

# REPORTS

-a thesis to the Club of Rome-

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# Notes

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## *abstract*

Considering the social ecological issue we are facing during the last years, it is possible to take in account what the Club of Rome stated in 1972 with its first report worldwide famous "Limits to Growth". From that moment the scientific and economic debate arouse. Once that Forrester, Meadows, Randers and Behrens present to public opinion that milestone, they generate different position about the instances proposed. It was the first time a group of scientist combined System Dynamics theory by Forrester and its computer model known as World3 to cybernetics. The debate, especially by the opponents point of view, moved towards the defence of economic interest of that period and to argue against to idea of harnessing economic development. Since that first report, during its 50 years of life the Club of Rome has produced 46 other reports. The way in which critics move against the Club of Rome basically has not change during the years. Nevertheless Club of Rome have pursuit its project to find scientific evidences about climate change and the disruptive devastation that mankind has operating against Nature and biosphere. Beyond a shadow of a doubt, the Club of Rome and its actions keep trying to influence governments, companies and public opinion in order to avoid the worst scenario for humankind. So this thesis, is about all the reports produced during this 50 years. The main aim is to deeply look inside each of them, and at the same time take an overview to all them in order to uderstand in which way every report was produced and to what purpose. Furthermore, this work, it would be intended as a summa of all the reports gathered in one text in order to trace them and provide crucial information that are oftentimes beyond one's grasp.

This paper is based on the need to investigate the tangible results produced by the international “non-organization” known as the Club of Rome (henceforth quoted with the acronym CoR), ie the 47 reports produced up to the current year 2019. The term “ non-organization “, self-assigned at the time of the CoR foundation in 1968, is crucial in order to correctly interpret the entire document, as it confirms, especially in the first years of existence of the CoR, a substantial lack of collection of information on how these reports were planned from their origin in the choice of theme up to the final drafting and therefore publication. Of course, the first report of 1972 “The limits to growth” is exempt from this logic due to its particular distinctive feature, the method with which it was developed, the particular historical milieu in which it originated and last but not least the long trail of political, social and economic debates and diatribes that has triggered worldwide. Such is its extent to have left a large amount of secondary sources and also multimedia products to accompany the report. Furthermore, the destabilizing turbulences generated by it, after the first tumultuous years, have never calmed down but have simply slipped into latency in the second or even third floor, as they have not been listened to by the decision-making tables of international scope. Until, considering the picture of the current events at the time of writing, the instances of “The limits to growth” have become predominant again as recommended in the report itself, spreading in a growing alarm, now tangible at all levels, on climate change triggered in the biosphere.

## *foreword*

Having made this due digression on the first report produced for the CoR, it is now necessary to focus attention on this premise: any shadow areas on other reports can be attributed to the intrinsic “non-organizational” characteristic mentioned above. In any case, thanks to the help of the CoR members who participated, the indispensable support provided by the staff of Winterthur specifically in the people of Alexander Stefes and Till Kellerhof, and of the publishers who made themselves available, we tried to fill the gaps and return a more in-depth research with the means available in order to reconstruct the metadata related to the reports produced for the CoR, such as for example the premises that led to their creation. Finally, it seems appropriate to underline how the search and acquisition of sources and information took place exclusively through the network. This characteristic is particularly reflected in the bibliography and in the citation of the sources which will often present references to funds and archives found via the internet, as the latter was in fact the obligatory channel for finding the necessary sources. Through these channels it was also possible to find books, presentations, journalistic articles, interviews and of course the very few reports available. What has been said happens for some reasons. A first one must be attributed to the fact that the written testimonies that speak directly of the CoR are not available in normal library circuits. A second reason is to be found in the size: 47 reports plus annexed secondary documents made the option to proceed through printed volumes inaccessible under multiple profiles, not least the economic one.

The aim of the thesis is to explain as best as possible the ideas and strategies that the CoR has tried to develop as a Think-Tank in order to provide alternative path to governance as well as to common people who are committed in enhance their knowledge and practical actions.

During the whole thesis a lot of names referred to companies, groups, book's titles and so on, are going to be mentioned oftentimes. Due to this reason, in order to avoid undesirable repetitions, a several numerbers of abbreviations will employed.

Club of Rome > CoR

Limits to growth > LtG

Predicament to Mankind > PtM

## *thesis: aim and features*

## *first chapter*

*"The Predicament to Mankind"*: the first written source tells about the Club of Rome

There are many authoritative sources and voices that have been produced over the years in tracing the origins and evolution that have affected the Club of Rome. Its protagonists, the events that involved it, the effects on international policies, the events and initiatives promoted by the CoR are always the object of interest and dissertation at a global level. Considering the present paper, and that its core consists in the reports produced for the CoR, it seems very pertinent to provide a more complete vision through the sources. The best source, in this context, is the document known as "Predicament to Mankind" which sublimates the quintessence of the CoR as it contains all the basic elements of the non-organization under consideration: it contains the scope, its goals, the methodology and many features that will be unwrapped on the following pages. The text will be used slavishly, which will be reported in full. And it will also be integrated from time to time with references to the source in question and current as well as with biographical digressions and of general interest. Ultimately, attempts will be made to recount the CoR with the best degree of detail possible on the basis of the sources found, which are strictly contextualised to what non-organization tells of itself through the documents it has produced through its protagonists. What has been said so far could be the subject of a subtle formal objection as the document known as "Predicament to Mankind" could not be considered a report. Actually, it is not. The CoR in its website do not gather it in the "reports" page among the others. What makes that document so crucial could be explained through the following two points:

## introduction

It is a very first written evidence produced since its foundation. For this specific reason it is perhaps the most important tangible resource that can be called into question to tell the CoR from within. Inside are the guidelines and applications that provide the *raison d'être* to all subsequent reports. Without Predicament the other reports would be the random product of independent and heterogeneous studies. Therefore the following chapter will examine the source mentioned above, citing it fully to explain in detail the objectives and organization of the group known as the Club of Rome and to recount its protagonists and the events that interested them and in turn they have taken a significant part in the history of the last 50 years. It remains to add that in order to give a picture as close as possible to reality, a section of the current chapter will be reserved for the controversy and the invective that the detractors have historically pursued in the debate against the CoR and its theses on the new world order. There is also a second reason, beyond that of completeness of the overall picture, which reinforces the desire to resort also to the "antagonists" of the CoR: what the adversaries say and the way in which they hurl themselves in the action of contrast to the CoR provides elements of interesting investigations and other information from an opposite point of view that can be used positively to understand how effective CoR actions are and how these could be enhanced in order to avoid the catastrophic series of events in which humanity is running through. In the following pages, as sad, it will be attached the whole prospectus known as Predicament to Mankind.

I. INTRODUCTION

As in every epoch of its existence, mankind today finds itself in a particular "situation". And as always this situation is created and nurtured by those who live amid the myriad events that comprise it --events that now are in the process of tumultuous and ever accelerating change, events that now increasingly and even violently clash with one another. In some deep sense our situation compels us to animate and perpetuate it almost blindly, and thus to move toward a future whose shape or quality we do not comprehend, whose surprises we have not succeeded in reducing to a rational frame of ideas, whose complexities we are not in the least sure of being able to control.

There are, however, a few basic perceptions that possess both wide currency and increasing persuasiveness, by means of which people in many different walks of life have begun to apprehend the nature of this situation. It is thanks to such perceptions that we have come to recognize the forces that hold us in their grip as arising from what we have long recognized as being the very source of our power and achievement --at least in those countries where the industrial mode of life has flourished and broken the back of age-old scarcities.

The source of our power lies in the extraordinary technological capital we have succeeded in accumulating and in propagating, and the all-pervasive analytic or positivistic methodologies which by shaping our minds as well as our sensibilities, have enabled us to do what we have done. Yet our achievement has, in some unforeseen (perhaps unforeseeable) manner, failed to satisfy those other requirements that would have permitted us to evolve in ways that, for want of a better word, we shall henceforth call "balanced." It has failed to provide us with an ethos, a morality, ideals, institutions, a vision of man and of mankind and a politics which are in consonance with the way of life that has evolved as the expression of our success. Worse, it has failed to give us a global view from which we could begin to conceive the ethos, morality, ideals, institutions, and policies requisite to an inter-dependent world --this, despite the fact that the dynamics of our technologies and of our positivistic outlooks are global in their impacts, their consequences, their endless profusion and, more importantly, in the promises they proclaim and in the promises they imply.

This failure is often regarded as having created a number of separate and discrete problems capable of being overcome by the kind of analytic solutions our intellectual tradition can so readily generate. However, the experience of the past twenty or thirty years has shown with remarkable clarity that the issues which confront us in the immediate present, as well as their undecipherable consequences over time, may not too easily yield to the methods we have employed with such success in the bending of nature to our will. Such apparent resistance could be attributable to many things, none of which must be pre-judged,

THE PREDICAMENT OF MANKIND

Quest for Structured Responses to Growing World-wide Complexities and Uncertainties

A PROPOSAL

1970

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description of predicament

In 1970 the first written work produced directly by the Club of Rome took shape. From a strictly material point of view, it is a libel of about 40 pages of extension with an evocative title that provides an idea right away on the content that will take shape in the following pages. Predicament, as reported in the Cambridge dictionary, is also transliterated with the term "difficult situation", narrow. The following clarifies and reinforces the concept and determines the specific character of the text: "quest for structured responses" which suggests the role of research but also of mission for well-based answers. And finally, a "proposal" is a second word that presents an oscillating ambivalence in meaning between: "suggestion" and "project". From the first page, the reader has all the elements to understand that he is faced with a text that introduces the difficult situation of the human race in descriptive terms. Not limiting himself to this, he immediately declares that in the face of this culty he does not stop to locate the phenomenon in itself but rather from the analysis phase, he intends to undertake a mission with the character of seeking the solution. Or alternatively, with the same purpose, or a search that becomes a mission value in terms of commitment for those who draft the document. It is possible to affirm this by leveraging the degree of interpretation that the word "quest" implies. Whether we give more credit to one or the other version, regardless of the subtleties of accepting both, however, evocatively describe the spirit of the ideals that that subtitle infuses into the whole header. The last word, "proposal" clarifies all doubts. It is possible to say that this document has a precise functional connotation. Once the analysis is completed, the character of the document changes from descriptive to prescriptive. This last feature is the

difficult situation of the human race in descriptive terms. Not limiting himself to this, he immediately declares that in the face of this difficulty he does not stop to locate the phenomenon in itself but rather from the analysis phase, he intends to undertake a mission with the character of seeking the solution. Or alternatively, with the same purpose, or a search that becomes a mission value in terms of commitment for those who draft the document. It is possible to affirm this by leveraging the degree of interpretation that the word "quest" implies. Whether we give more credit to one or the other version, regardless of the subtleties of accepting both, however, evocatively describe the spirit of the ideals that that subtitle infuses into the whole header. The last word, "proposal" clarifies all doubts. It is possible to say that this document has a precise functional connotation. Once the analysis is completed, the character of the document changes from descriptive to prescriptive. This last feature is the founding character, the design in all its forms. However, in order to avoid markedly pretentious outbursts, the choice falls on the word "proposal" since while maintaining the connotation of the project as a possible synonym, it also outlines the subdued, therefore less categorical, proposition "proposition". To summarize, we are faced with an articulated document, which has its own character and presents a vision and which, however, at the same time, tries to gain its consent in the way it presents itself to the reader, leaving space rather than imposing. From a certain point of view, wanting to make a comparison that further clarifies the nature of the volume being analyzed, it can be juxtaposed with a business plan. With the latter he shares all the characteristics set out so far: the part of study and presentation of the context on which he intends to act; the prescriptive part as stated in the design vision; and finally it shares the intangible peculiarity that is more limited to the formal "Predicament" plan than a business plan: they are documents that are created to be presented to the attention of third parties that cases are not experts in the sector covered within the written text. The analogies end here, since the libellus drawn up on behalf of the CoR by Hasan Özbekhan it is known that if on the one hand it is intended for a heterogeneous and broad public; it is also known that Predicament represents a programmatic document with an almost statute value for the members of the CoR. Therefore it has a dual function: to make the average reader aware whether it is a person informed or not of the topics dealt with. And at the same time it aims to provide the members of the organization with a founding document that lays the foundations for the experts in the various fields of investigation; to pro

but about which certain, assumptions might be made. It could be due, for instance, to the magnification of the problems we must grapple with --that is, to the fact that almost all of them are global in scope, whereas the socio-political arrangements we have created are ill-equipped for dealing with issues that fall

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outside their strictly established jurisdictions. It could be due to heightened yet often obscure interactivity among phenomena, whereas our manner of solving problems owes its strength and efficiency to the identification of rather clear and direct lines of causality. It may be due to rapid rates of change, especially in the technological sector, whereas our institutions, outlooks and minds are geared by long-time habit to beliefs in slow unfolding and permanence --beliefs which have sustained certain relatively stable concepts of polity, of social order and of intellectual orderliness. In brief, whatever it is due to, the conjuncture of events that surrounds us is to all evidence worldwide, complex, dynamic, and dangerous.

Moreover such a situation can be seen as a new, or novel, experience, for in our long commitment to stability and continuity we have hitherto succeeded more or less, in steering our social evolution toward the known and in avoiding that which, for being unknown, was also uncertain and, therefore, frightening.

Because of the dissonances that inhere in our situation we find that our current attitudes toward life and issues are tending to become rigidly polarized and in consequence, hesitant to the point of paralysis. On the one hand, we take refuge in the comforts of that inertia we believe is going to help us preserve all the attributes of what we have come to call and to accept as "civilization". On the other hand, we tend to seek escape in iconoclastic or utopian futurisms whose feasibility and intellectual worth we know to be questionable, but in whose visions of a wholly new human order we sometimes find solace as well as some fleeting release.

These contradictory attitudes toward uncertainty are old. However, it bears repeating that the uncertainty, as we experience it today, is new --both in its dimensions and in its extraordinarily complex dynamics and structure. From this fundamental mismatch between the situation, that we still insist on describing as a set of "problems," and our mental and

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emotional attitudes, which we continue to feel might give birth to "solutions," we can already make the assumption that our notion of problem is wholly insufficient for us to face whatever it is that our situation proposes both to our intellect and to our conscience. At the same time our notions of solution are equally insufficient to enable us to define those outcomes that could or might result in novel ways of coping with our predicament --namely, of organizing our vision at a higher level where new approaches and attitudes might begin to acquire a degree of immediate relevance.

It is the aim of this particular project of the Club of Rome to turn the above assumption into a positive statement, by trying to cognize and investigate the all-pervasive problematique which is built into our situation, through some new leap of inventiveness. Success in an attempt of this nature would enlarge and deepen both our sensibility and our understanding and open the way for certain new attitudes that eventually might become reflected, concretely and operationally, at those levels of decision making where policy is formulated.

In the making of such an effort the factor of time has acquired the utmost importance, for rapid change which is a crucial aspect of our technological momentum is accompanied by a parallel phenomenon: the similarly rapid and massive crystallization of any corrective action we devise and apply to single problems, to the discrete components of the situation. If

our initial surmise that such partial cures are either insufficient or irrelevant is correct, it follows that every such action exacerbates the problematique as a whole and adds certain irreversible features to it. This, then, must lead us to conclude that time is not only of the essence but an absolute imperative that must condition any undertaking which seeks a new approach to the dilemma of our age.

This point is well illustrated by some recent studies concerning "decision effectivity time." Such studies indicate

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that any corrective or beneficent effects of present action are dependent on varying time-spans, and that in many instances these time-spans have narrowed down to a critical minimum. A number of types of crisis have been singled out whose flash-points could now be seen as clustered well within the decade of the 1970's. Thus, effectivity margins that apply to general problem classes such as large-scale destruction or change, widespread tensions, continuous and growing distress, tension producing responsive change, etc., are increasingly conceived as probably falling within a 1-7 year range (nuclear escalation, 1-5 years at the outset; institutional insufficiencies, 3-5 years; participatory impatience which is one of the main factors feeding the alienation of our youth, 3-4 years; widening famine, 5-7 years; pollution, housing, education, etc., 3-7 years). These random instances serve to show that if something is to be done it needs to be done now --for otherwise we might be confronted by that ultimate experience: N-E-V-E-R.

Such then is the predicament of mankind, and the object of this document is to describe, in terms that are perforce still somewhat cursory, what can be done now, the issues that must be addressed, the organization of the needed effort, its scope and its program, the methods of investigation that appear pertinent and the outcomes which, a priori, one might hope for.

The document is divided into three parts. The present first section contains an overall description of the above points. The second section is an attempt to discuss in a very general way some of the methods of approach and organization that could be considered at this stage as possibly being useful in an undertaking of this kind. The last section consists of various clarificatory annexes describing, among other things, the aims, plans, and general philosophy of the Club of Rome. A few comments on these aims, which directly relate to the present project, follow.

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## II. THE CLUB OF ROME

The Club of Rome is an informal, non-political, multinational group of scientists, intellectuals, educators, and business leaders deeply concerned with the situation just sketched, who among them have decided to face the issues that confront mankind in any way which offers the hope of reaching a new level of understanding and therefore of successful action.

The members of this group have access to considerable sources of information and knowledge. Acting jointly, they believe that they can mobilize enough intellectual and financial support to try to undertake the present project that should be viewed, not as another research study, but as an effort at intellectual breakthrough that promises a fresh vision and approach. It is their belief that only an effort which strives to go beyond "conventional wisdom" and methodological orthodoxy can allow us to perceive the complex dimensions of the problematique of our age, and thus set the stage for the formulation and development of the long-term options and alternative outlooks

founding character, the design in all its forms. However, in order to avoid markedly pretentious outbursts, the choice falls on the word "proposal" since while maintaining the connotation of the project as a possible synonym, it also outlines the subdued, therefore less categorical, proposition "proposition". To summarize, we are faced with an articulated document, which has its own character and presents a vision and which, however, at the same time, tries to gain its consent in the way it presents itself to the reader, leaving space rather than imposing. From a certain point of view, wanting to make a comparison that further clarifies the nature of the volume being analyzed, it can be juxtaposed with a business plan. With the latter he shares all the characteristics set out so far: the part of study and presentation of the context on which he intends to act; the prescriptive part as stated in the design vision; and finally it shares the intangible peculiarity that is more limited to the formal "Predicament" plan than a business plan: they are documents that are created to be presented to the attention of third parties that cases are not experts in the sector covered within the written text. The analogies end here, since the libellus drawn up on behalf of the CoR by Hasan Özbekhan it is known that if on the one hand it is intended for a heterogeneous and broad public; it is also known that Predicament represents a programmatic document with an almost statute value for the members of the CoR. Therefore it has a dual function: to make the average reader aware whether it is a person informed or not of the topics dealt with. And at the same time, it aims to provide the members of the organization

reports that follow and to which the CoR will refer in practical and theoretical actions; thus going beyond the dimension of the prospect and in some cases becoming more widespread and famous. Reference is made, to give an example to the conceptualization and the birth of the term problematique (although right about this term some attribute its authorship to Peccei himself claiming its presence in the volume "The chasm ahead"; however, at the time of writing of this thesis, the aforementioned volume has been verified in search of confirmation giving a negative result). The further lexical choices and theoretical statements will be discussed progressing in the reasoned analysis that is being done in this chapter on the Predicament document. Going on with the contextualization of the document shown, let's now observe the contents index. It is divided into three macro sections: The first

provides the conceptual basis and the basic coordinates preparatory to the explanation of the work being proposed.

with a founding document<sup>1</sup> that lays the basement for the experts in the various fields of investigation; to provide a memorandum to refer to in order to stay focused on pursuing a higher and broader goal. Finally, as it will be possible to deduce in the continuation of the discussion, Predicament represents the aggregating instance that makes the successive actions and the reports that the different authors and/or CoR members will produce over the years that would then be followed. This value is founded on the rigor of logical structuring and above all on the written formalization of a coherent and semantically elaborated terminology for the prospect. It is with this document that concepts and terms are repeated on paper, if not theorized, which will be repeated in the reports that follow and to which the CoR will refer in practical and theoretical actions; thus going beyond the dimension of the prospect and in some cases becoming more widespread and famous. Reference is made, to give an example to the conceptualization and the birth of the term problematique (although right about this term some attribute its authorship to Peccei himself claiming its

needed for policy-making. They are further convinced that a group of private persons who while concerned are nevertheless free from the responsibility of day-to-day political decision --and who, as individuals, have no political ambition except the good of mankind and its survival --can contribute in this way to the work of those who are responsible for leadership and action.

With reference to the project under consideration, the major objectives of the Club of Rome are:

- 1) To examine, as systematically as possible, the nature and configuration of the profound imbalances that define today's problematique throughout the world, and to attempt to determine the dynamics of the interactions which seemingly exacerbate the situation as a whole.
- 2) To develop an initial, coarse-grain, "model" or models of this dynamic situation in the expectation that such models will reveal both those systemic components that are most

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critical and those interactions that are most generally dangerous for the future.

- 3) To construct a "normative" overview from the foregoing models and to clarify the action implications --i.e., the political, social, economic, technological, institutional, etc., consequences --that such an overview might entail and substantiate.
- 4) To bring everything that has been learnt as a result of this initial effort, to the attention of those in political authority, in the hope that such findings might stimulate the conception of new lines of policy that would be effective in coping with our situation's overall dynamics and its world-wide dimensions.
- 5) To persuade governments to convene a World Forum,\* with whose consent, support, and encouragement an intensive dialogue concerning the findings of the project would be initiated to the end that a much larger and deeper effort could be undertaken. Such an effort would aim at developing the needed operational "macro-models" conducive to endeavors at integrated policy-planning and to the development of new institutions within whose frame of competence such work could be carried out.

These objectives have been set with the full knowledge that many governments and international organizations are beginning to recognize the dangers with which our present situation is fraught. Thus on the international level bodies such as NATO or OECD are now undertaking detailed work on many individual issues, while the United Nations is planning a world conference on the problems of the "Environment" in 1972. These moves are welcome and should add greatly to our recognition and understanding of the grave matters that are facing the whole of mankind.

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\*For further information regarding this point, please see Annex II in the last section of this document.

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Nevertheless, the prime difference between these approaches and the one being proposed by the Club of Rome must be noted. It resides in the fact that most current efforts are directed toward single or parallel problems and do not attempt any consistent and comprehensive study of the totality of the problematic events that add up to our world system; nor do they address themselves to the areas of dynamic interaction or of overall consequences of these events; nor, for that matter, are they explicitly concerned with questions of institutional change, development, and invention which might be necessary to cope with what is confronting us.

The approach adopted by the Club of Rome, on the other hand, derives from the threefold hypothesis:

- a) that the predicament we seek to understand is systemic in character; and that the boundaries of the system encompass the entire planet;
- b) that the real problematique which inheres in the situation has now transcended discrete categories of events --overpopulation, malnutrition, poverty, pollution, etc. -- and arises from confused and obscure consequence- patterns generated by the interactions of such categories of events;
- c) that any desirable, or even acceptable, resolution of the problematique will in all probability entail, at least as outcomes to be seriously considered, fundamental changes in our current social and institutional structures, for the simple reason that these structures were not established to operate in so complex and dynamic a situation as the one in which we find ourselves.

### III. THE PROBLEMATIQUE:

#### AN OVERVIEW OF THE SITUATION

##### I. THE IDEA OF "PROBLEMATIQUE"

It is in the nature of our languages, hence of our manner reality, to see and call the dissonant elements in a situation, "problems".

Similarly, we proceed from the belief that problems have "solutions" --although we may not necessarily discover these in the case of every problem we encounter. This peculiarity of our perception causes us to view difficulties as things that are clearly defined and discrete in themselves. It also leads us to believe that to solve a problem it is sufficient to observe and manipulate it in its own terms by applying an external problem-solving technique to it.

Although it is true that there are certain problems (mostly in the field of technology and engineering) that can be dealt with in this way, it is also becoming quite evident that such problems are no longer the most important ones with which we must deal.

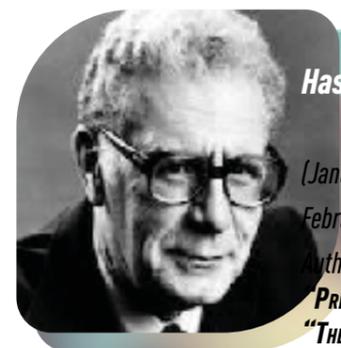
When we consider the truly critical issues of our time such as environmental deterioration, poverty, endemic ill-health, urban blight, criminality, etc., we find it virtually impossible to view them as problems that exist in isolation --or, as problems capable of being solved in their own terms. For even the most cursory examination will at least reveal the more obvious (though not necessarily the most important) links between problems. Where endemic ill health exists, poverty cannot easily be divorced from it, or vice versa. Certain kinds of criminal behavior often, though not always, seem to be related to poverty or slum living conditions. Furthermore, if we try to solve any such problems exclusively in their own terms we quickly discover that what we take to be the solution of one category of problem

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may itself generate problems of another category (the reduction of death rates in developing areas and the resultant increase in poverty, public unrest, overpopulation, etc., is a good example of this single avenue approach).

Another unfortunate consequence of the preference we display toward orthodox problem-solving is the misapplication of effort and energy. Thus many agronomists devote a great deal of ingenuity toward increasing the yield per acre of our crops without seeming to realize that the particular solution called "agriculture" may possibly no longer represent the single, feasible resolution of the problems clustered under words such as "hunger" or "malnutrition" when the latter are considered in their world-wide dimensions. It seems reasonable, therefore, to postulate that the fragmentation of reality into closed and well-

the Club of Rome:  
to examine, to develop,  
to construct, to bring, to persuade



Hasan Özbekhan

(January 1, 1921 -  
February 12, 2007)

author of:  
"PREDICAMENT TO MANKIND"  
"THE ISLE OF PRINCES"  
"TOWARD A GENERAL THEORY OF PLANNING"

He was born in Turkey into a diplomatic family. He studied at the Lycée Chateaubraïnd in Rome, then moved to Paris to study at the Faculte de Droit and the École Libre des Sciences Politiques, and finally he graduated in London School of Economics. In addition, after being elected to the Leverhume Fellowship, he moved to the University of Cambridge in order to start his postgraduated work.

Dr. Hasan Özbekhan was an American systems scientist, cyberneticist, philosopher and planner. He also was Professor Emeritus of Management at the Wharton School of the University of Pennsylvania. During his career he held many times the positions of management consultant inside different large multinational corporations and governments.<sup>1</sup> (pdf mio di critica di KRISTAKIOPULOS) He worked for Turkey and France as Policy Science designer. He also was the director of corporate planning department for the General Electric Corporation in New York City and for System Development Corporation (SDC) a think-tank settled in Santa Monica, California. Furthermore he has been a Fellow of the Royal Economic Society, and held

He also was the director of corporate planning department for the General Electric Corporation in New York City and for System Development Corporation (SDC) a think-tank settled in Santa Monica, California. Furthermore he has been a Fellow of the Royal Economic Society, and held membership in The Economic Club of New York, the American Economic Association, the National Academy of Economics and Political Science, The Society of Business Advisory Professions, the Comité National Belge de l'Organisation Scientifique, the American Society for Political and Legal Philosophy, Mankind 2000, Futuribles. Looking at Özbekhan's previous path and overall background allows us to understand more about the structure as well as the setting of the prospectus known as Predicament of Mankind. Economic and cybernetic education permeates the document and such aspect, will raise reservations, as will be seen later, in some members of the then newly formed CoR Executive Committee. Aurelio Peccei, Alexander Christakis and James Rennie Whitehead (the latter was an hold member of the Canadian chapter of the CoR cfr. CaCoR) wrote about the meeting and the prospectus Özbekhan prepared and presented in 1969, and this part, as already sad, will be widely argued inside a following section of the current chapter. However, at this juncture, it seems particularly appropriate to consider the historical circumstances that led Peccei and Özbekhan to know each other before and to collaborate later. It is James Rennie Whitehead who reports on the first meeting between the two:

«By 1969, Peccei was becoming increasingly impatient that the early meetings of the embryo Club had discussed the problems at length but had not developed any course of action. What he was seeking was an effective methodology to tackle the issues of what he termed the "problematique", which he described in The Chasm Ahead as "a tidal wave of global problems". To this end he sought the views of a well-known American systems analyst, Professor Hasan Özbekhan, on the development of the first compendium of global problems (problematique) for the Club of Rome»<sup>3</sup>

And then he also referred:

«Özbekhan became interested and he and Erich Jantsch made a presentation of the problematique to a meeting at the European Summer University in Alpbach, Austria in September, 1969. Eduard Pestel, a professor from Hannover, was at that meeting and expressed his interest in the Club to Peccei. By the end of the year, Pestel was not only a Member of the Club but had become a member of the Executive group of six. He was

bounded problems creates anew problem whose solution is clearly beyond the scope of the concepts we customarily employ. It is this generalized meta-problem (or meta-system of problems) which we have called and shall continue to call the "problematique" that inheres in our situation.

## 2. TOWARD A GENERALIZED RATIONALE

The fragmentation of reality caused by our conceptual and linguistic makeup notwithstanding, it is still necessary to talk about the situation and to communicate ideas concerning it. Since we have no new language for doing this, we can only approach the notion of the problematique in terms that are familiar to us. We can break down the problematique into its major components and we can list such components, both for purposes of their tentative identification and of creating a referential base, under the title of Continuous Critical Problems. The listing that follows represents a general statement of the most commonly recognized problems of this sort.

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### CONTINUOUS CRITICAL PROBLEMS: AN ILLUSTRATIVE LIST

- 1) Explosive population growth with consequent escalation of social, economic, and other problems.
- 2) Widespread poverty throughout the world.
- 3) Increase in the production, destructive capacity, and accessibility of all weapons of war.
- 4) Uncontrolled urban spread.
- 5) Generalized and growing malnutrition.
- 6) Persistence of widespread illiteracy.
- 7) Expanding mechanization and bureaucratization of almost all human activity.
- 8) Growing inequalities in the distribution of wealth throughout the world.
- 9) Insufficient and irrationally organized medical care.
- 10) Hardening discrimination against minorities.
- 11) Hardening prejudices against differing cultures.
- 12) Affluence and its unknown consequences.
- 13) Anachronistic and irrelevant education.
- 14) Generalized environmental deterioration.
- 15) Generalized lack of agreed-on alternatives to present trends.
- 16) Widespread failure to stimulate man's creative capacity to confront the future.
- 17) Continuing deterioration of inner-cities or slums.
- 18) Growing irrelevance of traditional values and continuing failure to evolve new value systems.
- 19) Inadequate shelter and transportation.
- 20) Obsolete and discriminatory income distribution system(s).
- 21) Accelerating wastage and exhaustion of natural resources.
- 22) Growing environmental pollution.

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- 23) Generalized alienation of youth.
- 24) Major disturbances of the world's physical ecology.
- 25) Generally inadequate and obsolete institutional arrangements.
- 26) Limited understanding of what is "feasible" in the way of corrective measures.
- 27) Unbalanced population distribution.

- 28) Ideological fragmentation and semantic barriers to communication between individuals, groups, and nations.
- 29) Increasing a-social and anti-social behavior and consequent rise in criminality.
- 30) Inadequate and obsolete law enforcement and correctional practices.
- 31) Widespread unemployment and generalized under-employment.
- 32) Spreading "discontent" throughout most classes of society.
- 33) Polarization of military power and psychological impacts of the policy of deterrence.
- 34) Fast obsolescing political structures and processes.
- 35) Irrational agricultural practices.
- 36) Irresponsible use of pesticides, chemical additives, insufficiently tested drugs, fertilizers, etc.
- 37) Growing use of distorted information to influence and manipulate people.
- 38) Fragmented international monetary system.
- 39) Growing technological gaps and lags between developed and developing areas.
- 40) New modes of localized warfare.
- 41) Inadequate participation of people at large in public decisions.
- 42) Unimaginative conceptions of world-order and of the rule of law.
- 43) Irrational distribution of industry supported by policies that will strengthen the current patterns.
- 44) Growing tendency to be satisfied with technological solutions for every kind of problem.

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- 45) Obsolete system of world trade.
- 46) Ill-conceived use of international agencies for national or sectoral ends.
- 47) Insufficient authority of international agencies.
- 48) Irrational practices in resource investment.
- 49) Insufficient understanding of Continuous Critical Problems, of their nature, their interactions and of the future consequences both they and current solutions to them are generating.\*

It should be evident that these Continuous Critical Problems are meant merely to serve as general labels under each of which entire trees or clusters of issues that appear analogous, can be classified. Further, neither their rate of occurrence nor their intensity is uniform throughout the world. Therefore, the causality structure that underlies such a listing is obviously of extreme complexity and actually impossible fully to ascertain through mere observation for, even on direct empirical evidence, it is clear that the true list must be many times larger than what we have given.

However, even from this limited listing we begin to sense that these large problem-areas are system-wide, interdependent, interactive and intersensitive; that they transcend national frontiers, or even regional boundaries; and that they are seemingly immune to linear or sequential resolution.

This, in turn, suggests that when the problem-trees have grown to world-wide proportions their branches intertwine --or, if we use the image of clusters, we can say that the clusters overlap. Such areas of overlap then create new problem-areas -----

\* These Continuous Critical Problems are not listed or grouped in any particular order; nor is the list to be regarded as complete.

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## THE THINK-TANK

The Club of Rome falls, above all according to a certain convergence of the relative sources, in the concept of Think-Tank. This phrase does not conceal particular meanings hidden beyond what they intuitively suggest the two words that juxtapose it: "thought-cistern". Generally the word defines organizations, institutes, groups or companies that produce data, information, advice and forecasts to assist decision-making bodies in undertaking choices and strategies generally with respect to complex problems. They are used in all areas where it is possible to carry out analyzes and develop forecasts; therefore in political, economic, scientific, economic, industrial, commercial and other fields. Sometimes they act without profit and are made up of personalities from different fields of knowledge who, acting together through the integration of those heterogeneous backgrounds, develop alternative solutions with respect to conventional ones. The phenomenon is considered typically American, fruit of the same pragmatist culture. However, it is widely believed that the late-nineteenth-century Fabiana Society based in London could be considered the Think-Tank capostate. In any case, whether the thing corresponds to the truth or not, this instrument was developed and proliferated greatly in the USA, arising mainly as an analysis tool in support of the war apparatus. Among the think-tanks, the first organization accredited historically with this label was the System Development Corporation (SDC); whereas other type of similar organizations (Trilateral Commission, The Bilderberg Meeting just to mention two of them) will be presented in details ahead .



It started as the systems engineering group for the SAGE air-defense system at the RAND Corporation (GVISHIANI). Then in 1957 ensued another path as a not-for-profit corporation researching and developing computer software in the information sciences based in Santa Monica, California. that provided expertise for the United States military in the design, integration, and testing of large, complex, computer-controlled systems. It is important to underline that during 1969 the company went through a chance becoming for-profit and offered its services to all organizations more than onlu to the American military. Exactly in the same year Dr. Hasan Özbekhan was director of corporate planning department; and even in the same year met Aurelio Peccei.

Even Thierry De Montbrial talks about the import of Rand corporation in the think-tank arising scenario of the period before the Second World War.

whose description (hence our understanding of them) escapes the boundaries of the original taxonomy. Therefore, the line of approach to be taken must first aim at clarifying the systemic character of the problem-areas, and secondly, must re-state them in a way that will make their most critical synergies visible.

The five frames that will be found on the following two pages are an attempt to give a graphic portrayal of this dynamic and interactive growth of the problematic. In each of the frames the problem-areas are symbolized by differently shaped shaded spaces.

Fig.1 merely represents an arbitrary and random positioning of such problem-areas, with the aim of describing a situation wherein the visible interactions among the conjuncture of problems is patently weak or, even probably, non-existent. Such situations have often been experienced in the past especially if they were being viewed in terms of the whole world as the context within which the singular problem areas were evolving.

It is with reference to this type of situation that our problem-solving methods were developed. And they consist in attacking each of the problem-areas separately and in attempting to find discrete solutions in each such area. This analytic habit continues to hold sway over our minds, despite the fact that we have, by now, recognized the existence of certain contiguities among the problem- areas. Such contiguities have become manifest some time ago, and are no doubt due to the growth of the problems --although this growth has displayed different rates in its momentum, and has occurred along different vectors (Fig.2). The continuation of these trends would seem to have turned such contiguities into clusterings and overlaps (Fig.3), which we may perceive superficially but whose real structure and dynamics escape us. In actual fact the situation tends increasingly to appear as a single complex system whose internal relationships, interactions, fields of force, and overlaps are extremely confused (Fig.4) and impossible to delineate without a very serious attempt to model it in its entirety. Such a modeling

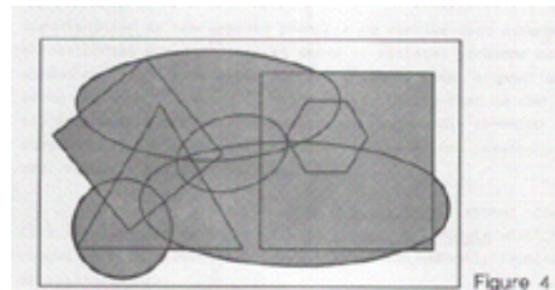


Figure 4

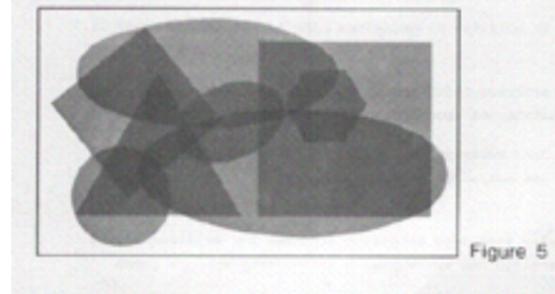


Figure 5

effort could, for example, reveal the morphology of the situation as resembling what is shown in Fig.5 --namely, as having a composite dynamic core, and differing intensities of interfaces and relationships, all of which must be identified and organized into a unified frame of perception and understanding.

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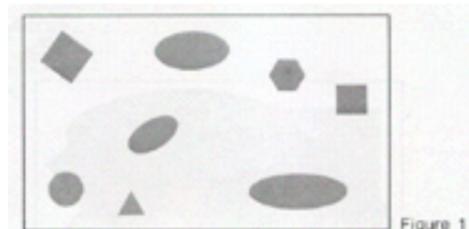


Figure 1

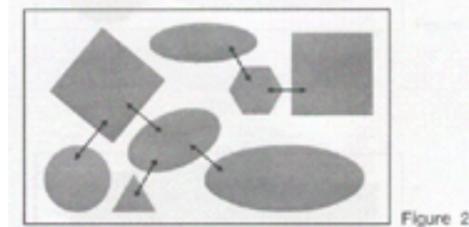


Figure 2

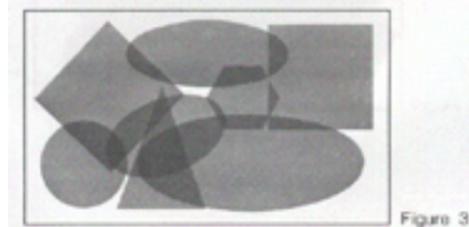


Figure 3

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Such an approach --which can only incompletely be communicated in two-dimensional drawings --is clearly needed and clearly important for it now appears possible to surmise that attempts at understanding the situation in terms of isolated problems have gone almost as far as they can. If this be true, then, greater effort along the same lines should teach us but little that is new about the phenomena which make up the issues, and hardly anything at all about the living, changing, dynamic texture of the interconnections that actually create a "situation".

If we are to learn something new it would appear, therefore, that we need to create one or more situational models which might reveal --with reference to, but almost independently from, the problem-clusters:

- 1) the identity of the most critical and sensitive components of the situation;
- 2) the main or major interactions that exist among the various variables contained in the situation;
- 3) the behavior of the main variables in relation to within the situation;
- 4) the time-dependent ordering of the chief possible outcomes and of their present consequences for action;
- 5) the presently invisible critical connections that operate systemically within the present situation and that situation's future configuration;
- 6) the positive and negative synergies that must exist among various alternative consequences and options.

Factors such as the above can be explored because, by means of modeling the situation correctly, it becomes feasible (1) to

**THE CLUB OF ROME: A private international group of scholars, industrialists, and scientists founded in 1968 by Italian businessman Aurelio Peccei in the Accademia dei Lincei in Rome.<sup>1</sup> Financed by the Agnelli and Volkswagen foundations, the Club of Rome first attempted to analyze what it termed "the world problematic," or the common global problems of mankind.<sup>2</sup> Using a computer-generated model developed by MIT, the Club traced the impact and interaction of population, food supply, national resources, industrial production, and pollution over a protracted period of time; the results were published in its first report *The Limits to Growth*.<sup>3</sup> The Club's third report, entitled *RIO: Reshaping the International Order*, reversed the "no growth" position of its first report, concluding that the *New International Economic Order* is a better model for avoiding world poverty.<sup>4</sup>**

#### NOTES

1. Marbus Timmer, "Reshaping the International Order," *Aspen*, Jan. 1977, p. 89. Claire Sterling, in "Club of Rome Tackles the Planet's 'Problematic,'" *Washington Post*, Mar. 2, 1972, p. A18, writes: "Scarcely five in all, they have no headquarters, pay no dues, elect no officers, meet when the spirit moves them in Paris, Rio de Janeiro, Cambridge, Moscow, Tokyo. All they do is talk."
2. Sterling, *op cit*.
3. Donella Meadows et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (1972).
4. Jan Tinbergen, *RIO: Reshaping the International Order -- Report to the Club of Rome* (1976).

#### SEE ALSO

*Limits to Growth*; *RIO Project: Futurism*.

vide a memorandum to refer to in order to stay focused on pursuing a higher and broader goal. Finally, as it will be possible to deduce in the continuation of the discussion, Predicament represents the aggregating instance that makes the successive actions and the reports that the different authors and / or CoR members will produce produce over the years that would then be followed. falls on the word "proposal" since while maintaining the connotation of the project as a possible synonym, it also outlines the subdued, therefore less categorical, proposition "proposition". To summarize, we are faced with an articulated document, which has its own character and presents a vision and which, however, at the same time, tries to gain its consent in the way it presents itself to the reader, leaving space rather than imposing. From a certain point of view, wanting to make a comparison that further clarifies the nature of the volume being analyzed, it can be juxtaposed with a business plan. With the latter he shares all the characteristics set out so far: the part of study and presentation of the context on which he intends to act; the prescriptive part as stated in the design vision; and finally it shares the intangible peculiarity that is more limited to the formal

the reader, leaving space rather than imposing. From a certain point of view, wanting to make a comparison that further clarifies the nature of the volume being analyzed, it can be juxtaposed with a business plan. With the latter he shares all the characteristics set out so far: the part of study and presentation of the context on which he intends to act; the prescriptive part as stated in the design vision; and finally it shares the intangible peculiarity that is more limited to the formal "Predicament" plan than a business plan: they are documents that are created to be presented to the attention of third parties that cases are not experts in the sector covered within the written text. The analogies end here, since the libellus drawn up on behalf of the CoR by Hasan Özbekhan it is known that if on the one hand it is intended for a heterogeneous and broad public; it is also known that Predicament represents a programmatic document with an almost statute value for the members of the CoR. Therefore it has a dual function: on the website of Whitehead and also that the presentation would eventually take place in December 1969 in front of the Executive Committee of the CoR and the meeting was held in the Palais Pallavicini, opposite the Hofberg Palace in Vienna. The results of that presentation are entrusted to history. However, since the discussion on the document has not yet been completed and an overall vision is not yet available, please refer to this part at the end of the chapter in the appropriate paragraph. For the moment, albeit, we will limit ourselves to considering, on the basis of what has been presented so far in the columns alongside on the protagonists of the drafting of the document, that the latter can rightly be considered the product of some of the best minds of the period paid in the development of systemic and cybernetic models.

In light of what has been said so far, it is possible to take a first introduction to the document, in which the first coordinates were provided. A useful framework to contextualize the main authors of the document and not least the historical moment closely related to the latter and to the document itself.

The paragraph may be concluded at the same time as the end of the first introductory paragraph of the prospectus. In addition to what has been said so far, it is interesting to observe how these other words will be used in other reports that will follow. In this case, these will not be new words generated specifically for the document in question. These will also be common words which however will become recursive. Some exam-

penetrate the areas of interdependence among problems and clusters of problems; (2) to manipulate the models artificially --so as to observe the behavior of the situation's components under differently structured configurations. After the modeling work has been completed it should be possible to elaborate

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suggestions for curative or corrective action that might prove helpful in developing policies. However, to be taken, all these steps require that a ground be established upon which the entire modeling effort can be made to rest. Such a ground is what we shall refer to as the "value-base."

### 3. THE VALUE-BASE

The primary aim of modeling is to give the subject a shape, a structure, a configuration that is determined by an objective which, itself, is external to the subject. Hence the clarifications or insights that might be obtained from a successful modeling effort are never reached in terms of the subject (i.e., a problem or a situation) but in terms of the external objective to satisfy which the modeling was undertaken in the first place. Such an objective always entails a value, and the setting of it must therefore create the particular value-base that gives meaning and direction to the whole endeavor.

A value-base explicitly stipulates certain assumptions about what is "good" and what "bad."\* In the past, it was not always necessary to make such a stipulation because a problem could be recognized clearly and singularly as a problem and therefore fell automatically into a negative value category. This is not the case nowadays when we must deal with the problematique of a whole world-wide situation. In so extended and complex a problem area the value premises reveal themselves as being so confused that it becomes imperative to define a value-base that will govern the work from the very outset.

The value-base to be selected must satisfy certain

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\* This manner of proceeding is actually implicit whenever we say that something represents a "problem". When we call occurrences such as hunger, or over-population, or lack of education, "problems" we are in fact defining them in this way because according to our value system they represent a state that is bad, in comparison to an alternative possible state --which we call "solution" --that we accept as being good.

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fundamental criteria. First, it must qualify as a heuristic tool-concept that can be used throughout the study. Secondly, it must be consonant with the initial perceptions and beliefs that have triggered the work. Thirdly, it must support, and in some sense justify, the outcomes that are expected from the effort. The second and third criteria have already been elaborated throughout the preceding pages; nevertheless, it might bear repeating here that the ground of pre-suppositions from which we shall start is the belief, backed by considerable empirical evidence, that there are strong interactions among the events which create our situation and that, while it is impossible fully to isolate the former, it should be feasible to identify, through modeling, some critical aspects of their temporal and spatial morphology. And, moreover, that such identification might also permit us to anticipate a number of dissonances which may not exist at present, but whose developing conjuncture could well be forming those new issues and problems which will define our future.

It is on this ground of perceived fact and belief that we must now evolve the value-base of the work, as a heuristic tool-concept that will satisfy the first criterion stated above. This can be done with reference to the nature of the problematique itself, that is, with reference to the most general attributes we find in those component elements of our situation that we have

called Continuous Critical Problems. When we review these (even superficially) we find that all of them are problems in relation to something else --either other problem-clusters or a particular state of the system in terms of which we look at them, or values we take for granted because they are embedded in our current culture. Thus, for example, uncontrolled population growth is a problem when viewed in relation to a particular state of the environment that we are now experiencing. It was not a problem when we experienced the environment differently; namely, in a different state of the overall system. Such examples can be multiplied, and if they are we shall notice that in every

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instance the problematic element derives from an imbalance that affects the relationships existing among situational components. This observation cannot but remind us directly that imbalance is a state which defines the pathology of an "ecological" system, which, in fact, our situation, seen in its entirety, represents. Ecology, as one hardly needs to note, is the study of the equilibria and the dynamics of "populations" of living entities within given environments. The notion can be extended and generalized to comprise the equilibria and the dynamics of all entities, for every dimension of contemporary experience is a definable population of facts and concepts: biological, physiological, physical, psychological, ethical, religious, technological, economic, political, national, international, communal, attitudinal, intellectual, institutional...; the full list is no doubt finite but very long indeed. It covers everything and event among which relations of mutual determination, complementarity or competitiveness can be established.

Hence if we extend, as is increasingly being done nowadays, the definition of ecology to comprise the dimensions of occurrence in our world-wide environments it becomes possible to say that we are confronted with a problematique which is ecosystemic in character. The normative statement that describes the value- content of any ecosystem is "ecological balance." Consequently it is the idea of ecological balance that can, and will, be taken as the underlying value-base of the study; for in the terms dictated by our situation the "good" is self-evidently and most generally capable of being defined as the re-establishment of that many-dimensional dynamic balance that seems to have been lost in the modern world.

Given the general conditions of this study, such a value-base should make it possible to develop models and attain insights that have global relevance, and should further open the way for the integration of the models into one primary synthesis capable of providing ideas that, subsequently, can be made

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actionable in terms of concrete policies, of new structures, and new institutions.

### 4. CONCLUSION

The points that have just been touched upon amount to saying that: apart from the reasons of urgency for which the study is being recommended its only a priori hypotheses arise from the recognition of the problematique as possessing world-wide dimensions and therefore systemic characteristics, and that the functional attributes of today's world system necessarily involve normative elements which, being planet-wide, transcend sectoral, political, or regional differences; and the recognition that our current methods of description as well as our social and institutional structures are not designed to operate effectively in a system which is world-wide.

It should be repeated in order to emphasize the point, if for no other reason, that the approach briefly described above



Alexander King

(January 26, 1909 -  
February 28, 2007)

Author of:  
"THE FIRST GLOBAL REVOLUTION"

Alexander has written many introduction to the former reports to the CoR, often jointly with Peccei. But most of all he had also written the only report labled as "a report by the council of the CoR". For this reason about Alexander King biography it is recommended to go ahead to the thrid chapter and check the 1991's report "The First Global Revolution.



Dzhermen Gvishiani

(December 24, 1928 -  
May 18, 2003)

Author of:  
"ORGANISATION AND MANAGEMENT: A  
SOCIOLOGICAL ANALYSIS OF WESTERN  
THEORIES"

Among the three members that founded the CoR Gvishiani doubtlessly is the one whom past and biography was hardest to trace. Nonetheless here is what was possible to find online Dzhermen Mikhailovich Gvishiani. Born Dec. 24, 1928, in Akhaltsikhe, Georgian SSR. Soviet philosopher and sociologist. Corresponding member (1970) of the Academy of Sciences of the USSR (AN SSSR). Member of the CPSU since 1951. Gvishiani graduated from the Moscow Institute of International Relations in 1951. He served in the navy between 1951 and 1955. In 1955 he began work with the State Committee for New Technology of the Council of Ministers of the USSR, and in 1965 he became vice-chairman of the State Committee for Science and Technology of the Council of Ministers of the USSR. During 1960-68 he taught in the philosophy department at Moscow State University. In 1969, Gvishiani was appointed head of the Laboratory for Research Into Complex Problems of Management of the Institute for Concrete Social Research of the AN SSSR. He conducts scientific work on the problems of management and social organization. Gvishiani wrote the works The Sociology of Business (1962), The Social Role of Science and Scientific Policy (1968), and Organization and Management (1970). He has been awarded the Order of the Red Banner of Labor and various medals. "Member of United Nations Advisory Committee on the Application of Science and Technology to Development. Deputy Chairman, State Committee of Union of Soviet Socialist Republics Council of Ministers for Science and Technology since 1962. Chairman, Scientific Council on Problems of Scientific & Technological Revolution, Union of Soviet Socialist Republics Academy of Sciences since 1972.

"Member, Bureau of Branch for Philosophy & Law, Union of Soviet Socialist Republics Academy of Sciences since 1970. Company-Chairman, Intergovernmental Commission on Scientific, Technical & Economy Cooperation between Union of Soviet Socialist Republics & France since 1966. Member, Board of Trustees, United Nations Institute for Training and Research, 1968-1969.

is non-political be it in motivation, in methodology, or in its initial results. Its aim is to create new clarificatory models of the known and already described components of our complex problematic situation so that the subsequent activity of policy formulation may be facilitated or even made possible. It represents a step forward in relation to the present state of affairs, inasmuch as the current ways of describing our situation do not allow of any rational or effective attempt to grapple with the fundamental political considerations to which all insights and conclusions must ultimately be reduced.

## V. THE PROPOSAL

The effort as a whole would be divided into two distinct steps:

First: The "project" as described herein, undertaken by the Club of Rome and dealing with the empirical aspects of the situation, its morphology and the interrelationships that operate among its components. This would be the rough modeling phase;

Second: A subsequent and more ambitious phase, hopefully to be undertaken by the World Forum, dealing with the study of the critical aggregations revealed by the initial model and would aim at the discovery of alternative means of interpreting and resolving interface imbalances and to the identification of various options that are suggestive of coordinated policies.

### I. SCOPE

At the present juncture, the scope of the project (first step) is seen as follows:

- to define criteria for identifying imbalances of a global nature especially with reference to their future evolution
- to attempt a qualitative and quantitative delineation of the interactions that appear critically synergistic within the situation created by these imbalances;
- to establish a tentative morphology of problem interfaces and interactions;
- to identify and evaluate the main trends of research currently being undertaken with reference to this type of problem, to determine the degree to which such research can contribute to the investigation of the overall problematique;
- to outline programmes, initial methods of approach tasks and responsibilities pertaining to the investigation as a whole;
- to attempt to take the first steps necessary for the development of a dynamic computerized model by means of which the entire structure, rather than the mere parameters, of the situation can be manipulated, so that new configurations of the problematique may be revealed and experimented with.

### 2. PROGRAM

The governing statement concerning the project as a whole is that its aim is not research in the traditional sense but "invention."

This should be understood to mean that what is expected from the effort are new insights and approaches rather than the further and deeper elaboration of already known facts. The latter will be used in their present state of elaboration as the substantive material upon which the work will bear --however, the expectation that animates the work itself concerns the meaning which all these facts, in their systemic nature and system-wide

impacts, have for the future of mankind.

Hence it is necessary to interpret the following program in the light of the above statement of purpose.

#### a) Investigation

This initial attempt should define some of the main empirical dimensions of the problematique, the way it is presently sensed and perceived.

The sources from which this information will be obtained are international agencies, research institutions, universities, special study groups, foundations, unions, associations, youth groups, and various selected interest groups, etc.

Existing data banks of national or international scope dealing with critical world problems will be located and used insofar as possible.

Nevertheless in order to avoid sliding into some form of taxonomic research activity the project will for a start concern itself mainly with the basic grouping of problematic issues that are most widely known. These were listed earlier in this document under the heading of Continuous Critical Problems.

Each of the Continuous Critical Problems that were named is today the object of more or less deep research in many organizations and in many countries. This research is generally directed toward the problems themselves and not toward their interrelations--an aspect to which particular emphasis is to be given in the proposed effort. A comprehensive survey of this ongoing research must necessarily be made in order to identify capabilities, lags, and gaps in the body of understanding and knowledge now available, and to make use of any pertinent information it affords us.

Therefore the investigatory phase will attempt primarily at infusing the Continuous Critical Problems with as great an operational meaning as feasible; to enlarge or reduce or refine the initial listing by means of trees and clusters; to establish definitions that are more precise especially in relation to the value-base of ecological balance.

#### b) System Description

The investigatory part of the work should lead to, or be accompanied by, the design of the system which represents the matique in its world-wide generality.

The organization of such a system must be so conceived as to reveal:

- the structure of the dominant interrelationships among systemic components.
- the nature and present intensity of the interactive relationships; the nature and intensity of the "feedback" and "feedforward" effects; the general (obvious) causality patterns into which the interactions can be seen.
- the dynamic of the interactions from which some idea system's future states can be sensed or deduced.
- the controlling elements of the system as it is today, and how this order is likely to change as the system evolves in time.
- the component linkages that appear to be the mostly critical.
- the functional morphology of the linkages: degrees of rigidity, flexibility, equilibrium, stability --in the rates and the levels of the system of interactions.

The final configuration of situational components to emerge from the proposed study will therefore have a spatial and

The Lunar Society of Birmingham

"Lunatics" were active at the beginning of the British industrial revolution two centuries ago. Travel at night was difficult and dangerous. A group of people who were at the centre of the industrial revolution (such as Wedgwood the potter, James Watt creator of the steam engine, and Priestley the discoverer of oxygen) dined together each month on the night of the full moon when there was some natural light for the journey and discussed the promises and problems offered by contemporary developments in science and industry. The poet William Blake called them "lunatics" as a play on words both as to the size of the challenge which they had undertaken and the night of their meeting. The group had no political power or ambitions. Their different professions enabled them to see the interconnections between what was happening around them and the potential for changing the nature of society. They encouraged public debate on the changes taking place. The late Alexander King, one of the founders of The Club of Rome, liked to refer back to the Lunar Society of Birmingham as a precedent for The Club of Rome.

Like the Lunar Society, The Club began in an informal way. And it share as well as Lunar Society their concern for issues occurring already at that time to human being. It is very interesting to notice other people involved in this elitary group: , Erasmus Darwin (father of Charles Darwin).

plex Problems of Management of the Institute for Concrete Social Research of the AN SSSR. He conducts scientific work on the problems of management and social organization. Gvishiani wrote the works The Sociology of Business (1962), The Social Role of Science and Scientific Policy (1968), and Organization and Management (1970). He has been awarded the Order of the Red Banner of Labor and various medals. "Member of United Nations Advisory Committee on the Application of Science and Technology to Development. Deputy Chairman, State Committee of Union of Soviet Socialist Republics Council of Ministers for Science and Technology since 1962. Chairman, Scientific Council on Problems of Scientific & Technological Revolution, Union of Soviet Socialist Republics Academy of Sciences since 1972. "Member, Bureau of Branch for Philosophy & Law, Union of Soviet Socialist Republics Academy of Sciences since 1970. Company-Chairman, Intergovernmental Commission on Scientific, Technical & Economy Cooperation between Union of Soviet Socialist Republics & France since 1966. Member, Board of Trustees, United Nations Institute for Training and Research, 1968-1969.

"Chairman, Committee on Coordination of Scientific & Technological Cooperation, Council for Mutual Economy Assistance. Head of Union of Soviet Socialist Republics Deln to United Nations Industrial Development Organization, United Nations Educational, Scientific and Cultural Organization.

"Presidium, Soviet Sociologists' Association since 1972. USSR Academy, of Sciences, Institute of Manager Academy, Sweden Royal Academy, of Engineering Sciences, American Manager Association, American Manager Academy, Foreign member of Finnish Academy Technology Sciences. Club of Rome. " Married to Lyudmila Alekseyevna Kosygina (daughter of the late Aleksey Kosygin, Chair, of USSR Council of Ministers in 1964-in 1980) in 1948. Academician Jermen Gvishiani, Chairman of the IASA Council and Deputy Chairman of the State Committee for Science and Technology of the Council of Ministers of the USSR, one of IASA's founding fathers. Former member, US-USSR Trade and Economic Council Founding president, Russian Association for the Club of Rome

temporal morphology that embodies the dynamic process that animates critical world problems, when that process is set in the context of a general value framework of ecological balance.

The project will not attempt a forecast of how problems will be apprehended in the future, although the final shape of the system will depend on the integration of alternative perceptions of the future with perceptions that have currency today.

c) Report

The project should result in either one or several reports containing the synthesis of the work conducted, interpreting the new system of world-wide critical interconnections, the key problem-clusters that should be given particular attention, and the methods to be used in their further investigation.

d) Outcome

The reports, by giving a clearer picture of the nature of the problematic interactions, of their relative importance and their dynamic configurations, should be of use as a preliminary indication of possible new and viable directions in the field of policy-making.

Once this initial aim is attained it is the hope of the Club of Rome to have its findings reinterpreted in depth by the kind of instrumentality that was referred to earlier as the World Forum. Such reinterpretation would allow the results of the project to be fitted into the framework of different value systems and molded into new attitudes and outlooks at a higher level of political endeavor where new structures and institutions can be designed. However, to be reached, these ends require means that are both more ambitious and more sophisticated than those to be used in the project --e.g., policy analyses and design, trade-off calculations, deontic logic applications, the construction of alternative systems, long-term dynamic simulations with multiple variables, etc.

Through such means a normative as well as an empirical delineation of the future states of the world system might be obtained together with the details of the new framework of integrated policies, institutions, and organizations that are necessary to render such a new world system operational.

e) Organization

The overall organization of the project is described below in its relationship to the envisaged structure of the Club of Rome.

relation to the project being considered here. Its general objectives and constitution are described in Section Three (Annex I).

- B. The project falls directly under the cognizance of the Executive Committee of the Club of Rome. During the latter's formative stage an Executive Committee has been formed ad hoc whose membership will be found in Section Three (Annex III).
- C. The Executive Committee has asked the Institut Battelle at Geneva to provide administrative support and act as managing agency for the project. This request having received favorable response from the Battelle management, it was decided that Battelle's Geneva Centre de Recherche would be providing hospitality and facilities for the Work Group that will be engaged in carrying out the project.
- D. The Executive Committee has asked Prof. Hasan Ozbekhan to undertake the overall direction of the project and the operational responsibility for the Work Group. Currently, the Work Group itself is visualized as consisting of some

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- ten senior scientists from various national backgrounds, supported by a team of junior researchers. Further details concerning the Work Group will be found in Section Three (Annex IV).
- E. The aid of a number of Consultants will be solicited to support the Director of the project. These consultants should be authorities in various fields that pertain to the project in its generality.

The principal role of the consultants will be to offer new ideas and substantive verification from the viewpoint of disciplinary approaches whenever necessary.

A general idea of the planned competence of this consulting group will be found in Section Three (Annex V).

3. COST AND DURATION

It is expected that the project as described can be realized within a budget of \$900,000 and that its duration would be approximately of 15 months. Therefore if the work can be started sometime during the summer of 1970 it should be completed by the end of 1971.

CONCEPTUAL FRAME AND WORK PROCEDURES

INTRODUCTION

1. THE CONCEPTUAL FRAMEWORK

The purpose of the present section is to provide an overall impression of how the work described heretofore might be conducted, and to discuss insofar as is possible at this early stage some methods and techniques of approach that are tentatively being considered.

No firm and unequivocal commitment to a given methodology can be made at this time. The problematique --i.e., the subject to be addressed --that was outlined is extremely complex and must be approached by way of a unifying framework of concepts that will afford it a solid methodological basis. The chosen approach itself needs in some sense to be an invention closely and specifically tailored to fit the needs of the subject.

**THE RIO PROJECT:** A project sponsored by the Club of Rome and directed by Jan Tinbergen, the Dutch Nobel Prize winner in economics, to discuss "Reshaping the International Order" (RIO).<sup>1</sup> Twenty-one specialists from the First and Third Worlds analyzed the economic, social, technological, and political aspects of a more equitable relationship between the rich and poor countries of the world; they sent drafts of their conclusions to other experts and institutions, and after incorporating their comments issued a final report of specific recommendations.<sup>2</sup> The report suggested that a treaty based on the Charter of Economic Rights and Duties of States and similar to the Treaty of Rome be drafted and submitted to the United Nations to insure the new order.<sup>3</sup>

NOTES

1. Jan Tinbergen, *RIO: Reshaping the International Order. A Report to the Club of Rome* (1970). In the preface, Tinbergen explains that at the 1974 Salzburg meeting of the Club of Rome, Mexican President Echeverria strongly advocated the U.N.'s resolutions on the New International Economic Order and the Charter of Economic Rights and Duties of States, which convinced Aurelio Peccei to undertake the project.
2. Markun Timmke, "Reshaping the International Order," *Assemblage*, Jan. 1977, pp. 89-104.
3. *Ibid.* A commentary comparing the RIO report to the Club of Rome's earlier "limits to growth" advocacy may be found in the *Wall Street Journal*, Apr. 19, 1976, p. 10.

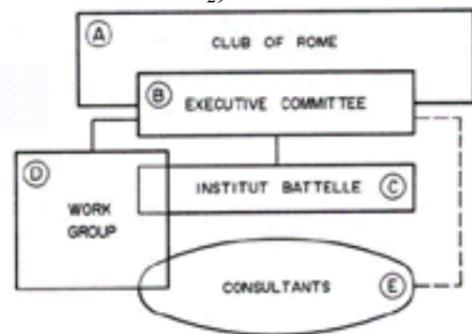
SEE ALSO

Club of Rome; Limits to Growth, *New International Economic Order. Charter of Economic Rights and Duties of States.*

Training and Research, 1968-1969. "Chairman, Committee on Coordination of Scientific & Technological Cooperation, Council for Mutual Economy Assistance. Head of Union of Soviet Socialist Republics Delegation to United Nations Industrial Development Organization, United Nations Educational, Scientific and Cultural Organization. "Presidium, Soviet Sociologists' Association since 1972. USSR Academy, of Sciences, Institute of Manager Academy, Sweden Royal Academy, of Engineering Sciences, American Manager Association, American Manager Academy, Foreign member of Finnish Academy Technology Sciences. Club of Rome. " Married to Lyudmila Alekseyevna Kosygina (daughter of the late Aleksey Kosygin, Chair, of USSR Council of Ministers in 1964-in 1980) in 1948. Academician Jermen Gvishiani, Chairman of the IIASA Council and Deputy Chairman of the State Committee for Science and Technology of the Council of Ministers of the USSR, one of IIASA's founding fathers. Former member, US-USSR Trade and Economic Council Founding president, Russian Association for the Club of Rome

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A. The aims of the Club of Rome have already been noted in

Viewed in this light, it becomes evident that the work must be conducted not merely as if it were a straightforward investigation into known facts but rather as an effort (1) to uncover new meanings and consequence-patterns that inhere in dynamic combinations of such facts, and (2) to shape such meanings and consequence-patterns into new, more revealing configurations.

To do this we need to meld together two fundamental, but different, logical approaches:

1) a hypothetical-deductive system that provides us with the tool concepts necessary to penetrate and manipulate the facts that make up the situation surrounding us;

2) a cybernetic system by means of which we can create alternative configurations of our findings, both so as to make the latter clearer and to see the various behaviors of newly defined consequences within different time frames.

This is to say that we must on the one hand build an axiomatic, and on the other hand a plan.

Through the melding of these two approaches, it should be feasible to examine our world-wide situation and to develop some ideas about how it can, or ought to be changed, to accord with the value-base of "ecological balance" that we have chosen as the ground of our reasoning.

We should note moreover that to create such a combined system of methods we have to take into consideration the levels of cognition from which the problematique and its components are perceived. Hence the Work Group (and what it represents, namely, the Club of Rome) will enter strongly into the methodological equation because its perceptions will be governing the work.

Having made these basic clarifications we may begin by establishing some procedural assumptions. In doing this we shall alter the order of the above, to basic approaches and begin with a tentative outline of the cybernetic system so that our thoughts can be organized in a logical manner.

2. TENTATIVE PLANNING CONSTRUCT

A. WORKING ASSUMPTIONS

In our attempt to design an initial and highly tentative planning construct, we must begin by proposing certain definitions that can also be considered as working assumptions.\*

CONCEPTS	DEFINITIONS
PROJECT	<u>Substantive operations</u> undertaken by the Work Group
GOAL	<u>Results expected</u> from the project; i.e., suggestions, clarifications, insights, reports, impacts.
OBJECTIVE	<u>Directives</u> concerning the goal that the Work Group receives from the Club of Rome.
MEANS	<u>Instrumental inputs</u> that the Work Group receives from or through the Club of Rome, including information techniques, methodo.. logies, ideas, facilities, etc.
EVENTS	Subject of the work; i.e., elements or components of the problematique

TABLE I

\* The ideas that will be found throughout this whole section derive from many sources and represent a synthesis of the thoughts of many authors. Unfortunately neither the nature of the document nor the circumstances in which it was written permit individual recognition with respect to every point made.

Among the foregoing concepts, the ones listed below are operational variables that enter into the overall framework as follows :

GOAL	Output
OBJECTIVE	Controlled inputs
MEANS	Controlled inputs
EVENTS	Uncontrolled inputs

TABLE II

The most simplified and elementary way of visualizing the relationships that will become established among these elements in the course of the work, is shown (Fig. I) on the next page.

It is self-evident that the nature as well as the level of the output are entirely dependent on the nature and the level of the relations we can establish and formulate with regard to the inputs that will enter the system of work. Moreover, these relations are likely to give us some indications of the methods of approach, which might have to be used. Hence the assumptions we have advanced will now have to be looked into somewhat more closely.

B. CONTROLLED INPUTS

The controlled inputs we have defined are objective and means. The precise operational meaning of these words as well as the manner in which they interact in relation to the goal must be determined.

Here, the first point to be made is that neither objective nor means are fixed nor static concepts. They constantly interact with each other, with the project --that is, the work-in-progress --and with the subject of the work, namely, the even

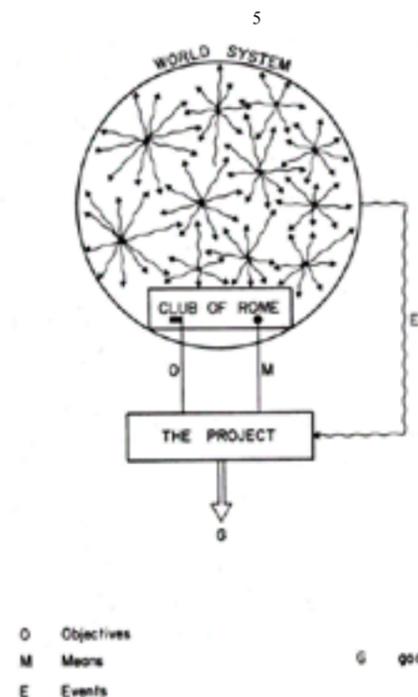


Fig. 1



Erich Jantsch

(January 8, 1929 - December 12, 1980)

Author of:  
**"THE SELF-ORGANIZING UNIVERSE"**  
**"EVOLUTION AND CONSCIOUSNESS"**

**"DESIGN FOR EVOLUTION: SELF ORGANIZATION AND PLANNING IN THE LIFE OF HUMAN SYSTEMS"**

He was born in Vienna. He studied physics at the University of Vienna, where he obtained his doctorate in astrophysics in 1951. Subsequently he did a post-doctorate study at the Indiana University Bloomington<sup>4</sup>. After that he travelled a lot around the world between Europe and United States. From 1957 and 1962 worked as engineer and physicist in Switzerland. Jantsch was visiting lecturer of Planning and Research Planner of International Studies, University of California, Berkeley. In 1974, stayed at the Villa Serbelloni in Bellagio, where he was invited by the Rockefeller Foundation. He was also Research Associate at MIT, where he studied the future the institute lastly mentioned and the American University. Was also consultant to the Directorate of Scientific Development of the O.E.C.D. and member of the Executive Committee of the CoR and during the early years of life of this Think-Tank, he was involved jointly with Christakis and Özbekhan in preparing the prospectus known as "Predicament to Mankind". Among this group he was the only one that was even a member of the CoR. To sum up, Erich Jantsch was an astrophysicist, engineer, professor, lecturer, consultant (for various governative and non organization) and in the last two decades of his life he profused himself in studing forecasting. Durig his life he wrote more than twenty books and a lot of articles. Who have had the possibility to know him, referres of a brilliant mind concerned for the future of mankind. Unfortunately his life ended too soon and in hardship without a job. Milan Zeleny has written about him a touching eulogy in which he remebers:

«Erich admired Ilya Prigogine and his irreversible thermodynamics, Manfred Eigen and his self-organizing hypercycles, Kenneth Boulding and his evolutionary vision; he respected von Weizsacker's ultracycles, Margulis-Lovelock Gaia system, Maturana Varela autopoiesis, and few other intellectual models. These concepts were at the root of his noble attempt to formulate a unifying paradigm: dissipative selforganization. Unfortunately, Erich did not live to see his first formulations published.»

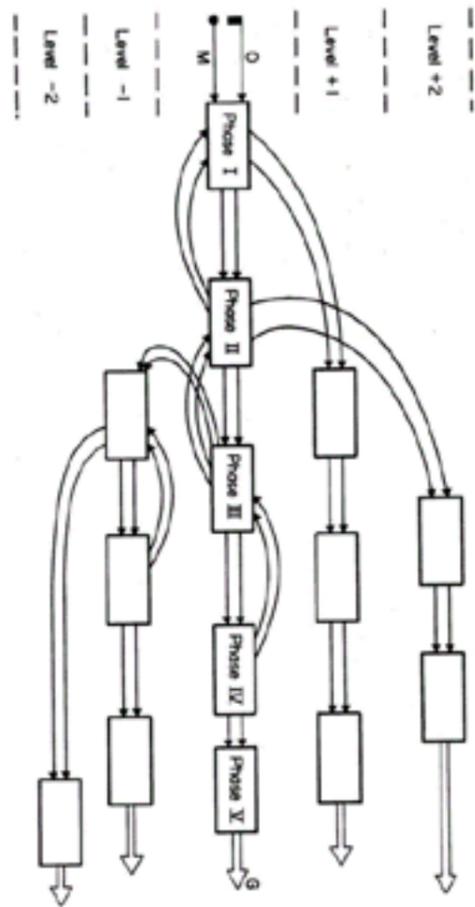
Through these words it is possible to understand how deep is the contribution Jantsch has brought to the CoR, to the systemic thinking and above all to cybernetics. His holistic approach has been influential among interdisciplinary proponents of biomimicry alternatives to understanding science such as co-evolution, and self-organization.

Moreover he said:

«He grew up in the cultural and educational environment which also nurtured John von Neumann, Oskar Morgenstern, Heinz von Foerster, Ludwig von Bertalanffy, Peter F. Drucker, Kurt Godel, Theodore von Karman, George von Bekesy, Karl W. Deutsch, and many, many others. Jantsch received a doctorate in astrophysics from the University of Vienna in 1951. But his first love was music, theatre and art. He was a music critic in Vienna for many years and maintained his interests in the arts until his death (over 300 reviews).»

Through these words it is possible to understand how deep is the contribution Jantsch has brought to the CoR, to the System Theory and above all to cybernetics. His holistic approach has been influential among interdisciplinary proponents of biomimicry alternatives to understanding science such as co-evolution, and self-organization. In conclusion it is interesting to notice that Jantsch in the acknowledgements of his work "The self-organizing universe" addresses his tanks to some interesting personality for their support, among all the names: Ilya Prigogine (for his friendship and his overhauling contribution), Magoroh Maruyama, Francisco Varela, Ernst von Weizsäcker, Milan Zeleny, Ervin Laszlo and Paolo Soleri.

Fig 2



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This interaction need not necessarily alter the direction of the objective (i.e., the nature of the task) or the nature or quantity of the means. But it is very likely to cause changes in the level of goal-attainment.

This is because the time-span of the work envisaged is something in the order of fifteen months and a learning process will set in as soon as it starts. This, in turn, will alter the perceptual make-up of the Working Group. This process can be outlined as shown on the following page (Fig. 2).

There are further reasons, connected with but differing from the learning process, that force us to consider those differences in level that define a relationship of dependency between output and controlled inputs. This introduces two ideas that are fundamental both methodologically and substantively.

These ideas are:

- (1) -"Futurity" or the future dimensions of the events that form the problematique to be investigated; and
- (2) -"normative analysis" in the light of which the value-base that was chosen --i.e., ecological balance --can be made to govern the objective of the work.

The notion of futurity enters into the argument because there are basically two ways of looking at a situation and perceiving its problematic features. Both are grounded in the idea of "differential". Namely: (a) a situation represents a problematique because some of its characteristics differ from the characteristics of a past situation that the people involved agree to define as non-problematic --or as "normal"; and, (b) a situation represents a problematique because some of its characteristics differ from the characteristics of a future

situation that the people involved agree to define as non-problematic --or as "ideal".

In either case the first step is to proceed from a general, agreed upon, image. And, in either case, what makes agreement possible is a shared value-base.

In the project being considered we have started from the assumption that the problematique is both world-wide\* and new in its configuration; therefore it would be impossible to evaluate its differentiating aspects with reference to a past situation. Hence it was decided to establish differentials with reference to some future state of the world-system of which the defining value-base would be "ecological balance".

To be able to create such an image two things are necessary: (1) an idea or vision of how events will evolve toward the present situation is left to itself or left to evolve with a minimum of tampering; (2) an idea or vision of how the situation will look in the same future if it is normatively conceived in the light of ecological balance.

It might or might not have been noticed that in the foregoing few paragraphs the whole argument was given a somewhat new shape merely by elaborating in a very superficial way various points that are embedded both in the facts we must deal with and in the general methodological philosophy we have adopted at least for a start. Thus we have:

1. OUTCOME PARAMETERS: in the sense that the goal must deal with "differentials" between a present state of the system and a future state of the system.

\* This feature alone would make it impossible to judge it in terms of a shared past value-base.

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2. INPUT PARAMETERS: in the sense that the objectives and means must be set at such a level so as to permit:
  - 2.1. A forecast of the normal future state of the present situation (logical future).
  - 2.2. An image of the future state as can be imagined in the light of the value-base of ecological balance (normative future).
  - 2.3. Interim states of the objective for judging whether the difference between 2.2. and 2.3. adds up to a meaningful evolutionary or interim situation be identified and singled out.
3. THEORETICAL FRAMEWORK: which is the value-base (ecological balance) that must be so clearly and operationally defined that it can be used to judge any established relationships as valid or invalid.

From these points certain new conceptions regarding the level of dependence problem can be derived. For example, and solely as an example, we can establish the following levels:

Going on with the contextualization of the document shown, let's now observe the contents index. It is divided into three macro sections:

The first provides the conceptual basis and the basic coordinates preparatory to the explanation of the work that is proposed later. It is here that the greatest number of new terms and concepts referred to just before are presented and explained.

The second section is that not only more nourished but also the exquisitely technical part from which the cultural influence of system administrator and cybernet of Özbekhan and of those who assisted him in the preparation of the document emerges.

The third and last part contain ancillary contextual and/or explanatory information of other concepts introduced in the previous sections and treated therein in the form of digressions in order not to affect the fluidity of the discussion.

Continuing the first formal analysis of the prospectus in question, it is possible to formulate some further considerations. James Rennie Whitehead reports that following a first meeting in which Peccei and Özbekhan discovered they shared some visions on the setting of certain problems of the society in which they were in agreement, they decided to collaborate. One of the SIX members of the first executive committee in the history of the CoR is then asked to Erich Jantsch to draw up a first document. This is what Peccei himself says in his book "La Qualita Umana" was cryptic in its scientific rigor for the bystanders summoned specifically by King and Peccei. It so happened that Peccei (the CoR had already been founded) entrusted Özbekhan with the drafting of a document that presented in a planning key the methodological approach that he had exposed to Peccei in a previous informal meeting. At that point, Dr. Özbekhan involves Jantsch and a young scientist named Alexander Christakis.

from the Whitehead website and also that the presentation would eventually take place in December 1969 in front of the Executive Committee of the CoR and the meeting was held in the Palais Pallavicini, opposite the Hofberg Palace in Vienna. The results of that presentation are entrusted to history. However, since the discussion on the document has not yet been completed and an overall vision is not yet available, please refer to this part at the end of the chapter in the appropriate paragraph. For the moment, albeit, we will limit ourselves to considering, on the basis of what has been presented so far in the columns alongside on the protagonists of the drafting of the document, that the latter can rightly be considered the product of some of the best minds of the period paid in the development of systemic and cybernetic models.

In light of what has been said so far, it is possible to take a first introduction to the document, in which the first coordinates were provided. A useful framework to contextualize the main authors of the document and not least the historical moment closely related to the latter and to the document itself.

The paragraph may be concluded at the same time as the end of the first introductory paragraph of the prospectus. In addition to what has been said so far, it is interesting to observe how these other words will be used in other reports that will follow. In this case, these will not be new words generated specifically for the document in question. These will also be common words which however will become recursive. Some examples of this are the words "dilemma", "complex", "dynamic".

TABLE III

LEVELS	CONTROLLED INPUTS			UNCTRL. INPUTS	
	Goals	Objectives	Means	Events	
				Forecast	Normative
Null	g 0	o 0	m 0	e 0	E 0
Low	g 1	o 1	m 1	e 1	E 1
High	g 2	o 2	m 2	e 2	E 2
Ideal	g 3	o 3	m 3	e 3	E 3

where

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W = the measure of the worth of a particular action (or policy).  
 I<sub>i</sub> = the input variables that control the alternative courses of action.  
 O<sub>i</sub> = the extraneous, non-controlled variables, that affect action\*.

Aside from level relations and adjustments and indices that lend operationality to the objective, the legitimacy of the plan must also derive from its dynamic conception --namely, from the manner in which the foregoing ~ through the system as a

whole. For it is evident that the relationships among all operational elements will be constantly changing. Hence it is important to develop from the outset a planning construct that recognizes and accommodates such changes while the work is going on. The rationale for this is that the Club of Rome is not external to the world. It too is part of the situation. Therefore, it follows that ~ inputs must, themselves, be viewed as feeding into the subject of the work.

Since the subject of the work is in a state of continual flux, the work must necessarily be evolutionary and dynamic. Some results, representing clarifications of the problematique's components, will be obtained as the work process unfolds. In consequence it is likely that:

(1) a feedback loop will be generated going from these continuous interim results back to the Work Group, and change the perception of the latter with regard to the interpretation of the objectives to be attained;

(2) another feedback loop generated by such results will affect the notions that the Work Group has concerning the nature

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 \*This general formulation of action variables within the context of an entire system was developed by Dr. A.N. Christakis and Dr. N. M. Kamrany.

From an arrangement of this sort it becomes --or should become --possible to build various models (which, basically, are pay-off matrices) in which the combined weights of objectives and means can be made to relate to various levels of forecast and normatively determined future events to derive different levels of goals.

It is in turn from such models that corresponding plans will be constructed in which all the concepts that were listed earlier (Table II) can be related to each other in a way that is not arbitrary but optimizing.

The most important consideration in the structuring of controlled inputs is the definition of "ecological balance", which needs to be established as the governing principle of the objective. Such a definition does not exist at present nor can the idea itself be given any kind of operational meaning through mere verbalization --namely, through a simple description of what the expression might signify.

"Ecology", that is human ecology in the sense we have described it in the first section of this document is, itself, a

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system of extraordinary complexity comprising both individual entities and multidimensional relationships, some of which have network characteristics. All the component forces and phenomena existing in such an ecology cannot be taken into consideration in a study such as the one being envisaged. Nevertheless a series of them that pertain with particular emphasis to those elements problematique that will be studied has to be selected and developed into indices, in accordance with the best methods extant for the creation of such indicator lists. It is possible that certain interesting ideas being explored in the USA as part of the effort involved in creating Social Indicators might prove useful, in building such lists.

In conjunction with this, simultaneously in fact, the notion of "balance" will have to be reduced to operational significance. Balance, in a system-wide human environment, is ultimately reducible to a finite number of trade-offs. Hence what will be required to make our objective operational is, in all probability, a three-dimensional matrix in which the selected ecological indicators are ascribed trade-off values not only in terms of monetary cost but also of other vital kinds of "costs" and kinds of "worth" pertaining to action and outcome (i.e., to policies and results).

With such indices and matrices at hand it should become increasingly feasible to view the model of a problematic situation in the relatively simple form

$$W = f(I_i, O_i)$$

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of the output --i.e., the goal. These shifts, or renewals, in understanding may change the perception of the Club of Rome concerning the problematique and must therefore be viewed as a source of new objectives as well as of new means --i.e., of new controlled inputs.\*

All these feedbacks whether taken singly or in combination will affect the nature of the output and possibly alter it.

Recognition of these processes provides us with a preliminary planning construct which is outlined on the next page (Fig. 3).

Up to this point we have dealt mainly with the controlled inputs side of the overall work plan. In the following pages we shall deal with questions concerning uncontrolled inputs.

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\*Moreover if such results are very important and dramatic (which is unlikely) they will also create a feedback loop into the situation and generate new events. But because the probability of this is very low it need not be considered presently. (That is the reason for that loop being shown in broken lines in the figure on the next page.)

**LIMITS TO GROWTH: A term that originated in 1972 with the first report to the Club of Rome, entitled *The Limits to Growth*.<sup>1</sup> The report was based on an MIT computer model projecting that the interaction of inadequate food supply, continued population growth, dwindling natural resources, industrial growth, and increased pollution over a period of the next 60 years would lead to a planetary doomsday.<sup>2</sup> The book stimulated a debate between advocates of "growth" and of "no growth" that still persists;<sup>3</sup> the Club of Rome's book "can be seen as providing a kind of New Testament for the environmental movement of the late 1960's and the early 1970's."<sup>4</sup>**

**NOTES**

1. Donella H. Meadows, et al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (1972).
2. Claire Sterling, "Club of Rome Tackles the Planet's 'problematique'", *the Washington Post*, Mar 2, 1972, p. A18.
3. Farrokh Jhabvala, "A Survey of Limits to Growth: Is Mankind Really at the 'Turning Point'?" *The Fletcher Forum*, Fall 1976, pp. 103-119.
4. "Background Books: Resources and Economic Growth," *The World*, Autumn 1976, p. 60.

**SEE ALSO**

Club of Rome: RTO Project; Futurism.

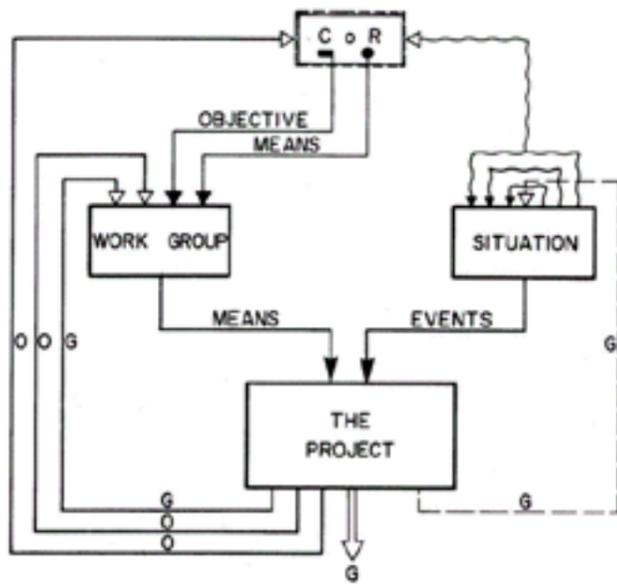


Fig. 3

Once these facts have been clearly recognized and admitted we can start by establishing a number of hypotheses, which will underlie as well as guide the study. These hypotheses obviously derive from many sources and represent a particular manner of cognizing the nature of the reality that surrounds us --they are, nevertheless, consonant with the value-base of ecological balance we have chosen as the governing objective of the study.

1. The events to be considered are crisis-related components of our situation.
2. In their totality these events represent a problematique. Problematique is not defined by its component events as an aggregation that is analogous to a "set" --in the mathematical meaning of the term --but as a system.
3. As such, the events to be studied are in themselves and in their attributes, dynamic, interconnected, and interdependent and that "operate together ...in such a way as to produce some characteristic total effect".\*
4. These dynamic relationships do not appear to be either regular or stable; they are akin rather to evolutionary "jumps" that create imbalances throughout the system.

\* In this hypothesis the definitions of Hall and Fagen and that of Allport have been paraphrased somewhat and combined. See: A.D. Hall and R.E. Fagen.. "Definition of System" in Modern Systems Research for the Behavioral Scientist, W.W. Buckley (ed.) Aldine Publishing Co., Chicago, 1968. And, F.H. Allport, Theories Of Perception and the Concept of Structure, John Wiley and Sons, New York 1955.

C. UNCONTROLLED INPUTS

The uncontrolled inputs with which we shall concern ourselves have been qualified as "events". Events are the substantive elements of the situation; therefore, they describe all the components of the problematique including what we have called the Continuous Critical Problems.

The controlling issue with reference to events --insofar as the proposed study is concerned --is that they must be understood in their essence, in their structure, and in their dynamic behavior. Hence our approach to them must be hypothetical-deductive in character; and our aim, the creation of an axiomatic.

This is obviously very difficult because today the configurations of the very important events that are constantly occurring around us are blurred. We have no precise feelings concerning their nature, no real way of formulating ideas about their future implications, no appropriate methods to trace the causal connections between what we sense to be symptoms and what might be the central illness. Linkages that were clear when our minds operated within the framework of determinism have become obscured and confused. Empirically we are able to describe numerous problems-- but this approach does not really help us to penetrate the essence of the situation. What seems needed is to proceed, mainly, through heuristic, inventive approaches, using almost any technique in the hope that we might sufficiently disarrange what is obvious so as to be able to penetrate a little further into what might be real.



Alexander Christakis

(January 1, 1937)

Author of:

"HOW PEOPLE HARNESS THEIR COLLECTIVE WISDOM"

"PRAGMATIC DESIGN DIALOGUE"

"THE TALKING POINT: CREATING AN ENVIRONMENT FOR EXPLORING COMPLEX MEANING"

He is born in Greece but came to USA when he was nineteen and there studied theoretical physics at Princeton University. Then he received a Ph.D. in theoretical nuclear physics at Yale. And lastly he also studied urban planning and systems science. After the academic experience he came back to Greece and joined the Doxiadis Associates an architectural firm. In 1968 he was hired by Hasan Özbekhan in order to collaborate with him and Erich Jantsh in the preparation of the prospectus to the CoR. Consequently he spent many years among different faculties such as Yale University, Georgetown University, University of Athens, University of Virginia and George Mason University in which he was in charge as director of the Center for Interactive Management. He has been employed also the Editorial Boards of several journals, including Systems Research and Behavioral Sciences, Systems: Journal of Transdisciplinary Systems Science, and the Journal of Applied Systems Studies. In 2002, Dr. Christakis has been president of the International Society for the Systems Sciences and also president of the Institute for 21st Century Agoras (a non-profit organization dedicated to the evolution of civic, global, and institutional capacity for coordinated democratic decision-making using systems principles). Aleco Christakis is still nowadays one of the most important theoretician and employer of Structured Design Science (SDS); however, as it is possible to see from his studies, he is also a social scientist, systems scientist and cyberneticist. At the same time, it is of considerable interest that he belongs to the moderate critics of the CoR and without doubt among those inside the club, perhaps among the first. Certainly previous to Edouard Pestel. His constructive criticism will be analyzed extensively in the appropriate paragraph at the bottom of the paragraph. PS for me REMEMBER to COMMENT the biographical paragraphs as well to the total minkia.



Aurelio Peccei

(July 4, 1908 -

March 14, 1984)

Author of:

"THE HUMAN QUALITY"

"THE CHASM AHEAD"

"ONE HUNDRED PAGES FOR THE FUTURE"

He was born on 4 July 1908 in Turin, the capital of the Piedmont region of Italy. He spent his youth there, eventually graduating from the University of Turin with a degree in economics in 1930. Soon thereafter he went to the Sorbonne with a scholarship and was awarded a free trip to the Soviet Union. His knowledge of other languages brought him to Fiat S.p.A. Although under continual suspicion as an antifascist in the early 1930s, in 1935 a successful mission for Fiat in China established his position in Fiat management. During World War II, Peccei became involved in the antifascist movement and in the resistance, where he was a member of the "Justice and Freedom". Peccei's work with the anti-fascist underground during the war caught up with him in 1944, when he was arrested, imprisoned, tortured, came within an ace of execution and escaped to lie in hiding until the liberation. After the war, Peccei was engaged in the rebuilding of Fiat. Furthermore, he was engaged in various private and public efforts then underway to rebuild Italy, including the founding of Alitalia. In 1949, he accepted to go to Latin America for Fiat, to restart their operations, as Fiat operations in Latin America had been halted during the war. He settled in Argentina, where he lived for nearly a decade with his family. He quickly realized that it would make sense to start manufacturing locally and set up the Argentine subsidiary, Fiat-Concord, which built cars and tractors. Fiat-Concord rapidly became one of the most successful automotive firms in Latin America. In 1958, with the backing of Fiat, Peccei founded Italconsult (a para-public joint consultancy venture involving major Italian firms such as Fiat, Innocenti, Montecatini), and became its Chairman, a position he held until the 1970s, when he became Honorary President. Italconsult was an engineering and economic consulting group for developing countries. It operated under Peccei's leadership, on the whole, more as a non-profit consortium. Italconsult was regarded by Peccei as a way of helping tackle the problems of the Third World, which he had come to know first-hand in Latin America. In 1964, Peccei was asked to become President of Olivetti. Olivetti was facing significant difficulties at that time due to the profound changes occurring in the office machine sector. Peccei, with his foresight and his entrepreneurial vision, was able to turn the situation at Olivetti around. But Peccei was

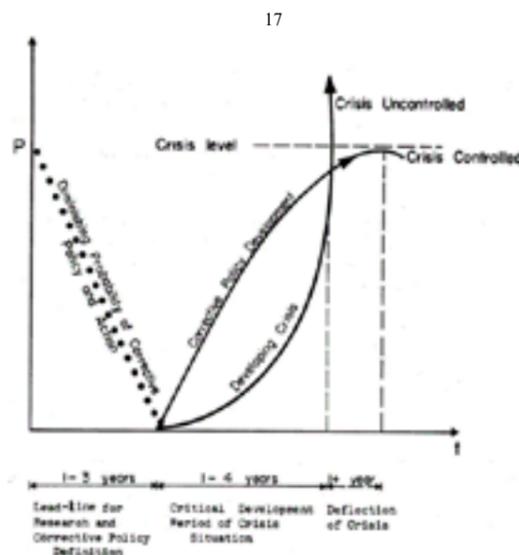


Fig. 4

Note: We shall assume in the study that critical events behave approximately as shown above. Namely, there is a crisis level at about 4 years hence beyond which most of the events we must consider will become uncontrollable, unless they have been deflected by newly developed corrective policies. The deflection period must be conceived as short to be effective (1+year). The lead-time for projects such as the present is generally set to 1-3 years. These figures represent an averaged-out consensus of those working in Crisis Research in the USA. They were obtained from Dr. John Platt of the University of Michigan at Ann Arbor.

5. Such imbalances seem to have two major characteristics: (a) their time-scale of occurrence is relatively short and might be getting shorter; (b) they are, or appear to be, a-causal inasmuch as each imbalance has impacts that resonate throughout the system, although in varying degrees of intensity. These characteristics will have to be operationally probed in terms of the fundamental criteria that apply to ecosystems:

Temporality	Complementarity
Spatiality	Mutual-determination
Quality	Competitiveness
Quantity	Synergy

6. This might suggest the presence of various kinds of impingement effects within the system that generate new events. These effects could be phenomena like: interface, mismatches, intersensitivity, clusterings, overlaps, synergies, functional dissonances, time-phase dissonances, etc.

It is in terms of these six basic hypotheses that the study will be conducted. The main thrust of the effort will be directed at identifying:

1- The "events" within the system --namely, the components of the problematique.

2- The "attributes" of the events --namely, the components' functional characteristics.

3- The "relationships", "interconnections", and "interdependencies" among the events and among their attributes.

4- The "characteristics total effect" that results from all the above and that we have called the "situation".

In the course of the project the greatest emphasis will be given to the first three points noted above, whereas point four is to be viewed as the subject of later efforts that have been mentioned in the opening section of this document.

### III. GENERAL COMMENTS ON METHODOLOGY

It is not possible to delve deeply into the methodologies to be used in this project because:

(1) a priori decisions about methodology might prejudice the outlook of the Work Group to a degree that would reduce its effort to an arbitrarily slanted, academic exercise ;

(2) although there are a number of methodological approaches that have been evolved in recent years all of them, almost without exception, are still highly experimental --so that it is impossible to judge their operational worth especially in relation to a large-scale problematique such as the one we shall have to consider.

In the light of the above the best strategy would seem to be that of remaining free of methodological commitments and pre-conceptions and to choose the apposite approaches as we go along and as the work dictates.

This obviously does not mean that the effort will be entered into blindly. On the contrary, it means the circumstances

are such that the greatest freedom of action and flexibility of invention must be preserved. The specific methodological field within which we shall be able to make the needed choices is

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large, but it can be described if we outline the project's operational evolution, as is done in the flow chart (Fig. 5) on the following page.

This chart shows the step-by-step development of the project starting with the given value-base that leads on the one hand to the creation of a normative image of the future and on the other hand to the setting of the correct objective/means level. From this ground (which satisfies the normative and some of the strategic requirements to start the work) the project proceeds to the identification of "events", namely, the uncontrolled inputs, and advances through self-evident logical steps to the goal.

Each of these steps will require one or more methods or methodological approaches. Decisions with regard to such approaches will have to be made in the course of the work. There are, in fact, several levels of methodology that will have to be closely considered at each stage. A number of these are shown, by way of example and illustration (in Table IV on the page 58) as they pertain to the work in process when such work is broken down into the three fundamental planning categories which are: the Normative, the Strategic/and the Operational.

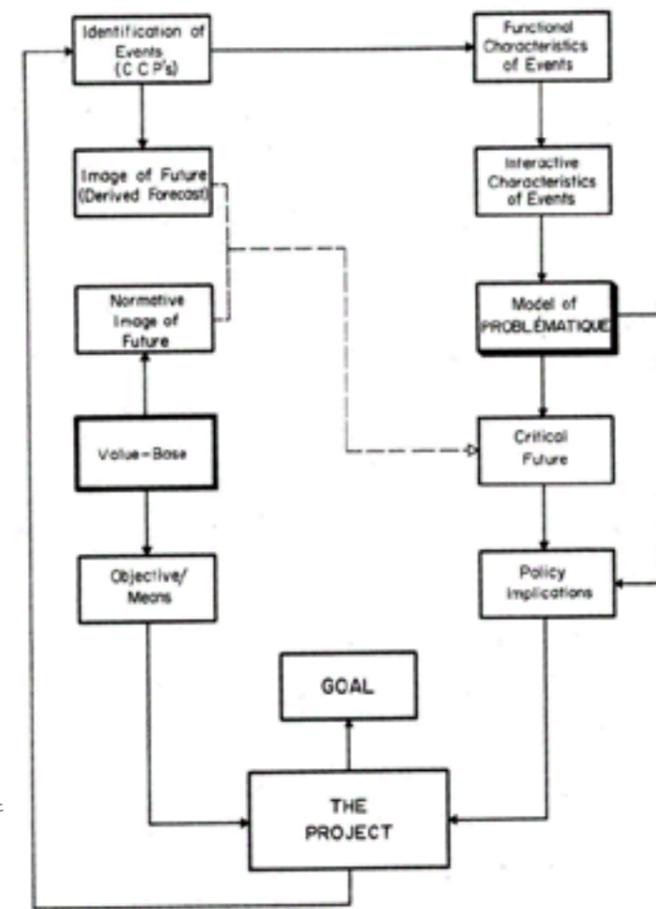


Fig. 5

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problematique

resolutique

occurring in the office machine sector. Peccei, with his foresight and his entrepreneurial vision, was able to turn the situation at Olivetti around. But Peccei was not content merely with the substantial achievements of Italconsult, or his responsibilities as President of Olivetti, and threw his energies into other organizations as well, including ADELA, an international consortium of bankers aimed at supporting industrialization in Latin America. He was asked to give the keynote speech in Spanish at the group's first meeting in 1965, which is where the series of coincidences leading to the creation of the Club of Rome began.

In the text aside, it is the first time that appears the term of problematique just to refer the predicament, intended as the complexity of situation that affect human being at the point in which we are facing today.

It interesting at this point to notice that Alexander King and Bertrand Schneider had presented for the first time ever the idea of resolutique in the meaning of a complex solution that is required by the the entanglement produced by humans. Obviously it could sound like a pun and it is clear in the same way that it is intended in this way.

As a final comment on the contents of the preceding table it might bear repeating that the methods which will be used for advancing the work as a whole are not yet fully known. Their elaboration is itself a part of the project. For instance, it is felt intuitively that many developments in cybernetic logic, in multi-valued logic, in generalized logic, in meta-ethics, in economic analysis, in coding, in structural morphology, in biotechnics/and in many other areas of knowledge have a great deal of relevance for the effort as a whole. Naturally, they will be introduced into the work process whenever a need for them becomes manifest. Moreover, the present feeling is that no single method or technique will suffice for the purpose before us. Hence combinations that are heuristically conceived will have to be created almost constantly, and experimented with. This applies to the methodologies we have noted as well as to those we have not. All these points are made once more to underline as clearly as feasible that the project as a whole is one of invention and that whatever comes to hand to advance it --with the requisite intellectual validity and honesty --will be used, by itself, in combination, or with appropriate modifications.

IV. MODEL OF WORK PROCESS AS PRESENTLY ENVISAGED

Having outlined the manner in which at present we intend to deal with controlled and uncontrolled inputs that are part of the structure of the project as well as work process, we can now complete the model that is descriptive of the whole insofar as we are able to visualize it at this time.

This model is envisioned as a rather simple cybernetic system in which the types of inputs we have discussed are

transformed into outputs that are consonant with the objectives of the Club of Rome, as these objectives were set down in the first section of this document.

Our views of the overall work process are now much clearer, as can be seen in the general model provided on the next page (Fig.6). Into this model we have further introduced an indication of our expectations beyond the execution of the project itself. This was done solely to show how the total idea that inspired the Club of Rome might be viewed in its unfolding during and after the assumed successful conclusion of this particular project. It is in this sense that the prospective possibilities shown below the broken line that divides the diagram ought to be interpreted

Ob. 1. The prime objectives ascribed to the project by the Club of Rome.

Ob. 2 First changes in Ob. 1 as a result of interim findings by the Work Group.

Ob. 3 Final changes in Ob. 1 as a result of the definition and configuration of the Problematique.

Changes in Ob. 1, Ob. 2, Ob. 3 result in firm objectives (O) and required means (M).

M Means provided by the Club of Rome to the Project.

E Situation existing in world system as perceived by Project

E The uncontrolled inputs from the Problematique on which Project will work.

E Adjustments in the perception of the Problematique as a result of its definition and configuration.

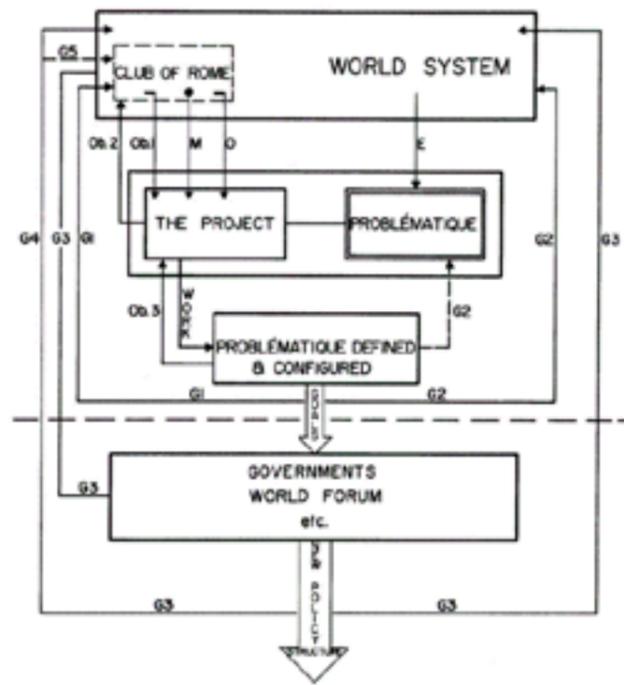


Fig. 6

Goals Expected outputs from the definition and configuration of the Problematique.

G.1 Changes affecting perception of the Club of Rome in expected outputs as a result of interim attainment of Goals.

These will be expressed in the new formulation of firm objectives (O) and required Means (M).

G.2 Minor possible impacts of interim outputs on World System -- affecting E and E1.

G.3 If World Forum materializes and continues work; new perceptions will be fed into World System.

G.4 If the work of the World Forum results in new policy structures, World System will be affected.

G.5 Similarly perceptions of the Club of Rome will change.

G.3 and G.4 are viewed as the major "change" agents.

ANNEX I

The Club of Rome was started following a meeting convened in Rome in April 1968 by the Giovanni Agnelli Foundation and the National Academy of Lincei to discuss new approaches to the Problems of world society. At the end of this meeting a number of those present, increasingly concerned about the symptoms of breakdown of our society that are appearing simultaneously with higher levels of prosperity and the ever-quickenning application of new technology, decided to continue to work together, and called their group "The Club of Rome" after the city of its origin.

The Club of Rome is an informal, multinational, non-political group of scientists, economists, planners, educators, and business leaders. It is non-political in the sense that its

FUTUROLOGY FUTURISM AND FORECASTING (overshoot, scenarios)

**FUTURISM:** A term used to describe the current academic and scholarly interest in forecasting or anticipating the future, usually making use of computers to plot trends, to formulate models of alternative futures, or to impose controls over mere guessing by such sophisticated techniques as the Delphi Method.<sup>1</sup> The term is used interchangeably with futurology, futuristics, and future studies.<sup>2</sup> Major research institutions and think tanks, such as the Hudson Institute, the Commission on the Year 2000 of the American Academy of Arts and Sciences, the Club of Rome, and the transnational World Order Models Project, have devoted much of their time to future studies.<sup>3</sup> Futurism has given rise to many conferences, societies, and journals,<sup>4</sup> and has been the subject of high school and college curriculums<sup>5</sup> as well as government activity, especially in technological forecasting.<sup>6</sup>

NOTES

1. Herman Kahn and Anthony J. Wiener, *The Year 2000: A Framework for Speculation on the Next Thirty-Three Years* (1967). Modern futurism grew out of postwar studies at the Rand Corporation on the probability of war ("Futurism: Gaining a Treshold in Public Policy," *Science*, July 11, 1975, p. 120.)
2. Edward Fiske, "In Some Classrooms, the Future Is Now," *New York Times*, May 29, 1977, Sect. 4, p. 16.
3. See the State Department *Newsletter* bibliography entitled "Forecasting the Future," May 1977, for citations to publications from these organizations.
4. Daniel Bell, in preface to Harvey Perloff, ed., *The Future of the United States Government: Toward the Year 2000* (1971), p. x.
5. Fiske, *op. cit.*
6. *Science*, *op. cit.*, p. 121 states that "The OTA (Office of Technology Assessment), set up in 1974 to advise Congress, is an exercise in applied futurism."

SEE ALSO

- Delphi Method.
- FUTURISTICS *see* FUTURISM

All the term listed in the title aside are used by both critics and supporter of the CoR to describe the operation made by the cybernetics or system dynamics scientist when they try to look ahead to what will be about humanity. They could take in account resource, population, pollution and other countable quantities; or they could use different method according to the approach. However they will always has to consider how to produce them. Usually scientist involved in those process use the term "scenario" because it avoid the idea of predicting.

members are not involved in current political decisions and that it has not itself any ideological or national political commitments. Its vocation is the good of mankind --which in its opinion subsumes also the good of any nation or people in a world that is rapidly emerging as a whole, integrated system. It believes that a rethinking, rediscovery, and reformulation of values consonant with the realities of our time is needed; that broad goals for man and society must be defined; that a new set of institutions and instrumentalities is required to conduct human affairs adequately; and that to organize human society at this higher level we must first understand the present exceptionally dynamic and dangerous world situation and the kind of futures that may eventuate from it. Its overall objectives were thus formulated as follows:

"(a) To contribute toward an understanding of the problems of modern society considered as an ensemble, and to the analysis of the dynamics, interdependencies, interactions, and overlappings that characterize this

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ensemble, concentrating particularly on those aspects that concern all or large sections of mankind;

"(b) To heighten the awareness that this complex of tangled, changing, and difficult problems constitutes, over and above all political, racial or economic frontiers, an unprecedented threat to all peoples, and must therefore be attacked by the multinational and transnational mobilizing of human and material resources;

"(c) To make the results of these studies and reflections known to public opinion, in scientific, intellectual, and political circles, and to centers of decision at all levels, in order to influence to the utmost extent the conduct of the world's affairs in a more rational and human way."

To carry out this design, the Club of Rome has to spread its action in various directions, including the carrying out of studies and research as indicated in the present Proposal. So far, it has established a number of contacts with key people in Ottawa, Moscow, Washington, Tokyo, Buenos Aires, Stockholm, Berne, Vienna, and other capitals, as well as in international organizations; and it is expected that this activity will be continued also during the execution of the project herein.

The Club of Rome was incorporated on March 1970 in Geneva as a non-profit private association under the Swiss Civil Code. Its Secretariat is in Rome; and representatives or offices will be established in various parts of the world, the first two being in Geneva c/o the Institut Battelle and in Tokyo c/o the Japan Techno-Economics Society. By its Statutes, its membership is limited. At present, there are (25) ordinary members and the total number envisaged is 60. New members are co-opted with the approval of the Executive Committee.

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#### ANNEX II

The present project, as emphasized in the proposal, constitutes but a stepping stone which, it is hoped, will lead to further, more elaborate, in-depth studies based on the preliminary morphology of the problematique that the project will

endeavor to construct. These in-depth studies cannot be attempted within the framework of the Club of Rome. Such an undertaking requires anew form of cooperative effort among industrialized countries. The Club of Rome tentatively advances the idea of a World Forum as the under-pinning of this effort. This idea should not be understood as a rigid, fixed, or sine qua non prescript for future effort, but as the subjective formulation of what the Club of Rome feels would be an adequate framework for a profound and action-oriented study of the predicament of mankind.

As envisaged, the World Forum would be created by the governments of industrialized countries through an act of political will. The direct involvement and responsibility of governments in this venture seems essential, for policy challenges of a world-wide nature can no longer be met unless they are integrated with policy considerations of a regional or national character. The Club of Rome recognizes that one of its basic tasks is to act as a catalyst in bringing about such acts of political will. To this end, contacts have been made with international organizations as well as with governments whose positive responses are considered vital to the initiation and the carrying out of a study program under the aegis of a World Forum. The Club of Rome has also accepted as its responsibility the need to provide a rationale for structuring the work of the World Forum, and to offer it a suitable body of methodology as well as tentative models of mankind's dynamic but unstable situation. It is to meet this particular responsibility that the accompanying project has been proposed.

The conception of a World Forum cannot be elaborated in full detail at this juncture. That would be the initial task of those governments who engage jointly in the effort to create such a Forum. However, in line with current thinking in the Club of Rome, the World Forum might be conceived as an ad hoc organization, separate from any other agency and established with the sole purpose of executing in-depth studies of the various critical aspects of the human situation. It should be kept slim, flexible, and adaptive to changing needs. It is likely that the period of its duration should be limited, say from three to five years.

Since it is hardly possible that the necessary scientific brain-power could be marshaled and shaped into inter-disciplinary teams for a temporary assignment of such magnitude, it would be more feasible to set up an effective method of organizing and managing inputs that could be obtained mainly from the intellectual resources now available in "think groups", consulting firms, research institutes, academic institutions, industry, etc.

A three-fold multi-national organization might be envisioned that would consist of:

An International Board of perhaps 10 to 12 members of the highest international repute to work full-time at the of the World Forum, aided by a small administrative staff.

A flexible arrangement of scientific panels and workshops,

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to guide the work of the various groups undertaking differing but consistent patterns of individual study, and to provide the "fine-structure" of the rationale; such scientific panels and workshops might operate in an intermittent way and convene at the seat of the World

Forum or elsewhere according to need; members would be selected from scientists of renown who would be able to devote a large fraction of their energy and time to this task;

A flexible group of external contractors, ranging from individual experts to large inter-disciplinary research institutes and academic centers, to whom specific tasks would be assigned.

The thrust of the World Forum study would be directed to creating the elements of a world policy and to devising means for its subsequent enactment in the form of new, world institutions and their corresponding instrumentalities. The working out of operational plans having world scope might hopefully follow. However, the principal goal of the World Forum study, as the Club of Rome sees it, would be to convey to policy-makers and to the public at large a dramatic "state-of-the-world" message supported by proposed policy responses. In other words, it would serve to clarify our fears and give focus and direction to our hopes. This might in turn give rise to a massive public prise de conscience that would pave the way to action by enlightened governments and world leaders.

#### ANNEX III

The Executive Committee is in the process of being formed, hence a listing of its members cannot be given at this time. Such a listing will be communicated to the full membership of the Club of Rome as soon as possible.

#### ANNEX IV

It is tentatively felt at this juncture that the effort described in this document will require a Work Group of Senior Scientists and a Support Team of Junior Researchers.

The competences envisaged as necessary are the following:

- 1 project director
- 3 planners with general system analysis and cybernetics backgrounds
- 1 mathematician specialized in topology
- 1 senior statistician with operations research background
- 2 senior computer programmers
- 1 social scientist with experience in morphological analysis
- 1 economist with knowledge of general systems theory
- 1 political scientist with experience in international relations.

The team of junior researchers will come mainly from the areas of computer programming, logic systems, data retrieval, file composition, formatting, etc. It is also one of the aims of the Club of Rome that through exposure to work with the main task force, the team of junior researchers will undergo an intense educational and formative experience.

It is expected that the work can easily be handled by available computer capacity, i.e. Honeywell 632 (Battelle) or CDC 3800 (Geneva University) .

#### ANNEX V

It is deemed to be of the greatest importance that a strong roster of Consultants be created to support the Work Group during the course of the project.

At this stage two categories of consultants are being contemplated:

1. Specific individuals capable of providing knowledge and skills in various disciplines such as, for instance: Political Science, Law, Economics, Sociology, the Hard Sciences, Life Sciences, Ethics, Anthropology, Psychology, Education, etc.
2. World leaders in various cultural fields --Religion, the Arts and Humanities, etc. --who will be consulted as to their opinions, ideas, and views.

Geneva, March 13. 1970 H0/myg/ns

# World Problematique

Hugo Thiemann clarifies the Club of Rome's role as catalyst in formulating values and defining goals for society.

Governments must change from their present preoccupation with growth of Gross National Products, if the human species is to survive without falling into a state of worthless existence. Physicists should be induced to move from non-orientated or basic research on to projects aimed at meeting the needs of global society. Too many scientists are simply engaged in paper proliferation without a sense of responsibility to society. These challenging views were expressed by Hugo Thiemann\*, Director-General of Battelle, Geneva, and a founder-member of the Club of Rome, in an interview with Europhysics News Editor, Alex H. Crawford.

The MIT study of the 'World Problematique', as defined by the Club of Rome in 1970, and resulting recently in *The Limits to Growth*<sup>1</sup> provided a good starting-point. The book itself is having world-wide repercussions at decision-making level, according to Thiemann.

## The Club of Rome

Thiemann described how the Club of Rome was founded in 1968 by Aurelio Peccei, of Fiat, Olivetti and Italcant (an agency for economic and engineering organization), as an informal, multi-national and non-political group. They had agreed that current trends in the world techno-economic system were pointing towards a highly-dangerous situation. Peccei, Thiemann and Alexander King (Head of the Science and Technology Division of OECD) and other members of the Club of Rome contacted individuals in other developed countries (Canada, Japan, USA, USSR) and found that they were all aware of the menace ahead.

The Club's first project on *The Predicament of Mankind*<sup>2</sup> emphasized the interdependence of variables in the techno-economic system, its dynamic

nature, and its global scope. By June 1970 at the Club's meeting in Bern, Thiemann said, preliminary goals had been set, a survey of methodologies completed, and the statement of the 'World Problematique' prepared. But still the methods seemed vague, and it was realised that, for the programme to become more concrete, great intellectual effort would be required; that would need financial resources which the Club of Rome could not provide as an informal group. The Executive Committee now includes E. Pestel, S. Okita, and C.L. Wilson, as well as A. Peccei, A. King and H. Thiemann, and The Club of Rome is registered as an Association in Geneva.

## World Dynamics

At the Bern meeting, J.W. Forrester (MIT) preferred the systems approach that he had developed for industrial and urban dynamics. The Club's Executive Committee travelled to MIT for 10 days the next month to examine the methodology proposed. Forrester successfully convinced them that the first model should have only five parameters — relating to population and capital (growth factors) and natural resources, pollution and land (limiting factors) in a one-year trial. The model that Forrester used was described in his book<sup>3</sup>. Whilst Thiemann applauded Forrester's courage in tackling the Problematique with such a simple model, he made it clear that the Club of Rome were all aware of its limitations and considered it as only the first step. The underlying, and often subjective, assumptions were to be explored more deeply and more detailed investigations into the dynamics of major sub-systems like population, pollution, capital investment, and agriculture were to be carried out by an international team under the leadership of Dennis L. Meadows.

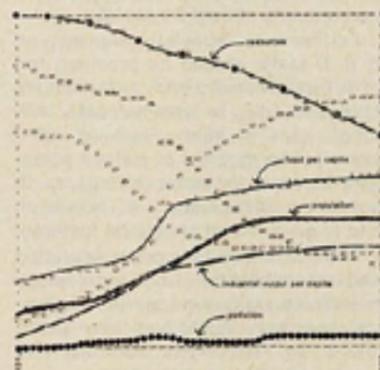
## The Limits to Growth

For any book on techno-economics to be published in 10 languages within 10 months is a formidable achievement — a credit to its particular relevance

to global problems. Thiemann believed that the enormous impact of *The Limits to Growth* was due to its highly visual and convincingly graphic display of computer runs. Up till now, books in that field had been mainly semantic exercises and could not hold the reader's attention like *The Limits to Growth*.

Thiemann did point out that there had been much popular misconception over the status of the 'models' used, but he was sure that physicists would find the approach appealing. However, he was ready to admit that the model-builder had a significant influence on the results in the choice of how variables were to be related. This subjectivity necessarily meant that the Problematique was illuminated from one direction only and that there was still much in the dark for which further studies would be needed.

To gauge the full import of the MIT work, Thiemann recommended that technical people should consult the two-volume report to appear in late 1972 in which the assumptions were fully explained and where the data from which the model constructed results were revealed. The data had come mainly from agencies of the United Nations and Thiemann acknowledged that their co-operative support had been most beneficial to the project.



A stabilized world model as projected in *The Limits to Growth*. In 1975 the birth rate is reduced to two per family, industrial capital investment reduced, pollution suppressed.

## Club of Rome as catalyst

The Club of Rome, Thiemann explained, looked upon the work it had sponsored at MIT as a catalytic agent. The world-wide response to *The Limits to Growth* was encouraging. Already the Japanese government, perhaps because of the particular relevance to their over-populated, under-resourced country, had started more detailed studies. The Club of Rome hoped that the emphasis by governments would turn from 'growth' to 'progress towards stability', which necessarily meant controlled growth in future.

As the Director-General of Battelle in Geneva, Thiemann believed that the consultations that the Club of Rome had had with decision-makers throughout the world had been an additional element in constructing his research policy. He considered that political, and even industrial research, timescales were not sufficiently long-term. It was essential that today's research must be influenced by the knowledge that in 20-30 years the world population could well have doubled. Whilst research policy was not an overt parameter in the MIT models, only the applications of advanced research could bring about the changes in parameters that would set the system on a course for stability.

That many institutions were concerned to predict the future in specific areas was a sign of the unrest that the Club of Rome had also detected. Many of these institutions were influenced by the Club's activities — mainly due to the contribution by Peccei, as the Club's 'engine'.

## Physicists and the World Problematique

The Club of Rome's aims to formulate new values and to define goals for society were of interest to physicists and their research organizations, Thiemann maintained.

In the past, research had been aimed at understanding in the belief that it would help mankind. After a period of technological evolution based on this assumption, that belief was clearly not borne out by experience. Now, there was a serious conflict developing between planetary dimensions and population, so that physicists should change to consider future needs. Science policy should be guided by preservation of the biosphere. Perhaps this change would require physicists to become less arrogant and to show more humility. In many countries, there were now sufficient physicists, but without a sense of responsibility, since there

was too much non-orientated research. However, other countries, like the USSR, still put efforts into increasing the numbers of scientific personnel. But, in those countries where the expenditure on physics was high enough in relation to GNP, more emphasis on project research was needed.

Thiemann urged that physicists should not look upon themselves as instruments in the research machinery of their laboratories. They should address themselves to the essential problems that faced the world today.

## Deep changes

The Club of Rome had the general objective of helping to re-think and reformulate values and to define broad goals for society, and Thiemann saw that their initial studies heralded deep changes.

As the population continued to grow, there would be more and more need for individual discipline. Competition would be reduced as a result, and restrictions would increase. Companies would no longer emphasize growth as the sole criterion of success. Governments would recognize that other elements besides GNP growth were essential for well-being and a constructive approach to the future would arise.

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## Real impact of Predicament and Limits to Growth

Following what has been said so far on the prospectus for the CoR, it is possible to make some considerations in consideration of the chapter and the value of the document. As already widely explained, the document was prepared by Dr. Özbekhan for the Executive Committee. To draft and present it, Özbekhan made use of the collaboration of Erich Jantsch and Alexander Chritakis. The presentation also took place in front of 25 other listeners, some of whom were known reported by James Rennie Whitehead. Always the latter and Aurelio Peccei himself report that once he listened to his design proposal, the feeling of the bystanders was divided substantially into two including that of Peccei himself. If, on the one hand, it laid the foundations for the semantic definition of the problem well and analyzed the premises in a valid manner; he was judged excessively imbued with technocratic culture; so for some it was written in too complex a way. PecceiX also does not fail to underline that the document did not take into due account that some technological tools, necessary for the implementation of the idea of Özbekhan, were

e still far from being developed. From the latter point, the second factor of which the prospect, according to Peccei, did not take into due account: the time factor which in his opinion was already little to be able to wait for the completion of a project proposal such as that put forward by Özbekhanó. What has been said almost naturally leads to asking questions about the real validity of the Predicament document. In fact, following what has been said, and at the same time comparing it with the introduction made at the beginning of the chapter, its validity in terms of the founding document of the CoR may appear to be greatly reduced.

## THE CRITICISMS

the following chapter, in its unfolding, is to be understood as a climax towards the abyss. As the CoR for its revolutionary statements for the times in which they were formulated were contextually seen as aimed at upsetting a certain status quo of well-being for the city that at that time existed and that at the moment does not seem to have been subverted but just put in agitation with some grace. The reaction of the latter group was hysterical, deliberately thrown in an attempt to distort the message of the club in Rome and in some extreme fringes, even strongly defamatory. For this reason, the various positions that have arisen in contrast to the club of Rome will be presented as their critical vehemence grows, which rather than coinciding with a crescendo, manifests itself as a substantial impoverishment of the tones and arguments that decline growing up precisely but down. However this was not necessarily seen as bad by Aurelio Peccei, Roberto peccei reports in the preface to the re-edition of the book

the human quality of the father that Alexander King said "Bad or good is still a vehicle to make the Club of Rome known" xx . Therefore, to summarize, and in consideration of the exhibition logic just outlined, among the criticisms presented in diachronic order, the first will be the one moved by Cristakis, then that of Edouard Pestel towards LtG and finally the external fringes composed by all those who describe plots increasingly conspiracy and rooted in Masonic lodges. In order not to transcend the nature of the present document and to follow descendant tones referred to earlier, only a few hints of the last point of the critics will be presented where the tones become grotesque and caricatured leaving the reader's wish to deepen or not certain abysses through the links that will be provided in the bibliography.

At the conclusion of the chapter, the introduction would appear diluted in its high-sounding premise on the PtM prospect. It was reported through the words of Peccei himself that despite the efforts made by those who drafted it, however, in the end, it was almost shelved. The evidence of the time shows that it is remembered as the first true report of 1972 LtG. The fame of the latter has given rise to follow-up to the CoR itself in terms of official reports and others not. And in the academic world it has followed up papers and articles in support in some cases, or overflowing with invective in others. Even just the phrase "limits to ..." has been the subject of continuous remodeling at the mercy of the needs of the most varied arguments and of the largest amount of puns ever seen before. So the question to which we will attempt to answer in this concluding chapter of the chapter is: why dedicate an entire chapter to the document?

The answer to the question has already been provided along the same chapter, so now we will proceed to a mere recapitulation of the reasons. Reaffirming the choices that led to the study and which now leave room for the examination of the reports first as a unitary phenomenon and individually then.

about Alexander King:

about Aurelio Peccei:

about Dzhermen Gvishiani:

about Alexander Christakis:

about Think-Tank, RDS:

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-  
first chapter

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## ERICH JANTSCH

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*>>> A Biographical Dictionary of Russian and Soviet Economists*

*Di Robert Campbel pp 131 - 133*

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[https://wikimili.com/en/Hasan\\_%C3%96zbekhan](https://wikimili.com/en/Hasan_%C3%96zbekhan)

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PDF A RETROSPECTIVE STRUCTURAL INQUIRY OF THE PREDICAMENT OF MANKIND PROSPECTUS OF THE CLUB OF ROME ALEXANDER N. CHRISTAKIS

<https://peoplepill.com/people/hasan-oezbekhan/>

**THINK-TANK:**

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[https://wikimili.com/en/System\\_Development\\_Corporation](https://wikimili.com/en/System_Development_Corporation)

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## second chapter

Enter Reports: introductive overall outlook

The chapter that is now about to take shape, goes ahead the kernel of this thesis. The actual reports will be analyzed without further preambles, one by one, starting from the third chapter. They will be analyzed individually trying, on the basis of what has been found, to provide each of them with the maximum information useful to discern the details that can range from the topic of the report to the number of copies sold, to cite an example. Therefore in light of the above, the third chapter will be configured as a study in detail. This second chapter, on the other hand, performs a proemial function which cannot be ignored, thus providing an overview. Indeed, it is essential to provide elements that allow us to understand the context in which the reports for the CoR were generated. At the same time, it is of particular interest to look at all the published reports to observe which rough data emerge. So an analysis was conducted that aims to bring out similarities, repetitions; as well as contrasts and uniqueness. The above was obtained by extrapolating figures on the basis of the reports in question. To give an example the number of authors and below on the basis of the nationality of the latter deduce how many reports have been written by one nationality rather than another. Adding the data deduced as just explained, these first raw data were then further processed to obtain. This is valid for a first overall reading. The page alongside presents some figures that summarize what has been produced for the CoR so far as first editions. In the immediately following pages the reports are shown in a time line so far. Even in this last case the years are referred to the first editions of each report.

introduction

48  
*reports*

61  
*principal authors*

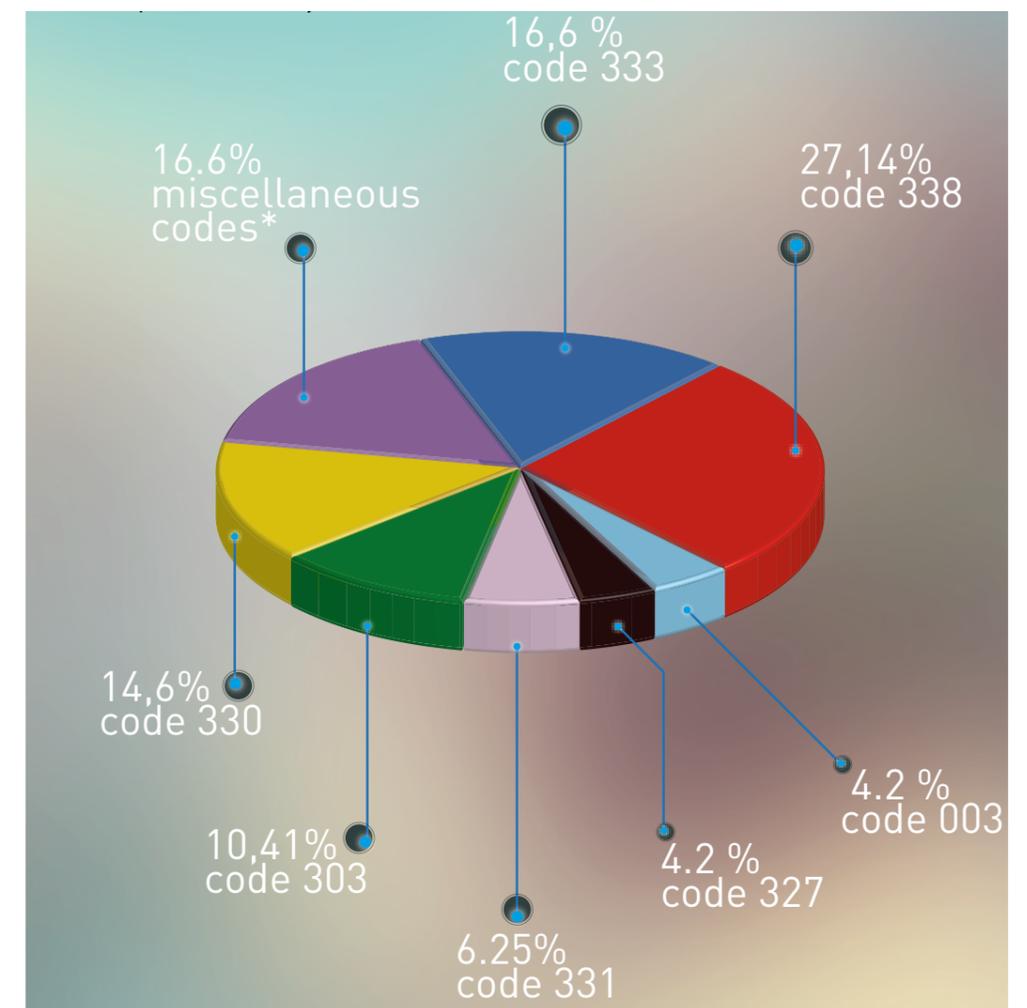
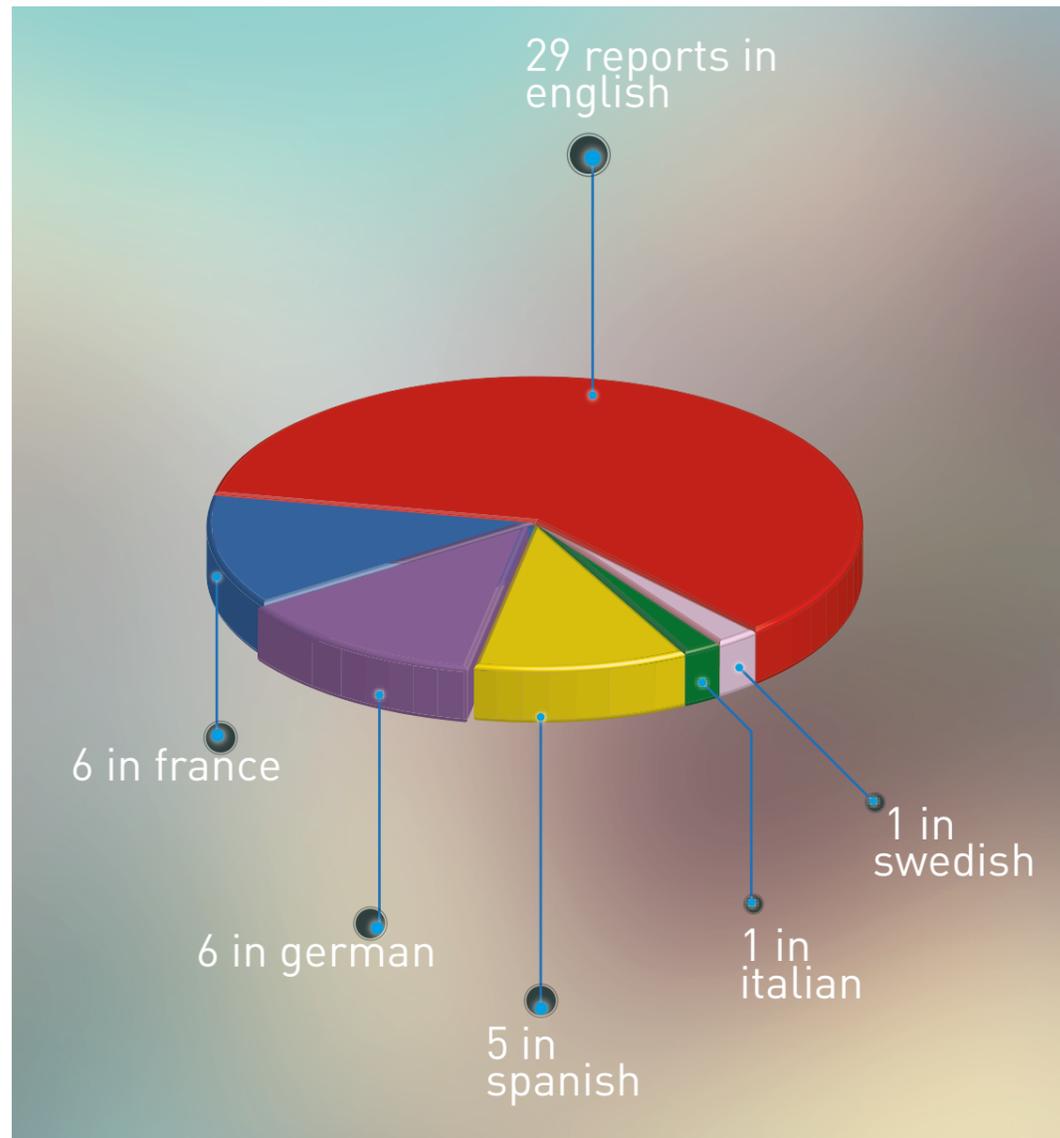
13280  
*pages*



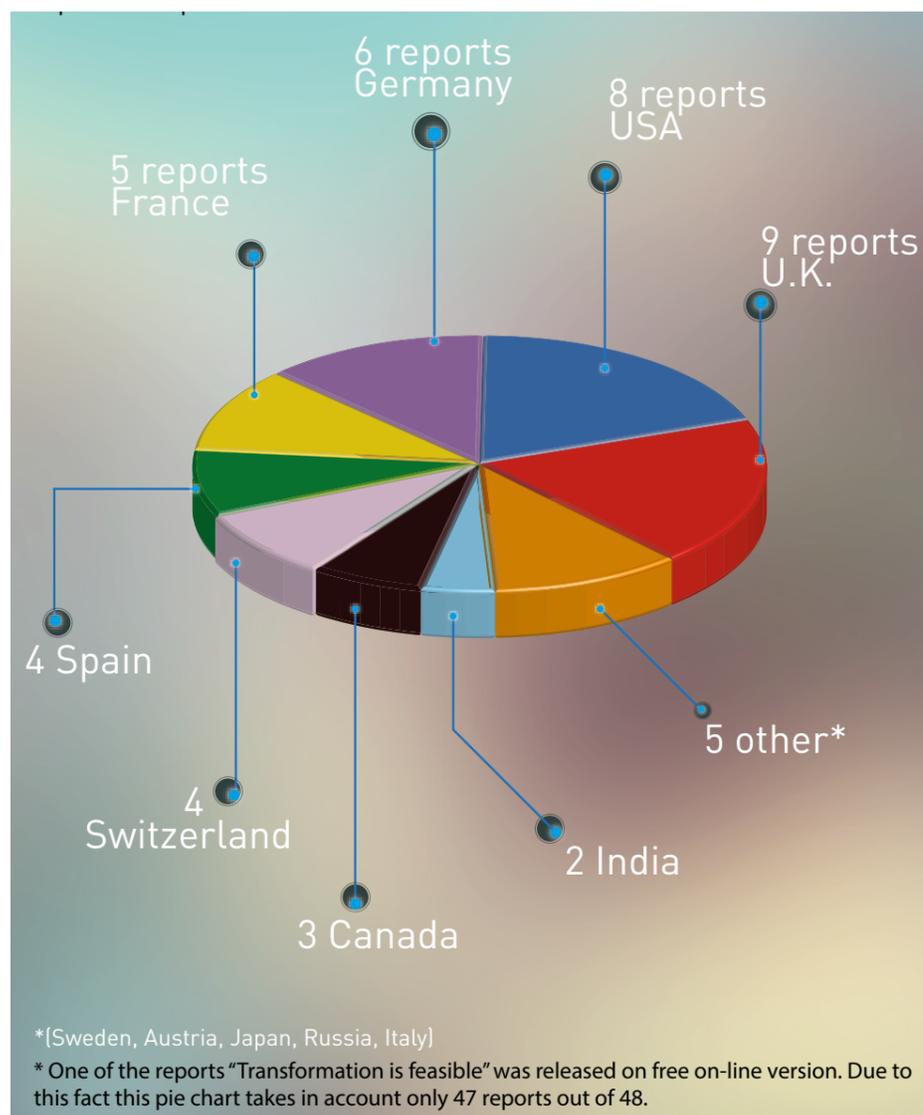
In the 51 years of CoR history 48 reports have been published until the moment in which this thesis is edited. These were produced in just 35 years out of the 51 actually spent. This means that there has been no intention to fix a predetermined rate in their release. In certain years, up to a maximum of four reports were printed and years in which they were not produced at all. In addition, this timeline includes reports according to the year of actual first publication. This implies that the reports will be presented in the

original language of first printing as already mentioned in the previous page. In the following pages other graphic supports are showed in order to convey a general outlook on the reports as a whole.





# Countries of first publication



In the two pages ahead is showed the proper way to read the reports sheets of the third chapter. Each report sheet shows in the first page the element that characterize a book. The elements that allow to define even the reports in the third chapter: from the title, imprint, author and year of release to other data that provide an idea of the physical description. So the size of a book the number of pages and other important informations. In the following pages of reports sheet that are not shown ahead in this chapter are very easy to grasp. Because they only present in extended text section biographies or information about authors, associations, institution and of course publishers and events. At the very end of each report sheet it is possible to find the references in order to be immediately available to everyone who is interested in examine the information or find it out more data. Lastly when an author or a publishing house is repeated (and it happens rather frequently) more than once in other report, it will be visualized in the report the logo or the picture of the author in a fade out section that immediately below present the icon of report in which they are already examined or that they are related to.

the number displayed at the top left represents the code according to the Dewey Decimal Classification (DCC) developed by Melville Dewey in the second half of the 1800s. The number shown in the various tables was obtained from the reports themselves, where it was possible to find the report and if this number was present in the report. In the remaining part of the cases the number was extrapolated by consulting the site <http://classify.oclc.org/classify2/> and inserting the titles of the individual reports

image of the cover of the first edition, if it was possible to find it

key-word that allows to immediately grasp the main topic

physical description of the volume in question by means of: unique identification code ISBN, number of pages, possible presence of graphics, diagrams, images, illustrations and other types of visual aids. Finally volume size and language (s) in which the first edition was printed

in this part, there are the further editions produced for the same volume both in different languages and by other publishing houses

333.79

ENERGY



ISBN: 008545669887

317 pages

chart/graph/diagram

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french

other edition

Milan (Italy): Edizioni Scientifiche e Tecniche Mondadori, 1978, 1982.

Oxford (U.K.); New York (USA): Pergamon Press, 1979, 2014, 2016

Elkins Park, Pennsylvania (USA): Franklin Book, 1992

Kent (U.K.): Elsevier Science, 2014, 2016

“L'ENERGIE, LE COMPTE A REBOURS: RAPPORT PRÉSENTÉ AU CLUB DE ROME”

Thierry de Montbrial

Paris (France): Jean-Claude Lattès

1978



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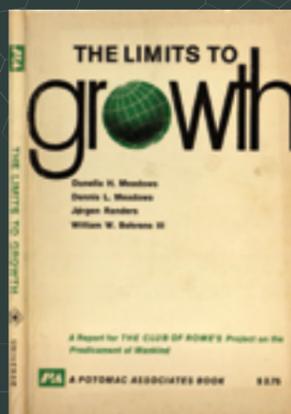
the word cloud always has at its center the KEY-WORD shown on the adjacent page under the Dewey Code. The latter is accompanied by other MAIN TOPICS written in upper case and by secondary topics in italics whose size also decreases in relation to their marginality

in this part the index of the report is summarized by topics in the chapters. Also in this case, as already explained above, this happens if it was possible to find the report and therefore consult the original index. In those cases where the source could not be accessed; this same space will directly host the synopsis of the report.

## *third chapter*

*"LIMITS TO GROWTH"*

*1972*



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## OTHER EDITION

Milan (Italy): Edizioni scientifiche e tecniche  
Mondadori, 1972, 1974, 1980, 1983

Copenhagen (Denmark): Gyldendals  
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## THE LIMITS TO GROWTH, A REPORT FOR THE CLUB OF ROME'S PROJECT ON THE PREDICAMENT OF MANKIND

Donella H. Meadows, Dennis L. Meadows, Jørgen Randers,  
William W. Behrens III

Washington D.C. (USA): Potomac Associated Book  
New York (USA): Universe Books

1972

population increase  
MATHEMATICAL MODELS POLLUTION  
food production **SIMULATION MODELS** basic needs  
FUTURE SOCIETY ECOLOGY  
nonrenewable resources INDUSTRIALIZATION

## SYNTHETIC INDEX

*The Nature of Exponential Growth*

*The Limits to Exponential Growth*

*Growth in the World System*

*Technology and the Limits to Growth*

*The State of Global Equilibrium*

## SYNOPSIS

The first report produced for the Club of Rome. It is closely related to the Predicament to Mankind. For this reason, the title of the work was extended. As mentioned in the chapter dedicated to the CoR, which is widely reported in the preliminary work "Predicament to mankind" developed by Peccei and the other founders. "Limits to Growth" is configured as the first tangible outcome in response to the project on predicament. The preconditions for his birth occurred following two conferences held in England by Jay Forrester, a professor at MIT in Boston, in which he illustrated his recently developed World3 system. This turns out to be, in those years, one of the few newborn simulation models capable The first report produced for the Club of Rome. It is closely related to the Predicament to Mankind. For this reason we wanted to report the title of the work in full. As mentioned in the chapter dedicated to the CoR widely reported in the preliminary work "Predicament to mankind" developed by Peccei and the other founders. "Limits to Growth" takes shape as a first tangible outcome in response to the project on predicament. The assumptions of his birth occurred following two conferences held in England by Jay Forrester, professor at the MIT in Boston, in which he illustrated his recently put World3 system to point. This turns out to be, in those years, one of the few newly-born simulation model capable of produce scenario of such complexity.



### JØRGEN RANDERS

Jørgen Randers (born 22 May 1945) is a Norwegian academic, professor of climate strategy at the BI Norwegian Business School, and practitioner in the field of future studies. His professional field encompasses model-based futures studies, scenario analysis, system dynamics, sustainability, climate, energy and ecological economics. He is also a full member of the Club of Rome, a company director, member of various not-for-profit boards, business consultant on global sustainability matters and author. His publications include the seminal work *The Limits to Growth* (co-author), and *Reinventing Prosperity* Randers is the son of the Norwegian physicist Gunnar Randers and the nephew of Norwegian mountaineer Arne Randers Heen. He received a Masters of Science in Solid State Physics at the University of Oslo in 1968, and a PhD in Management at the MIT Sloan School of Management in 1973, having originally been accepted to complete a PhD in Physics. Whilst at MIT, he became one of the original four co-authors of *The Limits to Growth*, a "seminal text on the use of computer-modelling in simulating the consequences of economic and population growth in a finite world". Academic career In 1973, he was appointed Assistant Professor of Management at the MIT Sloan School of Management. For the next eight years, he pursued a career in business. From 1981 to 1989 he served as president of the BI Norwegian Business School, and he served as a professor from 1985 to 2015. Since 2015, he has been Professor Emeritus. From 2001 to 2012, he was a core member of the faculty of the Cambridge Institute for Sustainability Leadership, Cambridge. In 2013, he was appointed as Honorary Professor, Anglia Ruskin University, Cambridge. In 2016, he was appointed as Honorary Professor, Fudan Institute for Advanced Study in Social Science, Shanghai. In 2018, he was appointed as Honorary Researcher, School of Marxism, Peking University, Beijing. In 2019, Randers was appointed as inaugural Co-Chair of the Ecological Civilization Center at Peking University's Research Institute of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. Randers' research interests are on climate issues, scenario planning and system dynamics, especially on the topics of sustainable development, climate change and global warming mitigation. In 1974, he left the MIT Sloan School of Management and founded the Resource Policy Group, based in Oslo, and served as director between 1974 and 1980. In 1980, he was appointed to the Ministry of Long-Term Planning, in Oslo, involved with macroeconomic planning. Subsequently he was appointed as Deputy Director of Deminex (NORGE) AS, an oil production company. Between 1989 and 1991, he served as Managing Director of World City AS, a financial holding company based in Oslo. Between 1994 and 1999, he served as deputy director general of the World Wildlife Fund International in



### WILLIAM W. BEHRENS III

It was quite facing to find information about William Wohlsten Behrens III. It is possible to find out more about his father, Vice Admiral William Wohlsten Behrens Jr. who is still today known for his military career and other important scientific acknowledgements. The only other source of information about Behrens III are available in the movie "Last Call" by Enrico Cerasuolo. Behrens is now working for sustainable innovative solution in the field of energy production as co-founder of the solar system panel project "Revisionenergy".

### UNIVERSE

Rizzoli New York joined such prestigious American institutions as Tiffany's, Saks, and Cartier when it first opened the Rizzoli Bookstore on Fifth Avenue in 1964. In the following years, its landmark building in New York became the center for the company's national expansion, adding new bookstores throughout the country and, a decade later, establishing an eminent publishing house renowned today for high-quality, illustrated books. Rizzoli New York began its publishing operation in 1974 and has become a leader in the fashion, interior design, culinary, art, architecture, and photography fields. Rizzoli's Universe Publishing imprint was added in 1990, marking Rizzoli's entrée into the pop-culture worlds of humor, beauty, sports, performing arts, and gay and alternative lifestyles, as well as a highly successful calendar program. In 2011, Rizzoli established Ex Libris, an imprint dedicated to publishing up-market literary fiction and nonfiction with a transatlantic character. Starting in January 2018, Rizzoli produces its museum and exhibitions publishing under the new imprint Rizzoli Electa, in collaboration with leading Italian book publisher and sister company Mondadori Electa. In the United States, Canada, and Latin America, our corporate entity Rizzoli International Publications distributes the English-Language titles of British publishers Pavilion (with imprints Pitkin and Portico) and National Trust, as well as of French publisher Flammarion. Rizzoli International Publications distributes Australian publisher Smith Street Books in the United States, Canada, Latin America, and Asia. Rizzoli International Publica-



### JAY W. FORRESTER

Jay Wright Forrester (Anselmo, 18 July 1918 - 16 November 2016) was an American electrical engineer and computer engineer. Professor at MIT, he is remembered as the founder of system dynamics in the 1950s. Many of his works are contained in *Papers collected* (1975). In 1944 he led the Whirlwind project which aimed to build the first computer that reacted in real time to the actions of a pilot. Given the importance of the project, he convinced the U.S. Navy to expand it to create a general purpose computer and in 1948 he got a million dollar a year funding. The navy was not very convinced and thought about cutting the funds. However, he did not follow through on his intentions because of the nuclear tests of the Soviet Union, thus allowing Forrester, in 1951, to complete the project which helped a lot in tracing the simulated routes.



### DENNIS L. MEADOWS

Dennis L. Meadows (born June 7, 1942) is an American scientist and emeritus professor of systems management and former director of the Institute for Policy and Social Science Research of the University of New Hampshire. He is president of the Laboratory for Interactive Learning and widely known as a co-author of *The Limits to Growth*. Dennis Meadows holds a bachelor's degree from Carleton College, a doctorate in Management from the MIT Sloan School of Management, and holds four honorary doctorates. He started working at the Massachusetts Institute of Technology faculty in the late 1960s. [Citation needed] From 1970 to 1972 at MIT he was director of the "Rome Club Project on the Predicament of Mankind". In addition, Meadows was full professor of management, engineering and social sciences. For many years he was director of a graduate program based in economics and engineering. He facilitated seminars and developed innovative and complex strategic games around the world for decades. Additionally, Dr. Meadows has lectured in over 50 countries. He was director of three university research institutes: at MIT, at Dartmouth College and at the University of New Hampshire. He is Past President of the International System Dynamics Society and of the International Simulation and Games Association. He has been a member of the board of directors and a



### DONELLA H. MEADOWS

Donella H. "Dana" Meadows (March 13, 1941 - February 20, 2001) was an American environmental pioneer scientist, teacher and writer. She is best known as the lead author of

the influential books *The Limits to Growth* and *Thinking in Systems: a Primer*. Born in Elgin, Illinois, Meadows studied science and earned a B.A. in chemistry at Carleton College in 1963 and a doctorate in biophysics at Harvard in 1968. After a year-long trip from England to Sri Lanka and back, she became a researcher at MIT, as a member of a team in the department created by Jay Forrester, the inventor of system dynamics, as well as the principle of magnetic data storage for computers. He taught at Dartmouth College for 29 years, starting in 1972. He died of brain meningitis in 2001 at the age of 59. Meadows was honored as Pew Scholar in Conservation and Environment (1991) and as a member of MacArthur (1994). He received the Walter C. Paine Scientific Education Award in 1990. Posthumously, he received the John H. Chafee Award for Excellence in Environmental Affairs for 2001, presented by the Conservation Law Foundation. Meadows wrote "The Global Citizen", a weekly column on world events from a systems perspective. Many of these columns have been compiled and published as a book of the same name. His work is recognized as a formative influence in hundreds of other academic studies, government policy initiatives and international agreements. Meadows has long been a member of the United States Association for the Club of Rome, which established an award in his memory, the United States Association's Donella Meadows Award for the Club of Rome in Global Sustainable Actions. The prize is awarded to an exceptional person who has created actions in a global framework towards the sustainability objectives that Meadows has expressed in his writings.

Potomac Associates, a Washington thinktank, A.D. His mission was to publish and promote studies "to encourage a lively debate on critical public policy issues." Bill Watts and Don Lesh were the executives of Potomac Associates. They read our relationship and we agreed to publish the 5000 copies for Aurelio. According to the methods of Potomac Associates, 5,000 free copies were intended for selected policy makers. Our book was sent to the heads of state of all nations, to all members of the European Parliament and to the United States Congress, to all governors of the United States, to all ambassadors in Washington and to the United Nations, and to key journalists around the world. We were in favor of a serious debate on the issues raised by Limits, and therefore we were particularly looking forward to the possibility of a one-day symposium on the book at the Smithsonian Institution in Washington, A.D. We were initially told that they would be about 50 participants attended the day of the symposium the audience had grown to 250, over several troupes television. After the Smithsonian session, it was there for us only one week to advertise Limits.

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"MANKIND AT THE TURNING POINT"

1974

# Mankind at the Turning Point

By Mihajlo Mesarovic and Eduard Pestel

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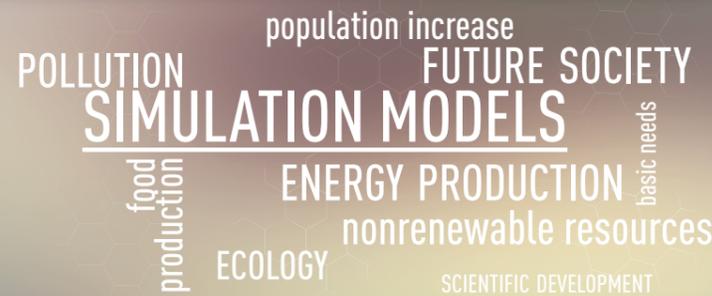
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## MANKIND AT THE TURNING POINT: THE SECOND REPORT TO THE CLUB OF ROME

Mihajlo Mesarovic, Eduard Pestel

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1974



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### SYNOPSIS

Eduard Pestel has edited in 1973 a book called: "Die Menschheit hat eine Chance" which can be translated with the exact title of the report that is going to be presented in this section; and it is quite reasonable to look at it as a preliminary work that had led to "Mankind at the turning point". However this is only an hypothesis without any evidence to proof it. The second report for the CoR can be included in the list of reports that expose scenarios based on mathematical models developed by the first computers. So aimed at providing forecastings. In 1973 the well-known energy crisis had occurred. That event reduced the perception of the energy of the populations of the so called first world, since an embargo was promulgated. The message given by Mesarovic-Pestel intervenes in this particular context. The latter, from within the CoR itself, have criticized some naturally congenital biases to the model used in LtG. For this reason their goal with their report was to improve and carry forward the speech started by the Meadows group. In fact as Peccei and King affirm in their commentary inside the book: "One of the deliberate limitations of the previous research (LtG ndr) was its adoption of worldwide aggregations". This second report, in fact, divided the world into 10 regions and this is the peculiar aspect that has given the chance to go beyond the vision of the world in LtG as a monolithic whole. The regionalization captures the diverse life-styles, socio-economic and political-cultural patterns prevalent in the real world. Moreover, the model recognizes the interdependence and dynamics of the world development process. As said, the book in question intends to propose itself as an overcoming of LtG in its methodological "limits" and at the same time proposes itself as a reaffirmation and an adjustment in detail of the possible models that trace the global trend. The report extends his forecast on a period of 50 years (as in LtG).



EDUARD K. C. PESTEL

Eduard Kurt Christian Pestel. After a three years study for bricklayer, Pestel received further education at the Fachhochschule in Hildesheim and from 1935 to 1938 at the

Leibniz University Hannover. Pestel was since 1956 a full Professor of Mechanics at the Technische Hochschule Hannover (today Leibniz University Hannover). Pestel founded the chair of mechanics in the Faculty of Mechanical Engineering at the Technical University of Haifa (Technion) in Israel. Also, he founded in 1975 the Institute for Applied Systems Analysis and Forecast (ISP), which was renamed in his honor as the Eduard Pestel Institute for Systems Research. In 1966 he was a member of the NATO Science Committee, and later a member of the Board of Trustees of the Volkswagen Foundation and Vice President of the Deutsche Forschungsgemeinschaft. In 1968 he was one of the founders of the Club of Rome. He also saw the founding of the German Association of the Club of Rome (DGCoR) in 1978, of which he was the first chair, position he held until his death. In Lower Saxony, he was Minister of Science and Arts from 1977 to 1981 as a member of the CDU Party. In this time, he worked on the restructuring of the German Technion Society founded by Albert Einstein in 1924, banned during the Nazi era and completed in 1982; it promotes cooperation between Jewish and German scientists. Eduard Pestel was president of this society until his death. In 1982, Pestel, the Max Born Medal awarded for responsibility in science. Pestel was married to Anneliese Ude-Pestel, an analytical psychotherapist and author. In 2005 he was awarded the Hovorka Prize from Case Western Reserve University for exceptional achievements. In 2005 he was awarded the USA Club of Rome Lifetime Achievement Award at the United Nations.



## MIHAJLO D. MESAROVIĆ

Is a Serbian scientist, who is a professor of Systems Engineering and Mathematics at Case Western Reserve University. Mesarovic has been a pioneer in the field of systems theory, he was UNESCO

Scientific Advisor on Global change and also a member of the Club of Rome. Mihajlo D. Mesarović was born on July 2, 1928 in Zrenjanin, Yugoslavia. He was awarded the B.S. from the University of Belgrade Faculty of Electrical Engineering in 1951. In 1955 he received a Ph.D. in Technical sciences from the Serbian Academy of Sciences and Arts. From 1951 to 1955, Mesarović was a research assistant at the Nikola Tesla Institute in Belgrade. From 1955 to 1958 he was head of the inspection department of the Institute. At the same time, Mesarović held academic positions at University of Belgrade, Yugoslavia from 1954 to 1958. In 1958 he became professor at the Massachusetts Institute of Technology / USA (MIT), where he served until 1959. He was associate Professor at Case Western Reserve University from 1959 to 1964 and professor from 1964 to 1978. In that time he was head of the Systems Engineering Group 1965-68, head of the Systems Engineering Department 1968-72 and director of the Systems Research Center 1968-78. Starting 1978, Prof. Mesarović has been the Cady Staley Professor of Systems Engineering and Mathematics. One of his students was Roger W. Brockett. He has lectured in more than 60 countries, advised government officials on a variety of issues, consulted for international organizations, and published widely. He was also the founder of the 'Mathematical Theory of General Systems' Journal, Springer Verlag. In 1999, he was appointed a Scientific Advisor on Global Change by Federico Mayor, Director-General of the UNESCO. In that role, Mesarović traveled to UNESCO's headquarters in Paris and advised the director general's office on



Hutchinson was a british publisher settled in London. Today the Company is under the label Penguin Random House considering also that from 2013 is owned by Bertelsmann group. Hutchinson began as Hutchinson & Co. (Publishers) Ltd., an English book publisher, founded in London in 1887 by Sir George Hutchinson and later run by his son, Walter Hutchinson (1887-1950). Hutchinson's published books and magazines such as The Lady's Realm, Adventure-story Magazine, Hutchinson's Magazine and Woman. In the 1920s, Walter Hutchinson published many of the "spook stories" of E.F. Benson in Hutchinson's Magazine and then in collections in a number of books. The company also first published Arthur Conan Doyle's Professor Challenger novels, five novels by mystery writer Harry Stephen Keeler, and short stories by Eden Phillpotts. In 1929, Walter Hutchinson stopped publishing magazines to concentrate on books. In the 1930s, Hutchinson published H.G. Wells's The Bulpington of Blup as well as the first English translations of Vladimir Nabokov's Camera Obscura (translated by Winifred Roy with Nabokov credited as Vladimir Nabokoff-Sirin) in 1936 and Despair (translated by Nabokov himself) under its John Long marque of paperbacks. In 1947 the company launched the Hutchinson University Library book series. Among notable, non-fiction books, in 1959 Hutchinson & Co. published the first English edition of Karl Popper's most famous work, The Logic of Scientific Discovery, first published as Logik der Forschung in 1934. The company merged with Century Publishing in 1985 to form Century Hutchinson, and was folded into the British Random House Group in 1989, where it became an imprint of Cornerstone Publishing, a publishing house of Penguin Random House UK, which is in turn a division of Penguin Random House, which itself, since 2013, is owned jointly by Bertelsmann and Pearson plc

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"RESHAPING  
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# RIO, RESHAPING THE INTERNATIONAL ORDER: A REPORT TO THE CLUB OF ROME

Jan Tinbergen

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1976

industrialization development aid regional disparities  
transnational corporations INTERNATIONAL ORGANIZATION monetary policy  
INTERNATIONAL RELATIONS  
ECONOMIC PLANNING INTERNATIONAL ECONOMIC RELATIONS  
human environment arms control oceanography energy resources

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## SYNOPSIS

The "Reform of the International Order" (RIO) project is an initiative of the Club of Rome Executive Committee, in particular its President, Dr. Aurelio Peccei, back. This initiative was a consequence of the "Salzburg Meetings" in February 1974, at which the Mexican President Echeverria vehemently supported the proposals contained in the "Charter of Economic Rights and Duties of the States" and in the 6th special session resolutions adopted by the General Assembly of the United Nations. Due to the importance of the UN resolutions and the Charter, but also because of their vagueness and because of the controversial treatment of the problems they tackle, Dr. Peccei proposed to put together and lead a working group of experts who would be able to answer the following question: Which new international regulations should be recommended to statesmen and social groups in the world in order to do so in a practical and realistic way to meet the urgent needs of today's population and the likely needs of future generations? An answer to this question, which inevitably can only be an attempt, is given on the following pages. The work of the group was made possible by the generous financial support of the Dutch Minister for Economic Cooperation, Jan Pronk. But neither the Club of Rome nor the Dutch government imposed any restrictions on the group. She was completely free to express their views. The group consisted of 21 experts as showed in the index aside, from different countries, community systems and most of all various fields of knowledge.

## JAN TINBERGEN



Born in The Hague on April 12, 1903 and died in The Hague, on June 9, 1994. He was a Dutch economist. Together with the Norwegian Ragnar Frisch, he was the first economist to receive the Nobel Prize for economics in 1969, "for having developed and applied dynamic models for the analysis of economic processes". Jan Tinbergen studied mathematics and physics at the University of Leiden under the guidance of Paul Ehrenfest. In 1929 he obtained Ph. D. with a thesis entitled "Minimumproblemen in de natuurkunde en de economie" (translation from Dutch: "Minimization problems in Physics and Economics"). From 1929 to 1945 he worked for the Dutch statistical institute, as well as holding the role of professor at the Erasmus-Universiteit Rotterdam, of which he founded the Institute of Econometrics. He was a consultant to the League of Nations. From 1945 to 1955 he was the first director of the Dutch Office for the Analysis of Economic Policy, which he founded. He was part of the Royal Academy of Arts and Sciences of the Netherlands and the International Academy of Sciences. Tinbergen became famous for the Tinbergen rule, an economic policy rule according to which in order for there to be a univocal solution to an economic policy problem, the number of target variables must be equal to the number of instrument variables and these must be between their independent. Tinbergen also developed the first national macroeconomic model, which was built on the characteristics of the Netherlands, and later, after the Second World War, applied to the United States and the United Kingdom. Tinbergen's studies influenced economists of different



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It was an American book publishing company founded as a book retailer in Boston, Massachusetts, in 1852 by Edward Payson Dutton. In 1864, Dutton expanded to New York City, where it began publishing religious books. In 1906, Dutton made a deal with English publishing company J. M. Dent to be the American distributor of the Everyman's Library series of classic literature reprints. John Macrae joined the company in 1885 as an office boy and in 1923 was named president. In 1928, the publishing and retail divisions were split into two separate businesses with Macrae acquiring the publishing side, operating as E. P. Dutton and Company, Inc. It published children's books under the Unicorn imprint, with some books published in the 1990s. Dutton Children's Books continues today. In 1975, Dutton was acquired by the Dutch publisher Elsevier. Dutton lost money under Dutch ownership, and the company was sold to the buyout firm Dyson-Kissner-Moran in 1981. The paperback publisher New American Library acquired Dutton in 1985. In 1986, New America Library was acquired by Penguin Group and split into two imprints: Dutton and Dutton Children's Books. Dutton is now a boutique imprint within Penguin Group, publishing approximately 40 books per year, half fiction and half non-fiction. After the acquisition by Penguin, books that Penguin acquired the rights to as part of the acquisition of Dutton were published in paperback under the imprint Puffin Unicorn (because Puffin has been the longtime paperback imprint for the Penguin Group). Penguin merged

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**OLTRE L'ETA DELLO SPRECO**, RICERCA SCIENTIFICA E POLITICA DELLE RISORSE: QUARTO RAPPORTO  
AL CLUB DI ROMA

Dennis Gabor, Umberto Colombo

Milan (Italy): Edizioni scientifiche e tecniche Mondadori

1976

interdependence food resources material engineering energy resources  
energy conservation RENEWABLE RESOURCES climate  
NATURAL RESOURCES  
waste treatment /EXPLOITATION scientific marine resources  
mineral resources NATURE CONSERVATION materials development policy making  
NONRENEWABLE RESOURCES science policy  
renewable energy sources food production

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## SYNOPSIS

The report in question opens with a descriptive presentation of the main energy sources exploited at the time it was written. This implies a division of energy sources into the two now widespread categories: Renewable and non-renewable. Once this is done, with the help of layout and summary schemes, the percentages of use and diffusion in the world are described, the main critical issues. The individual items belonging to the individual categories of energy sources are described below, dedicating for each of the paragraphs exhaustive and concise at the same time.



UMBERTO COLOMBO

Born on 1927 and died on 13 May 2006. He was a Jewish-Italian chemical engineer, academic and the minister of universities, science and technology of Italy. Colombo was

born in 1927. He received a PhD in physical chemistry from the University of Pavia. He was a Fulbright Fellow at the Massachusetts Institute of Technology in the United States. Colombo trained as a chemical engineer and worked as a professor at the University of Milan in the 1970s. He served as the president of the Italian energy firm ENI for a short period from November 1982 to January 1983 before being appointed as the head of the Italian nuclear energy unit. From 1993 to 1994 Colombo served as the minister of universities, science and technology in the Ciampi cabinet. Following this he became a member of the Italian national council of economy and labour. He was one of the shareholders of Energy Conversion Devices and became a member of its board of directors in July 1995 before retiring in November 2004. Other posts that Colombo held included the chairman of ENEA (Italian national agency for new technology, energy and the environment); 1983-1993, president of the European science foundation (1991-1993), chairman of the Italian hydrocarbons trust, director general of Montedison's R&D and strategic planning, director of Montecatini's G. Donegani research centre, governor of the international development research centre (IDRC; 1985-1990) in Canada, chairman of the United Nations's advisory committee on science and technology for development (1984-1986), chairman of LEAD-Europe, and president of the European institute research management association. He was also a member of the Club of Rome's executive committee that had been founded by Aurelio Peccei. In 1989, Colombo and fellow Italian scientist Francesco Scaramuzzi experimented with nuclear fusion, reporting that they had successfully creating nuclear fusion at room temperature. Colombo was the



DENNIS GABOR

Gabor was born as Günszberg Dénes, into a Jewish family in Budapest, Hungary. In 1918, his family converted to Lutheranism.

Dennis was the first-born son of Günszberg Bernát and Jakobovits Adél. Despite having a religious background, religion played a minor role in his later life and he considered himself agnostic. In 1902, the family received permission to change their surname from Günszberg to Gábor. He served with the Hungarian artillery in northern Italy during World War I. He began his studies in engineering at the Technical University of Budapest in 1918, later in Germany, at the Charlottenburg Technical



The publishing house then prepared and published, under the direction of Edgardo Macorini, a series of monographs entitled the EST Library, in which contributions remained famous such as the essays by the astronomer Paolo Maffei and the Italian translation of the Massachusetts Institute of Technology report to the Club of Rome on The Limits of development, which had been anticipated in the EST Yearbook of 1972. The series also published the reprints, updated to 1977, of the annalistic parts of the historiographic supplements of the EST (Science and technology from the origins to the twentieth century, Milan, Mondadori scientific and technical editions, 1977 and 20th century science and technology, Milan, Mondadori scientific and technical editions, 1977).

The editorial parenthesis just described had a fundamental precedent in the Encyclopedia of Science and Technology (EST). The latter was an editorial initiative of Arnolando Mondadori Editore inspired by the McGraw-Hill Encyclopedia of Science & Technology. In the early sixties it represented «a fundamental experience in the field of high scientific popularization in Italy. The encyclopedia consists of thirteen volumes, published in the first edition in 1963. In them the articles are sorted according to the alphabetical sequence. To the corpus of the encyclopedia were added yearbooks, published annually from 1968 to 1992 with the title of Science & Technology 68. Yearbook of the EST (and later). The yearbooks, in addition to a detailed international review of the scientific and technological progress of the previous year, also included original articles of considerable importance, written by scientists and technologists of international renown (such as the director of the Program Apollo Rocco Petrone, who contributed with a description of the plants of the John F. Kennedy Space Center prepared for moon missions). In the first three volumes of the yearbook, published between 1968 and 1970, extensive bibliographic reviews were published relating to all scientific and technological disciplines, together with a critical presentation of the state of scientific communication prepared by UNESCO, with the aim to provide a track for the development of public and private research libraries.

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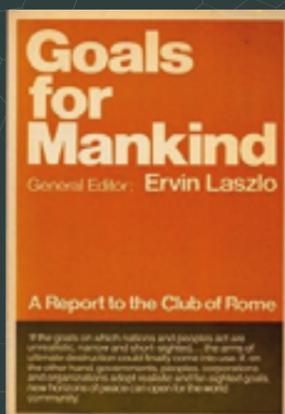
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## GOALS FOR MANKIND: A REPORT TO THE CLUB OF ROME ON THE NEW HORIZONS OF GLOBAL COMMUNITY

Ervin László

New York (USA): E. P. Dutton &amp; Co Inc.

1977

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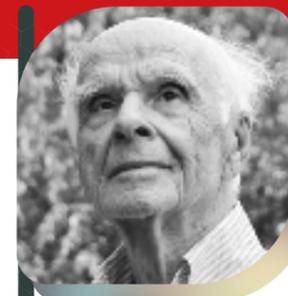
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## SYNOPSIS

Divided into nineteen chapters which in turn in the first part are further divided and examined individual macro geographical areas divided according to an internal logic of the book. Each of these macro sections internally addresses individual countries through a repeated scheme for each country examined which takes into account the following items, namely the "goals". Each macro section is introduced and presented with general objectives for this and then for each country examined outlines specific goals. At the end of each chapter the sums are drawn on the objectives to be achieved also in different areas such as economics, religion and others.

In a subsequent section, on the other hand, several crucial issues are dealt with one by one, already addressed in previous reports and which it is always possible to observe in subsequent reports. Themes such as food, justice, energy and others are addressed in an international context in order to provide a sort of global strategy. WORLD SOLIDARITY is a concept expressed in a pervasive way in the report in question, especially in the last chapter and at the end of the report itself.



Ervin László

born 12 June 1932 is a Hungarian philosopher of science, systems theorist, integral theorist, originally a classical pianist. He is an advocate of the theory of quantum consciousness. László was born in Budapest, Hungary, the son of a shoe manufacturer and a mother who played the piano; László himself started playing the piano when he was five years old, and gave his first piano concert with the Budapest Symphony Orchestra at the age of nine. At the end of the war[vague] he moved to the United States. László is a visiting faculty member at the Graduate Institute Bethany. He has published about 75 books and over 400 papers. In 2002, László received an honorary doctorate from the University of Pécs. He participated in the Stock Exchange of Visions project in 2006. In 2010, he was elected an external member of the Hungarian Academy of Sciences. In Hungary, the minister of environment appointed Laszlo as one of the leaders of the ministry's campaign concerning global warming. László married Carita Jägerhorn af Spurila 16 November 1956. One of their two sons is Alexander Laszlo. General Evolutionary Research Group In 1984, László was co-founder with Béla H. Bánáthy, Riane Eisler, John Corliss, Francisco Varela, Vilmos Csanyi, Gyorgy Kampis, David Loye, Jonathan Schull and Eric Chaisson of the initially secret General Evolutionary Research Group. Meeting behind the Iron Curtain, the group of scientists and thinkers from a variety of disciplines met in secret. Their goal was to explore whether it might be possible to use the chaos theory to identify a new general theory of evolution that might serve as a path to a better world. In 1993, in response to his experience with the Club of Rome, he founded the Club of Budapest to, in his words, "centre attention on the evolution of human values and consciousness as the crucial factors in changing course — from a race towards degradation, polarization and disaster to a rethinking of values and priorities so as to navigate today's transformation in the direction of humanism, ethics and global sustainability". László in his 2004 book, Science and the Akashic Field: An Integral Theory of Everything posits a field of information as the substance of the cosmos. Using the Sanskrit and Vedic term for "space", Akasha, calls this information field the "Akashic field" or "A-field". He posits that the "quantum vacuum" (see Vacuum state) is the fundamental energy and information-carrying field that informs not just the current universe, but all universes past and present (collectively, the "Metaverse"). László believes that such an informational field can explain why our universe appears to be fine-tuned so as to form galaxies and conscious lifeforms; and why evolution is an informed, not random, process. He believes that the hypothesis solves several problems that emerge from quantum physics, especially nonlocality and quantum entanglement. László became interested in the consciousness theories of Anthony Peake, (who in turn was an admirer of László's work on the

produced a tentative synthesis of the ancient idea of the "Eternal Return" with modern ideas like the simulation argument, the holographic universe, and the many worlds interpretation. Peake became a Consciousness Studies Department Member at Ervin László's Center For Advanced Studies. László collaborated with Anthony Peake on the book *The Immortal Mind: Science and the Continuity of Consciousness Beyond the Brain*. In his book *You Can Change the World*, László promotes a linking of non-government organizations promoting sustainable development, using the Internet. László has written an autobiography entitled *Simply Genius! And Other Tales from My Life*, published by Hay House Publishers in June 2011.



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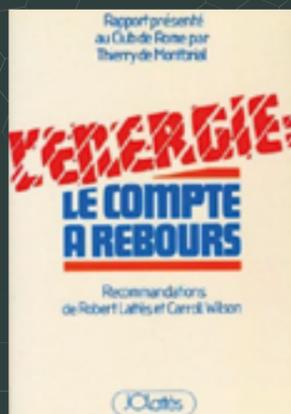
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Thierry de Montbrial

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ENERGY SHORTAGES  
petroleum industry  
ENERGY CONSUMPTION  
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THIERRY DE MONTBRIAL

3 mars 1943 Born in Paris. Son of François de Montbrial, Bank of France inspector, author of political essays and poetry collections, and Monique Lécuyer-Corthis. Thierry de Montbrial is the founder and president executive chairman of Ifri, the reference think tank in France. He is also Chairman of the World Policy Conference (WPC), which he founded in 2008. All of his intellectual activity and action are led by the idea that progress in human societies is possible, when reason and sensitivity coalesce harmoniously. Trained in the hard sciences, particularly in mathematics, in which his interest has never ceased, he dedicated his PhD thesis at Berkeley to the temporal dimension in the economic theory of general equilibrium, supervised by Gérard Debreu, Nobel Prize laureate in 1983. The concepts of time and equilibrium, and therefore History, are threaded throughout his work. In his view, economics remain the queen of the sciences of action, even though, as observed in 2008, the facts sometimes offer harsh reminders of its limitations. He transformed the teaching of this discipline at the Ecole Polytechnique in Paris, with a team that he chaired for eighteen years (1974-1992). At the same time, from 1973, his position as first director of the Centre for Analysis and Forecasting (CAP) at the French Ministry of Foreign Affairs allowed him to extend the scope of his thinking and action to international politics and strategy. Bringing together one of the most brilliant teams of experts, he worked guided by the firm belief that, while scientific knowledge is essential in these areas too, it must be accompanied by in-depth relationships with others, in a spirit of respect, tolerance and empathy. During his six years at the CAP, he instituted an "intellectual diplomacy" never before seen in France, which led him to travel across the five continents, engaging in an abundance of encounters and forming ever more ties. These experiences allowed him to better embrace and develop sensitivity towards other cultures. Continuing in this direction, he introduced the concept of think tank in his country, creating the Institut français des relations internationales (Ifri), now ranked among the best in the world. He believes think tanks have a major part to play in the 21st century, to give flesh to the still embryonic idea of global civil society. While geopolitics is often associated with war, Thierry de Montbrial has worked tirelessly towards a geopolitics of peace. He considers that there is no greater collective task than establishing legitimate and effective global governance. To this end, he launched the World Policy Conference (WPC), which in twelve years has established itself as one of the

Éditions JC Lattès has distinguished itself with numerous successes: an Interallié prize with Serge Bramly, a Renaudot prize and a Goncourt of high school students for Delphine de Vigan, two booksellers' prizes including that of Marc Dugain, the revelation Grégoire Delacourt, four Nobel prizes with Svetlana Aleksievitch, Muhammad Yunus, Kazuo Ishiguro and Professor Luc Montagnier, as well as the alternative Nobel awarded to Maryse Condé in 2018. mJC Lattès is also the editor of the historical suspensions of Jean-François Parot, of the new novels of John Grisham, of Eric Giacometti and of Jacques Ravenne. The combined successes of the EL James trilogy, Fifty Shades of Gray, and Dan Brown have marked in recent years. Jean-Claude Lattès, born September 3, 1941 in Nice and died January 27, 2018 in Paris, is a French publisher and writer. He is the founder of Jean-Claude Lattès editions. Jean-Claude Lattès is the son of Alfred Lattès, known as Fred, fabric merchant, city councilor of Nice from 1965 to 1977, and figure of the Jewish community of the city, and his wife Simone Lattès; he has two brothers. After the baccalaureate, he studied literature and commerce (at ESCP). At the age of 21, he joined Combat at the cultural service and collaborated on the letters pages of Cande, L'Express, Les Nouvelles littéraires and L'Observateur. In 1965, he became head of the promotion department for Robert Laffont editions. In 1968, he created with Jacques Lanzmann Special Edition, where event books are published. The first, This is just the beginning of Philippe Labro, finds a large audience.

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<https://www.editions-jclattes.fr/>

Éditions Jean-Claude Lattès In 1972, Jean-Claude Lattès went it alone, Édition Spécial became Éditions Jean-Claude Lattès. From 1972 to 1981, this house published nearly 2,000 titles and met with great success with Le Sac de marbles, by Joseph Joffo, L'Amour blind, by Patrick Cauvin, Louisiane, by Maurice Denuzière, Le Nabab by Irène Frain, Léon the African by Amin Maalouf or Le Vent du soir by Jean d'Ormesson. Many young authors are discovered, collections are dedicated to music, Jewish culture, Arab culture (including the novels of Naguib Mahfouz who will win the Nobel Prize) without forgetting many political and historical documents. In 1981, Jean-Claude Lattès sold his house to the Hachette group and became managing director of the Livre group, which he straightened and internationalized.

From publishing to writing In 1991, Jean-Claude Lattès leaves Hachette, settles in a vineyard in Provence, in Mirabeau in the Vaucluse, travels and devotes himself to his favorite passions: reading, writing, traveling. With Éric Deschodt he wrote two novels: The Only Lover and Marguerite and the enraged, fruits of stays in India and Italy..

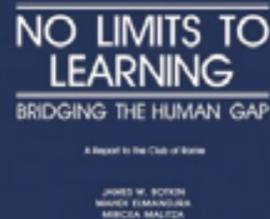
"NO LIMITS TO LEARNING"

1979

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# No Limits to Learning, Bridging the Human Gap A Report to the Club of Rome

James W. Botkin, Mahdi Elmandjra, Mircea Malița

Oxford (UK); New York(USA): Pergamon Press

1979



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## SYNOPSIS

This is the first Club of Rome report by authors from socialist and Third World Countries, as well as from the West. It reconsiders global problems such as energy, communications, cultural identity, and the arms race, focusing primarily on the human element rather than predominantly on the material constraints to growth. This is because learning and the individual human being - not material resources - are the key to the world's future. Of particular importance is the concept of societal learning. The risks inherent in the widespread reliance on 'learning by shock' are exposed. The authors propose as an alternative the development of 'anticipatory and participatory learning'. The fundamental question raised is whether humanity can shift from a mode of learning characterized by unconscious adaptation to one of conscious anticipation. This chapter presents a conceptual framework for innovative learning processes. Maintenance learning is essential but insufficient. It is indispensable in closed situations where assumptions remain fixed. The meaning derived from such learning easily assumes an inner coherence. Innovative learning is problem formulating and clustering. Its main attributes are integration, synthesis, and the broadening of horizons. It operates in open situations or open systems. It leads to critical questioning of conventional assumptions behind traditional thoughts and actions, focusing on necessary changes. As the contexts widen and multiply and as the values that these contexts encompass grow more varied, the process of understanding becomes more difficult. A key aim of innovative learning is to enlarge the range of options within sufficient time for sound decision-making processes. Without such innovative learning, humanity is likely to rely solely on reactive learning, making new shocks inevitable. The only rational way to develop innovative learning and to reach to masses is to develop a new learning perspective. This chapter provides an overview of this perspective. This perspective must be cultivated by a form of learning and education that begins with a global reasoning, which balances local, national, international, and global requirements, and which fosters an integrative and complete development of human beings. A world system vulnerable to the cultural aggression of some and the cultural disintegration of others is hardly a reliable basis for mutual understanding, dialogue, cooperation, joint ventures, or solidarity. Transdisciplinary information can help to establish a true dialogue between science and the public at large according to the requirements of participatory learning. An international learning research project would be participatory to the extent that it would call upon researchers from a great variety of disciplines from the entire world community to work together and to share their knowledge and the results of their findings.



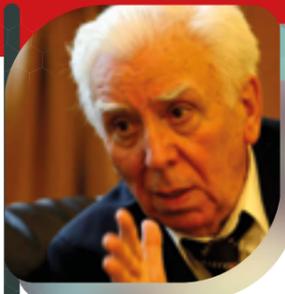
### JAMES WALDRON BOTKIN

There are very few information about James Waldron Botkin. Moreover about those it is quite difficult to say if they are really talking about the co-author of the present report. However, in this lines that follows it will be tried to provide as well everything has been founded. James Waldron Botkin Of Cambridge, died on November 20, 2011. In 1973 Jim received his doctorate from Harvard University. An accomplished author, Jim's books on business reflected the same energy, enthusiasm and openness to change that he emanated in his daily life.



### MAHDI ELMANDJRA

13 March 1933 – 13 June 2014 was a Moroccan futurologist, economist and sociologist. Elmandjra started his high-school education at Lycée Lyautey (Casablanca) in 1944 where he got his Baccalaureat in 1948 . He then went to Putney School, Vermont, U.S. (1948–1950) before joining Cornell University, Ithaca, New York (1950–1954) where he obtained a B.A. Government degree. Elmandjra then went to England where he enrolled in the London School of Economics, and the University of London (1954–1957) obtaining a PhD. Mahdi Elmandjra graduated from Cornell (USA) and obtained his PhD from the London School of Economics. He has taught international relations at the University of Rabat since 1958. Elmandjra has held many occupations throughout his career. After finishing his studies, Elmandjra started his career as Director General of the Moroccan Broadcasting Service (RTM) and as a Counselor of the Moroccan Mission to the UN. He occupied various functions in the UN body from 1961 to 1981 including that of Assistant Director General of UNESCO for Social Sciences, Human Sciences and Culture as well as Coordinator of the Conference on Technical Cooperation between Developing countries at the UNDP. He was President of the World Futures Studies Federation and of Futuribles International as well as the founding President of the Moroccan Association of Future Studies and the Moroccan Organization of Human Rights. He is a member of the African Academy of Sciences and of the Academy of the Kingdom of Morocco. He has been a Visiting Professor to Tokyo University (1998) and a Visiting Scholar of the Japanese Society for the Promotion of Science (JSPS) at the Tokyo Keizai University (1999). He has been awarded with Curzon Prize of French Literature, Cornell University (1953); Rockefeller Award for International Relations, London School of Economics (1955); Order of Independence of the Kingdom of Jordan (1959); Chevalier of the Order of Arts and Letters, France



### MIRCEA MALIȚA

He was born on 20 February 1927 in Oradea, Romania. He undertook his undergraduate schooling in Oradea, Făgăraș, Beiuș and Bucharest. Between 1945 and 1949 he accomplished his university studies at the Faculty of Sciences (Mathematics) and the Faculty of Philosophy. In 1972 he defended his PhD thesis on "Mathematical models for negotiations". Mircea Malița was a renowned scholar, a writer, a diplomat, a founder of institutions and an initiator of great projects. In 1949 he was a participating student in the delegation of the Paris Peace Conference, led by Mihail Sadoveanu, a famous Romanian writer; he subsequently became a secretary in the Peace Committee, whose president was Mihail Sadoveanu between 1952 and 1953. He was the director of the Romanian Academy Library between 1950-1956. Mircea Malița served as a counselor of the first Romanian Mission to the UN between 1956-1961. He was further the director of the cultural department of the Ministry of Foreign Affairs (1960-1962), deputy minister of foreign affairs (1962-1969), minister of education (1070-1972), counselor for foreign affairs and state minister and member of the preparative committees of the UN conferences for population, science, technology and development (1974-1979). He was an ambassador of Romania to Switzerland and the UN (1980-1982) and to the USA (1982-1984). In 1974, Mircea Malița was elected a corresponding member of the Romanian Academy; he became a full member here in 1994. He was the founding president of the Black Sea University Foundation, the spiritual patron of the "Ion I. C. Brătianu" Institute of Political Science and International Relations (ISPRI) of the Romanian Academy and the president of the Commission for Future Studies of the Romanian Academy. Mircea Malița was a founding member of the European Cultural Centre in Bucharest, a member of the World Academy of Art and Science, a member of the International Academy for Future Studies, member of the World Future Studies Federation and a member of the "Leonardo da Vinci" Academy in Rome. A university professor since 1972 (title granted by the Faculty of Mathematics of the University of Bucharest), he lectured on international affairs at academic centers in Geneva, Stockholm, Boston, London, Prague, Vienna, Khartoum, Moscow, New York and Tokyo. He also held lectures on international relations at the University of Oradea (1990-2000), the Academy of Economic Studies in Bucharest as well as the National School for Political Studies and Public Administration (Bucharest, 2000-2008). He was a member of the Club of Rome since its foundation, together with founder Aurelio Peccei. He contributed with highly praised ideas and reports, such as "No Limits to Learning. Bridging the human Gap" (1979, together with James W. Botkin and Mahdi Elmandjra) and "The Double Helix of Learning and Work (2003, together with Orio Giarini). Mircea Malița is an inestimable national value for Romania, the



### PERGAMON PRESS

Pergamon Press was an Oxford-based publishing house, founded by Paul Rosbaud and Robert Maxwell, that published scientific and medical books and journals. Originally called Butterworth-Springer, it is now an imprint of Elsevier. The core company, Butterworth-Springer, started in 1948 to bring the "Springer know-how and techniques of aggressive publishing in science" to Britain. Paul Rosbaud was the man with the knowledge. When Maxwell acquired the company in 1951, Rosbaud held a one-quarter share. They changed the house name to Pergamon Press, using a logo that was a reproduction of a Greek coin from Pergamon. Maxwell and Rosbaud worked together growing the company until May 1956, when, according to Joe Haines, Rosbaud was sacked. When Pergamon Press started it had only six serials and two books. Initially the company headquarters was in Fitzroy Square in West End of London. In 1959 the company moved into Headington Hill Hall, a country home rented from the city of Oxford. In 1960 Brian Cox joined Pergamon Press as subscription manager. After the founders' deaths, Cox has become the primary witness to the phenomenal rise of Pergamon Press in the Science, Technology, and Medicine (STM) sector of publishing. The 59 Pergamon academic journals in 1960 became 418 journals in 1992. Cox recalls that in the process some 700 were launched, many transmogrifying rather than ceasing. In 1962 Pergamon Press started the series called The Commonwealth and International Library of Sciences, Technology, Engineering, and Liberal Studies. By 1970 this series had 1000 titles.

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series had 1000 titles. Brian Cox says that in all, Pergamon published 7,000 monographs for various authors. In 1964 Pergamon Press became a public company. With its growth and export performance, the company was a recipient of one of the Queen's Awards for Enterprise in 1966. That year saw construction of a new office block and warehouse at Headington Hill. Pergamon ventured to produce an Encyclopaedic Dictionary of Physics, in nine volumes and four supplements in the decade from 1961. In 1969, Maxwell lost control of Pergamon and was ejected from the board. An inquiry by the Department of Trade and Industry (DTI) under the Takeover Code of the time reported in mid-1971. It was found that Maxwell had contrived to maximise Pergamon's share price through transactions between his private family companies. Maxwell reacquired Pergamon in 1974 after borrowing funds. Pergamon continued with International Encyclopedias in biotechnology, chemistry, education, engineering, entomology, linguistics, materials science, and pharmacology & toxicology. The one in education won the Dartmouth Medal from the American Library Association in 1986 as the best reference work of the year. Pergamon also has offices in Elmsford, New York in the United States. In his biography of Robert Maxwell, Tom Bower says that Maxwell sold most Pergamon Press to academic publishing giant Elsevier in March 1991 for £440 million to keep his other companies afloat. This is contrary to what is reported in the New York Times that, following Maxwell's death in November 1991, Elsevier bought most of the company for \$US770 million after a failed bid by Simon & Schuster. Maxwell retained Pergamon's US books (which became part of sister company Macmillan Inc.), Chess and Bridge, and some smaller properties. The imprint "Pergamon Press" continues to be used to identify journals now published by Elsevier.

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TROIS QUARTS DU MONDE"*

*"TOWARDS MORE EFFECTIVE  
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*1980*



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(1981, 1982)

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Japan Management  
Association, 1981**THE IMPACT OF MICROELECTRONICS, A TENTATIVE APPRAISAL OF INFORMATION TECHNOLOGY:  
A REPORT TO THE CLUB OF ROME**

Juan F. Rada

Geneva (Switzerland): International Labour Office

1980

COMPUTER INDUSTRY  
technology: innovation INFORMATI  
labour supply **ELECTRONICS/** economic aspect  
COMMUNICATIONS  
ENGINEERING social impact  
social condition

## INDEX OF THE REPORT

In this report, for the first time the author tries to make an analysis of a topic that is rather in embryo, considering the date of release. In particular it is interesting to notice how there is important contributions from other author such Bruno Lamborghini who had worked for Olivetti.



JUAN F. RADA

Senior Vice President Global Public Sector, Healthcare, and Education Oracle Corporation with worldwide responsibility for public sector, healthcare, and education industry solutions. He is also a member of the management team for Europe, the Middle East, and Africa (EMEA). Juan Rada joined Oracle as Vice President for Public Services for EMEA in 1998, and in June 2000 he became Senior Vice President for Oracle's industries, which includes all vertical market solutions. In June 2006 he took over responsibility for the Public Sector and Education Industries Business Unit globally, which was extended to include healthcare and life sciences in January 2008. Prior to joining Oracle, Rada was Vice President of Digital Equipment Corporation International (Europe) from 1992 to 1998, responsible for strategic alliances and new initiatives. He also led The Environmental Partnership, a company devoted to the implementation and promotion of environmental initiatives. From 1979 to 1992, Rada was a professor of Technology Management and a member of the faculty at the International Management Institute (IMI) in Geneva, and also of IMD in Lausanne (Switzerland), which was created from the merger between IMI and IMEDE. From 1989 to 1992, he was the founding Director General (Dean) of IMD. Rada studied economics and sociology at the Universidad Católica de Chile, his country of origin, followed by studies at the University of London, where he obtained his PhD. Rada has served as a board member for a number of corporate, academic, and not-forprofit organizations. These include the Club of Rome, the European Commission Information Technology Review Board, the Council of the World Conservation Union (IUCN), and the Advisory Board of the World Bank Community Carbon Fund. He is also Chairman of the Lombard Odier Darier Hensch Infology Fund Advisory Board. Rada has published a number of books and articles, which

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**Juan F. Rada:**

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International  
Labour  
Organization

International Labour Organization It was created in 1919, as part of the Treaty of Versailles [PDF 837KB] that ended World War I, to reflect the belief that universal and lasting peace can be accomplished only if it is based on social justice. The International Labour Organization (ILO) is a United Nations agency whose mandate is to advance social justice and promote decent work by setting international labour standards. It was the first specialised agency of the UN. The ILO has 187 member states: 186 of the 193 UN member states plus the Cook Islands are members of the ILO. The tripartite structure is unique to the ILO where representatives from the government, employers and employees openly debate and create labour standards. The International Labour Office is the permanent secretariat of the International Labour Organization. It is the focal point for International Labour Organization's overall activities, which it prepares under the scrutiny of the Governing Body and under the leadership of the Director-General. The ILO employs some 2,700 officials from over 150 nations at its headquarters in Geneva, and in around 40 field offices around the world. Among these officials, 900 work in technical cooperation programmes and projects. In 1969, the ILO received the Nobel Peace Prize for improving fraternity and peace among nations, pursuing decent work and justice for workers, and providing technical assistance to other developing nations. Fifty years later to mark the organisation's centenary, it convened a Global Commission on the Future of Work, whose report, published in January 2019, made ten recommendations for governments to meet the unprecedented challenges of a changing world of work. Those included a universal labour guarantee, social protection from birth to old age and an entitlement to lifelong learning. The International Labour Organization has developed a system of international labour standards aimed at promoting opportunities for women and men to obtain decent and productive work, in

**International Labour Organization:**

<https://www.ilo.org/global/publications/lang-en/index.htm>  
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## MAURICE GUERNIER

Doctor of Law. - Member of the Club of Rome. - President of the national association Qualité-France (in 1978)

Mr. Maurice Guernier will present on Friday May 9 to the United Nations a proposal from the Club of Rome, of which he is a member, on "a world intercommunity order". This suggestion comes from the report which was recently published under the title *Third World; three-quarters of the world* (1). The author recommends the creation of large regional communities grouping together homogeneous countries such as those of Latin America, black Africa or South-East Asia, etc., which would allow to provide a number of essential benefits to Third World countries. He indicates in particular that such a system would facilitate endogenous development thanks to the existence of large internal markets (more than two hundred million consumers in general), would allow the countries of the third world to treat as equals with the powers of the North and to discuss and then deal with the major planetary problems which currently escape the capacities of national leaders (famine, desertification, overpopulation, pollution, unemployment, energy, etc.)



Dunod is a publishing house of the Hachette Livre group, specialized in university and professional training books and includes the brands Dunod, Armand Colin, InterÉditions, Ediscience, (ETSF).

Dunod's publishing areas are: science and technology, scientific culture; computer science; economics, accounting, management and management; social sciences, humanities, psychology, personal development, social and medico-social action. The Dunod scientific bookshop takes its name with Charles Dunod in 1858 (there are works from 1866) at 49, quai des Grands-Augustins in Paris. In fact, it has existed since 1791, founded in Paris by Jean-Louis Gœury under the title of Bookstore for mathematics & architecture<sup>1</sup>. Henri Dunod took over in 1905. Dunod was bought by Editions Bordas in 1972. Within the Bordas group, Dunod passed into the hands of Presses de la Cité in 1977, of Havas in 1997, then, integrated into Vivendi Universal Publishing, it was sold to the Lagardère group in 2004. Dunod bought Armand Colin editions in 2014 and François Bachelot took over the post of Managing Director after the departure of Pierre-André Michel. After many years not far from the Pantheon, at 5, rue Laromiguière, in the Val-de-Grâce district of the 5th arrondissement, Dunod editions are getting closer to the headquarters of Hachette Livre in Vanves and settle down in rue Paul Bert in Malakoff. In April 2019, the publishing house changes its logo in order to renew its image and support changes to the editorial line, in particular the incorporation of a personal development fund.

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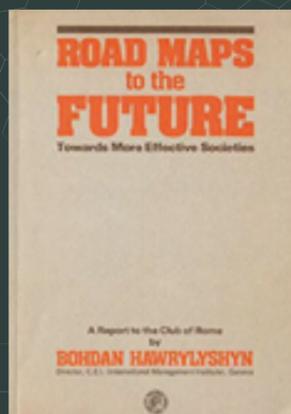
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1985

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## ROAD MAPS TO THE FUTURE, TOWARDS MORE EFFECTIVE SOCIETIES: A REPORT TO THE CLUB OF ROME

Bohdan Hawrylyshyn

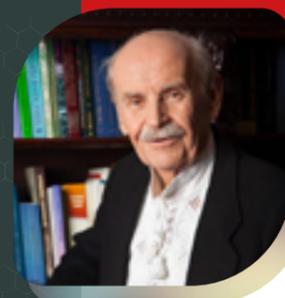
Oxford (UK): Pergamon Press

1980



## SYNOPSIS

The original version of Prof. Hawrylyshyn's book titled *Road Maps to the Future* (1980) was published in 8 languages. An exploration of how and why different societal orders have emerged, presenting an analysis of their basic components – values, political governance and economic systems. Hawrylyshyn demonstrated how these components as well as, the internal and external environments of a country determine its social, political and economic effectiveness. Taking the key countries of the world separately, Hawrylyshyn indicated the ways in which each might achieve higher effectiveness by making modifications in these basic components and, in the process, facilitate the emergence of a world order. Hawrylyshyn is a high profile expert on issues of public administration and international business. He was born in Western Ukraine. In 1947, he left for Canada and obtained a Masters degree in Engineering (1954, Toronto University). Having worked for multinational company he was sent to the International Management Institute in Switzerland (IMI). In 1960, Hawrylyshyn started his career in educational sphere, teaching economics, global business, international operations management and public administration at IMI in Geneva. In 1968, he became the Director of the Institute and remained its head for 18 years. In 1972, he was elected to the Roman club, in 1973 to the International Management Academy, in 1975 – the World Academy of Art's and Sciences. Hawrylyshyn was awarded Doctorate of Economics of Geneva University (1976), Honorary Doctorate of Law of York University (Canada, 1984) and Alberta University (Canada, 1986). Since 1988, Hawrylyshyn has committed his activity to Ukraine. He initiated establishment of the first institution in the former USSR which provided MBA program training (MIM-Kyiv). In 1989, he contributed to the establishment of the Soros Foundation in Ukraine (chaired its Supervisory Board until 1998). In 1991, Hawrylyshyn created and became the head of the Council of Advisors to the Presidium of the Ukrainian Parliament, was a member of the American-Ukrainian Advisory Board, an advisor to the first president of Ukraine, four chairmen of the Parliament and three prime-ministers. Now Bohdan Hawrylyshyn is a board member of the World Academy of Art and Sciences, the head of Ukrainian National Scout Organization, a member of the Executive Committee of the Swiss International Policy Forum, and the head of Supervisory Board of MIM-Kyiv.



BOHDAN HAWRYLYSHYN

Bohdan Hawrylyshyn was born on 19 October 1926, and died in 24 October 2016. He was a Canadian, Swiss and Ukrainian economist, thinker, benefactor and advisor to governments and large companies worldwide. He was a full member of the Club of Rome, a long-time director of Switzerland's International Management Institute (now International Institute for Management Development), a founder of the European Management Forum in Davos (now World Economic Forum), a fellow and member of the Board of the World Academy of Art and Science. Hawrylyshyn also was a consultant of General Electric, IBM, Unilever, Philips and advisor to several countries. After Ukraine declared independence in 1991, he was an advisor to several Ukrainian prime ministers, and to most chairmen of the Ukrainian Verkhovna Rada. Hawrylyshyn was awarded five honorary doctorates, a gold medal from the President of the Italian Republic, and two medals from presidents of Ukraine. From 1988 he worked mainly in Ukraine, created the International Management Institute which he chaired. He also chaired the International Centre for Political Studies, initiated the creation of a number of student organizations, acted as an advisor to first President of Ukraine Leonid Kravchuk, (and also advised) four successive chairmen of Parliament and three prime ministers. At the end of his life Hawrylyshyn focused on youth organizations through the Bohdan Hawrylyshyn Charitable Foundation. Hawrylyshyn was also an active member of the Lisovi Chorty fraternity within the Plast Ukrainian Scouting Organization. From 2006 to 2008 Hawrylyshyn was a Headman of Plast. Bohdan Hawrylyshyn was born in Koropets village, Ternopil Oblast where he spent most of his childhood on father's farm. During World War II, he was captured by the Nazis in 1944 and displaced to Germany. After the war, he spent almost two years in a displaced persons camp, and afterwards moved to Canada as a lumberjack. While working at various jobs Hawrylyshyn was admitted at the University of Toronto. His admission received media coverage and public disruption, as he was the first refugee to get admitted to the university in Canada. In 1952 he graduated with a BA and an MA in 1954 in engineering at the University of Toronto. From 1954 to 1960 Hawrylyshyn worked as an engineer, researcher and manager at the various enterprises in Canada. Hawrylyshyn died on 24 October 2016 at the age of 90 in Kyiv, Ukraine. In 2010, Dr. Hawrylyshyn founded Bohdan Hawrylyshyn Charitable Foundation, the main purpose of which is to encourage and promote new generations of professional, patriotic Ukrainians who care about common values and goods, who are proactive in the social and political life of the country and who can cooperate with each other. Dr. Hawrylyshyn believed that these young Ukrainians would form a critical mass of people capable of transforming Ukraine. The endowment of the

The key program of the Foundation is called Young Generation Will Change Ukraine and is created in the form of international study-trip. According to it the selected groups of young people choose one of the effective European countries, i.e. Austria, Germany, Norway, Sweden, Switzerland or Poland, study their experience, make a short study trip to the country in question, then select "components" for political, economic, social "architecture" for the future Ukraine and use that knowledge in their political or civil careers for transformation of Ukraine. The results of the studies will be presented in mass media and on different events and also will be submitted to the legislative process including drafting and amending national laws. The groups usually focus their research work on different issues, including parliamentary system, social policy of the country, environmental policy, gender policy, mass media, the role young people play in the government of the country and in public sector.



## PERGAMON PRESS

Pergamon Press was an Oxford-based publishing house, founded by Paul Rosbaud and Robert Maxwell, that published scientific and medical books and journals. Originally called Butterworth-Springer, it is now an imprint of Elsevier. The core company, Butterworth-Springer, started in 1948 to bring the "Springer know-how and techniques of aggressive publishing in science" to Britain. Paul Rosbaud was the man with the knowledge. When Maxwell acquired the company in 1961, Rosbaud held a one-quarter share. They changed the house name to Pergamon Press, using a logo that was a reproduction of the Pergamon Altar. Paul Rosbaud was also PUBLISHER OF THE FOLLOWING REPORTS, CHECK:



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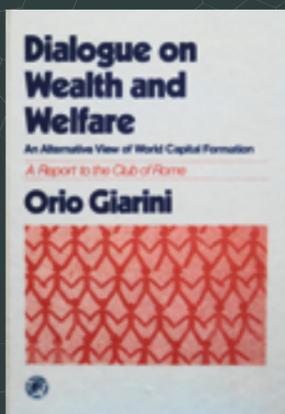
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maps/charts/diagrams

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Turin (Italy):  
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## IALOGUE ON WEALTH AND WELFARE, AN ALTERNATIVE VIEW OF WORLD CAPITAL FORMATION: A REPORT TO THE CLUB OF ROME

Orio Giarini

Oxford (U.K.); New York (USA): Pergamon Press

1980



## SYNOPSIS

The first report produced for the Club of Rome. It is closely related to the Predicament to Mankind. Per questa ragione si è voluto riportare per esteso il titolo dell'opera. Come detto del capitolo dedicato al CoR raccontato diffusamente nell'opera preliminare "Predicament to mankind" messa a punto da Peccei e dagli altri fondatori. "Limits to Growth" si configura come primo tangibile esito in risposta al project on predicament. I presupposti della sua nascita si verificarono a seguito di due conferenze tenute in Inghilterra da Jay Forrester, professore presso l'MIT di Boston, in cui egli illustrava il suo sistema World3 da poco messo a punto. Questo risulta essere, in quegli anni, uno dei pochi neonati simulation models capable The first report produced for the Club of Rome. It is closely related to the Predicament to Mankind. For this reason we wanted to report the title of the work in full. As mentioned in the chapter dedicated to the CoR widely reported in the preliminary work "Predicament to mankind" developed by Peccei and the other founders. "Limits to Growth" takes shape as a first tangible outcome in response to the project on predicament. The assumptions of his birth occurred following two conferences held in England by Jay Forrester, professor at the MIT in Boston, in which he illustrated his recently put World3 system to point. This turns out to be, in those years, one of the few newly-born simulation model capable



ORIO GIARINI

is an Italian economist, he founded the Risk Institute (Trieste-Geneva-Zagreb-Pondicherry) in 2001 to promote studies on risk and uncertainty and their impact on society and currently serves as its

Director. He is also founder and Editor-in-Chief of the European Papers on the New Welfare. He was also Secretary General since its foundation in 1973 up to 2000 of the Geneva Association, a global think tank for the study of insurance economics. Prior to that he was Director of the Techno-Economic Research Division of the Battelle Institute in Geneva. He served as a member of the Executive Committee of The Club of Rome from 1982-86. He has taught at numerous universities, in particular the Graduate Institute of European Studies of the University of Geneva and currently of the International University ALSO PUBLISHER OF THE FOLLOWING REPORTS, CHECK:



## PERGAMON PRESS

Pergamon Press was an Oxford-based publishing house, founded by Paul Rosbaud and Robert Maxwell, that published scientific and medical books and journals. Originally called Butterworth-Springer, it is now an imprint of Elsevier. The core company, Butterworth-Springer, started in 1948 to bring the "Springer know-how and techniques of aggressive publishing in science" to Britain. Paul Rosbaud was the man with the knowledge. When Maxwell acquired the company in

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*"L'IMPERATIF DE COOPÉRATION  
NORD/SUD"*

*1981*



ISBN 9782040107161

124 pages

illustrations

VII, 21 cm

french

## OTHER EDITION

Paris (France): Bordas, 1981

**L' IMPERATIF DE COOPERATION NORD/SUD, LA SYNERGIE DES MONDES:**  
 RAPPORT AU CLUB DE ROME

Jean Saint-Geours

Paris (France): Dunod

1981

INTERNATIONAL ECONOMIC DEVELOPMENT  
 agricultural development regional disparities  
 comparative advantage **INTERNATIONAL** industrialization  
**COOPERATION** future society development strategies

## INDEX OF THE REPORT

The author presented his book at a panel discussion on February 24, 1981, organized by the International Futures Association and Dunod Editions. It develops and enriches the themes of a study discussed within the CoR, itself resulting from the Tinbergen report published in French under the North-South title, from the challenge to dialogue (sned, Dunod, 1978). Believing that very few books present the point of view of the countries developed in terms of the New International Economic Order, it offers change strategies that are not based on beliefs in rigid mechanisms but on the awareness of a necessary adaptation based on consultation between all the partners involved. The approach consists in rejecting assistance-type solutions to countries in the Third World which poses more problems than it solves, as well as the "every man for himself" solutions dictated by savage suicidal liberalism for everyone. Thus, a significant modification of the relationships between the mode of development of the countries of the North and that of the countries of the South, as well as the inevitable transformation of minds and behaviors. The author recommends economic policy actions in the area of international specialization, industrialization of the Third World, trade. This requires a minimum of planning in the form of discussions between industrial and developing countries on their plans for respective development and State intervention to better inform private decision-makers on essential developments and correcting errors in the market. A third way would therefore be open, that of a harmonization of developments voluntarily accepted by everyone as the author calls inter-development. His reflections are based on a rigorous analysis of statistical realities, political statements and representations of possible futures provided by the different scenarios on the possible futures. So the normative aspect is it based on figures which provide the whole with logic reasonable. However, certain weaknesses appear. We have in particular criticized the author for making the "northern" point of view heard again and not examining enough of the explosive claims of young people of the third-world. In general, to developments relating to the state of the economy in different parts of the world mixes a normative analysis of what underdeveloped countries should understand.



JEAN SAINT-GEOURS

Jean Saint-Geours, born on April 24, 1925 in Bordeaux and died on November 7, 2015 in the same city, is a senior French civil servant, banker and writer. Son of Jean Saint-Geours, civil servant,

and Anne de Vernon, Jean Jacques Charles Saint-Geours was born on April 24, 1925 in Bordeaux. He is of "Protestant culture" After studying at the Claude-Bernard and Janson-de-Sailly high schools, he obtained a law degree, then a post-graduate diploma (DES) in public law and political economy, and a diploma from the Free School of Sciences political, then is a student of the National School of Administration (ENA) in the promotion United Nations in 1949, from which he graduated major. He was successively Inspector of Finance in 1950, advisor and project manager to various French ministries, deputy director in the Treasury department, in charge of economic and financial studies, then director of forecasting at the Ministry of the Economy and Finances (1965), deputy managing director (1968) then managing director of Crédit Lyonnais (1970-1975), president and managing director of the Sema-Metra group (1976-1982), president - with François Bloch-Lainé - of Crédit national (1982), President of the Industrial and Commercial Credit and President of the Stock Exchange Operations Commission (1989-1995). Finally, he chaired the Cinémathèque française from 1991 to 2000. In parallel with these activities, he gave (1960-1981) a course in political economy - or he developed comparisons and international references" - at the Institute of Political Studies (Sciences Po) and taught at the School of the Hautes Etudes Commerciales de Paris (HEC). He was retired on April 25, 1991. He is the author of several political and economic essays. The Financial Economics Review will judge some - among them Power and Finance, The Imperative of North-South Cooperation and The Ethics of the Enarchs - "premonitory". Conversely, Alain de Benoist describes his praise of the consumer society, made with a "youthful lyricism", as "the least cloudy theory". He has also

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describes his praise of the consumer society, made with a "youthful lyricism", as "the least cloudy theory". He has also written many novels (including La Caverne, awarded by the French Academy in 2008) Member of the Club of Rome, administrator of the prospective magazine Futuribles, he is president (1988-1992) then administrator of the Beaumarchais foundation Married to Yvonne Monnier, he has three sons: Frédéric, Jean-Philippe and Yves. He died on November 7, 2015 in his hometown, at the age of 90.



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Dunod's publishing areas are: science and technology, scientific culture; computer science; economics, accounting, management and management; social sciences, humanities, psychology personal development, social and professional action. The Dunod scientific knowledge takes its name with

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*"MICROELECTRONICS AND  
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*1982*



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**MICROELECTRONICS AND SOCIETY, FOR BETTER OR FOR WORSE A REPORT TO THE CLUB OF ROME**

Günter Friedrichs, Adam Schaff

Oxford (U.K.)/ New York (USA): Pergamon Press

1982 (1983, 1984)



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**SYNOPSIS**

This report undoubtedly falls within the list of reports that are not based on mathematical models of differential equations designed to develop patterns of trends of certain trends related to the microelectronics sector, a sector already widely revealed in the year of book preparation, and indeed on the rise in several ways. In fact, the decade of 1980 represents perhaps the peak of that gold rush in the field of microelectronics, in which growth, for most, seemed limitless and capable of bringing only benefits. The defects and negative aspects of every aspect of human life began to emerge timidly in the mid-90s but always accompanied by a feeling of not wanting to admit those defects. They wanted to be forgotten. This report with a certain avant-garde spirit exposes these unspoken problems or to which we did not want to give credit. In the wake of the first report already presented "The impact of Microelectronics a tentative appraisal" a few years earlier. As said at the beginning, the report does not use mathematical models to make real "forecasts" but tries to trace, as can also be seen from the last paragraphs of the last chapter, a trend for the next twenty or thirty years from the year of editorial board. In particular, a certain emphasis in this idea of tracing a trend is placed towards the expansion of the micro-electronics sector and the implications as well as the effects that this would have on employment. This is a key point within the report. Much emphasis is given in fact on how the automation of which the advent of digitalization is a harbinger would have led materially in the lives of individuals. It is of considerable interest to bring to the attention that the report dedicates an entire chapter to the implications that microelectronics brings to a sector of critical social life such as war entrusted to Frank Barnaby; which in a thorough examination, probes the implications.

**GÜNTER FRIEDRICHS**

Günter Friedrichs (born in 1928; and died in 2012) was an early analyst of the social consequences of automation and for many years head of the automation department on the board of IG Metall. Friedrichs attended high school during the Second World War. In 1944 he became a gunner on a quadruple flak, which defended the nitrogen plant Leuna in Saxony against Allied bombers. After his release from captivity, he completed an apprenticeship in a Kassel grocery store. In 1952 he began studying economics at the University of Frankfurt am Main. After graduating with a degree in economics, he studied for a year at the University of Minnesota. In 1957 he became Dr. in Frankfurt am Main with a thesis on "sales advertising, its technology, psychology and economics". He had been a part-time employee at IG Metall since 1954, before becoming an employee of the union in 1956. In 1957 he was appointed head of the automation department. This department was "for a long time the only institution that dealt systematically with the alleged consequences of automation". Under Friedrichs' leadership, IG Metall organized multi-day automation congresses "that took place with the international participation of scientists, politicians and top-class practitioners. Overall, the three IG Metall conferences met with a strong response and, thanks to their unusually strong international focus, contributed to a cross-border exchange of ideas between trade union and political actors. The contributions (including his own) and discussions were published by Günter Friedrichs in multi-volume publications at the European Publishing House.



**ADAM SCHAFF**

Adam Schaff was born 10 March 1913, and died 12 November 2006. He was a Polish Marxist philosopher. Of Jewish origin, Schaff was born in Lemberg into a lawyer's family. Schaff studied economics at the Ecole des Sciences Politiques et Economiques in Paris, and philosophy in Poland, specializing in epistemology. In 1945 he received a philosophy degree at Moscow University, and in 1948 he returned to Warsaw University. He was considered the official ideologue of the Polish United Workers' Party. He was a member of the Polish Academy of Sciences and of the Club of Rome.

Adam Schaff (born March 10, 1913 in Lemberg, † November 12, 2006 in Warsaw) was a Polish Marxist philosopher. Adam Schaff came from a Jewish family of Polish lawyers. He completed his studies at the law faculty of the University of Lviv and at the École des Sciences Politiques et Économiques in Paris, and received his doctorate in philosophy at Moscow's Lomonosov University in 1945. After the war he studied in the field of epistemology at the



## PERGAMON PRESS

Pergamon Press was an Oxford-based publishing house, founded by Paul Rosbaud and Robert Maxwell, that published scientific and medical books and journals. Originally called Butterworth-Springer, it is now an imprint of Elsevier. The core company, Butterworth-Springer, started in 1948 to bring the "Springer know-how and techniques of aggressive publishing in science" to Britain. Paul Rosbaud was the man with the knowledge. When Maxwell acquired the company in 1981, Rosbaud held a one-quarter share. They

ALSO PUBLISHER OF THE FOLLOWING REPORTS, CHECK: [one that was a](#)



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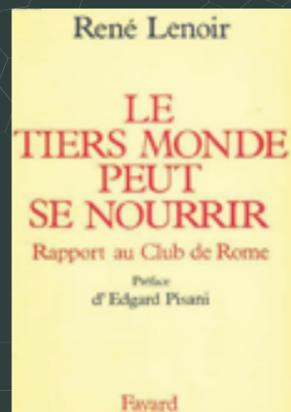
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"LE TIERS MONDE PEUT SE NOURRIR"

1984



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illustrated

XXIV, 21 cm

french

## OTHER EDITION

Milan (Italy): Vita e pensiero,  
1984, 1985

**LE TIERS MONDE PEUT SE NOURRIR**, LES COMMUNAUTÉS DE BASE, ACTEURS DU  
DÉVELOPPEMENT: RAPPORT AU CLUB DE ROME

René Lenoir

Paris (France): Fayard

1984

rural development  
land use  
economic and social development  
AGRICULTURAL PRODUCTION  
FOOD PRODUCTION  
FOOD SHORTAGES  
rural population  
FOOD SHORTAGES  
HUNGER  
developing countries

## INDEX OF THE REPORT

The current report put the stress on some key-words: develop, invest, train, and even more so the term "help". Third World countries, can feed themselves if they build on their cultural wealth and their unused workforce. The author tells us about men and what mobilizes them rather than fertilizers and dams. It makes us live at the village level and shows that in the basic communities, capital accumulation and intellectual accumulation go hand in hand and are the engine of true development. This concrete approach, which shakes up the usual ways of talking about world hunger, makes the originality of this report to the Club of Rome profound.

*"The technical genius made it possible to stem rivers, to pierce mountains, to make deserts bloom, to send men to the moon. Political genius does not allow us to feed 500 million hungry people. Major challenge for our science and our consciousness."*

René Lenoir is wary of magic words: develop, invest, train, etc., and even more so the term "help". Third World countries, he says, can feed themselves if they build on their cultural wealth and their unused workforce. He tells us about men and what mobilizes them rather than fertilizers and dams.

It makes us live at the village level and shows that in the basic communities, capital accumulation and intellectual accumulation go hand in hand and are the engine of true development. This concrete approach, which shakes up the usual ways of talking about world hunger, makes the originality of this report to the Club of Rome profound.

Former Director General of Family, Old Age and Social Aid, then Secretary of State for Social Action, author of "Excluded" (Editions du Seuil, 1974), René Lenoir spent more than ten years in several developing countries as an international expert. He portrayed his encounters with societies in the South and advocated for the preservation of cultural diversity in "Les cerisiers d'Ighil" (Editions



RENÉ LENOIR

is a senior French official and centrist politician born on January 21, 1927 in Algiers and died on December 16, 2017. He was Secretary of State for Social Action under the chairmanship of Valéry Giscard d'Estaing from June 8, 1974 to March 31, 1978. Son of blackfoot, he studied at the Lycée E.F. Gautier in Algiers, then left Algeria in 1948 to study in Paris. Having passed a course in political science, graduated in law, he left the ENA in 1954 and was appointed Inspector of Finance in July 1958. He began an administrative career in Morocco, where he notably met the future Hassan II, whose he becomes a loved one. In 1962 he became a senior collaborator with the Malagasy government, a position he held for two years. In 1969 he became director of cabinet for Michel Debré when he was appointed Minister of Defense. The following year, he became director of social action at the Ministry of Health. But it was the publication in 1974 of his book Les Exclus: a Frenchman in ten who drew this obscure senior official from anonymity and made him known to the general public. He is indeed interested in the situation of the disabled and those who are then still called "socially maladjusted". It is undoubtedly this work which is worth to him to be named in June 1974 secretary of state for social action in the government Jacques Chirac, on decision of the president of the Republic, whereas he has no electoral mandate and is not a member of any party. During the four years of his mandate, he was very active. In 1975, he passed the first orientation law for the disabled in French law. It is this law which notably founds the allowance for disabled adults, which provides a living minimum for people who cannot work because of their disability. The implementing decrees include the accessibility obligation for all new collective housing construction from 1978. Located in the most centrist, even center-left, wing of the presidential majority, he founded in 1977 with Olivier Stirn and Lionel Stoléro the Carrefour social-democrate. After his departure from the government, however, he

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## Fayard:

<https://www.fayard.fr/>  
<http://www.treccani.it/enciclopedia/fayard/>

was in the wrong position because of his disagreement with the transfer from school to Strasbourg. He returned to politics after the election to the presidency of the Republic of Jacques Chirac, of which he was, until 2000, one of the advisers, project manager at the Elysée. He is the father of the philosopher Frédéric Lenoir.

Fayard is a French publishing house founded in 1857 by Jean-François Arthème Fayard. The full name of the company is Librairie Arthème Fayard Jean-François Lemerle dit "Arthème Fayard" (1836-1895). In 1857 he founded a publishing house which he called "Librairie Arthème Fayard". Little by little, rather anchored on the side of the republican ideas, its objectives are to reach the widest possible clientele by selling low-cost works. It failed twice, in 1862 and 1867. The house, however, remained medium-sized until his death in 1895. On that date, his son Joseph-Arthème Fayard took over the publishing house. To conquer new markets, he decided to launch periodicals, first in the form of collections of short illustrated novels, then magazines illustrated with cartoons. In 1897 he launched La Jeunesse amusante, his first children's magazine. Joseph-Arthème Fayard is above all an important exporter of works: nominated for the Legion of Honor in 1910. Encouraged by this success, Fayard decided to create two new weekly children's magazines. Fayard was also editor of Diabolo magazine. His biggest hit was the Fantômas series, by Pierre Souvestre and Marcel Allain, with covers by Gino Starace, which will exceed 5 million copies. In this way he brings the French edition into the era of mass production with two low-cost but large print collections. Arthème Fayard pursues his father's policy, previously dedicated to the publication of popular literature, and gives it a new orientation, the tone of which had been set by the edition of the complete works of Alphonse Daudet. In 1956, Hachette joined the shareholders of Fayard Editions, which was transformed into a public limited company. In 1962, Fayard was absorbed into the Hachette group. In December 2009, the takeover of the Hachette Literature division was announced by Fayard, scheduled for early 2010. Isabelle Seguin, director of Hachette Literature, becomes Fayard's literary director.

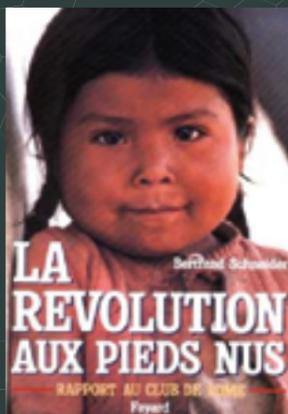
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*"LA REVOLUTION AUX PIEDS NUS"*

*"DIE ZUKUNFT DER WELT MEERE"*

1985



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maps

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french

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## LA RÉVOLUTION AUX PIEDS NUS, RAPPORT AU CLUB DE ROME

Bertrand Schneider

Paris (France): Fayard

1985

economic assistance  
third world  
income distribution  
regional disparities  
ECONOMIC DEVELOPMENT  
AND GROWTH: GLOBAL  
DEVELOPING COUNTRIES  
alternative development strategies  
social disparities

## INDEX OF THE REPORT

The current report put the stress on some key-words: develop, invest, train, and even more so the term "help". Third World countries, can feed themselves if they build on their cultural wealth and ayard, 1981). Currently Director of International Affairs of "Caisse des Dépôts-Développement" and President of SCET-Coopération-International.



BERTRAND SCHNEIDER

Bertrand Schneider, diplomat, former Secretary General of the Club of Rome, president of the international think tank THE GLOBAL FUTURE COLLEGE. Bertrand Schneider, born in Grenoble in 1929, is a French diplomat. He is the former Secretary General of the Club of Rome, President of FWS (Futuring the World Society, 2000-2003), consultant in Intelligence and in International Strategy and Development. He was president of the World Information Technology Symposium (Washington-1999, Futuroscope-2000, UNESCO-2001). He is president and founder of the Global Future College For Human Mutual Understanding<sup>2</sup>. He was also Commander of Ouissam Alaouite and member of The World Academy of Art and Science. Lastly he was honoured with Doctor Honoris causa by the University of Transilvania.

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## Bertrand Schneider:

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fayard

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german

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Munich, (Germany): Goldmann, 1987

**DIE ZUKUNFT DER WELTMEERE:** A EIN BERICHT AN DEN CLUB OF ROME**Elisabeth Mann Borgese****Vienna (Austria): Europaverlag****1985**

INTERDISCIPLINARY APPROACH  
 SUSTAINABLE DEVELOPMENT GOVERNANCE international instruments  
 MARINE ENVIRONMENT  
**OCEANS AND SEAS**  
 WATER RESOURCES MANAGEMENT social factors international cooperation  
 GLOBAL PUBLIC GOODS environmental management cultural values law of the seas

## INDEX OF THE REPORT

The Future of the Oceans. economic uses of the world's oceans are the subject of the 1982 United Nations Convention on the Law of the Sea. In addition, the agreement (which, incidentally, has not been ratified by the Federal Republic of Germany) contains the ecological framework for the protection of the maritime sector. In her report to the Club of Rome, Elisabeth Mann Borgese describes the decisions of the third UN Conference on the Law of the Sea (1973 to 1982) and discusses what they mean in practice. The economic use of the world's oceans This was decided by the United Nations in 1982 Law of the Sea. Furthermore, the (from the Federal Republic of Germany other non-ratified agreement the ecological framework for chutz de maritime area. Elisabeth Mann Borgese presents in her report to the Club of Rome the decisions of the third UN law conference (1973 to 1982) and discusses what it is in practice mean. 72 percent of the earth is covered by what it covers. But bi in 20. Century into the oceans were a mystery, thanks to the modern oceanography could reveal the secrets of the My baths are ventilated. Mountains, gorges deep trenches and active volcanoes were discovered. For humans, topography is naturally a rich resource like an ore containing white tubers. Arvid Pardo, UN Ambassador to Malta, submitted in one Speech to the United Nations General Assembly on 1 November 1967 the proposal to share the world's oceans Declaring human heritage. The suggestion ultimately flowed into the legal convention. That meant that the seas and theirs Soils only for peaceful purposes and only for the benefit of the whole Humanity can be unlocked and used. Pardo spoke of the eruption of the industrial revolution on the Oceans. Report to the Club of Rome. The "maritime revolution" is structured in three areas: Aquaculture, the cultivation of aquatic plants and breeding of aquatic animals. Aquaculture could be crucial

Contribute to solving the food problem. Their particular advantage is that the waters are due to their great depths enable multiple uses. 2 Extraction of raw materials from the sea. Located in the seabed natural resources, their value for that reason alone is invaluable because some raw material reserves on the mainland run out. 3 Energy generation.

The oceans are home to sources of energy, so far

**ELISABETH MANN BORGESSE**

Elisabeth Veronika Mann Borgese, CM (April 24, 1918 – February 8, 2002) was an internationally recognized expert on maritime law and policy and the protection of the environment. Called "the mother

of the oceans", she has received the Order of Canada and awards from the governments of Austria, China, Colombia, Germany, the United Nations and the World Conservation Union. Elisabeth was a child of Nobel Prize winning German author Thomas Mann and his wife Katje. Born in Germany, Elisabeth experienced displacement due to the rise of the Nazi Party and became a citizen first of Czechoslovakia, then of the United States of America, and finally of Canada. Elisabeth Mann Borgese worked as a senior fellow at the Center for the Study of Democratic Institutions in Santa Barbara, California and as a university professor at Dalhousie University in Halifax, Nova Scotia, Canada. She became a proponent of international cooperation and world government. In 1968, she was one of the founding members – and for a long time the only female member – of the Club of Rome. In 1970 she organized the first international conference on the law of the sea, "Pacem in Maribus" ("Peace in the Oceans") in Malta, and helped to establish the International Ocean Institute (IOI) at the Royal University of Malta. From 1973 to 1982, Mann Borgese helped to develop the United Nations Convention on the Law of the Sea (UNCLOS). She also helped to establish the International Tribunal for the Law of the Sea. Mann's application was supported and expedited at high levels of government and as of November 19, 1936 he and other family members, including his minor children Elisabeth and Michael, were granted Czechoslovakian citizenship. Elisabeth studied piano and cello at the Conservatory of Music in Zurich, Switzerland, receiving a Bachelor of Arts degree in Classics and a diploma from the Conservatory of Music in Zurich in 1938. Among musicians, she is known for her translation of Heinrich Schenker's Harmonielehre (1906) into English. In 1941, Thomas Mann and other family members, including Elisabeth Mann Borgese, became citizens of the United

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<https://www.leibniz-zmt.de/en/news-at-zmt/news/news-archive/birth-centennial-of-elisabeth-mann-borgese.html>

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Elisabeth Mann married the anti-fascist Italian writer and professor of literature Giuseppe Antonio Borgese (1882–1952) in 1939. In 1979, Mann Borgese accepted a one year fellowship as the Killam Senior Fellow at Dalhousie University, in Halifax, Nova Scotia, Canada. Invited to remain, she became Professor of Political Science at Dalhousie in 1980, and an Adjunct Professor of Law in 1996. She taught maritime law and political science, including a special international summer program for civil servants. She

**EUROPAVERLAG**  
 BERLIN | MÜNCHEN | WIEN | ZÜRICH

Europa Verlag is a book publisher based in Munich. Branch offices are maintained in Berlin and Vienna. With effect from. In December 2015 he took over the Swiss publisher of the same name, Europa-Verlag Aktiengesellschaft, based in Zurich. The publishing house was founded in 1933 by Emil Oprecht in Switzerland to provide a forum for persecuted authors and forbidden manuscripts. The publisher was thus considered a so-called "emigrant publisher" during the Nazi era. Europa Verlag was also one of the most important theater publishers of the time. Emil Oprecht is one of the legendary publishers of the past century, who in daily struggles for the support of the persecuted, against increasing pressure also against Swiss censorship and against all economic resistance. In the half-century of the existence of his publishing house, the program focused on authors and books that stood for human dignity and freedom. Even in the 80th year of its existence in 2013, the Zurich-based Europa Verlag is still partly publisher of authors of emigration and the fight against fascism such as Curt Riess, Luigi Bartolini, Arthur Koestler, Carlo Levi, Bertrand Russell, Willy Brandt. Modern authors include Richard Aschinger, Reinhold Joppich, Angelika Waldis, Robert Parker, Andreas Gross, Rainer Gross, and Esther Scheidegger. In 2015, Europa Verlag Munich and Berlin took over Europa Verlag Zurich. Since April 2017, the Berlin Golkonda Verlag has also been part of Europa Verlag.

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*"JENSEITS DER GRENZEN DES  
WACHSTUMS"*

*1988*



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graphics/diagrams

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german

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Universe Books, 1989Amsterdam (Netherlands):  
Meulenhoff Informatief,  
1988

## JENSEITS DER GRENZEN DES WACHSTUMS: BERICHT AN DEN CLUB OF ROME

Eduard Pestel

Stuttgart (Germany): Deutsche Verlags-Anstalt

1988

POLLUTION  
 SCIENTIFIC DEVELOPMENT  
 population increase  
 basic needs  
 SIMULATION MODELS  
 food production  
 ECOLOGY  
 nonrenewable resources  
 ENERGY PRODUCTION  
 FUTURE SOCIETY

## SYNOPSIS

After "the limits of growth", this new report already indicates the current situation in the title. The question immediately arises whether the volume published in 1972 did nothing but a global discussion about the future prospects of mankind and a heightened awareness of the major global problems. At least the Cassandra function of "Limits to Growth" was obvious, which was not least reflected in the violent criticism. At the outset, Pestel's re-evaluation addresses problems expressed in this regard (crisis development is divergent and not everywhere and at the same time; computer models are not sufficiently differentiated). "The problems facing the 'real' world today have their roots mainly in the fact that we are in a period of rapid transition throughout the world: at one end of the spectrum we see many developing countries in transition from a predominantly agricultural society in the early stages of an industrial society, while at the other end of the spectrum the leading industrial societies are on the way to the 'post-industrial' society. "Pestel cannot imagine unlimited growth. He sees parallels to growth in nature and therefore introduces the term "organic growth" - or rather organic world development. The second part "Ways into the future" does not offer "off-the-shelf" recipes, because we only have options for future alternatives. The paradigm of organic growth is about the most accurate picture of our current state to understand how it came about. Which forces have brought about the change of times and which forces can be tracked down which could lead to significant course corrections on the way to the future.



EDUARD K. C. PESTEL

Eduard Kurt Christian Pestel. After a three years study for bricklayer, Pestel received further education at the Fachhochschule in Hildesheim and from 1935 to 1938 at the Leibniz University Hannover. Pestel was since 1956 a full Professor of Mechanics at the Technische Hochschule Hannover (today Leibniz University Hannover. Pestel founded the chair of mechanics in the Faculty of Mechanical Engineering at the Technical University of Haifa (Technion) in Israel. Also, he founded in 1975 the Institute for Applied Systems Analysis and Forecast (ISP), which was renamed in his honor as the Eduard Pestel Institute for Systems Research in 1984. **ALSO AUTHOR OF THE FOLLOWING REPORTS, CHECK:**



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DVA

The Deutsche Verlags-Anstalt (DVA) is a German book publisher based in Munich. It goes back to the Hallberger publishing company founded in Stuttgart in 1831. Later owned by Robert Bosch and the Fazit Foundation, the Deutsche Verlags-Anstalt has been part of the Random House publishing group since 2005. The most successful title is Maya the Bee and her adventures by Waldemar Bonsels. In addition, the German publishing house became known through numerous political biographies. The program today includes sophisticated fiction, poetry and non-fiction as well as works from the fields of architecture, gardening and living. Ludwig Hallberger published novels by Carl Spindler and travel reports by Hermann von Pückler-Muskau. His work Allusions on landscape gardening was the first architectural book of the Deutsche Verlags-Anstalt and was available until the 1990s. After the merger of the two family businesses, the publisher published works by Otto Julius Bierbaum, Ricarda Huch and Theodor Fontane, as well as translations by the authors August Strindberg, Lew Nikolajewitsch Tolstoi, Iwan Sergejewitsch Turgenew, Mark Twain and Émile Zola. In the 1920s, the program was expanded to include Waldemar Bonsels, Böttcher von Münchhausen, Ina Seidel and Clara Viebig through acquisitions. German authors, including Heinrich Lersch, Gottfried Benn and Erich Kästner, became more important. In 1923 Thomas Mann published the confessions of the impostor Felix Krull in the German publishing house. It was a leader in the field of biographies and memoirs of politicians such as Otto von Bismarck. "The literature" developed into an important journal of literary criticism and literature mediation, but wrote permanent losses. After the Second World War, the German publishing house initially used its backlist. Paul Celan became known with the book of poems Mohn und Gedächtnis, published in 1952. In general, poetry played a major role. In 1964, one of the first popular science journals was launched under the name "Image of Science". In the 1970s, Marcel Reich-Ranicki, another renowned author, came to the Deutsche Verlags-Anstalt. This helped to win Sarah Kirsch and Ulla Hahn for the Deutsche Verlags-Anstalt. Well-known authors of non-fiction included Peter Scholl-Latour, Frederic Vester and Ian Kershaw with his Hitler biography. Angela Merkel wrote a book on environmental protection entitled "In the Long Term".

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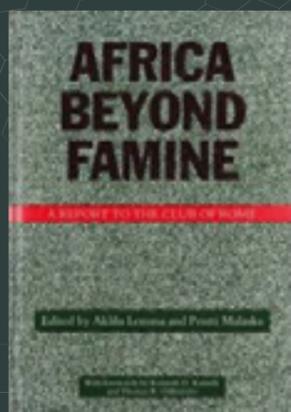
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OTHER EDITION

**AFRICA BEYOND FAMINE: A REPORT TO THE CLUB OF ROME***Aklilu Lemma, Pentti Malaska**London (U.K.), New York (USA): Tycooly Publishing.***1989** (1990, 1991)

africa: Sahel/Ethiopia rural development  
 child development DROUGHT health policy malnutrition  
**FOOD/HUNGER** external debt  
 food aid development NUTRITION FOOD PRODUCTION  
 desert population increase

**SYNOPSIS****AKLILU LEMMA**

Aklilu Lemma 18 September 1935 – 5 April 1997) was a distinguished Ethiopian scientist. In 1989, he was awarded the Right Livelihood Award "for discovering and campaigning relentlessly for an affordable preventative against bilharzia. Lemma was educated at Addis Ababa University College and at Johns Hopkins University, USA, where he obtained his D.Sc. in 1964. His dissertation was on sandfly-borne leishmaniasis. Following his doctorate, Lemma returned to his home country, Ethiopia, where he obtained a position at the then Haile Selassie I University. He founded the Institute of Pathobiology, now known as the Aklilu Lemma Institute of Pathobiology, and taught there until 1976, when he left it for a job in the United Nations. He served the UN in many capacities as a scientist, became the Deputy Director of UNICEF's International Child Development Centre, now known as UNICEF's Innocenti Research Centre and finally obtained a position in his alma mater, Johns Hopkins University. He made his most important scientific discovery very early in his career, in 1964, when he discovered a natural treatment to schistosomiasis, also known as snail fever disease or bilharzia, a debilitating disease caused by the parasitic worm Schistosoma, which is spread by freshwater snails. He found that berries from the endod plant, which is commonly used to make soap and shampoos in many parts of Africa, is a potent, inexpensive and safe molluscicide, to prevent the spread of the parasitic worm. This discovery made the plant an object of scientific research in many parts of the world. Lemma himself was at the forefront of this research. His work acquired an international reputation, which in turn led to various awards, including honorary doctorate degrees. The most prestigious award was the one he won together with his research associate, Dr. Legesse Wolde-Yohannes in November 1989 – the Right Livelihood Award of Sweden, commonly referred to as the Alternative Nobel Prize. He died in the United States and was buried in Ethiopia, on 13 April 1997

**PENTTI MALASKA**

Malaska, Pentti Ensio, (born 11/4 1934 Kexholm, died 15/3 2012 Hfrs), professor, futurist, techn. Dr. 1965. M. was among others. researcher at the Academy of Finland 1964-66 before being appointed Professor of Economics, Mathematics and Statistics at the Turku School of Economics (TKKK) last year, a position held by M. until 1997. He was also Pro-Rector at Turku Finnish School of Economics (Turun kauppakorkeakoulu TKKK) from 1971 to 1974. Malaska made a great scientific contribution to future research in Finland, including as Director of the Finnish Future Research Institute and the Finnish Academy of the Future at TKKK 1993-97, as founding member and chairman of the Finnish Future Research Society 1980-90, Secretary-General of the World Futures Studies Federation 1990-93, (its president 1993-97) and as a board member of the Finnish Academy of Future 1997-2008. His own and other writers have published several works in the field of future research with wife, Ekon. dr. Karin Holstius.

## TYCOOLY PUBLISHING

There are not information available about this publishing house. According to other books founded on the web, published by this imprint it turns out that it is based in London (U.K.) as an imprint of the company called **Cassell** located in Villiers House, 41/47 Strand, London WC2N 5JE, England and also in 125 East 23rd Street, Suite 300, New York 10010, USA. Unfortunately nothing more could be reported.

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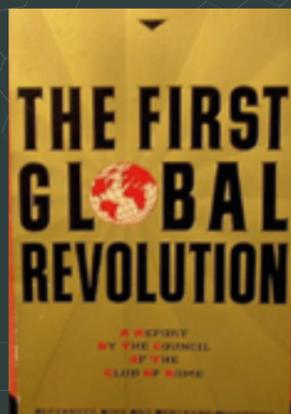
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"THE FIRST GLOBAL REVOLUTION"

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## THE FIRST GLOBAL REVOLUTION: A REPORT BY THE COUNCIL OF THE CLUB OF ROME

Alexander King, Bertrand Schneider

New York (USA): Pantheon Books

1991



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4. Intimations of Solidarity
5. The Vacuum
6. The Human Malaise

## The Challenge

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## SYNOPSIS

This report is the first assoulute to have been produced by the CoR council, specifically in the personalities of Alexndrer King and Berrrand Schinder. Until now the reports produced bore the wording "a report to the CoR" whereas in this case has been switched for the first time ever into "a report by the Council to the CoR". This is the first feature that qualifies this report as a special one. But there is another feature that overthrows the value of the report, as turning point inside the CoR. For the first time ever it appears the word RESOLUTIQUE. If the first report LtG, and even before "The Predicament to mankind" had stuated the word and the idea of the problematiquè; now with this report it is the time to find the rsolutiquè. Obviously it is a complex solution for a complex problem and it is referred to different level of society but it quite clear that this report put the stress on the importance to act on governaments and policy makers.



ALEXANDER KING

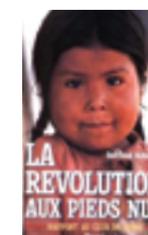
Alexander King 26 January 1909 – 28 February 2007 was a British scientist. King was Director-General for Scientific Affairs at the Paris-based Organization for Economic Cooperation and Development (OECD). Born in Glasgow, King attended Highgate School and later studied chemistry at Imperial College, where he edited the college's literary magazine and served as president of its literary and debating society. From 1929 to 1931, he pursued postgraduate research on a fellowship at the University of Munich. On his return to London, he became a lecturer and then senior lecturer in physical chemistry at Imperial. In 1938, he was awarded the Edward Harrison Memorial Prize by the Royal Society of Chemistry. With the outbreak of WWII, Sir Henry Tizard invited King to join the Ministry of Production as Deputy Scientific Adviser. It was during this period that a letter from the Geigy Company in Switzerland to its Manchester branch office, detailing the composition of a new "mothballing agent" dichlorodiphenyltrichloroethane, was intercepted by the censor. King recognised the importance of the chemical agent and its potential use as an insecticide, allegedly coining the acronym DDT. In 1943, King travelled to the United States, becoming Head of the UK Scientific Mission and Scientific Attaché at the British Embassy in Washington. Following the war, King became Secretary of the Advisory Council on Scientific Policy and personal adviser to the Lord President of the Council, Herbert Morrison. King was named a Commander of the Order of the British Empire (CBE) in the 1948 Birthday Honours. He later

In 1957, King joined the European Productivity Agency (EPA) as Director in Paris, subsequently becoming Director-General for Scientific Affairs at the OECD. At the OECD, he initiated the Science Policy Surveys, which took a critical look at the state of science and technology in the OECD countries. Among other things, his initiatives encouraged new forms of education. He retired from the OECD in 1974, taking up the chairmanship of the International Federation of Institutes of Advanced Studies (IFIAS), an organisation based in Stockholm. He also saw the founding of the German Association of the Club of Rome (DGCoR) in 1978, of which he was the first chair, position he held until his death. In Lower Saxony, he was Minister of Science and Arts from 1977 to 1981 as a member of the CDU Party. In this time, he worked on the restructuring of the German Technion Society founded by Albert Einstein in 1924, banned during the Nazi era and completed in 1982; it promotes cooperation between Jewish and German scientists. Eduard Pestel was president of this society until his death. In 1982, Pestel, the Max Born Medal awarded for responsibility in science. Pestel was married to Anneliese Ude-Pestel, an analytical psychotherapist and author. In 2005 he was awarded the Hovorka Prize from Case Western Reserve University for exceptional achievements. In 2005 he was awarded the USA Club of Rome Lifetime Achievement Award at the United Nations.



BERTRAND SCHNEIDER

Bertrand Schneider, diplomat, former Secretary General of the Club of Rome, president of the international think tank THE GLOBAL FUTURE COLLEGE. Bertrand Schneider, born in Grenoble in 19291, is a French diplomat. He is the former Secretary General of the Club of Rome, President of FWS (Futuring the World Society, 2000-2003), consultant in Intelligence and in International Strategy and Development. He was president of the World Information Technology Symposium. ALSO AUTHOR OF THE FOLLOWING REPORTS, CHECK: He is president





## PANTHEON BOOKS

Pantheon Books is an American book publishing imprint with editorial independence. It is part of the Knopf Doubleday Publishing Group.

The current editor-in-chief at Pantheon Books is Dan Frank. Bertelsmann, the German company that also owns Bantam Books, Doubleday Publishing, and Dell Publishing, acquired Random House in 1998, along with its imprints the Modern Library, Times Books, Everyman's Library, Vintage Books, Crown Publishing Group, Schocken Books, Ballantine Books, Del Rey Books, and Fawcett Publications, making Bertelsmann the largest publisher of American books. In addition to classics, international fiction, and trade paperbacks, recently Pantheon has moved aggressively into the comics market. It has published many critically acclaimed graphic novels and comics collections.

Pantheon Books is an American book publishing imprint with editorial independence. It is part of the Knopf Doubleday Publishing Group.[4]

The current editor-in-chief at Pantheon Books is Dan Frank. Bertelsmann, the German company that also owns Bantam Books, Doubleday Publishing, and Dell Publishing, acquired Random House in 1998, along with its imprints Pantheon Books, Modern Library, Times Books, Everyman's Library, Vintage Books, Crown Publishing Group, Schocken Books, Ballantine Books, Del Rey Books, and Fawcett Publications,[5] making Bertelsmann the largest publisher of American books. Pantheon Books was founded in 1942 in New

Pantheon continues to publish well-respected fiction and non-fiction, and has more recently expanded further into graphic novels. Pantheon re-issued books in the graphic-based "...For Beginners" series (originally published by Writers and Readers Cooperative) in the 1970s and 1980s; deciding to bring the series back in 2003.[21]

One of the first original graphic novels Pantheon published was the highly acclaimed Maus: A Survivor's Tale by Art Spiegelman in 1986. Spiegelman has become somewhat of a comics consultant, advising editor-in-chief Dan Frank.[22] Another key member of the Pantheon Graphic Novels team is graphic designer Chip Kidd.[23]

In 2000, Pantheon published The Acme Novelty Library by Chris Ware.[22] In 2005, Pantheon published The Rabbi's Cat, a graphic novel by Joann Sfar that "tells the wholly unique story of a rabbi, his daughter, and their talking cat".[24] Notable cartoonists whose graphic novels have been published by Pantheon include Spiegelman, Ware, Dan Clowes, Ben Katchor, Marjane Satrapi, and David Mazzucchelli.

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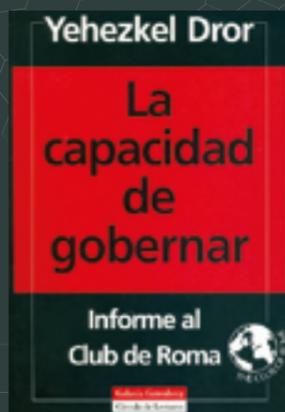
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## LA CAPACIDAD DE GOBERNAR: INFORME AL CLUB DE ROMA

Yehezkel Dror

Barcelona (Spain): Circulo de Lectores, S.A. and Galaxia Gutenberg, S.A

1994

political culture  
PUBLIC ADMINISTRATION  
POLITICAL SCIENCE  
GLOBAL GOVERNANCE MANAGEMENT  
political architecture public policy

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## SYNOPSIS

This report is about leadership and management, and it goes further. If on the one hand it guides on the essential political recommendations of the Club of Rome on issues such as poverty, world order, science and technology, population, environment, culture and education, work and other crucial issues, on the other, proposes collective action to implement these other innovative policies that are so necessary. Without forgetting at any time the increasingly important role to play for non-governmental organizations, grassroots movements and agents social, the Club of Rome is aware that the government's task falls first and foremost, and will continue to fall for quite some time, on national and supranational governments, however, the rigor and erudition of those that Yehezkel Dror does not show they are impediments for the book to be directed "to a wide audience, which ranges from citizens concerned about the local and global future, to the leaders they take in serious your responsibilities.



YEHEZKEL DROR

Yehezkel Dror is a former professor of political science at Hebrew University, Jerusalem. Dror was born in Vienna, Austria, in 1928, and emigrated to the Mandate Palestine with his family in 1938. He was a member of the university's Department of Political Science of the Hebrew University from 1957 until his retirement, and was also head of its Public Administration division from 1964. He is a pioneering author in the fields of management, policy science, public administration, capacities to govern, leadership and security issues with publications including Public Policy-making Re-examined, Design for Policy Sciences. Dror holds a B.A. and Magister Juris from Hebrew University, and LL.M. and S.J.D. (doctor of juridical sciences) qualifications from Harvard University. Outside academia he served as a senior consultant on policy-making and planning for the Israeli government, and founded the Jewish People Policy Planning Institute. He engaged in international consultancy, serving inter alia from 1968-70 as a senior staff member at the American Rand Corporation. Awards n 1965, Dror received the Rosolio Prize. In 2005, he was awarded the Israel Prize, for management. "Speakers". Herzliya Conference. Eldar, Akiva (18 April 2007). "Endgame in Damascus and Gaza". Ha'aretz Israel Prize Judges' Rationale for the Award to Y. Dror (in Hebrew) Israel Prize official.

He is also former staff member, RAND Corporation; Fellow at various Institutes of Advanced Study; senior professor at the European Institute of Public

leadership, statecraft and global issues. He won the Israel Prize for policy planning theory and practice. He authored 15 books published in 13 languages, including inter alia Public Policymaking Reexamined; Policy Making Under Adversity; Crazy States; and, most recently, Avant-Garde Politician: Leaders for a New Epoch.

Galaxia Gutenberg  
Círculo de Lectores

The publishing house Galaxia Gutenberg is a Spanish publishing house created in 1994 that was created with the aim of distributing the readers' Circle books. As of 2001, it works temporarily within the Random House Mondadori publishing group, until, in 2004, the Circle of Readers retrieves the publishing house, now directed by Joan Tarrida. In 2010, the publishing house finally becomes independent from the Circle of Readers and becomes an independent publisher. About 60 new titles are published annually, mainly narrative works and essays. The publisher has received awards such as the Visual Award for the History of Editorial Graphic Design and the Prize of the Ministry of Culture for the Best Cultural Editorial Work 2006. One of his most successful publications was *Life and Destiny*, by Vasili Grossman, with more than 200,000 copies sold. In 2012 they started a new collection of contemporary European narrative, with little known authors in Spain and, in 2018, the Collection begins of German Classics, with unpublished translations in Spanish of texts by Goethe, Schiller and others. The publishing house has followed a growing trajectory in recent years, which has led it to expand through different countries in Latin America.

Círculo de Lectores was a reading club in Spain created in 1962, belonging to the Grupo Planeta since 2014. At the end of the 1990s the company had more than one and a half million members who received the catalog of novelties monthly; In 2010 it had a network of more than 5000 agents spread throughout Spain. His collection Complete Works of Circle of Readers is a reference of the Spanish literature, comparable in Spanish to the French collection of La Pléiade. In 2019, Planet acquired the German group Bertelsmann, owner of Círculo de Lectores, 50% of the company and in 2014 it took full control of it. On November 7, 2019, Planeta announced the closure of its commercial network, its website and all its sales channels.

"LE SCANDALE ET LA HONTE"

"FAKTOR VIER"

"TAKING NATURE INTO ACCOUNT"

1995

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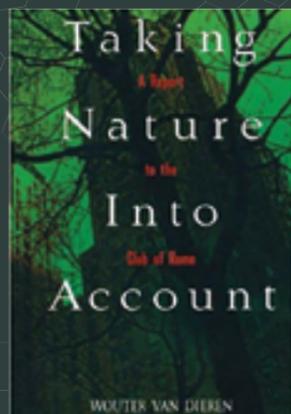
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TAKING NATURE INTO ACCOUNT: TOWARD A SUSTAINABLE NATIONAL INCOME; A REPORT TO THE CLUB OF ROME

Wouter van Dieren

New York (USA): Copernicus

1995

national accounting ENVIRONMENTAL DEGRADATION  
 SUSTAINABLE DEVELOPMENT economic growth  
 environmental quality ENVIRONMENTAL ECONOMICS  
 SOCIO-ECONOMIC INDICATORS ECONOMIC POLICY ENVIRONMENTAL  
 national income MANAGEMENT

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## SYNOPSIS

The report in question analyzes the relationship between the economy and the environment. Although other reports have already addressed this type of topic, this was done as a chapter of a report or as a section of a larger speech. In this book, however, divine nodal point and dealt with in all its extension. Another element that instead shares with other reports already analyzed, is that of being written in several hands. Several authoritative economists and / or scholars are asked to provide a contribution on a specific sector of the environment-economy combination. As reported at the bottom of the Acknowledgements section by Wouter van Dieren himself, he orchestrated the requests for specific interventions on the subject to the experts according to what he considered the contribution pertinent. Furthermore, van Dieren adds that he has standardized the various contributions of the various authors, to provide stylistic unity to the volume. Finally, the acknowledgements section with a note in which he underlines how not all the authors agrees with the opinions expressed in the book concludes.



WOUTER VAN DIEREN

Professor Wouter van Dieren (1941) is a Dutch author, journalist, scientist, speaker, advisor, TV-maker, politician and host of the annual Springtij Forum, an assembly on green

innovation and green finances. He was the founder of IMSA, a leading thinktank, vice-chair of the International Advisory Board of the Wuppertal Institute as well as the Factor 10 Group (on resource efficiency). Among his books is the Report to the Club of Rome "Taking Nature into Account" (1995) about the need to correct the GDP for environmental losses. He has been awarded the Rachel Carson Gold Medal (2006), the WWF Global Merit prize (2012, and the nomination into the Royal Order of Orange-Nassau. He is fellow of the World Academy of Art and Science. In 1972, he also played a major role in promoting the first Report to the Club of Rome "The limits to Growth". In fact, since 1968, Van Dieren has been involved in international environmental activities in various aspects such as science, politics and media. He gained fame through the report of the Club of Rome from 1971, The Limits to Growth, of which he passed on a draft version to the Dutch press and brought this to the attention of the public at an early stage. In the 1970s he was co-founder and chairman of Milieudefensie. He is a Dutch journalist, social psychologist, landscape painter, entrepreneur and environmentalist. He was director of the Institute for Environmental and System Analysis (IMSA), an independent consultancy and think tank in the field of sustainability and innovation, founded in 1985 and terminated after the bankruptcy in May 2015. He also holds more than forty positions. He is a member of the Club of Rome (since 1990) and of the World Academy of Arts and Sciences. In 2010, Van Dieren was the initiator of the annual ecological Springtij Forum on Terschelling. He lives in Formerum (Terschelling). As a journalist he worked for the NCRV and others. For this broadcaster he made television programs with and about Godfried Bomans from 1968 to the end of 1971. In 1969, Van Dieren discovered and unveiled the plans of the municipality of Amsterdam to demolish 80% of the built-up area of the Jordaan working-class neighborhood. A Jordaad action committee was formed and with the help of Geurt Brinkgreve and the support of many artists, the plans were put to the table within a year. Van Dieren is one of the architects of the agreement that led to the establishment of the Wadden Fund (2006). In addition, gas extraction was permitted at Ameland in exchange for the establishment of a multi-million fund, which should strengthen the quality of nature of the Wadden Sea and support for it among the population. This allowed, among other things, the companies that operated large-scale cockle fishing in the area to be bought out. Van Dieren was discredited in 2015 for alleged conflicts of interest when he argued for a similar agreement on possible oil extraction at Terschelling. Quote therefore called him "the nestor of the Dutch guild of green slippers".

Unfortunately it was impossible to find out deeper information about this imprint. The only thing that it has been found is the logo of the publishing house Copernicus. Moreover, those few websites whom spend some words about this imprint, said that it is a branch (or that it had subded) into the holding Springer publishing house. Even though, it is impossible to tell other detail but it turns out that it is still working nowadays for specific publication topic. Its own website proof the activity of this publishing house. In their section in which they talk about themselves they define the imprint as a publisher of scientific literature based in Göttingen, Germany. Founded in 1994, Copernicus Publications currently publishes 28 peer-reviewed open access scientific journals and other publications on behalf of the European Geosciences Union.

Copernicus Publications is part of the open-access publishing movement. Initially, the CC-BY-NC was used. In 2007, they switched to the CC-BY attribution license. Copernicus Publications has been described as the largest open access publisher in the Geo- and Earth system sciences.

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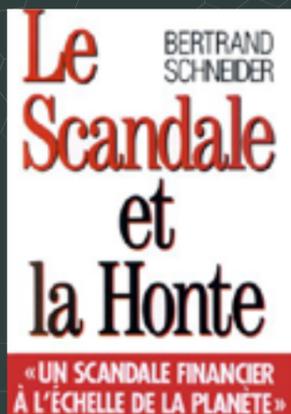
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**LE SCANDALE ET LA HONTE, DE LA PAUVRETÉ ET DU SOUS-DÉVELOPPEMENT: RAPPORT AU CLUB DE ROME****Bertrand Schneider****New Delhi (India): Vikas Publishing House****1995**

DEVELOPING COUNTRIES social disparities  
**ECONOMIC DEVELOPMENT**  
 regional disparities  
**AND GROWTH: INDIAN** income distribution  
 economic assistace **SUBCONTINENT** third world  
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**SYNOPSIS**

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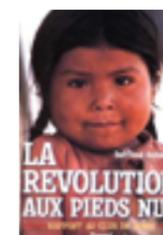
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**BERTRAND SCHNEIDER**

Bertrand Schneider, diplomat, former Secretary General of the Club of Rome, president of the international think tank THE GLOBAL FUTURE COLLEGE. Bertrand Schneider, born in Grenoble in 1929, is a French diplomat. He is the former Secretary General of the Club of Rome, President of FWS (Futuring the World Society, 2000-2003), consultant in Intelligence and in International Strategy and Development. He was president of the World Information Technology Symposium (Washington, 1999, February 2000, UNESCO 2001). He is president and founder of

ALSO AUTHOR OF THE FOLLOWING REPORTS, CHECK:

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**Bertrand Schneider:**

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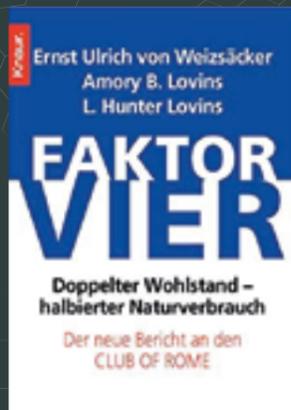
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Czech, Romanian, Slovenian

## FAKTOR VIER, DOPPELTER WOHLSTAND HALBIERTER NATURVERBRAUCH: DER NEUE BERICHT AN DER CLUB OF ROME

Ernst U. von Weizsäcker, Amory B. Lovins,  
L. Hunter Lovins

Munich (Germany): Droemer Knaur

1995 (1996, 1997)

WEALTH  
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transport  
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technological change  
renewable energy resources  
ENERGY CONSERVATION  
EFFICIENCY  
international trade  
ENERGY RESOURCES  
sustainable development  
natural resources

## SYNOPSIS

This report is the first for Ernst U. von Weizsäcker and for L. Hunter Lovins, both of them will produce other in the following years. It is possible to consider it as a PRECURSOR of Blue Economy for Gunter Pauli. In the acknowledgements of his report, in fact, Pauli himself expresses his gratefulness to Factor Four. Due to this fact it is possible to consider it as a report that try to assess the current (for the publication year of the report itself) the human footprint, and at the same time provides a certain number of solution to enhance human productive yield by acting on the process. This Report to the Club of Rome offers a solution. It lies in using resources more efficiently, in ways which can already be achieved, not at a cost, but at a profit. The book contains a wealth of examples of revolutionizing productivity, in the use of energy; from hypercars to low-energy beef; materials, from sub-surface drip irrigation to electronic books, transport, video conferencing to CyberTran, and demonstrating how much more could be generated from much less today. It explains how markets can be organized and taxes re-based to eliminate perverse incentives and reward efficiency, so wealth can grow while consumption does not. The benefits are enormous: profits will increase, pollution and waste will decrease and the quality of life will improve. Moreover, the benefits will be shared: progress will no longer depend on making ever fewer people more productive. Instead, more people and fewer resources can be employed. While for many developing countries the efficiency revolution may offer the only realistic chance of prosperity within a reasonable time span. The practical promise held out in this book is huge, but the authors show how it is up to each of us, as well as to businesses and governments, to make it happen.



ERNST U. VON WEIZSÄCKER

Ernst Ulrich von Weizsäcker (born 25 June 1939 in Zürich, Switzerland) is a German scientist and politician (SPD). He was a member of the German Bundestag and currently serves as co-president of the Club of Rome jointly with Anders Wijkman. A member of the prominent Weizsäcker family, he is the son of physicist and philosopher Carl Friedrich von Weizsäcker and nephew of former German president Richard von Weizsäcker. Since 1969, he is married to Christine von Weizsäcker. Together, they have five children, including MEP Jakob von Weizsäcker. Weizsäcker spent his childhood in Zurich and Göttingen. In 1966, he graduated from Hamburg University with a Diplom in physics. In 1968, he obtained his PhD in biology from Freiburg University. In 1972, he was appointed full professor of biology at Essen University. In 1975, he was recruited as president of the then newly founded University of Kassel. In 1981, he joined the United Nations in New York as director at the UN Center for Science and Technology. From 1984 to 1991 he headed the Institute for European Environmental Policy in Bonn. In 1991, Weizsäcker became founding president of the Wuppertal Institute, soon establishing itself as a leading environmental think tank. In 1998, he was elected a member of the German Bundestag for the Social Democratic Party (SPD) and re-elected in 2002. As a legislator, he chaired the select committee on globalization (2000-2002) and the environment committee (2002-2005). After his decision not to run in the 2005 election, he became Dean of the Bren School of Environmental Science & Management at the University of California, Santa Barbara. He returned to Germany in 2009 where he is an honorary professor at Freiburg University. A bestselling author in Germany, his English language books include *Earth Politics* (1994), *Factor Four: Doubling Wealth, Halving Resource Use* (1995), *Factor 5* (2009) and *Limits to Privatization*



AMORY BLOCH LOVINS

(born November 13, 1947) is an American writer, physicist, and Chairman/Chief Scientist of the Rocky Mountain Institute. He has written on energy policy and related areas for four decades. In 1983, he was awarded the Right Livelihood Award for "pioneering soft energy paths for global security." He was named by TIME magazine one of the World's 100 most influential people in 2009. Lovins has promoted energy efficiency, the use of renewable energy sources, and the generation of energy at or near the site where the energy is actually used. Lovins has also advocated a "negawatt revolution" arguing that utility customers don't want kilowatt-hours of electricity; they want energy services. In the 1990s, his work with Rocky

design of an ultra-efficient automobile, the Hypercar. Lovins does not see his energy ideas as green or left-wing, and he is an advocate of private enterprise and free market economics. He notes that Rupert Murdoch has made News Corporation carbon-neutral, with savings of millions of dollars. But, says Lovins, large institutions are becoming more "gridlocked and moribund", and he supports the rise of "citizen organizations" around the world. Lovins has received ten honorary doctorates and won many awards. He has provided expert testimony in eight countries, briefed 19 heads of state, and published 31 books. These books include *Reinventing Fire*, *Winning the Oil Endgame*, *Small is Profitable*, *Brittle Power*, and *Natural Capitalism*. Amory Lovins has received ten honorary doctorates and was elected a Fellow of the American Association for the Advancement of Science in 1984, of the World Academy of Art and Science in 1988, and of the World Business Academy in 2001. He has received the Right Livelihood Award, the Blue Planet Prize, Volvo Environment Prize, the 4th Annual Heinz Award in the Environment in 1998, and the National Design (Design Mind), Jean Meyer, and Lindbergh Awards. Lovins is also the recipient of the Time Hero for the Planet awards, the Benjamin Franklin and Happold Medals, and the Shingo, Nissan, Mitchell, and Onassis Prizes. He has also received a MacArthur Fellowship and is an honorary member of the American Institute of Architects (AIA), a Foreign Member of the Royal Swedish Academy of Engineering Sciences, and an Honorary Senior Fellow of the Design Futures Council. Furthermore, he is on the Advisory Board of the Holcim Foundation. In 2009, Time magazine named Lovins as one of the world's 100 most influential people. On 17 March 2016, Lovins received the Bundesverdienstkreuz 1. Klasse (Officer's Cross of the Order of Merit) from the Federal Republic of Germany for intellectually underpinning



L. HUNTER LOVINS

Hunter and Amory Lovins work together as analysts, lecturers and consultants on energy, resource and security policy in over 30 countries. Their prophetic analyses caused Newsweek to place them among "the Western world's most influential energy thinkers" and to include Amory among 28 people in the world "most likely to change the course of business in the 1990s". Hunter Lovins has degrees in Law, Political Studies and Sociology and an honorary doctorate, and is a member of the California Bar. For six years she was assistant Director of the California Conservation project. Amory Lovins is a consultant experimental physicist, educated at Harvard and Oxford, who has published 23 books (many co-authored with Hunter) and several hundred papers. He has held various academic chairs, received six honorary doctorates, served on the US Department of Energy's senior advisory board, and consulted (often with Hunter) for scores of energy companies, manufacturing firms, governments and interna-

the Rocky Mountain Institute (RMI), of which Hunter is President and Amory Vice-President. RMI is an independent, non-profit resource policy centre whose 43 staff foster the efficient and sustainable use of resources as a path to global security. The following are some highlights of the Institute's activities: Energy: RMI's research and outreach efforts support least-cost energy choices for individuals, communities, corporations and governments, emphasising super-efficient uses integrated with renewable supply. E SOURCE: Spun off in 1992, this wholly-owned subsidiary, now bigger than its RMI parent, provides technical information on advanced electric end-use efficiency and serves over 350 utilities, industries, governments and other organisations in several dozen countries. Water and agriculture: RMI's end-use/least-cost approach can provide more and better services with less water, waste water, costs and damage - for buildings, industry and irrigation - thereby facilitating sustainable farming and ranching. System Group on Forests: This unusual transdisciplinary team is looking afresh at the basic causes of forest degradation and devising ways to make sustainable practices advantageous. Other work is being done on Transportation, Green Development Services, Sustainable Corporations, Economic Renewal and Global Security. RMI publishes a newsletter three times a year (orders(at)rmi.org) and plans to post its extensive body of publications on its Website (<http://www.rmi.org>). Quotation: "The 'soft energy path' we foresaw in 1976 is coming true, only more so. Now, powerful new techniques for resource efficiency are spreading into many major industries. From these efforts in turn are emerging practical and profitable ways to protect the environment, create durable local economies and build real security - not at a cost but at a profit."

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Droemer Knaur is a publishing group based in Munich. The group consists of the book publishers Droemer, Knaur, the Pattloch Publisher and O.W. Barth. Droemer Knaur belongs to the Georg von Holtzbrinck Publishing Group. In addition, the publishing group cooperates with neobooks, a free provider under the self-publishing platform for self-publishing e-books. Droemer Knaur Publishing publishes novels and nonfiction from German and international authors. Through the broad ranged publishing program and the publication of bestselling authors like Johannes Mario Simmel, Droemer Knaur became one of the most prestigious publishing houses for fiction in Germany. In the category of popular fiction, historical novels, detective stories, thrillers, fantasy and romantic literature are published. In the category non-fiction are among others, biographies, guides, esotericism and conspiracy theories are published. They also publish international bestselling authors for the German market and sell licenses to German authors all over the world. The origins of the publishing house lie in the Leipzig steam bookbinding Theodor Knaur, which dates back to 1846. After many individual publications, the Theodor Knaur publishing house had its first regular program in 1884. The publishing house was sold to the Berlin bookseller Gabriel Hendelsohn in 1901, and renamed the Theodor Knaur Nachf. Verlag. In 1902 Adalbert Droemer came to the publisher as publishing representative. In 1934 the Jewish Hendelsohn brothers fled Nazi persecution and emigrated to the United States and Droemer took over the publishing house. Two years later, Droemer's son Willy Droemer, became part of the publisher's management and succeeded his father after Adalbert Droemer's death in 1939. In October 1939 Theodor Knaur Nachf. published its Knaurs Welt-Atlas with maps that represented the greater German Reich and the lands recently annexed and conquered by the

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"EL DILEMA DEL EMPLEO"

1996



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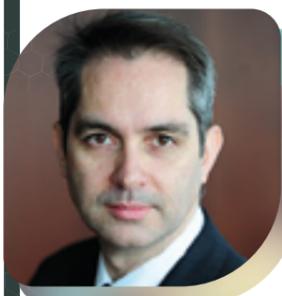
## SYNOPSIS

The employment dilemma and the future of work



ORIO GIARINI

An Italian economist, he founded the Risk Institute (Trieste-Geneva-Zagreb-Pondicherry) in 2001 to promote studies on risk and uncertainty and their impact on society and currently serves as its Director. He is also founder and Editor-in-Chief of the European Papers on the New Welfare. He was also Secretary General since its foundation in 1973 up to 2000 of the Geneva Association, a global think tank for the study of insurance economics. Prior to that he was Director of the Techno-Economic Research Division of the Battelle Institute in Geneva. He served as a member of the Executive Committee of The Club of Rome from 1982-86. He has taught at numerous universities, in particular the Graduate Institute of European Studies of the University of Geneva and currently at the International University Institute for European Studies (Gorizia, University of Trieste). Giarini has published 12 books, including *The Double Helix of Learning and Work* with Mircea Malitza (2003), *The Employment Dilemma: Report to the Club of Rome* with Patrick Liedtke (1997), *Limits to Certainty: Report to the Club of Rome* (1993), *The Emerging Service Economy* (1988), and *Dialogue on Wealth and Welfare: Report to the Club of Rome* (1980), in



PATRICK M. LIEDTKE

Patrick M. Liedtke, Managing Director, was from January 2001 to July 2012, BlackRock's Head of the Financial Institutions Group (FIG) for Europe, Middle East and Africa. He is a member of the global FIG Executive Committee and the global Institutional Client Business Leadership Committee. He is the son of manager Kurt W. Liedtke and finished school in Madrid in 1985. He studied electrical engineering and economics at the Technical University of Darmstadt and at the London School of Economics. Then he worked in the field of European capital markets and economic research at SG Warburg & Co., a bank in London founded in 1934, which merged with the Swiss Bank Association (SBV) in 1995. Subsequently, he was responsible for economic research as head of a project at the Club of Rome in Bilbao. From 1996 to 1998 he was director of independent macroeconomic research at the Presidium in Frankfurt am Main, which specializes in the labor, pension and insurance industries. In 1996 he also started working for the International Association for the Study of Insurance Economics (The Geneva Association) in Geneva. From 1998 to 2000 he worked as deputy and vice general secretary.



Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (BBK), universal successor by merger of the extinguished Bilbao Municipal Savings Bank (founded by the City Council of Bilbao) and Vizcaína Savings Bank (founded by the Provincial Council of Bizkaia), was constituted by merger deed granted before the Notary of Bilbao, Mr. José M<sup>o</sup> Arriola Arana, dated February 16, 1990, No. 525 of the protocol of that year and was registered in the Mercantile Registry of Bizkaia, at Volume BI-1, Folio 112, Sheet n<sup>o</sup> BI-9A, 1st Registration, on February 20, 1990. To comply with the provisions of the First Transitory Provision of Law 26/2013, of December 27, on boxes of savings and banking foundations, the General Assembly of Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (BBK), in session held on June 30, 2014, adopted the transformation agreement of Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (BBK) in foundation n bank, with the name of Bilbao Bizkaia Kutxa Banking Foundation-Bilbao Bizkaia Kutxa Banku Fundazioa. On November 20, 2014 BBK granted public deed of transformation into a banking foundation, Bilbao Bizkaia Kutxa Banking Foundation-Bilbao Bizkaia Kutxa Banku Fundazioa, before the Notary of Bilbao, Mr. Vicente María del Arenal Otero, with the number 1,596 of his protocol, which was registered on November 24, 2014 in the Registry of Foundations of the Basque Country, under Registration number F-375 and classified by virtue of its purposes in the Fourth Section of the indicated Registry. It was a Basque savings bank, based in Bilbao. His full name was Bilbao Bizkaia Kutxa, Aurrezki Kutxa eta Bahitetxea (his translation into Spanish was Caja Bilbao Vizcaya, Caja de Ahorros and Monte de Piedad). It was created with the union of the Municipal Savings Bank of Bilbao and the Provincial Savings Bank of Vizcaya in 1990. It was the main savings bank in Vizcaya and the Basque Country. Since January 1, 2012, he exercised his financial activity through the SIP Kutxabank together with Caja Vital and Kutxa. Bilbao Bizkaia Kutxa was established on February 16, 1990 by the merger of the Bilbao Municipal Savings Bank (founded in 1907) and the Vizcaya Provincial Savings Bank (founded in 1921). It was established as a charity, "because of its status as a Charity Entity, it will enjoy all the substantive, procedural, fiscal or other rights recognized by legal provisions, including that of free justice." In October 2008, the board of directors of BBK and the Caja de Ahorros y Monte de Piedad de Gipuzkoa and San Sebastián (Kutxa) approved the merger project of both entities. They planned to form in 2009 the Savings Bank and Monte de Piedad de Euskadi (Euskadiko Aurrezki Kutxa eta Bahitetxea), which would maintain the commercial name of Kutxa. That of the BBK approved the merger, as expected, but in the Guipuzcoan Kutxa the majority achieved did not exceed two thirds necessary. After the merger failed, the BBK had to expand to Guipúzcoa, to avoid being sanctioned



WORLD SAVINGS DAY

The World Savings Day was established on October 31, 1924, during the 1st International Savings Bank Congress (World Society of Savings Banks) in Milan, Italy. The Italian Professor Filippo Ravizza declared this day the "International Saving Day" on the last day of the congress. In the resolutions of the Thrift Congress it was decided that 'World Thrift Day' should be a day devoted to the promotion of savings all over the World. In their efforts to promote thrift the savings banks also worked with the support of the schools, the clergy, as well as cultural, sports, professional, and women's associations. Representatives of 29 countries wanted to bring to mind the thought of saving to the worldwide public and its relevance to the economy and the individual. The World Savings Day is usually held on October 31 except in countries where this day is a public holiday, since the idea is for the banks to be open, so that the people are able to transfer their savings into their account. The idea of World Thrift Day was not born out of nothing. There had been some examples of days that were committed to the idea of saving money in order to gain a higher standard of life and to secure the economy, for example in Spain where the first national thrift day was celebrated in 1921, or in the United States. In other countries, such as Germany, the peoples' confidence in savings had to be restored since many of them had lost their savings in the German monetary reform of 1923. After the Second World War, World Thrift Day continued and reached the peak of its popularity in the years between 1955 and 1970. It practically became a veritable tradition in certain countries. In Austria, for instance, the official mascot of saving, the so-called 'Sparefroh' (literally: 'Happy Saver', or rather "save happily!") reached a higher degree of brand awareness than the republic's President and even a street was named after him. In the 1970s, the 'Sparefroh-Journal', an educational magazine for younger people, reached a circulation of 400,000 copies. World Savings Day is very popular in many countries and the reason for this attraction is that there are many obstacles in savings. Since the high rate of unemployment and poverty is still strong in many parts of the world. It is very important to educate people to save money. Savings are important for dealing with the bad days of life. This is especially important for the day when there is a hindrance in income generation for many reasons like illness, employment, disability or old age. The basis is also formed to earn more income for saving investment. A day is celebrated to promote saving among the general public. This is a global festival celebrated by especially responsible retail and savings banks, cultural organizations, sports bodies, and skilled agencies. World Saving Day reminds us of the importance of regular savings to be safe. Savings also help a person in achieving a dream or goals such as starting a business, doing health care, getting a good education or buying a

The Geneva Association has been founded to make an original contribution to the progress of insurance through objective studies of the interdependence between the economic environment and insurance activities. It is a THINK-TANK founded in 1973 as the International Association for the Study of Insurance Economics, under the initiative of a committee that met for the first time on 22 September 1973 in Paris. The founder of the Association was Fabio Padoa Schioppa, former Chief Executive Officer of Generali (Trieste), with Raymond Barre, subsequently French Prime Minister as President, and Orio Giarini as Secretary General. Padoa was a recognised top manager and a respected representative in many countries where Generali had operations; he harboured the ambition of upgrading perceptions of insurance in business, educational and public circles. Fabio Padoa had a clear perception of the growing importance of risk management and insurance in our world, and he launched the idea of a centre or institute to study this development, travelling around Europe in 1972 like a pilgrim to discuss this project. In addition to Fabio Padoa, the founding committee included Emil Frey, General Manager, Mannheimer Versicherung (Mannheim); Georges Martin, President, Royale Belge (Brussels); Ernst Meyer, General Manager, Allianz (Munich); and Bernard Pagezy, President, La Paternelle (Paris). This Constitutive Assembly of The Geneva Association took place in Paris on 27 February 1973, at the

The following companies were represented by their President or Chief Executive Officer: Allianz, Münchener Rück, Aachener & Münchener, and Victoria for Germany Commercial Union, Royal and Mercantile & General for the United Kingdom Erste Allgemeine for Austria Royale Belge for Belgium UAP, AGF, La Paternelle, Préservatrice and SAFR for France Generali, RAS, Reale Mutua, INA and Fondiara for Italy Nationale Nederlanden for the Netherlands The Swiss Reinsurance Company for Switzerland. Orio Giarini, Secretary General from 1973-2001, trustee of the World Academy of Art and Science and editor of The European Papers on the New Welfare and of Cadmus, wrote in 2011 a detailed history of The Geneva Association as a special contribution to the Insurance Economics newsletter.

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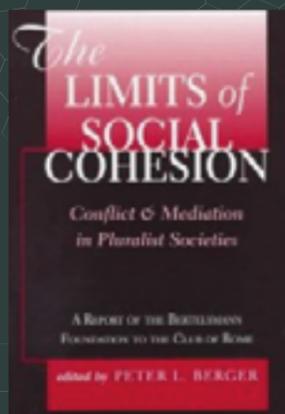
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1997

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## SYNOPSIS

THE LIMITS TO SOCIAL COHESION, CONFLICT & MEDIA-  
TION IN PLURALIST SOCIETIES: A REPORT OF THE BERTELSMANN FOUN-  
DATION TO THE CLUB OF ROME



PETER LUDWIG BERGER

Peter Ludwig Berger[a] (1929–2017) was an  
Austrian-born American sociologist and  
Protestant theologian. Berger became known for  
his work in the sociology of knowledge, the  
sociology of religion, study of modernization, and

theoretical contributions to sociological theory. Berger is arguably best known for his book, co-authored with Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (New York, 1966), which is considered one of the most influential texts in the sociology of knowledge and played a central role in the development of social constructionism. In 1998 the International Sociological Association named this book as the fifth most-influential book written in the field of sociology during the 20th century. In addition to this book, some of the other books that Berger has written include: *Invitation to Sociology: A Humanistic Perspective* (1963); *A Rumor of Angels: Modern Society and the Rediscovery of the Supernatural* (1969); and *The Sacred Canopy: Elements of a Social Theory of Religion* (1967). Berger spent most of his career teaching at The New School for Social Research, at Rutgers University, and at Boston University. Before retiring, Berger had been at Boston University since 1981 and was the director of the Institute for the Study of Economic Culture. Peter Ludwig Berger was born on March 17, 1929, in Vienna, Austria, to George William and Jelka (Loew) Berger, who were Jewish converts to Christianity. He died on June 27, 2017, in his Brookline, Massachusetts, home after a prolonged illness. With his work he present Social structures as the sphere of reality that presents itself upon human existence most intensely and immediately. Everyday life is contrasted with other spheres of reality – dreamworlds, theatre – and is considered by a person to be the objective, intersubjective (shared with others) and self-evident. Life is ordered spatially and temporally. Spatial ordering allows interaction with other people and objects; the human ability to manipulate zones of space can intersect with another's ability. The reality of everyday life is taken for granted as reality. It does not require additional verification over and beyond its simple presence. It is simply there, as self-evident and compelling facticity.

Bertelsmann Foundation German non-profit foundation, headquartered in Gütersloh and secondary offices in Berlin, Washington and Brussels. Considered one of the most important **THINK-TANK** in Europe, the BF, founded by the entrepreneur R. Mohn in 1977, promotes, on the basis of a liberal socio-economic vision, research and projects in the fields of internal politics, foreign policy, economics, international relations and health policy. As the Bertelsmann Stiftung itself has put it, the foundation promotes "reform processes" and "the principles of entrepreneurial activity" to build a "future-oriented society." Since 1993, the Bertelsmann Stiftung has held the majority of capital shares in the Bertelsmann Group. It holds 80.9% together with the Reinhard Mohn Stiftung and the BVG Stiftung but has no voting rights. Establishment of the foundation At the end of the 1970s, there were discussions concerning who would follow Reinhard Mohn as chairman of Bertelsmann. Against this background and because he believed that the state must be able to count on its citizens' willingness to assume responsibility and take the initiative, Mohn founded the Bertelsmann Stiftung on February 8, 1977. It was officially approved by the authorities on March 14, 1977. The Bertelsmann Stiftung was initially endowed with 100,000 Deutsche Marks in capital. About two years later it began its work. Building the foundation's work In 1979, Hans-Dieter Weger was appointed the first managing director. He developed the concept of an operational foundation that develops and oversees its own projects. One of the Bertelsmann Stiftung's first activities was the baseline study "Kommunikationsverhalten und Buch" (Communication Behavior and the Book), which was prepared in cooperation with Infratest. The Bertelsmann Stiftung and the Bertelsmann Group also provided

support for the construction of the Gütersloh municipal library. In 1982, the Bertelsmann Stiftung presented its first public report of its activities. In the report's foreword, Karl Carstens, president of the Federal Republic of Germany, praised the "achievement of foundations in the public sphere." In the meantime, the Bertelsmann Stiftung had come to play a central role in Reinhard Mohn's sociopolitical activities. Mohn functioned as the foundation's sole executive and was supported by a newly created Advisory Board from 1983 onwards. In addition to Reinhard Mohn and Hans-Dieter Weger, the board's members were Kurt Biedenkopf, Gerd Bucerius, Friedhelm Farthmann and Eberhard Witte. In 1985, a publishing house was founded as part of the foundation in order to handle the growing number of publications. Verlag Bertelsmann Stiftung still exists today. In 1988, the Bertelsmann Stiftung awarded the Carl Bertelsmann Prize (now known as the Reinhard Mohn Prize) for the first time. The recipients were employer organizations and trade unions in the construction, chemistry and metalworking industries. Today, the award continues to honor internationally renowned figures who have developed pioneering solutions to social and political challenges. In addition to working in Germany, the Bertelsmann Stiftung initiated several international projects in the 1980s, such as the "Kulturraum Europa" (European Culture Space). Further examples include a program at the Hebrew University of Jerusalem and the construction of the Biblioteca Can Torró in Alcúdia on the island of Majorca. Kurt Biedenkopf was elected as the first chairman of the Advisory Board in 1987, and Reinhard Mohn himself took over this position in 1990. Horst Teltschik then joined the foundation, a development that received a great deal of media attention. The former foreign policy adviser to Helmut Kohl became managing director of the Bertelsmann Stiftung in early 1991 and began focusing on the foundation's internationalization. At the end of the 1980s, the Bertelsmann Stiftung offices were built opposite the Bertelsmann corporate headquarters. Mikhail Gorbachev was a guest during his first trip to Germany after the demise of the Soviet Union.

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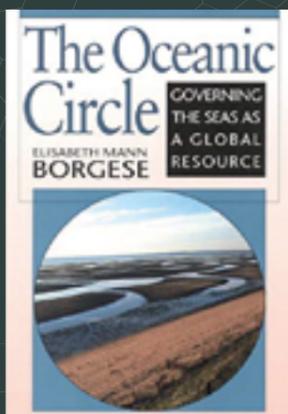
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"THE OCEANIC CIRCLE"

"LA RED"

1998



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Seizandōshoten, 2018**THE OCEANIC CIRCLE, GOVERNING THE SEAS AS A GLOBAL RESOURCE: A REPORT TO THE CLUB OF ROME**

Elisabeth Mann Borgese

Tokyo (Japan), New York(USA): United Nations University Press

1998



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## SYNOPSIS

The second report by Elisabeth Mann-Borgese to the CoR about the oceans and whatever related to the marine environment. It take in account the oceans as a measure of the state of the world. In fact in the report, the author, tries to look at the main subject from different point of view.



ELISABETH MANN BORGESSE

Elisabeth Veronika Mann Borgese, CM (April 24, 1918 – February 8, 2002) was an internationally recognized expert on maritime law and policy and the protection of

the environment. Called "the mother of the oceans", she has received the Order of Canada and awards from the governments of Austria, China, Colombia, Germany, the United Nations and the World Conservation Union.

ALSO AUTHOR OF THE FOLLOWING REPORTS, CHECK: [The Oceanic Circle](#)

UNITED NATIONS UNIVERSITY PRESS

The United Nations University Press served as the publishing division of UNU until January 2014. The division has since been closed and its publishing activities ended. The division is no longer accepting manuscripts, nor will it be providing reprints of past volumes. However, in an effort to make the works of the UNU accessible to the widest possible community, the University will gradually be making UNU Press volumes freely available for download over the course of 2014-2015 via UNU Collections. Unless otherwise specified, UNU applies a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO License for content published on the UNU website and in UNU Collections.

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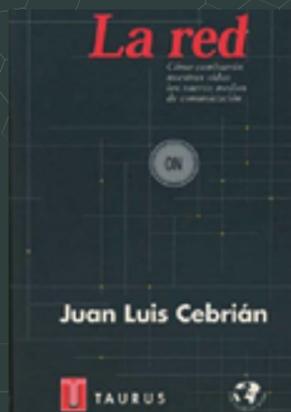
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**LA RED, CÓMO CAMBIARÁN NUESTRAS VIDAS LOS NUEVOS MEDIOS DE COMUNICACIÓN:  
UN INFORME AL CLUB DE ROMA**

Juan Luis Cebrián

Madrid (Spain): Santillana Taurus Pensamiento

1998

internet  
mass media  
DIGITAL TECHNOLOGY  
social change  
communication  
INTERCONNECTED ORGANIZATION  
**TECHNOLOGICAL INNOVATION/  
SOCIAL ASPECTS**

## SYNOPSIS

This report is focused on the network, transmission and the



JUAN L. CEBRIÁN ECHARRI

Dr. Juan Luis Cebrián Echarrri is a prominent Spanish writer and journalist specialized in political sociology. He is Chairman of Prisa, the world's leading news, education and entertainment group in Spanish and Portuguese. Previously, he was founding editor-in-chief of El País, the global Spanish-language newspaper, which played a crucial role in the Spanish political transition from dictatorship to democracy. He is Chairman of The Country Board. He also served as President of the International Press Institute and of the Association of Spanish Newspaper Publishers Laureate of many awards and decorations, he is a member of the Royal Spanish Academy and of the board of the French newspaper Le Monde and Honorary Professor in several Universities in Latin America and Doctor Honoris Causa in the Juan Carlos I University in Madrid. He has been appointed also Officier of the Ordre des Arts et des Lettres of France, and Grand Officer of the Order of Bernardo O'Higgins. Cebrián left all his executive positions in PRISA on May 21, 2018. The Presidency of El País was left to Manuel Mirat, and Cebrián was named Honorary President of El País. Cebrián has been considered by various international media as one of the ten most influential Spaniards in Spain and Latin America for 44 years (from 1976 to 2019). He was one of the founding members of the political magazine Notebooks for Dialogue and has worked as a senior worker and deputy editor of Pueblo and Informaciones de Madrid, a daily newspaper in which I worked with during the time periods of 1963 to 1975. He is the only Hispanic academic member of the Bilderberg Club and the only Spanish-speaking member with executive functions in that organization. Between 1980 and 2016 Cebrián has published 19 books in Spanish consisting of fiction and essay based writing, including the first part of his memoirs. He studied Philosophy at the Complutense University of Madrid, where he graduated in Information Sciences, after graduating, in 1963, at the Official School of Journalism. Before taking El País to the street, he was a member of the founding team of the Cuadernos para el Diálogo (1963). Between 1963 and 1975 he worked as editor-in-chief and deputy director of the Pueblo y Informaciones newspapers in Madrid and in 1974 he accessed the direction of the Spanish Television Information Services, where he stayed for eight months. In 1986 he was distinguished by the University of Missouri (United States) with the Prize for Distinguished Services in Journalism and in 1988 received the appointment of honorary professor of the Universidad Iberoamericana de Santo Domingo (Dominican Republic). In 2003 he was an honorary visitor at the University of La Plata (Argentina) and received the Medal of Merit from the Universidad Veracruzana (Mexico) for his contribution to critical thinking; He is the patron of the Alfonso Reyes



Taurus is an editorial stamp of Penguin Random House Editorial Group, which publishes essay books: history, thought, biographies. The publishing house was founded in 1954 by Francisco Pérez González, Rafael Gutiérrez Girardot and Miguel Sánchez López. Its first director was Francisco Pérez González. Among its main contributions are the creation of the collections "Essayistas de hoy", "Ser y Tiempo" and "Sillar". In 1960, the direction was handed over to Francisco García Pavón, who was succeeded in 1969 by Jesús Aguirre, 1 2 who had already collaborated with the publishing house as a translator and religious editorial advisor. In 1977, José María Guelbenzu replaced Aguirre as director of Taurus, after the latter's resignation to accept the post of Director General of Music. In 1988, Guelbenzu left office and was replaced by José Antonio Millán, who was released on his departure in 1992 by Juan Cruz, until in 1999 María Cifuentes became director. Currently, the publishing house is part of the publishing label of Penguin Random House Editorial Group with Núria Cabutí as CEO of the Editorial Group and Pilar Reyes as editorial director of Taurus (also of Alfaguara, Debate, Lumen and Academic Publications)

"DIE KUNST VERNETZT ZU DENKEN"

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**DIE KUNST VERNETZT ZU DENKEN, IDEEN UND WERKZEUGE FÜR EINEN NEUEN UMGANG MIT  
KOMPLEXITÄT: EIN BERICHT AN DEN CLUB OF ROME**

Frederic Vester

Stuttgart (Germany): Deutsche Verlags-Anstalt

1999 (2000, 2001, 2003)



## SYNOPSIS

The Art of Interconnected Thinking, Tools and Concepts for a new Approach to Tackling Complexity:  
It is the translation of the report by Vester, it present a methodology to accomplish with complexity  
that is called "Sensitivity model".



FREDERIC VESTER

Frederic Vester (November 23, 1925 – November 2, 2003) was a German biochemist, and an expert in the field of ecology. Vester was born in Saarbrücken, and studied chemistry at the universities of Mainz, Paris and Hamburg. From 1955 to 1957 he was postdoctoral fellow at Yale University and Cambridge. From 1957 to 1966 he worked at Saarland University, Saarbrücken, and from 1969 he worked in Munich, first at the Max Planck Institute. In 1970 he founded the private Munich-based Frederic Vester Studiengruppe für Biologie und Umwelt GmbH ("Frederic Vester Study Group for Biology and Environment, Ltd.), renamed Frederic Vester GmbH ("Frederic Vester, Ltd.") after his death. From 1982 to 1989 he was a professor at the Bundeswehr University Munich, and from 1989 to 1991 he was Professor for Applied Economics at the Hochschule St. Gallen, Switzerland. Vester's ideas influenced the formation of the environmental movement and the Green Party in Germany. He was a member of the Club of Rome. He was married to Anne Vester. The couple had three children and six grandchildren. He died in Munich. Vester was known as pioneer of networked thinking, a combination of cybernetic and systemic ideas and complexity. Central ideas of network thinking include viewing a system as a network of interrelated effects, leading to emergent behavior of the system as a whole. These networks can be described by using protocols, mathematical networks, computer software, so that even someone with the most basic understanding of networks will see relations, including positive and negative feedback loops. Simulations of systemic networks can help to decide the long-term effects of singular measures. The Sensitivity Model Vester's Sensitivity Model combines these ideas, and has been used since the 1980s in studies by Ford, UNESCO and other organizations.

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DVA

The Deutsche Verlags-Anstalt (DVA) is a German book publisher based in Munich. It goes back to the Hallberger publishing company founded in Stuttgart in 1831. Later owned by Robert Bosch and the Fazit Foundation, the Deutsche Verlags-Anstalt has been part of the Random House publishing group since 2005. The most successful title is Maya the Bee and her adventures by Waldemar Bonsels. In addition, the German publishing house became known through numerous political biographies. The program today includes sophisticated fiction, poetry and non-fiction as well as works from the fields of science, history, economics and travel. DVA also has a children's book program.

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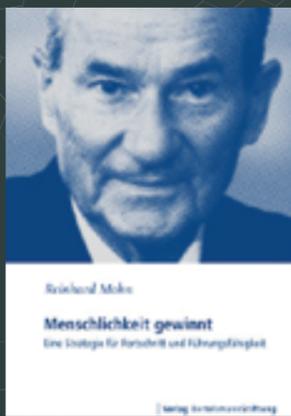
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*"MENSCHLICHKEIT GEWINNT"*

*2000*



**MENSCHLICHKEIT GEWINNT, EINE STRATEGIE FÜR FORTSCHRITT UND FÜHRUNGSFÄHIGKEIT: EIN BERICHT AN DEN CLUB OF ROME**

Reinhard Mohn

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**SYNOPSIS**

“Humanity wins: a strategy for progress and leadership in times of change” or “The victory of humanity: a strategy for progress and leadership capability” are the possible translations of the german title of the report by Reinhard Mohn. This report is focused on leadership and partnership and on how it is possible to go beyond state of crisis implementing a good and accurate management and organization. The author succeeds in combining modern leadership technology with socio-political concerns. It proves that the balancing act between freedom and responsibility, humanity and efficiency, rights and duties within the community, creative independence and integration into organizational systems can be successfully accomplished.



**REINHARD MOHN**

Reinhard Mohn (29 June 1921 – 3 October 2009) was a German-born international entrepreneur and philanthropist. Under his leadership, Bertelsmann, once a medium-sized

printing and publishing house, established in 1835, developed into a global media conglomerate. In 1977, he founded the non-profit Bertelsmann Stiftung, which is today one of the largest operating foundations in Germany, with worldwide reach. For his entrepreneurial and philanthropic achievements, Mohn received numerous domestic and international awards, including the Knight Commander's Cross of the Order of Merit of the Federal Republic of Germany, and Spain's Prince of Asturias Award. Reinhard represented the fifth generation of the shareholding families of Bertelsmann. In 1887, his grandfather, Johannes Mohn, had taken over the management of the printing and publishing house from his father-in-law, Heinrich Bertelsmann, son of Carl Bertelsmann. Raised in a strict Protestant family, Mohn earned his German baccalaureate (Abitur) at the Evangelisch Stiftische Gymnasium Gütersloh in 1939 and went on to complete his Reichsarbeitsdienst, the official labor service of the Third Reich. Afterwards, he volunteered for military service with the Luftwaffe, originally with the aim of becoming a pilot. After serving in an air-base command on the Western Front, Mohn was stationed with an anti-aircraft unit, advancing in rank from private to sergeant, and in 1942 achieving the rank of lieutenant. From France, via Italy, his regiment was moved to Tunisia. On 5 May 1943, Mohn became a U.S. prisoner of war, and in mid-June, he was relocated to the United States, to Camp Concordia, an internment center in Kansas for German prisoners of war. According to Mohn's accounts, he was profoundly influenced by this experience; as one example, he began reading American management literature for the first time. In January 1946, Reinhard Mohn returned to Gütersloh. In April 1947, he transferred his publishing license to his son Reinhard, who managed the publishing business from then on. In 1948, Mohn married Magdalene Raßfeld, whom he knew from his schooldays. In 1947, Mohn took over the management of the C. Bertelsmann publishing company, which had been largely

destroyed by bombing raids during World War II. In 1950, he established the Bertelsmann Lesering book club, which formed the basis for the fast growth of the company in the decades that followed. From the beginning, he closely involved employees, e.g. through the loan participation program introduced in 1951. In 1969, he launched an employee profit-sharing model, viewed as exemplary throughout Germany. As an entrepreneur, Mohn was consistent in his efforts to grow the traditional publishing business into a media conglomerate: Thus, he entered music and film production, invested in the magazine business, and promoted international expansion. A merger of Bertelsmann with the Axel Springer group planned in the years 1969/70 did not come to fruition. In 1971, Mohn transformed the family company into a joint stock corporation. In this way, he created another structural prerequisite for Bertelsmann's rise to become one of the world's leading media groups. Mohn became Chairman of the Executive Board, and in this position continued a corporate culture based on partnership, the essential component of which involves dialogue between management and employees. In 1976, he had a new corporate headquarters built, where Bertelsmann's home offices are still located today. During this time, Mohn also began an entry into the U.S. publishing business, of vital importance to Bertelsmann. The acquisition of Bantam Books (1977/1980) and Doubleday (1986) created the largest trade-book publishing group in the United States, at the time. In 1981, Mohn transitioned from the Executive Board to the Supervisory Board, which he chaired for an additional ten years, still remaining involved in business operations. At 70, he finally stepped down from his duties, yet remained Honorary Chairman of the Supervisory Board. From then on, he dedicated his efforts primarily to his commitment as a corporate citizen, in particular the foundation Bertelsmann Stiftung. In 1999, Mohn transferred what up to that time had been his sole control over the voting rights of roughly 90% of Bertelsmann shares to the Bertelsmann Verwaltungsgesellschaft, a move designed to ensure the continuity of his company.

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## Bertelsmann Stiftung

About Bertelsmann Stiftung it is needed to go back to on 1977. Mohn established it as a non-profit Bertelsmann Stiftung, initially endowed with capital of 100,000 Deutsche Mark. Mohn supported the management-driven concept of an operating foundation, independently developing and managing projects. On his initiative, the Bertelsmann Stiftung, for example, participated in the enhancement of the Gütersloh City Library, and established the Carl Bertelsmann Prize (today the Reinhard Mohn Prize). In the 1980s, the Bertelsmann Stiftung became the key focus of Mohn's corporate citizenship activities. In 1993, the majority of shareholdings in Bertelsmann was transferred to the foundation, making the Bertelsmann Stiftung the largest shareholder in the group. Capital shares and voting rights were strictly separated in the gift agreement, so that neither the foundation nor the group can exert any significant controlling influence over the other. Mohn massively increased the Bertelsmann Stiftung's budget in the 1990s. In addition to his commitment in Germany, he supported projects in Spain, such as the Fundació Biblioteca d'Alcúdia Can Torró on Mallorca. In 1995, he founded the Fundación Bertelsmann, now based in Barcelona and Madrid, as an independent subsidiary foundation of the Bertelsmann Stiftung. It is currently committed to promoting dual training in order to reduce youth unemployment. Founded in 2008, the Bertelsmann Foundation North America, headquartered in Washington, D.C., deals with transatlantic cooperation, among other issues. In the early years, the founder was the sole Executive Board member of the Bertelsmann Stiftung. In 1979, a managing director was hired; from 1983, Mohn was supported by an Advisory Board, and in 1993, the Executive Board was also expanded. After 1998, Mohn withdrew from executive management: Initially, he stepped down from his position as Chairman of

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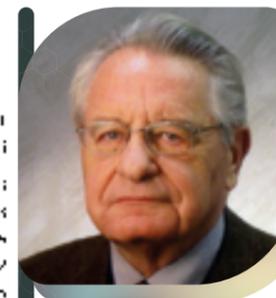
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## SYNOPSIS

This is the second report focused on learning and even specifically on work. It is possible to classify it in the number of CoR's reports that studies the social aspect. If it possible to consider the action related to sustainability there are always two different approach. In fact in order to change the current world trend there are an immediate practical aspects in which society has to act: such as production and energy consuming factor. While on the other hand the second approach is on the minds of people, to affect the human sociological aspect to make the change effective in the way in which people decide to make their own choice become environmental effects that at the end affect the biosphere. For this second reason the authors put the stress on the education by tackling it as a project to take serious care.



ORIO GIARINI

An Italian economist, he founded the Risk Institute (Trieste-Geneva-Zagreb-Pondicherry) in 2001 to promote studies on risk and uncertainty and their impact on society and currently serves as its

Director. He is also founder and Editor-in-Chief of the European Papers on the New Welfare. He was also Secretary General since its foundation in 1973 up to 2000 of the Geneva Association, a global think tank for the study of insurance economics. **PLEASE ALSO PUBLISHER OF THE FOLLOWING REPORTS, CHECK:**



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He was born on 20 February 1927 in Oradea, Romania. He undertook his undergraduate schooling in Oradea, Făgăraș, Beiuș and Bucharest.

Between 1945 and 1949 he accomplished his university studies at the Faculty of Sciences (Mathematics) and the Faculty of Philosophy. In 1972 he defended his PhD thesis on "Mathematical models for negotiations". Mircea Malița was a renowned scholar, a writer, a diplomat, a founder of institutions and an initiator of great projects. In 1949 he was a participating student in the delegation of the Paris Peace Conference, led by Mihail Sadoveanu, a famous Romanian writer; he subsequently became a secretary in the Peace Committee, whose president was Mihail Sadoveanu between 1952 and 1953. He was the director of the Romanian Academy Library between 1950-1956. Mircea Malița served as a counselor of the first Romanian Mission to the UN between 1956-1961. He was further the director of the cultural department of the Ministry of Foreign Affairs (1960-1962), deputy minister of foreign affairs (1962-1969), minister of education (1970-1972), counselor for foreign affairs and state minister and member of the preparative committees of the UN conferences for population, science, technology and development (1974-1979).

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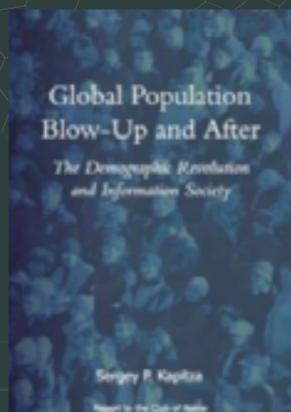
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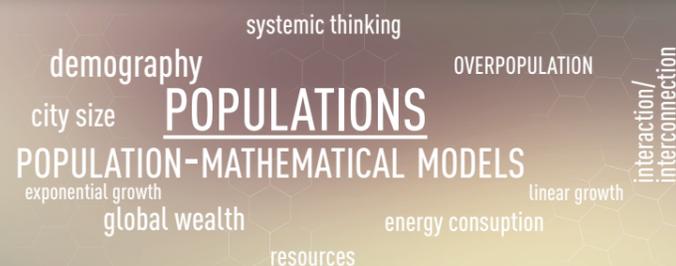
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**GLOBAL POPULATION BLOW-UP AND AFTER, THE DEMOGRAPHIC REVOLUTION AND  
INFORMATION SOCIETY: A REPORT TO THE CLUB OF ROME**

Sergeï Petrovich Kapitsa

Moscow (Russia): Nauka

2004



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## SYNOPSIS

This report tries to tackle the aspect of demographic aspects in order provide to the reader some scenarios just to figuring how the population "parameter" will change in the next forty years and how it will affect other aspects of society.



### SERGEĬ PETROVICH KAPITSA

Sergey Petrovich Kapitsa (14 February 1928 Cambridge, England – 14 August 2012 (aged 84), Moscow, Russian Federation) was a Russian physicist and demographer. He was best known as

host of the popular and long-running Russian scientific TV show, Evident, but Incredible. His father was the Nobel laureate Soviet-era physicist Pyotr Kapitsa, and his brother was the geographer and Antarctic explorer Andrey Kapitsa. Kapitsa was born in Cambridge, England, the son of Anna Alekseevna (Krylova) and Pyotr Kapitsa. His maternal grandfather was Aleksey Nikolaevich Krylov, naval engineer, applied mathematician and memoirist, and the developer of the insubmersibility technique. He was baptized while back in Britain, with Ivan Pavlov serving as his godparent. During his late life Kapitsa described himself as a "Russian Orthodox atheist". In 1935 his family returned to the USSR. Kapitsa graduated from the Moscow Aviation Institute in 1949. He was Senior Research Fellow at the Lebedev Physical Institute, Russian Academy of Sciences and Professor at the Moscow Institute of Physics and Technology. Kapitsa's contributions to physics were in the areas of applied electrodynamics and accelerator physics; he is known, in particular, for his work on the microtron, a device for producing electron beams. In later years, his research focus was on historical demography, where he developed a number of mathematical models of the World System population hyperbolic growth and the global demographic transition. His activities in science popularization included hosting the Russian Television program, Evident, but Incredible, starting in 1973, for which he was awarded UNESCO's Kalinga Prize for the Popularization of Science in 1979 and the USSR State



Nauka (Russian: Hayka, lit. trans.: Science) is a Russian publisher of academic books and journals. Established in the USSR in 1923, it was called the USSR Academy of Sciences Publishing House until 1963. Until 1934 the publisher was based in Leningrad, then moved to Moscow. Its logo depicts an open book with Sputnik 1 above it. Nauka was the main scientific publisher of the USSR. Structurally it was a complex of publishing institutions, printing and book selling companies. It had two departments (in Leningrad and Novosibirsk) with separate printing works, two main editorial offices (for physical and mathematical literature and oriental literature) and more than 50 thematic editorial offices. Nauka's main book selling company Akademkniga ("Academic Book" in English) had some 30 trading centers in all major cities of the country. Nauka was the main publisher of the USSR Academy of Sciences and its branches. The greater part of Nauka's production were monographs. It also published thematic collected works, reference books, textbooks and foreign literature in translation. In 1972 Nauka published 135 scientific journals, including 31 physical and mathematical, 24 chemical, 29 biological and five popular science journals (Priroda (Nature), Zemlya i Vselennaya (Earth and the Universe), Khimia i zhizn (Chemistry and Life), Kvant (Quantum), Russkaya rech (Russian speech). Book series published by Nauka have included the Languages of Asia and Africa series. English distributor of the Nauka publications is MAIK Nauka/Interperiodica together with Pleiades Publishing and Springer Science+Business Media.

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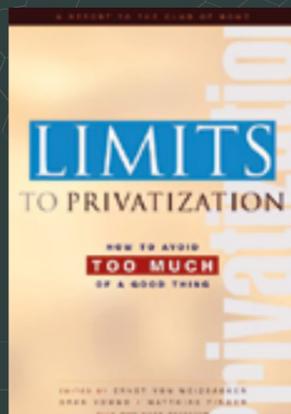
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## LIMITS TO PRIVATIZATION, HOW TO AVOID TOO MUCH OF A GOOD THING: A REPORT TO THE CLUB OF ROME

Ernst Ulrich von Weizsäcker, Oran R. Young, Matthias Finger

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## SYNOPSIS

Limits to Privatization is the first thorough audit of privatizations from around the world. It outlines the historical emergence of globalization and liberalization, and from analyses of over 50 case studies of best- and worst-case experiences of privatization, it provides guidance for policy and action that will restore and maintain the right balance between the powers and responsibilities of the state, the private sector and the increasingly important role of civil society. The result is a book of major importance that challenges one of the orthodoxies of our day and provides a benchmark for future debate.

Globalization has become a mega-trend, with liberalization and privatization at the heart of it. All over the world, governments have been privatizing services in a growing number of sectors - not just industrial utilities such as energy, water and transport, but also health, education, media, pensions, even prisons and defence. Looking back, it is clear these trends have much earlier roots. Since World War II, international bodies such as GATT, the OECD and the European Union have had liberalization agendas and have facilitated privatization. However, with the emergence of 'turbo-capitalism' and the 'global casino' in the 1990s, a widespread and growing reaction has set in, reflecting the belief that the trends have gone too far. Protests against the WTO in Seattle and the G8 in Genoa as well as the creation of the World Social Forum in Porto Alegre are among the strongest expressions of this, and many now see globalization as jeopardizing the basis of democracy and of equity in international relations. Limits to Privatization is the first thorough audit of privatizations from around the world. It outlines the historical emergence of globalization and liberalization, and from analyses of over 50 case studies of best- and worst-case experiences of privatization, it provides guidance for policy and action that will restore and maintain the right balance between the powers and responsibilities of the state, the private sector and the increasingly important role of civil society. The result is a book of major importance that challenges one of the orthodoxies of our day and provides a benchmark for future debate.



ORAN R. YOUNG

Oran R. Young is professor emeritus and co-director of the Programme on Governance for Sustainable Development at the Bren School of Environmental Science and Management at the University of California (Santa Barbara), United States of America. His research focuses on theoretical issues relating to the roles of social institutions as governance mechanisms with applications to matters of governance relating to climate change, marine systems, and the Polar Regions. He also does comparative research on environmental governance in China and the United States. Young has been involved in leading position in global change research for several decades, among others as founding chair of the Committee on the Human Dimensions of Global Change of the US National Academy of Sciences; chair of the Scientific Steering Committee of the international project on the Institutional Dimensions of Global Environmental Change; founding co-chair of the Global Carbon Project; and from 2005 to 2010 the Scientific Committee of the International Human Dimensions Programme on Global Environmental Change. He is the author of more than 20 books. His recent books include *On Environmental Governance: Sustainability, Efficiency, and Equity* (2013) and *Governing Complex Systems: Social Capital for the Anthropocene* (MIT Press 2017). Young supports the Earth System Governance Project as a distinguished member of its Lead Faculty. Recognizing Young's foundational work for the earth system governance research tradition, the Project has named its premier early-career award in his honour. Industries in the postal, telecommunications, railways, electricity, air transport, and water sectors. In his research, he reconciled the liberalization of these sectors with public service objectives by means of new regulatory arrangements, while at the same time promoting a more entrepreneurial behavior of the operators. His research focuses on theoretical issues relating to the roles of social institutions as governance systems with applications to matters of governance relating to climate change, marine systems, and the polar regions. He also does comparative research on environmental governance in China and the United States. Dr. Young served for six years as founding chair of the Committee on the Human Dimensions of Global Change of the US National Academy of Sciences. He chaired the Scientific Steering Committee of the international project on the Institutional Dimensions of Global Environmental Change (IDGEC). He was a founding co-chair of the Global Carbon Project and from 2005 to 2010 chaired the Scientific Committee of the International Human Dimensions Programme on Global Environmental Change. An expert on Arctic issues, Dr. Young chaired the Steering Committee of the Arctic Governance Project and is the science advisor to the North Pacific Arctic Conferences.



MATTHIAS FINGER

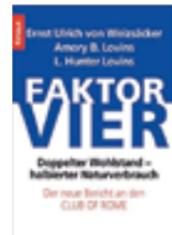
Born in 1955, Matthias Finger, a Swiss and French citizen, received his Ph.D. in Education in 1986 and his Ph.D. in Political Science in 1988, both from the University of Geneva. After having been Assistant Professor at Syracuse University, New York (1989-1991) and Associate Professor at Columbia University, New York (1992-1994), Matthias Finger was appointed Full Professor at the Swiss Graduate School of Public Administration (IDHEAP) in Lausanne in 1995. This is where he developed his research on the transformation of the network industries in the postal, the telecommunications, the railways, the electricity, the air transport, and the water sectors. In his research, he reconciles the liberalization of these sectors with public service objectives by means of new regulatory arrangements, while at the same time promoting a more entrepreneurial behavior of the operators. Matthias Finger was appointed Full Professor at the Swiss Federal Institute of Technology in October 2002 and Dean of Continuing Education in May 2003. Prof. Finger is the Academic Program Director of Executive Master in e-Governance and the Dean, School of Continuing Education in College of Management of Technology in EPFL. Matthias Finger is Part-time Professor at the Florence School of Regulation and full Professor at the Ecole Polytechnique Fédérale de Lausanne (EPFL), where he directs the Chair Management of Network Industries. Matthias was appointed to his present position of Full Professor at the EPFL in October 2002. Matthias edits the Journal Competition and Regulation in Network Industries and is in charge of special editions of Utilities Policy for Elsevier. Matthias received his Ph.D. in Political Science in 1988 and his Ph.D. in Education in 1986, both from the University of Geneva.



## ERNST U. VON WEIZSÄCKER

Ernst Ulrich von Weizsäcker (born 25 June 1939 in Zürich, Switzerland) is a German scientist and politician (SPD). He was a member of the German Bundestag and currently serves as co-president of the Club of Rome jointly with Anders Wijkman. A member of the prominent Weizsäcker family, he is the son of physicist and philosopher Carl Friedrich von Weizsäcker and member of former German president Richard von

### ALSO AUTHOR OF THE FOLLOWING REPORTS



Earthscan is an English-language publisher of books and journals on climate change, sustainable development and environmental technology for academic, professional and general readers. Earthscan was founded by the International Institute for Environment and Development (IIED) in 1982. After making a loss, it became an independent publisher, although still printing many books emanating from IIED research. In August 2009 Earthscan launched their Earthcasts [2] series of free hour-long interactive Webcast sessions on sustainability, climate change and Corporate Social Responsibility. Notable figures who have participated in the series include Tim Jackson and Robert Costanza. In October of the same year Earthscan acquired the publishing assets of RFF Press, the publishing imprint of Resources for the Future. In March 2010 Earthscan won three Independent Publishing Awards, including the top prize of Independent Publisher of the Year, becoming only the second publishing company to win three Independent Publishing Awards in a single year. In January 2011 Earthscan's name and the backlist was bought by one of the "big four" academic publishers, Taylor & Francis, for an undisclosed sum. The Earthscan imprint is still used, and sits under the Routledge imprint. Several staff lost their jobs and the London office was closed.

Earthscan authors include Lester Brown, Walt Patterson, Al Gore, the IPCC, Tim Jackson, Amory Lovins.

"FACTOR FIVE"

2009

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**FACTOR FIVE**, TRANSFORMING THE GLOBAL ECONOMY THROUGH 80% IMPROVEMENTS IN RESOURCE  
PRODUCTIVITY: A REPORT TO THE CLUB OF ROME

Ernst Ulrich von Weizsäcker

London (U.K.); Stirling, VA (USA): Earthscan

2009

climatic changes/  
economic aspects

technological innovations/  
environmental aspects

sustainable  
development

TECHNOLOGICAL INNOVATION

**EFFICIENCY** economic aspects

ENVIRONMENTAL PROTECTION

INDUSTRIAL PRODUCTIVITY

## SYNOPSIS

Factor 5: Transforming the Global Economy through 80% Increase in Resource Productivity is a 2009 book by Ernst Ulrich von Weizsäcker and an Australian team at The Natural Edge Project. The book suggests that sustainability can be achieved by improving resource productivity. The book presents examples showing the potential of a factor of five in efficiency improvements for some sectors of the economy, while maintaining the quality of service and well-being. The book was made possible through sponsorship from Griffith University, Aachen Foundation, CSIRO, and RPS Group. Factor 5 is the sequel to Factor 4, a 1997 international best seller, which presented 50 examples of resource-saving technologies. Factor Five is the sequel to Factor Four, a book that presented 50 examples of technologies and logistics saving 75% or more energy, water, or minerals, without losing the quality of service or well-being. Factor Five has a stronger focus on whole sectors of the economy, notably, buildings, heavy industry, transport, and agriculture. Most, if not all, of the improvements are available to rich and poor countries alike. To be sure, nothing is really new in Factor Five. Low energy farming has been around for 5,000 years, by necessity, and will have to be combined with modern techniques helping to feed a planet of seven billion people. Replacing Portland cement with geopolymers – thereby making an 80% energy saving – repeats the experience of the ancient Romans, who 2,000 years ago built their aqueducts using cement-like binders very similar to modern geopolymers. Recycling metals, and thus saving a lot of energy, has been going on since the Bronze Age, and is enjoying a revival with “city mining” – the extraction of valuable metals from landfills or from the tailings of old mines. On the other hand, there are of course also some exciting high-tech advances already in progress; for example, with lightweight yet robust automobiles, in the field of micro-electronics, and with selected applications of bio- and nanotechnology that help optimize processes, systems, and specific technologies. This experience should teach us something about suitable economic frameworks that are conducive to the launch of the new technological revolution.

The Natural Edge  
PROJECT

The Natural Edge Project (TNEP) was a collaborative partnership for research, education, policy development, and strategy for sustainable development, spanning 2002 – 2015. Our project was driven by a team of early career Australians who receive mentoring and support from a number of experts and leading organisations around the world. After being incubated by The Institution of Engineers Australia, the project was hosted in various Australian cities, with team members located in Griffith University, Adelaide University, QUT, and Curtin University. We thank QUT for continuing to host this legacy site. Our group's mission was to contribute to, and succinctly communicate, leading research, case studies, tools and strategies for achieving sustainable development across government, business and civil society. The Natural Edge Project (TNEP) is an independent think-tank for sustainability based in Australia. TNEP contributes to leading research, case studies, tools, policies and strategies for achieving sustainable development across government and business. The non-profit TNEP receives mentoring and support from selected experts and leading organisations in Australia and internationally. TNEP delivers short courses, workshops, and conference presentations to build industry experience and relationships. It has published the books Natural Capitalism by Amory Lovins (1999), described as “groundbreaking” by Habitat Australia, and The Natural Advantage of Nations edited by Karlson Hargroves and Michael H Smith (2005). The patron of TNEP is Sir Ninian Stephen, former Governor General of Australia. The Natural Edge Project was the winner of the 2005 Banksia Award for Environmental Leadership Education and Training. The Banksia Awards aims to recognise individuals and organisations for environmental excellence and innovation. The Natural Edge Project (TNEP) is an independent think-tank for sustainability based in Australia. TNEP contributes to leading research, case studies, tools, policies and strategies for achieving sustainable development across government and business. The non-profit TNEP receives mentoring and support from selected experts and leading organisations in Australia and internationally. TNEP delivers short courses, workshops, and conference presentations to build industry experience and relationships. It has published the books Natural Capitalism by Amory Lovins (1999), described as “groundbreaking” by Habitat Australia, and The Natural Advantage of Nations edited by Karlson Hargroves and Michael H Smith (2005). The patron of TNEP is Sir Ninian Stephen, former Governor General of Australia. The Natural Edge Project was the winner of the 2005 Banksia Award for Environmental Leadership Education and Training. The Banksia Awards aims to recognise individuals and organisations for environmental excellence and innovation. The member of this Think-Tank, who has contributed to this report are presented one by one in the following lines.



KARLSON HARGROVES

Karlson 'Charlie' Hargroves, co-founder and TNEP Executive Director, is a graduate of Civil Engineering from the University of Adelaide in 2000. In 2004 Charlie was seconded from TNEP for a 12 month visiting scholar position at the University of Colorado, Boulder. Charlie is a co-author and the co-editor of 'The Natural Advantage of Nations: Business Opportunities, Innovation and Governance in the 21st Century'. In 2005 the book received the highly contested Banksia Award for Environmental Leadership, Training and Education. Charlie and the team from TNEP have developed a range of projects focused on education and training for sustainable development, including working with Universities, Professional Bodies, Government Agencies, Companies, Schools and touring international keynote speakers. Through the development of this and other TNEP initiatives Charlie is developing his PhD in Sustainable Industry Policy at Murdoch University under the supervision of Prof. Peter Newman.



MICHAEL H. SMITH

Michael H. Smith, co-founder and TNEP Research Director, completed a double major Science degree in Chemistry and Mathematics from the University of Melbourne, in his honours year, Michael researched chemicals to replace those that destroy the ozone layer at the University of Sydney Michael is a co-author and the co-editor of 'The Natural Advantage of Nations: Business Opportunities, Innovation and Governance in the 21st Century'. In 2005 the book received the highly contested Banksia Award for Environmental Leadership, Training and Education. His recently completed PhD thesis at the Australian National University investigated the latest advances in the classic sustainability debates such as economic growth vs. sustainable development with co-supervisor Dr Stephen Dovers. In 2006, Michael was seconded as a Departmental Visitor to ANU's Centre for Resource and Environmental Studies as a representative of TNEP to work on capacity building material, under funding from the CSIRO Energy Transformed Flagship in collaboration with Griffith University, and other TNEP partners.



### CHERYL J. K. DESHA

Cheryl Julia Kiran Desha is an Associate Professor and the Head of Civil Engineering at Griffith University's Nathan campus in Brisbane. She is responsible for delivering a '21st Century' civil engineering curriculum within a digitally equipped new building. She is also part of the Executive Group initiating the university's Cities Research Institute, focused on addressing complex problems through a Digital Earth research agenda. Cheryl collaborates across Australia and overseas to build capacity for whole system thinking, biomimicry, resource productivity, decoupling and sustainable business practice, fostering urban nature for resilient and liveable cities, within her overarching career goal of sustainable development. With the team from The Natural Edge Project research group Cheryl has co-authored more than 100 publications. She has also led core projects within the Sustainable Built Environment National Research Centre and sits on the Energy Efficiency Council board as an education expert. Cheryl Desha appears with thanks to Academic Partner Griffith University. TNEP Education Director graduated in Environmental Engineering (First Class Honours) with the University Medal from Griffith University. Cheryl worked in an international consulting engineering firm for four years. In 2005 Cheryl was selected as the Engineers Australia Young Professional Engineer of the Year. Cheryl is a co-author of The Natural Advantage of Nations.



### PETER STASINOPOULOS

Graduated at the University of Adelaide, with a bachelor of mathematic and computer science. He is also graduated at the University of South Australia Master of engineering. He joined The Natural Edge Project as a volunteer in 2004. Since then he passed through higher level inside the Think-Tank finally becoming Research Fellow. His work consist in research and consulting projects, including the development of book publication, educational resources and also industry reports.



### ERNST U. VON WEIZSÄCKER

Ernst Ulrich von Weizsäcker (born 25 June 1939 in Zürich, Switzerland) is a German scientist and politician (SPD). He was a member of the German Bundestag and currently serves as co-president of the Club of Rome jointly with Anders Wijkman. A member of the prominent Weizsäcker family, he is the son of physicist and philosopher Carl Friedrich von Weizsäcker and nephew of former German president Richard von Weizsäcker. Since 1969, he is married to Christine von Weizsäcker, a German biologist and philosopher.

#### ALSO AUTHOR OF THE FOLLOWING REPORTS



Earthscan is an English-language publisher of books and journals on climate change, sustainable development and environmental technology for academic, professional and general readers. Earthscan was founded by the International Institute for Environment and Development (IIED) in 1982. After making a loss, it became an independent publisher, although still printing many books emanating from IIED research. In August 2009 Earthscan launched their Earthcasts [2] series of free hour-long interactive Webcast sessions on sustainability, climate change and Corporate Social Responsibility. ALSO PUBLISHER OF THE FOLLOWING REPORTS



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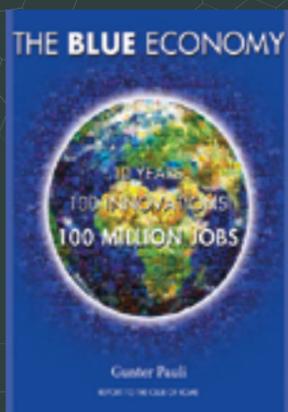
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2010

*"THE BLUE ECONOMY"*



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# THE BLUE ECONOMY, 10 YEARS, 100 INNOVATIONS, 100 MILLION JOBS: REPORT TO THE CLUB OF ROME

Gunter Pauli

Taos (USA): Paradigm Publications

2010

economic policy      social ethic  
SUSTAINABLE DEVELOPMENT  
economy      **ECONOMICS: GREENING**      protection  
social responsibility      entrepreneurship      and conservation  
NATURAL RESOURCES      of natural resources

## SYNOPSIS

First conceived by Prof Gunter Pauli in 2010 as nature-inspired derivatives for wealth creation through environmental correctness, the concept has since evolved into a purely ocean-based and ocean-related concept through the Rio+20 declaration. The blue in the concept derives from the characteristic blue of the ocean. Although the sky possesses a similar blue colour, it however does not serve as a resource medium (at least for now) like the ocean. The economics of blue economy concept includes, besides traditional fishing and shipping, innovative ocean exploitation such as marine biotechnology, deep sea mining, maritime tourism and renewable ocean energy amongst others. The blue economy, as an ecological economics development strategy is reinforced by the United Nations Sustainable Development Goal (UNSDG) 14 which advocates the sustainable use of ocean resources. Thus, the blue economy strategy claims its international legitimacy on the basis of UNSDG. A balanced study of and research on blue economy would inexorably be predicated on sustainable development theory which stands out as an appropriate theoretical framework for blue economy researches. It advocates that economic development must go side-by-side environmental sustainability and social well-being in a manner as not to imperil future generations' chances of developing therefrom. It is represented by the balanced intersection of the environment, society and economy. Although some scholars advocate



GUNTER PAULI

(born 1956 in Antwerp, Belgium) is an entrepreneur and author of *The Blue Economy*. Gunter Pauli was born in 1956. He is a graduate in economics of Loyola College in Antwerp (1979). He later obtained his MBA from INSEAD (1982) in Fontainebleau, France. He also has an honorary masters in systemic design from the Politecnico di Torino (Italy) and an honorary doctorate in economics from the University of Pecs (Hungary). He has been named an outstanding AIESEC alumnus. Pauli has lived on four continents and is fluent in seven languages. He has been a resident of Japan since 1994 and spends considerable time initiating and monitoring projects around the world. He is married to Katherina Bach and is the father of five sons (Carl-Olaf, Laurenz-Frederik, Philipp-Emmanuel, Louis-Hadrien and Francesco-Aurélio) and one (adopted) daughter (Chido). He has been active as an entrepreneur setting up a dozen companies, a lecturer at the Politecnico di Torino and the University of Pecs, and commentator in culture, science, politics, sustainability, innovation, and the environment for different media. He is a member of The Club of Rome and since 2017 member of the Executive Committee and Chairman of Novamont SpA. He built the first ecological factory in the world as 50% shareholder, Chairman and CEO of Ecover. It was completed in 1992, under his leadership, and has received worldwide acclaim as an ecological building. His first book was a biography of Dr. Aurelio Peccei, founder of the Club of Rome, whom he assisted from 1979 to 1984. Since then he has written more than 20 books printed in 43 languages, and written 285 fables for children, of which 180 have been published in China. Some estimate that 90 million copies of his fables have been distributed worldwide. In 1989 he was elected as an independent substitute to the European Parliament, but never took up the seat. In 1991 Gunter Pauli was the founder of the "Mozarteum Belgicum", founder (1988) and president of Worldwatch Europe (until 1992). In 1994 Pauli founded the Zero Emissions Research Initiative (ZERI). ZERI started in Tokyo with the support of the Japanese government and United Nations University (UNU) and targeted redesigning production and consumption into clusters of industries inspired by natural systems. Today ZERI is a network of 2,800 scientists, professors, and intellectuals continuously rethinking innovations to make business and operational processes as durable as possible. In 2009 he wrote the book *The Blue Economy*, which was originally a report to the Club of Rome. He wrote it with the twin aims of stimulating entrepreneurship and establishing higher standards for sustainability. It includes principles that support the blue economy concept and also one hundred business cases that follow the principles. The goals set for the blue economy as a business model are high: to create 100 million jobs and substantial capital value through 100 innovations in the 2010-2020 decade. *The Blue Economy 2.0* was released in 2014



Paradigm Publishers Founded in 2003. Then became Routledge. It was settled in United States at Boulder, Colorado Paradigm Publishers was an academic, textbook, and trade publisher in social science and the humanities based in Boulder, Colorado. Paradigm was founded in 2003 by Dean Birkenkamp. In 2015 the company was sold to Routledge, part of Taylor & Francis. For almost three decades, Paradigm Publications has provided information about traditional Chinese medicine and acupuncture, Japanese acupuncture and other complementary and alternative healing systems to English-speaking readers.

ZERI

ZERI, Zero Emission Research and Initiatives, is an international network of 3000 technologists and economists, who intend to develop new production processes, in which the waste of one process can be used as raw materials for another, so as to drastically reduce, if not completely avoid the production of waste to be eliminated in an unproductive and harmful way for the environment. "The goal is zero: zero accidents, zero waste, zero emissions". His philosophy is not that which sees progress and science as evils to be eradicated, but that of incorporating respect for the environment and the techniques used by nature itself into progress, effectively making the production process part of an ecosystem. According to the 1996 White Paper on the Environment, Japan's Environmental Agency "ZERI will be the industry standard in the 21st century". ZERI foundation has been settled on 6th April 1994 by the economist Gunter Pauli and professor Heitor Gurgulino de Souza, at that time dean of United Nation University. The purpose of foundation was meant to transform ideas and scientific knowledge into real useful projects. Over the next 10 years, dozens of functional projects have been implemented, especially in Third World countries. Although formally ZERI is not part of the United Nations, it has collaborated with the UNDP (United Nations Development Program) since 1997 and since the beginning with UNESCO. On 14 October 1998, Kofi Annan, then Secretary General of the United Nations, formally supported ZERI. In December of the same year, collaboration with FAO began. In July 2000, ZERI attended the World EXPO in Hannover (Germany), building a pavilion using only plants from Colombia as raw material. On October 3, 2005, at the Politecnico di Torino, the first Italian second level masters in Systems Design began which implement the ZERI principles.

## UPDATES

After this first report, other two publication has followed. Guner Pauli has published:

**The blue economy version 2.0 : 200 projects implemented, US\$ 4 billion invested, 3 million jobs created**

**The blue economy 3.0 : the marriage of science, innovation and entrepreneurship creates a new business model that transforms society**

In both of this two other book, Pauli presents the previous scientific observations in the report and after that he added each time the new ideas and scientific studies. However none of those two new book are considered "reports to the CoR".

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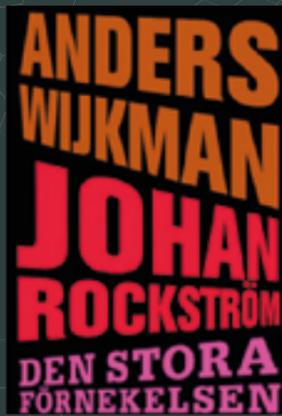
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"DEN STORA FORNEKELSEN"

2011



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## DEN STORA FÖRNEKELSEN

Anders Wijkman, Johan Rockström

Stockholm, (Sweden): Medströms Bokförlag

2011

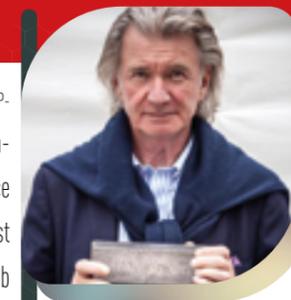


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## SYNOPSIS

BANKRUPTING NATURE, DENYING OUR PLANETARY BOUNDARIES A REPORT TO THE CLUB OF ROME BANKRUPTING NATURE is the product of a collaboration between Anders Wijkman, an environmental policy maker, former member of the European Parliament and vice president of the Club of Rome, and Johan Rockström, an environmental scientist and executive director of the Stockholm Resilience Centre. As a report to the Club of Rome, the perspective of the book should come as no surprise to individuals familiar with the focus of that group on the future of humanity and the biosphere. Written in clear, simple language that is readily accessible to a diverse audience of casual readers, natural and social scientists, policy makers, and politicians, *Bankrupting Nature* succeeds in providing a critical review of current socio-ecological problems, including climate change, population and resource limitation, and the behavioral and political challenges of confronting these problems. *Bankrupting Nature* excels in highlighting the complex relation between the environment and socio-economic activity. Unlike mainstream economic theories, the authors recognize that much of economics is both human ecology and behavior, and explicitly ties the population and economy of the world to the capacity of the planet to supply resources and assimilate wastes. In *An Inquiry into the Nature and Causes of the Wealth of Nations*, Adam Smith recognized how the economic, political, and military strength of a nation depends on access to, and utilization of, natural resources. Wijkman and Rockström remind us that all economies are embedded within the biosphere and show that growth in human population and economy is 'bankrupting nature', destroying the ecological systems of the biosphere and jeopardizing the wealth of nations. In contrast to many writings on 'sustainability', they emphasize the global dimension of the problems and the need for major changes in cultural norms and political will to reverse these trajectories. The book is not without its weaknesses. Although it points out some complex interrelations between populations, resources, and economics, it fails to mention other related challenges to society. The authors dedicate chapters to climate change, food production, freshwater supply, and energy use, but give less attention to the threats of disease, social unrest, and warfare that might be triggered by population growth and resource scarcity. Most seriously, however, we question whether the authors' presentation is sufficiently rigorous and well documented. With the exception of the sections on climate change, the treatment of the literature is inconsistent, largely superficial, and uncritical. Some important works are cited whereas others are not, and often Wijkman and Rockström repeat the conclusions of other research as though they were established facts and necessary consequences.



ANDERS WIJKMAN

Anders Ivar Sven Wijkman (born 30 September 1944 in Stockholm) is a Swedish politician (Swedish: Kristdemokraterna, KD) who was Member of the European Parliament from 1999 to

2009. As member of the European Parliament, he focused on

issues related to climate change, environment, development cooperation and humanitarian affairs. He is a member of the Christian Democrats, part of the European People's Party - European Democrats group. He sat on the European Parliament's Committee on the Environment, Public Health and Food Safety. He is also a substitute for the Committee on Development, a member of the delegation to the ACP-EU Joint Parliamentary Assembly, and a substitute for the delegation for relations with the United States. Anders has been a member of the Swedish parliament, secretary general of the Swedish Red Cross, and president of the International Red Cross Disaster Relief Commission. Anders Wijkman is vice President of Club of Rome and the Tällberg Foundation. He is a member of the Royal Swedish Academy of Sciences. He is also a councillor for the World Future Council.



JOHAN ROCKSTRÖM

Johan Rockström (born 31 December 1965) is professor at and former executive director of the Stockholm Resilience Centre at Stockholm University. He is a strategist on how resilience can

be built into land regions which are short of water, and has published over 100 papers in fields ranging from practical land and water use to global sustainability. Johan Rockström was Executive Director of the Stockholm Environment Institute from 2004-2012. Rockström is internationally recognized on global sustainability issues. In 2009, he led the team which developed the Planetary Boundaries framework, a proposed precondition for facilitating human development at a time when the planet is undergoing rapid change. In recognition of this work, *Fokus* magazine named him "Swede of the Year" for "engaging and exciting work in sustainable development. Rockström is vice-chair of the Scientific Advisory Board of the Potsdam Institute for Climate Impact Research and chair of the Earth System Visioning Task Team of International Council for Science (ICSU). In 2010, the magazine *Miljöaktuellt* ranked him the second most influential person in Sweden on environmental issues, and *Veckans Affärer* gave him its "Social Capitalist Award". In 2011 he chaired the third Nobel Laureate Symposium on Global Sustainability in Stockholm. After 12 years as director of Stockholm Resilience Centre (SRC), he became 2018 joint director of the Potsdam Institute for Climate Impact Research (PIK), based in Germany, together with PIK's current deputy director Professor Ottmar

Potsdam Institute for Climate Impact Research (PIK), based in Germany, together with PIK's current deputy director Professor Ottmar Edenhofer. Rockström and Edenhofer replace PIK director Professor Hans Joachim Schellnhuber. He has recently joined climate change charity Cool Earth as a trustee.



The publisher produces and publishes illustrated fact books in order to reach a large audience - in serious subjects and in collaboration with the country's leading writers and subject experts. Topics include culture and cultural heritage, history and popular science. Many books are produced in collaboration with the major museums.

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"2052"

2012



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**2052**, A GLOBAL FORECAST FOR THE NEXT FORTY YEARS: A REPORT TO THE CLUB OF ROME COMMEMORATING THE 40<sup>TH</sup> ANNIVERSARY OF THE LIMITS TO GROWTH

Jørgen Randers

White River Junction, Vermont (USA):  
Chelsea Green Publishing

2012

economic and social development  
food production  
economic history  
ECONOMIC  
SITUATION/CONDITIONS -  
FORECAST  
ECONOMIC FORECASTING  
CLIMATE CHANGE  
energy economics

## SYNOPSIS

Main conclusions from the 2052 forecast World population and economy will grow more slowly towards 2052 than most people expect - but still fast enough to trigger a climate crisis Consumption will stagnate because society will have to spend ever more labour and capital on repair and adaptation. The short-term nature of man - reflected in the short term focus of democracy and capitalism - is the root cause of this development What should be done. - Ideally Further slow population growth. Introduce child policy - first in rich world Cut CO2 emissions - first in the rich world Ban the use of coal, oil and gas from 2024. Reduce poverty in the poor world Give a climate-friendly energy system to the poor Reduce the ecological footprint of the rich world Legislate more compulsory vacation. Temper national short termism Establish supra-national institutions Reduce the focus on income growth Establish "increased well-being" as the new goal What can be done? - Realistically. Reduce the ecological footprint of the rich world. Simplify shift from dirty to clean production provide income security in transition. Reduce production growth reduce length of the work year, i.e. more leisure Temper national short termism. Establish a global agreement where all nations promise to emit less CO2 per person than the US. Evolve IPCC to "IPCC 3" (a supernational org. with funding to pay for the most effective cuts). Reduce the focus on income growth. Start measuring "growth in well-being" alongside "growth in GDP".



JØRGEN RANDERS

Jørgen Randers (born 22 May 1945) is a Norwegian academic, professor of climate strategy at the BI Norwegian Business School, and practitioner in the field of future studies. His professional field encompasses model-based futures studies, scenario analysis, system dynamics, sustainability, climate, energy and ecological economics. He is also a full member of the Club of Rome, a company director, member of various not-for-profit boards, business consultant on global sustainability matters and author. His publications include the seminal work *The Limits to Growth* (co-author), and *Reinventing Prosperity* Randers is the son of the Norwegian physicist Gunnar Randers and the nephew of Norwegian mountaineer Arne Randers Heen. He received a Masters of Science in Solid State Physics at the University of Oslo in 1968, and a PhD in Management at the MIT Sloan School of Management in 1973, having originally been accepted to complete a PhD in Physics. Whilst at MIT, he became one of the original four co-authors of *The Limits to Growth*, a "seminal text on the use of computer-modelling in simulating the consequences of economic and population growth in a finite world". Academic career In 1973, he was appointed Assistant Professor of Management at the MIT Sloan School of Management. For the next eight years, he pursued a career in business. From 1981 to 1989 he served as president of the BI Norwegian Business School, and he served as a professor from 1985 to 2015. Since 2015, he has been Professor Emeritus. From 2001 to 2012, he was a core member of the faculty of the Cambridge Institute for Sustainability Leadership, Cambridge. In 2013, he was appointed as Honorary Professor, Anglia Ruskin University, Cambridge. In 2016, he was appointed as Honorary Professor, Fudan Institute for Advanced Study in Social Science, Shanghai. In 2018, he was appointed as Honorary Researcher, School of Marxism, Peking University, Beijing. In 2019, Randers was appointed as inaugural Co-Chair of the Ecological Civilization Center at Peking University's Research Institute of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. Randers' research interests are on climate issues, scenario planning and system dynamics, especially on the topics of sustainable development, climate change and global warming mitigation. In 1974, he left the MIT Sloan School of Management and founded the Resource Policy Group, based in Oslo, and served as director between 1974 and 1980. In 1980, he was appointed to the Ministry of Long-Term Planning, in Oslo, involved with macroeconomic planning. Subsequently he was appointed as Deputy Director of Deminex (NORGE) AS, an oil production company. Between 1989 and 1991, he served as Managing Director of World City AS, a financial holding company based in Oslo. Between 1994 and 1999, he served as deputy director general of the World Wildlife Fund International in Switzerland.



Chelsea Green Publishing was founded in 1984 by Ian Baldwin and Margo Baldwin Country of origin United States Headquarters location, 85 North Main Street White River Junction, Vermont Distribution self-distributed (US), Footprint Books (Australia) University of Toronto Press Distribution (Canada) Real Books (South Africa) Publishers Group UK Publication types Books Nonfiction topics progressive politics and sustainable living Owner(s) ESOP Chelsea Green Publishing is an American publishing company which specialises in non-fiction books on progressive politics and sustainable living. Based in Vermont, it has published over 400 books since it was founded in 1984, and now releases between 25 and 30 titles each year. The company was started by Margo Baldwin and her husband Ian in 1984 two years after moving from New York City to Chelsea, Vermont. They initially published books that appealed to their own interests, which included fiction, nature, travel, and art. Their first books were published in 1985—In a Pig's Eye, small-scale farmer Karl Schwenke's observations on "the human qualities of pigs and the piglike qualities of humans," and the first trade edition of Jean Giono's *The Man Who Planted Trees*, with woodcut illustrations by Michael McCurdy. Among the books that followed in the next two years were *Permanent Parisians* (a guide to Paris cemeteries), *Words and Images of Edvard Munch*, and Steve Heller's novel *The Automotive History of Lucky Kellerman*. Not all of the books from their early, more eclectic range sold well, and the company was in financial difficulty by 1991. The Baldwins brought in Vermont business strategist Stephen Morris, who advised them to focus on a particular niche, sustainable living, and to build up a backlist that would keep selling over the years. He also negotiated a partnership with the Real Goods Trading Company, a California-based company whose customers were interested in living off the grid or with a low environmental impact, in which Real Goods bought Chelsea Green's books at steep discounts and then marketed them through their catalog, enabling them to reach a wider audience. Titles published by Chelsea Green in this area have included Alan Scott's *The Bread Builders: Hearth Loaves and Masonry Ovens*, Sandor Katz's *Wild Fermentation*, and Athena Swentzell Steen, Bill Steen and David Bainbridge's *The Straw Bale House*. First published in 1994, *The Straw Bale House* proved to be one of the company's best-selling books in their sustainable living list, with 100,000 copies sold over the next five years, even though there were only between 1,000 and 2,000 straw bale houses in the United States at the time. Morris became Chelsea Green's CEO in 1998, as Ian Baldwin had begun pursuing a career as an artist and was increasingly involved in founding the non-profit Marion Institute. When Morris stepped down as CEO in 2002, Margo Baldwin took over the post. Under Margo Baldwin, Chelsea Green increasingly broadened their range to encompass books on progressive politics and environmental issues, a process that had already begun in 1992 with the publication of *Beyond the Limits*.

They have since published George Lakoff's *Don't Think of an Elephant*, Naomi Wolf's *The End of America*, and Robert Kuttner's *Obama's Challenge*, all of which made *The New York Times* bestseller list. Other books published by Chelsea Green in this area have included Diane Wilson's *An Unreasonable Woman* and Edward Hoagland's *Sex and the River Styx*, which won the 2012 John Burroughs Medal for Distinguished Natural History Book. In 2008, Chelsea Green's pre-publication of *Obama's Challenge* drew protest from some independent and chain book sellers. Unable to print it before the 2008 Democratic National Convention, Chelsea Green made an exclusive agreement with Amazon to release it on a print-on-demand basis for two weeks in August and distributed discount vouchers to the convention delegates. In retaliation, Barnes & Noble said they would substantially reduce their 10,000-copy order and would sell the book only via their website, not in their stores. The book was released to retailers in September in an initial print run of 75,000 copies, which Chelsea Green said was the largest in their company's history. In 2012, the company began transferring the majority of its ownership to its employees through an employee stock ownership plan. Three years later, 78% of Chelsea Green's stock was owned by its employees, with the Baldwins retaining the remaining 22%. In 2014, their 30th anniversary year, the company published *The Chelsea Green Reader*, an anthology of excerpts from books they had published during their first 30 years, encompassing poetry, fiction, memoir and biography, nature, travel, food and food culture, and environmental and economic policy. In 2015 they published Jonathan Tasini's *The Essential Bernie Sanders*, the first book-length treatment of Bernie Sanders' political agenda. Chelsea Green's books for children include natural craft books, the *Gaia Girls* environmental fantasy series by Lee Welles, and Patrick's *Great Grass Adventure* (2017) by Joel and Rachel Salatin about a pigeon and a grass-farmer.

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2015

**DER GEPLÜNDERTE PLANET, DIE ZUKUNFT DES MENSCHEN IM ZEITALTER SCHWINDENDER  
RESSOURCEN: EIN BERICHT AN DEN CLUB OF ROME**

Ugo Bardi

Munich (Germany): Oekom Verlag GmbH

2013 (2014)



## SYNOPSIS

This report must be considered, as declared by Bardi himself in his own blog<sup>1</sup>, that this report whose English title is: "EXTRACTED, HOW THE QUEST FOR MINERAL WEALTH IS PLUNDERING THE PLANET: A REPORT TO THE CLUB OF ROME"; is the upgraded version of a previous Italian version book, edited by Bardi himself, called: "LA TERRA SVUOTATA : IL FUTURO DELL'UOMO DOPO L'ESAURIMENTO DEI MINERALI". Here follows some data to whom desire to retrieve this book:

**Author: Ugo Bardi; foreword by: Luca Mercalli; published by: Rome (Italy), Editori Riuniti University Press; released in: 2011; ISBN: 9788864730677; 295 pages; 333.85 Dewey Classification Code.**

As we dig, drill, and excavate to unearth the planet's mineral bounty, the resources we exploit from ores, veins, seams, and wells are gradually becoming exhausted. Mineral treasures that took millions, or even billions, of years to form are now being squandered in just centuries—or sometimes just decades. Will there come a time when world will actually run out of minerals. Debates already soar over how we are going to obtain energy without oil, coal, and gas. But what about the other mineral losses we face. Without metals, and semiconductors, how are we going to keep our industrial system running. Without mineral fertilizers and fuels, how are we going to produce the food we need. Ugo Bardi delivers a sweeping history of the mining industry, starting with its humble beginning when our early ancestors started digging underground to find the stones they needed for their tools. He traces the links between mineral riches and empires, wars, and civilizations, and shows how mining in its various forms came to be one of the largest global industries. He also illustrates how the gigantic mining machine is now starting to show signs of difficulties. The easy mineral resources, the least expensive to extract and process, have been mostly exploited and depleted. There are plenty of minerals left to extract, but at higher costs and with increasing difficulties. The effects of depletion take different forms and one may be the economic crisis that is gripping the world system. And depletion is not the only problem. Mining has a dark side—pollution—that takes many



UGO BARDI

Ugo Bardi (Florence, 23 May 1952) is an Italian chemist and academic. Professor at the University of Florence since 1992, he is the author of various contributions in various scientific sectors (chemistry, mathematical models of depletion of fossil energy resources). Scientific divulgator (also on the problems of climate change), he is very active on these issues as blogger and lecturer; his blog, Effect Resources (called Cassandra Effect until 2014), of which there is also the English language version Resource Crisis, is one of the most widely read among scientific blogs in Italian. Another of his blogs is hosted by Il Fatto Quotidiano. He is interested in resource depletion, systems dynamics, climate science and renewable energies. He has dealt with the peak of oil, publishing some volumes on this topic, also internationally, and is a member of the ASPO association and founder of its Italian section. His blogs also deal with issues relating to the climate, science communication, energy technologies and "hoaxes" in these areas. In 2013 he was also the author of the 33rd official report of the Club of Rome, first published in German. Very active lecturer and essayist, whose interventions are often taken from the national and international press, prof. Bardi has also presented reports on energy and environmental issues in international institutions, such as the European Parliament, and others. Among the mathematical models studied by prof. Bardi on the depletion of resources, in addition to Hubbert's model, probably the most cited in the literature is the so-called "Seneca effect", in cases where the phase of decline of a resource occurs faster than its growth. Prof. Bardi's contributions are often characterized by the wealth of historical and historiographic information in support of the context of the topics dealt with: a recurring theme, for example, are the motivations, both of historical order and of material resources, in the competition to the fall of the Roman Empire.



Oekom not only supplies information on sustainability and the protection of the environment through its publications. These issues are also of great importance in all management decisions in particular with respect to biodiversity. Oekom Verlag is the leading publisher for sustainability topics in German-speaking countries. Its nine journals, its rapidly growing booklist, its numerous brochures as well as its online media bring together more than 2500 authors, cooperation partners and promoters of all groups of society. With its unique network and its professional team the publisher concentrates specialist know-how and potential in order to realize sustainable initiatives and ideas. As a pioneer among publishing houses Oekom assures an ecological production of all its publications and a sustainable business life. The member of the 'Biodiversity in Good Company' Initiative audits and optimizes its environmental protection activities concerning the aspect of biodiversity conservation according to the Leadership Declaration. Oekom's sustainability representatives, working side by side with the business management, are responsible for safeguarding sustainability and are in control of the impact the business' activities have on biodiversity. Recycling paper certified with the eco label "Blue Angel" and cooperations with environmentally friendly printing companies are eco standards at Oekom. Furthermore, employees go on business trips by train (even at distances over 400 km), the company purchases green energy from a certified provider. Being one of Germany's first publishing houses to compensate for its CO2 emissions Oekom contributes actively to climate protection and therefore to the conservation of biological diversity by avoiding, reducing and compensating for harmful emissions. Taking over the role of a multiplier by disseminating information on sustainable publishing Oekom has started the initiative .. Green Publishing – New environmental standards for the publishing branch" („Nachhaltig Publizieren – Neue Umweltstandards für die Verlagsbranche") in 2011. As part of this, Oekom carried out two projects in cooperation with the ifeu – Institute for Energy and Environmental Research, the Institute for Ecological Economy Research (IÖW), Oekopol – Institute for Environmental Strategies as well as the Frankfurt Book Fair. Both projects were promoted by the Federal Environment Ministry. The new eco label "Blue Angel for sustainable printing products" (RAL-UZ 195) is the main outcome of these projects (for more information see <http://www.nachhaltig-publizieren.de>). Thus, Oekom has managed to establish business standards for the protection of biodiversity and the environment within the whole media industry. The publishing house itself leads by example and implements all matters of the initiative „Green Publishing".

Oekom-Verlag is a German specialist publisher for ecology and sustainability based in Munich. The publisher's declared goal is to implement and anchor the guiding principle of sustainability in society. The publishing program includes books, magazines and brochures that prepare the topic from different perspectives and for different target groups: from popular non-fiction books to specialist media for social-ecological research. The Oekom publishing house emerged from the "Communication Office for Ecology and Communication (oekom)" founded by Jacob Radloff in 1989. This was initially devoted primarily to the production and distribution of the journal political ecology. In 1993 the communication office was renamed "Gesellschaft für Ökologische Kommunikation mbH (oekom)", a publishing house for ecologically oriented publications. In the following years, six specialist journals were added, which were either taken over and redesigned or developed by the publishing house itself: ecological management, GAIA, 21, the environmental officer, ecology & agriculture and environment current. The environmental rating division, which was previously integrated into the company, was spun off into oekom research AG in 1996. In 2005, Oekom-Verlag launched a specialist book program in which around 30 to 40 scientific titles are published annually. In 2008 he launched a popular non-fiction program with around 15 titles per year. In 2013 the publisher published a bibliophile new edition of the work "Sylvicultura oeconomica" by Hans Carl von Carlowitz, originally published in 1713. The non-fiction is expanded to include the thematic focus on "Responsible Nutrition". The publisher is a member of the Börsenverein des Deutschen Buchhandels.

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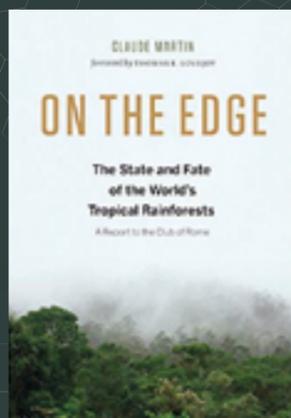
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*"CHANGE THE STORY,  
CHANGE THE FUTURE"*

*"ON THE EDGE"*

2015



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**ON THE EDGE, THE STATE AND FATE OF THE WORLD'S TROPICAL RAINFORESTS: A REPORT TO THE CLUB OF ROME**

Claude Martin

Vancouver (Canada), New York (USA): Greystone Books

2015

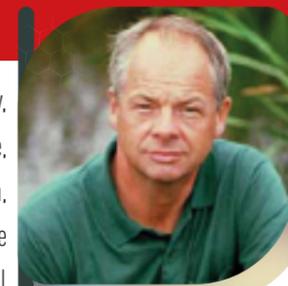
development aid  
environmental policy  
biosphere  
ECOLOGY  
BIODIVERSITY  
global and regional effort

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## SYNOPSIS

Tropical rainforests could largely disappear by the end of the century, warns a new report commissioned by the Club of Rome. The Club of Rome, celebrated for its influential early 1970s report on *The Limits to Growth*, commissioned former WWF International Director-General Dr Claude Martin to write *On the Edge: The State and Fate of the World's Tropical Rainforests*. The report finds that tropical rainforests, currently covering an area about the size of Australia spread across around 70 countries, could be dramatically reduced in size and planetary significance by "the fatal interactions" between deforestation, forest fragmentation and climate change. This would have devastating impacts on biodiversity, indigenous populations and the world's ability to adapt to and avoid the worst impacts of climate change. Martin's search for "the unvarnished truth" about why we are losing tropical forests has been acclaimed by many of the significant figures in conservation. Edward O. Wilson called the book "the definitive assessment of the single most important factor in the future of Earth's biodiversity", while Club of Rome Vice President and former IUCN head **Ashok Khosla** said it was "just in time". "Of all invasive species, none has been more destructive than us," noted David Suzuki. "Martin provides us with a description of the catastrophic effects of human activity and a description of some of the possible avenues away from this destructive path." Martin himself said "I am not a fatalist and I abhor statements that pretend all is lost – they are wrong. "But without concerted action, we may indeed lose it all. What we should never forget is that we humans are also part of our world's biodiversity, and the security of our descendants will not be independent from it." The realist in Martin also acknowledges that "there is no silver bullet to solve global environmental problems in a time of a globalized economy and weak governance systems". "Tropical rainforest conservation, the preservation of the world's biodiversity and climate change mitigation are intrinsically linked and no single measure, tool or policy will fix this fatal conundrum," he said. Some of the measures necessary to save the world's tropical rainforests are entirely what you would expect - extend the protection of intact forests, prevent deforestation and fragmentation of forest and engage in reforestation, prevent illegal logging and make legal logging sustainable. But others are less expected, if no less crucial. It is necessary for instance to protect the cultures and rights of indigenous peoples, engage with all stakeholders, reduce urban food waste, improve agricultural productivity and tackled corruption and poor governance. And then there are the urgent, overarching agendas that impact much more widely than tropics or forests. Preventing catastrophic climate change. Matching consumption to the earth's ability to provide.



CLAUDE MARTIN

Claude Martin (born 1945 in Zurich) is a Swiss biologist and environmentalist.

After studying biology at the University of Zurich, Claude Martin joined the WWF as a zoologist in the early 1970s and worked on field projects in central India to research the ecology of the endangered mountain deer in Kanha National Park and to develop proposals for its protection. After completing his doctorate in 1975 at the University of Zurich in 1975, he worked as a manager in Bia National Park in western Ghana until 1978. He did research on forest elephants, rainforests and primates. In 1980 he became managing director of WWF Switzerland. Under his leadership, the Swiss branch developed into one of the leading environmental protection organizations in the country. In 1990, Claude Martin joined WWF International as director of programs. In 1993 he was appointed Director General of WWF International. As Director General of WWF International, Claude Martin worked for twelve years on a targeted environmental protection policy and international partnerships, such as For example, the alliance for the protection of forests between the WWF and the World Bank, the Amazon Protection Area Program (Amazon Region Protected Areas Plan) and partnerships with business and industry. During his tenure, the WWF helped found the Forest Stewardship Council (FSC) and Marine Stewardship Council (MSC). Claude Martin represented the WWF in advisory bodies at the highest level and helped build a volunteer network in which young people can gain practical experience in environmental protection in one of the numerous WWF field projects. From 1995 to 2006 he was a member of the Council of the People's Republic of China for International Cooperation on Environment and Development (CCICED), an advisory body to the Chinese government. In 2016 Martin was awarded the Georg Ludwig Hartig Prize for his commitment to sustainable forestry.

The David Suzuki Foundation is a science-based environmental organization headquartered in Vancouver, British Columbia, Canada, with offices in Montreal and Toronto. It is a non-profit organization that is incorporated in both Canada and the United States, and is funded by close to 30,000 donors. The Foundation describes its goal as to: Work towards balancing human needs with the Earth's ability to sustain all life. Our goal is to find and communicate practical ways to achieve that balance. The mission of the foundation is to "protect nature's diversity and the well-being of all life, now and for the future" and their vision is that "we all act every day on the understanding that we are one with nature." Its origins lie in a 1989 "think-tank" retreat on Pender Island, British Columbia that was organized by David Suzuki and Tara Cullis. A dozen concerned individuals were invited, and inspired by those discussions the Foundation was incorporated on September 14, 1990. It officially opened its doors on January 1, 1991. It is a federally registered Canadian charity supported entirely by Foundation grants and donations. It does not accept any government funding, except from the National Sciences and Engineering Research Council of Canada.[2] It is also not a funding body for other organizations. Currently the Foundation employs roughly seventy-five staff members. The Foundation has four main program departments – Ontario and Northern Region, Quebec/Francophone, B.C. and Western Region, and Science and Policy. Together, they focus on the following areas: Protecting our climate — ensure that Canada is doing its fair share to avoid dangerous climate change and is on track to achieve a safe level of greenhouse gas emissions. Transforming the economy — make certain that Canadians can maintain a high quality of life within the finite limits of nature through efficient resource use. Protecting nature — work to protect the diversity and health of Canada's marine, freshwater, and terrestrial creatures and ecosystems. Reconnecting with nature — ensure that Canadians, especially youth, learn about their dependence on a healthy environment through outdoor education. Building community — engage Canadians to live healthier, more fulfilled and just lives with tips on building Earth-friendly infrastructure, making smart energy choices, using efficient transportation, and being mindful of the products, food and water we use.

Greystone Books is a Vancouver, British Columbia-based publisher of nonfiction books that publishes in the U.S., Canada, and the U.K. The company was established in 1993 as an imprint of Douglas & McIntyre under founding publisher Rob Sanders and has been an independent publisher, Greystone Books Ltd., since 2013. After its parent company D&M Publishers "filed a Notice of Intention to make a proposal under the provisions of the Bankruptcy and Insolvency Act," Greystone Books was revived under the new ownership of partners Rob Sanders, who returned to the role of publisher,[3] and Rodger Touchie, president of Victoria-based Heritage House Publishing. Greystone Books was recognized in April 2017 by Publishers Weekly, an industry trade magazine, as one of the fastest-growing publishers in North America. Since it began publishing, Greystone Books has released more than 300 nonfiction titles in subjects such as natural history, the environment, science, health, outdoors, sport, and popular culture. Greystone Books began a partnership with the David Suzuki Foundation in 1994 and later with the David Suzuki Institute. The environmental nonfiction books they have published together include *The Sacred Balance* (1997) and *Letters to My Grandchildren* (2015) by David Suzuki, and *Tar Sands* (2010) by Andrew Nikiforuk. In "The 150 Bestselling Canadian Books of the Past 10 Years," an article from the CBC in celebration of Canada 150. The book was created in collaboration with The Calgary Herald and has sold over 55,000 copies. Greystone has also published several books by frequent Canadian Geographic contributor Candace Savage, including *Bird Brains* (1995), *Prairie* (2004), and *A Geography of Blood* (2012), which won the 2012 Hilary Weston Writers' Trust Prize for Nonfiction. The recent well-known title from Greystone Books is *The Hidden Life of Trees* by German forester and author Peter Wohlleben, which earned a place on the New York Times Bestseller list in 2016.

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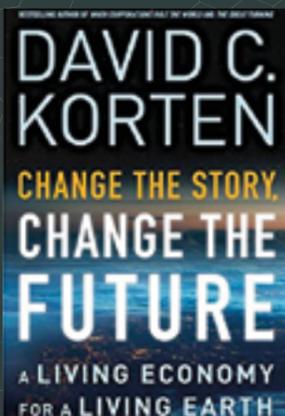
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**CHANGE THE STORY, CHANGE THE FUTURE;** A LIVING ECONOMY FOR A LIVING EARTH:  
A REPORT TO THE CLUB OF ROME

David C. Korten

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2015

ecotheology politics history  
economic growth: critical aspects  
RELIGIONS  
HUMAN ECOLOGY  
HOLISM economics: religious aspects  
business regional disparities

## INDEX of the report

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- Chapter 1: Our Story Problem
- Chapter 2: Our Quest to Know
- Chapter 3: A Brief History of Story Politics
- Chapter 4: Living Universe
- Chapter 5: Children of a Living Earth
- Chapter 6: Making a Living
- Chapter 7: Enslaved by Corporate Robots
- Chapter 8: Economics for a Living Household
- Chapter 9: A Living Economy for a Living Earth
- Chapter 10: Own the Story, Own the Future

## SYNOPSIS

Change the Story, Change the Future. We humans live by stories, says David Korten, and the stories that now govern our society set us on a path to certain self-destruction. In this profound new book, Korten shares the results of his search for a story that reflects the fullness of human knowledge and understanding and provides a guide to action adequate to the needs of our time. Korten calls our current story Sacred Money and Markets. Money, it tells us, is the measure of all worth and the source of all happiness. Earth is simply a source of raw materials. Inequality and environmental destruction are unfortunate but unavoidable. Although many recognize that this story promotes bad ethics, bad science, and bad economics, it will remain our guiding story until replaced by one that aligns with our deepest understanding of the universe and our relationship to it. To guide our path to a viable human future, Korten offers a Sacred Life and Living Earth story grounded in a cosmology that affirms our conditions of its own existence. Offering a hopeful vision, Korten lays out the transformative impact adopting this story will have on every aspect of human life and society. Korten does not make his technically philosophical ideas explicit. However, we in the process community who consider explicit metaphysical change to be important, claim him as a co-worker, and we have found close collaboration easy and smooth. Stories are about events. For us, events are the deepest reality of the actual world. Every event is itself a microcosmic process and many of them are organized into larger events that call for expression in stories. In reacting against the dead world of the economist, Korten stresses that we find ourselves in a living world. Whiteheadians emphasize, with Thomas Berry, that the world is not a society of objects but a community of subjects. What is intended by Korten and by process thinkers is virtually the same. Korten draws out the implications with great relevance and directness. Life should be about life, not about money. We are reminded of Jesus' statement that one cannot serve both God and money. It may take process folk a bit longer to get there, but the process community certainly agrees. We are proud to claim Korten's vision and his book as expressing our convictions as well as his. That we can do so is important for us. We have never produced a book that had a chance of being a best seller. It is unlikely that we ever will. Korten's book does have a chance. Its style is excellent. Many thoughtful people in the world outside academia are raising the questions to which this book provides answers – the right answers – in a way they can appreciate. As a member of the Club of Rome, Korten is visible in wide reaches of society. Let us do all we can to spread the word. This word has great saving potential.



DAVID C. KORTEN

David C. Korten (born 1937) is an American author, former professor of the Harvard Business School, political activist, prominent critic of corporate globalization, and "by training and inclination a student of psychology and behavioral systems". His best-known publication is *When Corporations Rule the World* (1995 and 2001). In 2011, he was named an Utne Reader visionary. David Korten was born in Longview, Washington, in 1937 and is a 1955 graduate of its R. A. Long High School. He received a master of business administration and Ph.D. from the Stanford University Graduate School of Business. He said: "My early career [after leaving Stanford in 1959] was devoted to setting up business schools in low-income countries—starting with Ethiopia". He served during the Vietnam War as a captain in the United States Air Force, undertaking U.S.-based teaching and organizational duties; and for five and a half years was a visiting professor in the Harvard Business School. While at Stanford in the 1950s, he married Frances Fisher Korten, with whom he now lives on Bainbridge Island near Seattle, Washington. Korten served for five and a half years as a visiting associate professor of the Harvard University Graduate School of Business where he taught in Harvard's middle management, M.B.A., and doctoral programs. He also served as the Harvard Business School adviser to the Nicaragua-based Central American Institute of Business Administration. He subsequently joined the staff of the Harvard Institute for International Development, where he headed a Ford Foundation-funded project to strengthen the organization and management of national family planning programs. In the late 1970s, Korten moved to Southeast Asia, where he lived for nearly fifteen years, serving as a Ford Foundation project specialist and, later, as Asia regional adviser on development management to the United States Agency for International Development (USAID), which involved him in regular travels to Pakistan, India, Bangladesh, Sri Lanka, Thailand, Indonesia, and the Philippines. Korten has written that he became disenchanted with the official aid system and devoted his last five years in Asia to "working with leaders of Asian non-governmental organizations on identifying the root causes of development failure in the region and building the capacity of civil society organizations to function as strategic catalysts of national- and global-level change". He formed the view that the poverty, growing inequality, environmental devastation, and social disintegration he was observing in Asia also was being experienced in nearly every country in the world, including the United States and other "developed" countries. He also concluded that the United States was actively promoting—both at home and abroad—the very policies that were deepening the resulting global crisis.

Berrett-Koehler was founded in 1992 by Steven Piersanti, former CEO of Jossey-Bass Publishers (now a division of John Wiley & Sons), who envisioned a different kind of publishing company. The purposes of this Constitution are to clarify and codify what "Berrett-Koehler" stands for, to detail the commitments that all BK Organizations agree to embrace, and to define the relationships among the various BK Organizations. It is also intended to increase the probability that BK's unique mission, values, and commitments will be put into daily practice in current and future BK organizations and will continue to be followed by succeeding generations of BK community members. Another purpose is to establish baseline requirements that new organizations (such as a potential Berrett-Koehler consulting company that is under discussion) would need to meet in order to become BK organizations and thus have the right to use the Berrett-Koehler name. It seek to create organizations and communities that embody these values in their daily functioning while also promoting these values in many ways around the world. This congruence—between ends and means, between is the core of the publishing house.

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*"TO CHOOSE OUR FUTURE"*

*"REINVENTING PROSPERITY"*

2016



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**To CHOOSE OUR FUTURE**, A REPORT TO THE CLUB OF ROME

Ashok Khosla

New Delhi (India): Academic Foundation

2016

human environment

**INDIAN SUBCONTINENT**

welfare

alternative  
strategies**SUSTAINABLE DEVELOPMENT**

Since its birth in 1947, India has made enormous progress. More people than ever before in our history have longer, healthier and more fulfilling lives. Rapid gains in agriculture, industry, energy production and infrastructure have brought the benefits of modern science to a large segment of the population. Yet, we also have more people who are poor, hungry and deprived than ever before. Presented in highly illustrative style, using plenty of infographics, *To Choose Our Future* describes alternative development strategies that can enable us to pass on to our children - all our nation's children - a more prosperous, vibrant and sustainable India than today. Considering what said in the previous lines, the report produced to the CoR by Ashok Khosla is about Indian subcontinent and the possibility to pursuit alternative development strategies.



ASHOK KHOSLA

Ashok Khosla is an Indian environmentalist currently based in Delhi. He received his PhD in experimental physics from Harvard University with a doctoral dissertation in the hyperfine structure of hydrogen halide isotopes. He is the co-chair of United Nations Environment Programme's International Resource Panel (UNEP-IRP) and is internationally known for pioneering and contributing to sustainable development. He is recognized for popularizing the word and concept of "sustainability" in international forums. He was actively involved in various projects that defined the environmental views and activities of institutions such as UNEP, UNESCO, UNU, the U.S. Academy of Sciences, IUCN, and the ICSU/SCOPE. He was also the President of IUCN (2008 to 2012) and Club of Rome (2005 to 2012). Ashok Khosla is member of the World Future Council. Khosla was born in Lahore on 31 March 1940. His father was a university professor and diplomat, and his mother was a college lecturer. Khosla's family moved to Delhi from Lahore in 1947 after the Partition of India. He pursued an M.A. in Natural Sciences from Peterhouse, Cambridge University. Additionally, he completed and received his PhD in experimental physics at Harvard University. In 1965, he helped design and taught the first undergraduate course on environment at the University as an assistant to Professor Roger Revelle. Khosla was exposed to the issues of sustainable development during his time as a graduate student at Harvard University, while studying experimental physics. In 1964, Khosla met Professor Roger Revelle at the Population Center at Harvard. Revelle, who had been the head of the Scripps Institute of Oceanography and science advisor to President John F. Kennedy, was a pioneer in applying science to issues of social relevance. This was a meeting of minds and Khosla quickly became a student and collaborator of Professor Revelle. They worked together closely for over a decade exploring the relationships between people, their resources, and the environment. Khosla helped Revelle design and teach the groundbreaking undergraduate course, "Natural Sciences 118." This eventually led them to jointly publish *The Survival Equation: Man, Resources, and His Environment* which was the first definitive textbook on the subject. At the time, much of the environmental literature available (for example, authors such as Paul Ehrlich and the Paddock Brothers) projected an apocalyptic future, whereas the message of *The Survival Equation* was one of hope. Its view was that while it is certainly true that forces and pressures to destroy the planet's life support systems do exist, so does the knowledge to reorient the behavior of economies and prevent this from happening. The course and the book itself, had a considerable influence on the field of resource management and the environment.

**Development Alternatives**

eco-solutions for people and the planet

Development Alternatives (DA), the world's first social enterprise dedicated to sustainable development, is a research and action organisation striving to deliver socially equitable, environmentally sound and economically scalable development outcomes. Our green technology innovations for habitat, water, energy and waste management, which deliver basic needs and generate sustainable livelihoods, have reduced poverty and rejuvenated natural ecosystems in the most backward regions of India. Since inception DA is dedicated to systemic transformation. It started by analysing the changes that were needed in the existing societal and economic order to ensure that the wellbeing of the marginalised and the health of the environment is maintained and regenerated, for long into the future. Our activities broadly cover three primary areas that underlie any sustainable development process: the design and large-scale dissemination of appropriate technologies, rational environmental management systems, and equitable people-oriented institutions and policies. We innovate eco-solutions to help meet the basic needs of all and work with partners, including government bodies, local entrepreneurs and civil society to market these in a commercially viable and an environmentally friendly manner to an ever-growing body of consumers. Empowering Communities through multi-stakeholder action for:

- Institution Development with a focus on women and marginalised groups
- Basic Needs Fulfillment more specifically habitat, water, energy
- Creating Green Jobs at a large scale through promotion and support of:
- Employment Skills for Green Job Creation
- Enterprise Creation for Social Enterprises
- Promoting and advocating Low Carbon Pathways for Development through the design and demonstration of:
- Natural Resources Management Models
- Clean Technology Solutions

Thus, a conglomerate called Development Alternatives Group was set up, comprising five organisations. The Non-Profit Societies, such as the flagship entity Development Alternatives and TARA (Technology and Action for Rural Advancement) are responsible for research, innovation, policy, incubation of green businesses and technical support services.



Academic Foundation (AF), based in New Delhi, is India's leading independent publisher of academic/scholarly books in Social Sciences, specialising in Economics—Development Economics and Indian Economy in particular, and allied subjects. Besides its impressive author list, Academic Foundation is credited with publishing numerous works with large international organisations, Government of India, national think-tanks and NGOs of repute. AF has also published some prestigious coffee-table books, trade titles, a few textbooks and general reference books. Academic Foundation was founded in 1990 by the economist couple, Raj and Uma Kapila, both alumni of Delhi School of Economics. After the initial struggle-period of 'setting-up' which got extended nearly upto 1995, with the support of their two sons, the Kapilas were able to finally anchor Academic Foundation as a non-funded self-sustaining publishing house that strived to bring out academic works of quality. Uma and Raj Kapila continued to contribute significantly in the commissioning and editorial aspects, even authoring/editing numerous works together, while their sons Rituraj and Sanu looked more into the operational and marketing side of publishing. As years went by, more manuscripts competed for publication at AF, staff grew, newer systems and policies came into place. What remained unchanged, however, was the passion and the commitment that went into each and every publishing project. It was evidently reflected in book after book that bore the AF imprint. Academic Foundation steadily progressed and made its hallmark on the publishing landscape in India.

Today, Academic Foundation is run and managed by brothers Rituraj Kapila and Sanu Kapila who are both Directors in the organisation. With over 1,000 titles that include numerous globally acclaimed publications, a long list of bestsellers, prestigious coffee table volumes, enviable list of authors, publishing tie-ups with some of the leading organisations of the world, well established trade network throughout India and effective distribution arrangements in place for overseas markets, especially US and UK, frequently organised high-profile book launch events, media reviews and critical acclaim—have all together led Academic Foundation to steadily grow in stature and earn respect in the international publishing community. Keeping pace with time and technology, Academic Foundation is all set to embrace the digital publishing revolution that include e-book offerings and engaging on the social media networks. Consequently, for many publishing projects, AF is now the preferred choice of authors and institutions alike.

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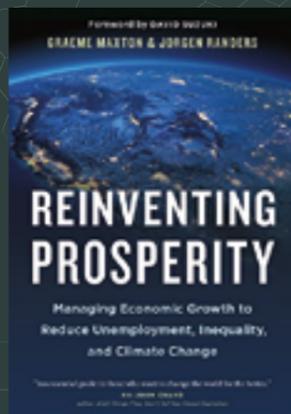
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Graeme Maxton, Jørgen Randers

Vancouver (Canada); Berkeley (USA): Greystone Book

2016

employment CLIMATE CHANGE MITIGATION  
**ECONOMIC DEVELOPMENT AND**  
 regional disparities **GROWTH** welfare  
 equality: economic aspects **ECONOMIC THEORY**

The biggest challenges facing human wellbeing today are widening income inequality, continuing global poverty, and environmental degradation. Luckily, these problems are simple to solve in theory. In practice, however, they are much harder to solve, because we are required to come up with solutions that are acceptable to a political majority in the rich world. Most of the commonly proposed solutions are simply not acceptable to most people. Many of these proposed solutions like stopping the use of fossil fuels require a sacrifice today in order to obtain an uncertain advantage in the far future. Therefore they are politically infeasible in the modern world, which is marked by relatively short term thinking. In *A Prosperous Planet*, Graeme Maxton and Jørgen Randers provide a new approach altogether through thirteen recommendations which are both politically acceptable and which can be implemented in the current period of slow economic growth around the world. *A Prosperous Planet* solves the forty year old growth/no-growth standoff, by providing a solution to income inequality, continuing global poverty and climate change, a solution that will provide for economic growth but with a declining ecological footprint. *A Prosperous Planet* shows us how to live better on our finite planet and in ways we can agree on.



GRAEME MAXTON

Graeme Maxton is a British economist and writer. He is the author, or co-author, of five books on climate change, the economic system and the automotive industry. Maxton was born in Edinburgh,

Scotland and currently lives in Asia. Until 2018, he was the Secretary General of the Club of Rome based in Switzerland. He was previously regional director of the Economist Intelligence Unit in Asia, worked for Booz Allen Hamilton, Citigroup and American Express and was a visiting professor at Cass Business School between 1988 and 2002.

Works Maxton is the author of *Change! Warum wir eine radikale Wende brauchen* (Komlett-Media 2018). The book examines the link between the economic system and climate change. It has been published in German, Slovak and English. He is also co-author with Jørgen Randers of *Reinventing Prosperity* (Greystone 2016) (German edition *Ein Prozent ist genug*, oekom Verlag 2016). The book has also been published in Ukrainian and Italian.

Maxton is the sole author of *The End of Progress, How Modern Economics Has Failed Us* (Wiley, 2011) which was nominated for the Financial Times and Goldman Sachs Business Book of the Year Award. The book has been translated into Chinese, Czech, Romanian and German (*Die Wachstumslüge*), where it became a Spiegel top-20 best seller. Maxton's books on the automotive industry, co-written with Dr John Wormald, include *Time for a Model Change*, which was Cambridge University Press's Feature Book of the Year in 2004 and *Driving Over a Cliff*, (Addison Wesley Longman, 1995), also nominated for the Financial Times Business Book of the Year Award.

Maxton is a regular contributor to the South China Morning Post and a number of other online and print publications.



JØRGEN RANDERS

Jørgen Randers (born 22 May 1945) is a Norwegian academic, professor of climate strategy at the BI Norwegian Business School, and practitioner in the field of future studies. His

professional field encompasses model-based futures studies, scenario analysis, system dynamics, sustainability, climate, energy and ecological economics. He is also a full member of the Club of Rome, a company director, member of various not-for-profit boards, business consultant on global sustainability matters and author.



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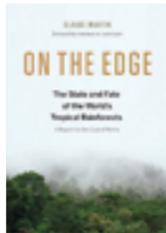


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### Graeme Maxton:

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*"COME ON!"*

*"THE SENECA EFFECT"*

2017





ISBN: 9781493974191

220 pages

illustrations/chart/grafic

XIV, 23 cm

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other edition

Munich (Germany): Gütersloh  
Gütersloher Verlagshaus  
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2017, 2018, 2019

Firenze, Milano (Italy):  
Giunti 2018

Bilbao (Spain): Deusto, 2018

Munich (Germany): Pantheon,  
2019

“COME ON!, CAPITALISM, SHORT-TERMINISM, POPULATION AND THE DESTRUCTION  
OF THE PLANET: A REPORT TO THE CLUB OF ROME”

Ernst Ulrich von Weizsäcker, Anders Wijkman

New York (USA), Springer

2017

employment AGENDA 2030  
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AND GROWTH  
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equality: economic aspects  
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### SYNOPSIS

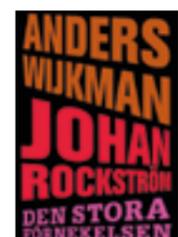
Come On! is an important initial attempt to describe a “world in disarray” and unsustainable trends in broader-than-usual terms, outdated thinking that underlies and exacerbates these trends, and the many elements of a “New Enlightenment” action platform for sustainability. It is an important frontier for the Club of Rome and a platform for its work in the decades ahead, to be informed by subsequent editions. The report represents a great amount of work, and refinements will be no easy task. Much thought is needed as to what to include, what to emphasize (and perhaps prioritize), what to shorten or omit, and how to present and publicize so this complex message gets out to various audiences. The 18 trends that begin the book could be expanded to include sea level rise, water supply, methane release from thawing Arctic ice and tundra, chemical pollution, inequality, consumption, migration, land scarcity, cyber-security, terrorism, corruption and expensive upgrading of nuclear arsenals. The second chapter on outdated philosophies/ideologies in economics and politics could be expanded to consider the radically changing information environment that impedes serious rethinking. Chapter Three on numerous remedies begs consideration of even more. It could include systems thinking, foresight, improved governance capacity at all levels, international law, waste management, the greening of business, promoting human security, many other relevant sustainability groups, other overviews, etc. The downside of considering these additions is trend and platform overload. To cope with this, both trends and remedies could be arranged in 5 or 6 groups, e.g. Environment, Population, Economy/Finance/Business, Politics/Security, and Technologies. And an introductory “top ten” key messages could sum up the report, as in Big World, Small Planet.<sup>14</sup> The Come On! synthesis is a significant beginning. Any integrative project is like preparing a stew and adding proper quantities and varieties of vegetables, meat, and spices. There is no one way to do it, but some stews are far tastier and nutritious than others! Time is short and much work remains to be done in the next decade. C'mon, let's get to it! A Report to the Club of Rome. Ernst Ulrich von Weizsäcker and Anders Wijkman (CoR Co-Presidents), with 34 more CoR Members. New York: Springer Science, Jan 2018, 220.



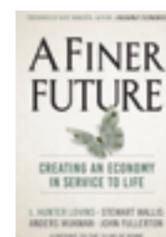
ANDERS WIJKMAN

Anders Ivar Sven Wijkman (born 30 September 1944 in Stockholm) is a Swedish politician (Swedish: Kristdemokraterna, KD) who was Member of the European Parliament from 1999 to 2009. As member of the European Parliament, he focused on issues related to climate change, environment, development cooperation and humanitarian affairs. He is a member of the Christian Democrats, part of the European People's Party - European Democrats group. He sat on

ALSO AUTHOR OF THE FOLLOWING REPORTS



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ERNST U. VON WEIZSÄCKER

Ernst Ulrich von Weizsäcker (born 25 June 1939 in Zürich, Switzerland) is a German scientist and politician (SPD). He was a member of the German Bundestag and currently serves as co-president of the Club of Rome jointly with Anders Wijkman. A member of the prominent Weizsäcker family, he is the son of physicist and philosopher Carl Friedrich von Weizsäcker and nephew of former German president Richard von Weizsäcker. Since 1969, he is married to Christine von Weizsäcker. Together, they have five children, including MEP Jakob von Weizsäcker. Weizsäcker spent his childhood in Zurich and Göttingen. In 1966, he graduated from Hamburg University with a Diplom in physics. In 1968, he obtained his PhD in biology from Freiburg University. In 1972, he was appointed full professor.

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Springer

Springer Science+Business Media or Springer, part of Springer Nature since 2015, is a global publishing company that publishes books, e-books and peer-reviewed journals in science, humanities, technical and medical (STM) publishing. Springer also hosts a number of scientific databases, including SpringerLink, and SpringerImages. Book publications include major reference works, textbooks, monographs and book series; more than 168,000 titles are available as e-books in 24 subject collections. Springer has major offices in Berlin, Heidelberg, Dordrecht, and New York City. On 15 January 2015, Holtzbrinck Publishing Group / Nature Publishing Group and Springer Science+Business Media announced a merger. The transaction was concluded in May 2015 and a new joint venture company, Springer Nature, was formed, with Holtzbrinck having the majority 53% share and BC Partners retaining 47% interest in the company. Julius Springer founded Springer-Verlag in Berlin in 1842 and his son Ferdinand Springer grew it from a small firm of 4 employees into Germany's second largest academic publisher with 65 staff in just 30 years. In 1964, Springer expanded its business internationally, opening an office in New York City. Offices in Tokyo, Paris, Milan, Hong Kong, and Delhi soon followed. The academic publishing company Bertelsmann-Springer was formed after Bertelsmann bought a majority stake in Springer-Verlag in 1999. The British investment groups Cinven and Candover bought BertelsmannSpringer from Bertelsmann in 2003. They merged the company in 2004 with the Dutch publisher Kluwer Academic Publishers which they bought from Wolters Kluwer in 2002, to form Springer Science+Business Media. Springer acquired Humana Press in 2006. Springer acquired the open-access publisher BioMed Central in October 2008 for an undisclosed amount. In 2009, Cinven and Candover sold Springer to two private equity firms, EQT Partners and Government of Singapore Investment Corporation. The closing of the sale was confirmed in February 2010 after the competition authorities in the USA and in Europe approved the transfer. In 2011, Springer acquired Pharma Marketing and Publishing Services (MPS) from Wolters Kluwer. In 2013, the London-based private equity firm BC Partners acquired a majority stake in Springer from EQT and GIC for \$4.4 billion. In 2014, it was revealed that sixteen papers in conference proceedings published by Springer had been computer-generated using SCIdgen. Springer subsequently retracted all the papers from these proceedings. IEEE had removed more than 100 fake papers from its conference proceedings. In 2015, Springer retracted 64 papers it had published after it was found that they had gone through a fraudulent peer review process.

During 17 October 2018 and 18 October 2018 the Club of Rome has celebrated his 50th anniversary. During those two days, next to the Vatican City. In that occasion Mr. Wijkman has presented through some slides this reports.

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[https://books.google.it/books?id=nWA-DwAAQBAJ&printsec=frontcover&dq=inauthor:%22Anders+Wijkman%22&hl=it&sa=X&ved=0ahUKEwjkr\\_n2kqnnAhVy5aYKHdJGBZMQ6AEILjAA#v=onepage&q&f=false](https://books.google.it/books?id=nWA-DwAAQBAJ&printsec=frontcover&dq=inauthor:%22Anders+Wijkman%22&hl=it&sa=X&ved=0ahUKEwjkr_n2kqnnAhVy5aYKHdJGBZMQ6AEILjAA#v=onepage&q&f=false)

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*"A FINER FUTURE"*

*"TRANSFORMATION IS FEASIBLE"*

2018



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60 pages

illustrations/chart/grafic/  
diagrams

XXXII, 30 cm

english

**TRANSFORMATION IS FEASIBLE, How to Achieve the Sustainable Development Goals within Planetary Boundaries: A Report to the Club of Rome for its 50 Years Anniversary 17 October 2018**

**Jørgen Randers, Johan Rockström, Per Espen Stocknes,  
Ulrich Golüke, David Collste, Sarah Cornell**

2018

MATHEMATICAL MODELS  
**TRANSFORMATION: SCENARIOS**

food production    population increase    FUTURE SOCIETY  
AGENDA 2030

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## 7. Acknowledgements

## 8. References

## SYNOPSIS

The dual adoption of the UN Sustainable Development Goals (SDGs) together with the Paris Climate Agreement, both in 2015, represents a global turning point. We have never before had such a universal development plan for people and planet. For the first time in human history the world has agreed on a democratically adopted roadmap for humanity's future, which aims at attaining socially inclusive and highly aspirational socio-economic development goals, within globally defined environmental targets. Humanity's grand ambition is surely to aim at an inclusive and prosperous world development within a stable and resilient Earth system. This human quest is to attain as many of the SDGs as possible by 2030, and then continue following a sustainable global trajectory well beyond the next 12 years. This report has identified one such possible, smarter pathway to success through five transformative and synergistic actions. It looks very apt in this case to stress the fact that this report, due to its availability as a downloadable resource is not classified as book or as the report that have been discussed until this point. This consideration lead to underline that the number of Dewey classification on the left top corner of the previous page is arbitrariamente attribuito by the author of this thesis. The are basically two reasons in support of this choice: avoiding black spaces and provide continuity to the flow of work. the second and even more important is given by the necessity of the statistic purposes represented in the second chapter of this work.



JOHAN ROCKSTRÖM

Johan Rockström (born 31 December 1965) is professor at and former executive director of the Stockholm Resilience Centre at Stockholm University. He is a strategist on

how resilience can be built into land regions which are short of water, and has published over 100 papers in fields ranging from practical land and water use to global sustainability. Johan Rockström was Executive Director of the Stockholm Environment Institute from 2004-2012. Rockström is also author of the following reports, check:



SARAH CORNELL

Ulrich Golüke has spent his professional life in business, academia, NGOs and as a freelancer. He is a system dynamicist by training has worked for

over thirty years with systems modeling (in shipping, health care, real estate, economics and climate change). He has taught system dynamics courses and supervised MSc students. He also has been working with scenarios, starting in the 1990ties with the World Business Council for Sustainable Development as the Director of the Scenario Unit and since 2000 as free-lancer. Clients have included numerous Fortune 100 companies, universities, and foundations. He teaches scenario planning at various universities. He has written Generous Respect: The next story of humanity in 2018 and Scenarios: How to create them and Why you should in 2016. Ulrich Golüke was born in Neuwied, Germany. He have since lived in a few countries and helped raise a few children. Over the years he has had the fortune to work with some of the finest colleagues one can wish for. Bill Shaffer, Barry Richmond, Dennis Meadows and Jorgen Randers taught him the system dynamics, Ged Davis and Betty Sue Flowers exploratory scenarios.



### PER-ESPEN STOKNES

Per Espen Stoknes, a psychologist with PhD in economics, is a TED Global speaker, and serves as the director of Centre for Green Growth at the Norwegian Business School. An experienced foresight facilitator and academic, he's also serial entrepreneur, including co-founding clean-tech company GasPlas. Author of several books, among them Learning from the Future (2004, in Norwegian) Money & Soul (2009) and the "Outstanding Academic Title of 2015" award winning book: What We Think About When We Try Not To Think About Global Warming (2015). Per Espen has the last year served as member of Norwegian Parliament. Are humans inevitably short-term? This question has guided Per Espen Stoknes's research over the last decades, from psychology through economics to strategic business scenarios. But gradually, he's reframed it into a more positive twist: Under what conditions will humans take action for the long term in their everyday behaviors. Stoknes works as the director for Center for Green Growth at the Norwegian Business School in Oslo. He's received several "Best Professor" awards for his original teaching style. As both an economist, author and psychologist, he's been working closely with organizational and business leaders throughout Scandinavia, the European Union as well as the Americas and Asia. In 2017-2018 he's representing the Green Party in the Norwegian parliament. His latest book is What We Think About When We Try Not To Think About Global Warming, which won the American Libraries Association's "Outstanding Academic Title" award for 2015. Educated as a psychologist at the University of Oslo, Stoknes has since supplemented this with studies in organizational theory, philosophy and a PhD in economics. He has worked both as a clinical psychologist and strategy consultant, bringing imagination and creative expression into these spheres. A popular speaker throughout Scandinavia, Stoknes lives in central Oslo. But he heads off to northern mountains or to his forest cabin in order to feel the free winds and get awe-struck as often as occasion allows.



### DAVID COLLSTE

Collste is part of the project 'AdaptEcon: Adapting to a new economic reality'. AdaptEcon is an Innovative Training Network (ITN) funded by the EU in the frame of H2020 and the Marie Skłodowska Curie Actions. Collste's part of the project focuses on integrated assessment tools and modeling for implementation of the Sustainable Development Goals (SDGs). As part of the AdaptEcon project, Collste is working towards a joint PhD from Stockholm Resilience Centre, Stockholm University (Sustainability Science) and CERDI at Université Clermont Auvergne (Economics), in Clermont Ferrand, France. Collste is also working with SwedBio's African Dialogues on The World In 2050. Collste has worked within the associated negotiation processes at the United Nations on the 2030 Agenda and

SDGs for the European Union. Before joining Stockholm Resilience Centre, he was product manager for insurance and finance at the Swedish Society for Nature Conservation (Natuskyddsföreningen). Collste has a background in System Dynamics and holds a joint European Master in System Dynamics from the University of Bergen and the New University of Lisbon. He also holds an MSc in Business Administration from Radboud University (Netherlands), an MSc in Political Sciences from Uppsala University and a BSc in Political Sciences with Economics as major from Uppsala University. Collste is a member of the Balaton Group - a global network for collaboration on systems thinking and sustainability. He is affiliated with the Millennium Institute where he has worked on the system dynamics-based model Threshold 21 iSDG. He is a member of the System Dynamics Society.



### SARAH CORNELL

Cornell leads a transdisciplinary team of researchers who aim to characterize the global 'safe operating space for humanity' in applicable ways. She jointly coordinates the international planetary boundaries research network PB-net. She contributes to the science-policy interface work of SwedBio. She teaches Challenges of the Anthropocene, an introduction to global change science and policy, in the SRC Master's programme. Cornell has a research background in marine and atmospheric chemistry. She obtained her PhD in 1996 from the University of East Anglia, UK, where she did postdoctoral research on the global nitrogen cycle before moving into transdisciplinary sustainability research. She worked on integrated approaches to environmental management, mainly of wetlands and coastal zones. Later she turned to issues of global environmental change and sustainability. She has combined her own research with international science coordination for several years, helping bridge various knowledge communities in environmental change science. And she has occasionally worked as a sustainability consultant, on issues ranging from local participatory processes for community planning up to global environmental risks. Cornell is involved in several forums where science interfaces with policy, business and wider society. She has served as a Trustee and Vice President of the international Institute of Marine Engineering, Science and Technology, a learned society and membership body for all marine professionals. She co-chairs the Executive Committee of IHOPE (Integrated History and Future of People on Earth), a Future Earth project. She co-convenes PB-net, an international network of policy-engaged researchers working to advance planetary boundaries science and operationalization. She is associate editor for the journal Environmental Science & Policy, and an editorial advisory board member of the Journal of Critical Realism. Throughout her career Cornell has championed university, national and EU initiatives to support women, working parents, and contract research staff working in science.



During 17 October 2018 and 18 October 2018 the Club of Rome has celebrated his 50th anniversary. During those two days, next to the vatican city CoR has held the anniversary for its foundation. In that occasion, it was presented "Come on!", a report produced just for the 50th anniversary, and moreover it was presented the current report "Transformation is feasible" by mr. Rockstrom. He presented the four scenarios contained in the report in a very significant talk, helped by interesting and graphically fascinating interactive slides.

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### JØRGEN RANDERS

Jørgen Randers (born 22 May 1945) is a Norwegian academic, professor of climate strategy at the BI Norwegian Business School, and practitioner in the field of future studies. His professional field encompasses model-based futures studies, scenario analysis, system dynamics, sustainability, climate, energy and ecological economics. He is also a full member of the Club of Rome, a company director, member of various not-for-profit boards, business consultant on global sustainability matters and author.

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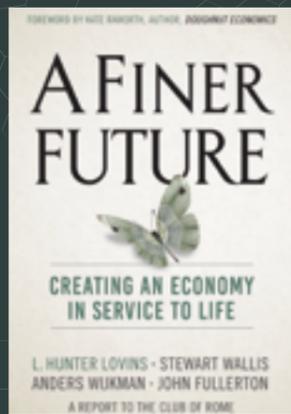
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- <https://www.bsl-lausanne.ch/people/ulrich-goluke/>



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Galaxia ?????????, 19????????

“A FINER FUTURE, CREATING AN ECONOMY IN SERVICE TO LIFE: A REPORT TO THE CLUB OF ROME”

L. Hunter Lovins, Stewart Wallis, Anders Wijkman,  
John Fullerton

Gabriola Island (Canada): New Society Publishers  
2018

employment sustainability: economic aspects  
**ECONOMIC DEVELOPMENT**  
AND GROWTH  
ECONOMIC THEORY  
regional disparities equality: economic aspects welfare  
CLIMATE CHANGE MITIGATION

SYNOPSIS

The blueprint for an inspiring regenerative economy that avoids collapse and works for people and the planet. Humanity is in a race with catastrophe. The future is facing global warming, 65 million migrants fleeing failed states, soaring inequality, and grid-locked politics. Or one of empowered entrepreneurs and innovators building a world that works for everyone.

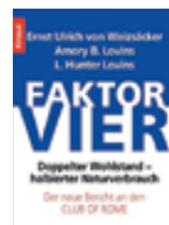
While the specter of collapse looms large, A Finer Future demonstrates that humanity has a chance – just – to thread the needle of sustainability and build a regenerative economy through a powerful combination of enlightened entrepreneurialism, technology, and innovative policy. The authors – world leaders in business, economics, and sustainability – gather the evidence, outline the principles of a regenerative economy, and detail a policy roadmap to achieving it, including: Transforming finance and corporations; Reimagining energy, agriculture, and the nature of how we work; Enhancing human well-being; Delivering a world that respects ecosystems and human community. Charting the course to a regenerative economy is the most important work facing humanity and A Finer Future provides the essential blueprint for business leaders, entrepreneurs, environmentalists, politicians, policymakers, and others working to create a world that works for people and the planet



L. HUNTER LOVINS

Hunter Lovins has worked as analysts, lecturers and consultants on energy, resource and security policy in over 30 countries jointly with his husband A. Lovins.

Their prophetic analyses caused Newsweek to place them among “the Western world’s most influential energy thinkers” and to include Amory among 28 people in the world “most likely to change the course of business in the 1990s”. Hunter Lovins has degrees in Law, Political Studies and Sociology and an honorary doctorate, and is a member of the California Bar. For six years she was ALSO AUTHOR OF THE FOLLOWING REPORTS, CHECK:



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ANDERS WIJKMAN

Anders Ivar Sven Wijkman (born 30 September 1944 in Stockholm) is a Swedish politician (Swedish: Kristdemokraterna, KD) who was Member of the European Parliament from 1999 to 2009. As member of the European Parliament, he focused

on issues related to climate change, environment, development cooperation and humanitarian affairs. He is a member of the Christian Democrats, part of the European People’s Party – European Democrats group. He sat on ALSO AUTHOR OF THE FOLLOWING REPORTS, CHECK:



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JOHN B. FULLERTON

John B. Fullerton is the founder and president of Capital Institute, “a collaborative working to explore and effect economic transition to a more just, regenerative, and

thus sustainable way of living on this earth through the transformation of finance.” Through the work of Capital Institute, regular public speaking engagements, and university lectures, John has become a recognized thought leader in the New Economy space generally, and the financial system transformation challenge in particular. John is the author of Regenerative Capitalism: How Universal Principles And Patterns Will Shape Our New Economy. John Fullerton is also a recognized “impact investment” practitioner as the principal of Level 3 Capital Advisors. Level 3’s direct investments are primarily focused on sustainable, regenerative land use, food, and water issues. Through both Capital Institute and Level 3, John brings a unique theory and practice approach to financial system transformation. Previously, John Fullerton was a managing director of JPMorgan where he worked for over 18 years. At JPMorgan, John managed various capital markets and derivatives business around the globe, then shifted focus to private investments and was subsequently the chief investment officer of LabMorgan through the merger with Chase Manhattan before retiring from the bank in 2001.

Following JPMorgan, and after experiencing 9-11 first hand, John spent years embarked on more entrepreneurial ventures as an impact investor while engaging in deep study of our multiple interconnected systemic crises that led to the founding of Capital Institute, officially launched in 2010.

John Fullerton was a member of the Long Term Capital Oversight Committee that managed the \$3.6 Billion rescue of the distressed hedge fund in 1998. He is a co-founder and director of holistic ranch management company Grasslands, LLC, a director of New Day Farms, Savory Institute, and the New Economy Coalition, a trustee of the V. Kann Rasmussen Foundation, and an advisor to Armonia, LLC, the UNEP Finance Inquiry, and Richard Branson’s Business Leader’s initiative (“B Team”). In spring 2014, John was nominated and became a member of Club of Rome. John writes the “Future of Finance” blog,[9] which is widely syndicated on platforms such as The Guardian,[10] The Huffington Post, CSRWire, the New York Society of Security Analysts’ blog, and other publications. He has appeared on PBS Frontline, and been featured in pieces by the New York Times,[15] Bloomberg, Wall Street Journal, Barrons, WOR radio, Real News Network, INET, Think Progress, The Laura Flanders Show on GRITtv, and The Free Forum Show with Terrence McNally. John received a BA in Economics from the University of Michigan, and an MBA from the Stern School of Business at New York University.



STEWART WALLIS

Stewart Wallis is an advocate for a new economic system. He worked for Oxfam from 1992 to 2002, for which he was awarded an OBE. From 2003 to 2016, he was Executive Director of the New Economics Foundation. Currently, Wallis is the Chair for the Wellbeing Economy Alliance (WEAll), which is a new major initiative to create a global new economy movement. He was born on 29 August 1948, the son of George and Jean Wallis. He took the tripos in Natural Sciences at Fitzwilliam College, Cambridge and, in 1976, obtained a MSc in Business and Economics from the London Business School. In 2016, Stewart was awarded an honorary Doctorate by Lancaster University. His business career began in marketing and sales with Rio Tinto Zinc from 1970 to 1974. He spent 1976 to 1983 with the World Bank in Washington, D.C. working on industrial and financial development in East Asia. He then worked for Robinson Packaging in Derbyshire from 1983 to 1992, the last five as Managing Director. He joined Oxfam in 1992 as International Director with responsibility, latterly, for 2500 staff in seventy countries and for all Oxfam's policy, research, development and emergency work worldwide. He was awarded the OBE for services to Oxfam in June 2002. Stewart was the Executive Director of the New Economics Foundation from November 2003 until December 2015. He was also a Trustee of the Overseas Development Institute and Habitat for Humanity and a member of the UK Social Investment Task Force. He was also vice chair of the World Economic Forum's Global Agenda Council on values and a Steward of their Inclusive Growth Initiative. He has since come out of retirement to voluntarily help to run the Wellbeing Economy Alliance (WEAll). Other recent roles include the Chair of the Conservation Farming Trust, and a Trustee of Devon Community Foundation.

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<https://cbey.yale.edu/our-community/john-fullerton>



New Society Publishers' roots are firmly in the activist soil of both the United States and Canada. In the US, a Philadelphia office first emerged from the Movement for a New Society during the anti-Vietnam war, offering Americans nonviolent, civil disobedience training. From this work grew the need for a publishing house, and New Society Publishers was created in the late 1970s with a mandate to publish books for nonviolent social change. New Society Publishers' Canadian office had its origins in British Columbia's food co-op movement of the early 1970s and the bioregional movement which began in the '80s. Known as The Catalyst Education Society, it began life in an off grid homestead in the mountains near Lillooet, BC. The fax machine was powered by microhydro, and more often than not, typesetting of The New Catalyst magazine which it published was done by candlelight. The US and Canadian organizations came together in 1990. For five years, the two offices operated as independent non-profits governed by a mutual aid agreement. Later, in 1996, the Canadian office formed a limited company and, through a friendly buy-out, took over continent-wide operations and the complete list of books. In this, New Society was much helped by Joel Solomon and Carol Newell of Renewal Partners, whose investment in the company made it possible. In 1996 also saw the company relocate to Gabriola Island, one of the beautiful northern Gulf Islands in the province of British Columbia, Canada. In 2008, New Society Publishers entered a new phase of our existence when we were acquired by Douglas & McIntyre Publishing Group, one of Canada's largest independent book publishers. For four years, New Society continued to be based on Gabriola Island and operated as a semi-autonomous entity. Following D&M's filing for bankruptcy protection in late 2012, New Society was reacquired by Chris and Judith Plant and Carol Newell in 2013. As we enter the second decade of the new millennium, New Society Publishers finds itself to be a long-time leader in the field of sustainability. We look forward to continuing to increase the scope and relevance of our publishing program so that we can continue to provide the building blocks for a new society that has always been our deeply held mission.

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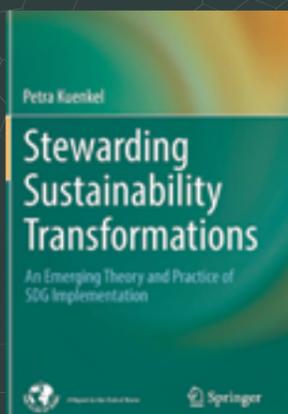
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*SUSTAINABLE ACTION"*

*"STEWARDSHIP SUSTAINABILITY TRANSFORMATION"*

2019



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## SYNOPSIS

The Sustainable Development Goals (SDGs), as part of the Agenda 2030 "Transforming Our World", alternatively also named Global Goals, are a collection of 17 interdependent goals that convey call to action in order to end poverty, protect the life support systems of the planet and ensure that all of humanity enjoys peace and prosperity. The SDGs inspire and guide Government planning, policy development and implementation, but also encourage non-state actors, such as the private sector and NGOs to align their activities with the targets formulated. Their aspiration is to work in a spirit of partnership for a sustainable way of living that shows responsibility for current and future generations. The 17 Goals and their 169 targets have been developed in a broad consultation process with stakeholders from public, private and civil society sector.

Chapter 1 introduces the 17 Sustainable Development Goals for the United Nations Agenda 2030 'Transforming Our World' as the background for exploring the notion of stewardship of sustainability transformations. It describes the world's sustainability challenges, which range from climate change to ecosystem decline, from energy insecurity to water scarcity, as systemic in nature. The chapter subsequently suggests that the interdependence of the challenges requires a new approach to implementing the Agenda 2030. It emphasizes that a systems view of life could potentially incorporate shifts in perspective from the parts to the whole, from silo thinking to networked collective action, from fixation on economic growth rates to revisiting the purpose of measurements. This leads to a chapter overview that summarizes the flow of the books argument towards an emerging theory and practice of sustainability transformations.

In the context of the world's pressing sustainability challenges this new Report to the Club of Rome presents a novel approach to navigating collaborative change in partnerships between governments, research institutions, corporations and civil society activists. With reference to the 17 Sustainable Development Goals and the Planetary Boundaries it introduces the theory and practice of Collective Stewardship as a management tool that respects the integrity of human and natural systems.



PETRA KUENKEL

Petra Kuenkel is a full Member of the International Club of Rome and the Executive Director of the Collective Leadership Institute, a Germany and South Africa based social enterprise building collaboration competency for transformative change. As a seasoned systems scientist, visionary author and expert in complex multi-stakeholder settings she promotes systems transformations by scaling-up collective stewardship skills for decision-makers from corporations, public sector and civil society. With her educational background in change management, organizational psychology and political science she has profound international experiences in corporate change, development cooperation and policy implementation. She is a leading strategic advisor to pioneering international initiatives that tackle sustainability challenges. Based on successful transformation processes, she developed the dialogic change methodology and the Collective Leadership Compass, a guiding tool for navigating change in complex multi-actor settings. Kuenkel's ground-breaking publication *The Art of Leading Collectively* received international attention; her writings have appeared in numerous professional journals as well as the Guardian and Huffington Post.



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"SUSTAINABLE ACTION, OVERCOMING THE BARRIERS: A REPORT TO THE CLUB OF ROME"

Christian Berg

Milton Park, Abingdon (U.K.): Routledge

2019

AGENDA 2030 welfare ECONOMIC THEORY  
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## SYNOPSIS

This is the last report produced to the Club of Rome, at the moment in which this thesis is drafted. It is possible to look at it as a report addressed to sustainable actions. The author, Christian Berg, unpacks the complexity in understanding the barriers we face in moving towards a sustainable future, providing solution perspectives for every level, from individuals to governments and supra-national organizations offering a lucid vision of a long-term and achievable goal for sustainability.

While the 2030 Agenda has already set ambitious targets for humanity, it offers little guidance for concrete actions. Although much is already being done, progress seems slow and some actions aiming at sustainability may be counterproductive. Different disciplines, societal actors, governmental departments and NGOs attribute the slow progress to a number of different causes, from the corruption of politicians to the wrong incentive structures.

Sustainable Action surveys all the fields involved in sustainability to provide action principles which speak to actors of different kinds, not just those professionally mandated with such changes. It offers a road map to all those who might not constantly think about systems change but who are concerned and want to contribute to a sustainable future in a meaningful way.

This book talks a lot about sustainability issues, so it is properly addressed to those looking for a framework for how to change their systems at work to impact the quadruple bottom line: environment, economy, society, and future generations.



CHRISTIAN BERG

Christian Berg, is a german

Future-oriented research, teaching and management of sustainability are closely related and cross-fertilizing each other. Between 2004 and 2016 he worked within SAP – always in sustainability related positions. Starting as a Senior Researcher Sustainability, later as product manager for Sustainability and Risk Management and then as Chief Sustainability Architect within SAP Services, heading the sustainability community within SAP's business consulting unit. In 2016 I left SAP to have more time for academic work, lecturing and writing.

He has been teaching sustainability at different German universities for several years. Since 2008 as Honorary Professor at Clausthal University of Technology, since 2009 as recurring Guest Professor Corporate Sustainability at the MBA-School of Saarland University, both in Germany, since 2016 as lecturer at the Christian-Albrechts-University in Kiel.

He studied physics and philosophy, and later even theology. Having studied the relationship of science and religion for some time, he was led to the imperative of a responsible handling of creation. Now been involved in topics of sustainability for the last 20 years.

Routledge is a British multinational publisher. It was founded in 1836 by George Routledge, and specialises in providing academic books, journals and online resources in the fields of humanities, behavioural science, education, law and social science. The company publishes approximately 1,800 journals and 5,000 new books each year and their backlist encompasses over 70,000 titles. Routledge is claimed to be the largest global academic publisher within humanities and social sciences.

In 1998, Routledge became a subdivision and imprint of its former rival, Taylor & Francis Group (T&F), as a result of a €90-million acquisition deal from Cinven, a venture capital group which had purchased it two years previously for €25 million. Following the merger of Informa and T&F in 2004, Routledge become a publishing unit and major imprint within the Informa 'academic publishing' division. Routledge is headquartered in the main T&F office in Milton Park, Abingdon, Oxfordshire and also operates from T&F offices globally including in Philadelphia, Melbourne, New Delhi, Singapore and Beijing.

The firm originated in 1836, when the London bookseller George Routledge published an unsuccessful guidebook, *The Beauties of Gilsland* with his brother-in-law W H (William Henry) Warne as assistant. In 1848 the pair entered the booming market for selling inexpensive imprints of works of fiction to rail travellers, in the style of the German Tauchnitz family, which became known as the "Railway Library".

The venture was a success as railway usage grew, and it eventually led to Routledge, along with W H Warne's brother Frederick Warne, to found the company, George Routledge & Co. in 1851. The following year in 1852, the company gained lucrative business through selling reprints of *Uncle Tom's Cabin*, (in the public domain in the UK) which in turn enabled it to pay author Edward Bulwer-Lytton £20,000 for a 10-year lease allowing sole rights to print all 35 of his works including 19 of his novels to be sold cheaply as part of their "Railway Library" series.

The company was restyled in 1858 as Routledge, Warne & Routledge when George Routledge's son, Robert Warne Routledge, entered the partnership. Frederick Warne eventually left the company after the death of his brother W.H. Warne in May 1859 (died aged 37). Gaining rights to some titles, he founded Frederick Warne & Co in 1865, which became known for its Beatrix Potter books. In July 1865, George Routledge's son Edmund Routledge became a partner, and the firm became George Routledge & Sons.

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