooperate with one another and live in societies--however fragile--accepting collective values and objectives. Our destiny is in our own hands: how can we learn to achieve it?

#### 11. Institutions and Policy Making

We return now to more concrete matters. There is a growing awareness by many governments of the inadequacy of their structures and policy-making methods to face up to the problematique as well as a growing need to broaden and localise participation in decision making. Most governments are organised through a vertical hierarchy devised to meet the needs of earlier simpler times and ill-suited to face the 'horizontal' nature of so many of the problems they face. The machinery of government gives little importance to the staff function found to be so important by the military and the large business corporations. Most integrative decision is with the Prime Minister or Cabinet, although coordination and decision on a horizontal basis is ever more required at many levels. The increased span and scale of governmental responsibility have multiplied the size and power of the bureaucracy which even at its most intelligent has the function of ensuring stability and continuity, and hence is inevitably resistant to change. Adjustment to rapidly changing events is thus inherently difficult. A further major difficulty arises from the four to five-year cycle of parliamentary elections in the democracies which, with the need for election or re-election, forces all political parties to concentrate on short-term issues which are the subject of public concern. This mattered little until recently when long-term problems ripened slowly. With present rapid rates of change--and of public perception of change, political, economic, social and technological--the so-called long-term often becomes actualised in five to ten years, that is in the next administration. This has the consequence of the recurrent emergency,

of crisis management, and the ineffective handling, for example, of monetary problems, inflation, balance of payments difficulties, educational reform, etc., met all too often by instituting measures which are superficial and merely palliative, while avoiding the fundamental causes which lie within the problematique.

These are but a few of the difficulties of governments in facing complexity. They are leading to structural experiment and innovation, to the creation of 'think tanks' and of centres for the study of alternative strategies and policies. There is need for much more intensive research on the policy-making process and for confrontation of experience if the problematique is to be coped with.

## 12. The Political Consequences

It is premature to discuss the political consequences of the type of situation which may arise if the tendencies of the MIT report are even approximately true. Abandonment of growth as a main objective and the evolution of new policies towards a dynamic equilibrium and quality of life runs counter to many of the principles inherent in both capitalism and Marxism. Among other consequences, the slowing down of growth would greatly accentuate our present problems concerning the distribution of wealth and also the posture and objectives of industry. Intrinsically, The Limits to Growth is a profoundly revolutionary document, not in the strict political sense, but through la force des choses. The Club of Rome is convinced that change is necessary and indeed inevitable but would not at this stage wish to take a political position. We do feel, however, that there is urgent need for all political parties and ideologies to analyse the political consequences of its message and for scholars to begin to consider the possible alternatives.

### REASSESSMENT OF OBJECTIVES

The recent meeting of the Club in France--the first to be held since the publication of the MIT report--provided a useful occasion for members to reconsider its objectives and methods as well as for review of current activities and discussion of problem areas concerned with the problematique which demand immediate attention. The widespread public and political interest which the report has evoked, together with the extent of controversy has, quite naturally, identified The Club of Rome too

exclusively with this first project. It is not generally recognised that 'Limits' is a report to the Club, of the first major research which it has sponsored. It is not a report of The Club of Rome. An erroneous image of the Club has, therefore, formed as a group advocating zero growth. Again, the possible consequences of unregulated growth of the industrialised societies and, still more, those which would arise if growth were abruptly brought to a halt, has disturbed some of the less developed countries where, we have already said, the report is all too easily seen as a selfish proposal from the developed world which would still further aggravate the difficulties of the great mass of under-privileged on our planet.

Without in any way lowering our appreciation of the MIT team work, or our conviction of the reality and urgency of its warnings, the members of the Club recognised that it is a beginning and not an end and restated their concern for the wider aspects of the problematique. In particular it was agreed that The Club of Rome is:

- Not a group of advocates of zero growth, although we feel strongly that the nature, tendencies, qualities and consequences of growth require deep and continued analysis and discussion;
- Not a club exclusively devoted to problems of industrialised societies, attempting to find solutions to the difficulties of affluence, but a group concerned with the world system as a whole and with the disparities which it includes;
- Not a group of futurologists, but of individuals who realise the necessity of attacking, now, longer-term and fundamental problems which are difficult to approach with our present methods of government and which could give rise to irreversible situations;
- Not a political organisation, either of the right or of the left, but a free assembly of individuals seeking to find a more objective and comprehensive basis for policy making;
- Not a body devoted to public propaganda for change--although, should we succeed in better delineation of the elements of the problematique, we are convinced that our results should be made known universally through appropriate national and international organisations and media.

Having stated, therefore, what The Club of Rome is not, we reaffirm our role as a group of world citizens, sharing a common concern for the future of humanity and acting merely as a catalyst to stimulate public debate, to sponsor investigations and analyses of the problematique and to bring these

to the attention of decision makers. To undertake such tasks, the Club must remain small, but not detached from public contact or become elitist. It should remain a club or non-organisation if it is to be quickly effective; should resist attempts to organise more formally with all the bureaucratic rigidities and lack of tempo which this might entail; and remain free from political affiliation.

Thus the concept of the Club as a non-organisation remains: its essentially catalytic function is its main asset which would be frittered away were it to accept continuing service or public relations functions which demand organisation, budgets and a full-time staff. At a recent meeting, the Executive Committee discussed whether the Club, having achieved its initial aims of generating the debate, securing some understanding of the nature and magnitude of the problematique, and having helped to open the door to the investigation of the workings of the world system, should not now disappear. We felt this to be premature, but we do think that it is a question which we should raise from time to time. There is still a need for a concerned but politically uncommitted group to raise questions and stimulate new studies. How then should our role be developed?

We feel that our task is essentially that of questioning, of formulating and delineating problems and of preparing for decision makers elements of information and experience as well as alternatives which will help them in making their decisions. Our function is advisory and not executive: we should be prepared to establish relations with decision makers similar to those of operational research units, providing alternative bases for decision, but never aspiring to the decision-making process ourselves. We may, of course, decide later to suggest alternative policies but not to indulge in political advocacy.

We do feel, however, that there is need for an equivalent of The Club of Rome at political level for senior ministers to meet from time to time--not to negotiate but to compare their experience with regard to future planning and their success and failure in facing up to the complex of problems with which the Club is concerned. This is the concept which we term The World Forum.

With its limited resources--particularly the time of its members--the Club is obviously unable to mount major campaigns of public debate and information on the problematique, although we regard it as important that this should be done. Our first project, having attracted so much attention in the press and on television, has ensured that this need is in fact being met spontaneously. Particularly encouraging has been the formation of

national Club of Rome groups in Japan and the Netherlands. These groups, while in close touch with the Club itself, are completely autonomous and nationally based. We hope to see the arising of similar movements in some other countries such as Sweden, Denmark and Belgium and we hope that there can be spontaneous meetings of members of the Club within particular countries to that end. It is particularly to be hoped that, around Club of Rome projects, groups in which non-members of the Club can participate actively will form and operate across national frontiers. We are also on friendly relations with a number of national and international groups with objectives akin to our own, such as the International Federation of Institutes for Advanced Study (IFIAS), the European Cultural Foundation, the World Law Fund, l'Institut de la Vie, le Groupe des Dix, and many others. A number of other associations--both national and international--are also in existence and pursuing aims similar to our own in a rational and purposeful manner. We shall seek contact and complementarity in our work with theirs.

And we hope that this paper will elicit interest, observations and suggestions from many more quarters.

The Executive Committee of The Club of Rome

Rome, February 1973