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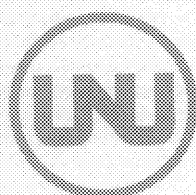
United Nations University

Expert Group on Human

and Social Development

Tokyo, Japan

10-14 November 1975



THE UNITED NATIONS UNIVERSITY

From the CHARTER OF THE UNITED NATIONS UNIVERSITY

ARTICLE I

Purposes and structure

1. The United Nations University shall be an international community of scholars, engaged in research, post-graduate training and dissemination of knowledge in furtherance of the purposes and principles of the Charter of the United Nations. In achieving its stated objectives, it shall function under the joint sponsorship of the United Nations and the United Nations Educational, Scientific and Cultural Organization (hereinafter referred to as UNESCO), through a central programming and co-ordinating body and a network of research and post-graduate training centres and programmes located in the developed and developing countries.

2. The University shall devote its work to research into the pressing global problems of human survival, development and welfare that are the concern of the United Nations and its agencies, with due attention to the social sciences and the humanities as well as natural sciences, pure and applied.

3. The research programmes of the institutions of the University shall include, among other subjects, coexistence between peoples having different cultures, languages and social systems; peaceful relations between States and the maintenance of peace and security; human rights; economic and social change and development; the environment and the proper use of resources; basic scientific research and the application of the results of science and technology in the interests of development; and universal human values related to the improvement of the quality of life.

4. The University shall disseminate the knowledge gained in its activities to the United Nations and its agencies, to scholars and to the public, in order to increase dynamic interaction in the world-wide community of learning and research.

5. The University and all those who work in it shall

act in accordance with the spirit of the provisions of the Charter of the United Nations and the Constitution of UNESCO and with the fundamental principles of contemporary international law.

6. The University shall have as a central objective of its research and training centres and programmes the continuing growth of vigorous academic and scientific communities everywhere and particularly in the developing countries, devoted to their vital needs in the fields of learning and research within the framework of the aims assigned to those centres and programmes in the present Charter. It shall endeavour to alleviate the intellectual isolation of persons in such communities in the developing countries which might otherwise become a reason for their moving to developed countries.

7. In its post-graduate training the University shall assist scholars, especially young scholars, to participate in research in order to increase their capability to contribute to the extension, application and diffusion of knowledge. The University may also undertake the training of persons who will serve in international or national technical assistance programmes, particularly in regard to an interdisciplinary approach to the problems with which they will be called upon to deal.

ARTICLE II

Academic freedom and autonomy

1. The University shall enjoy autonomy within the framework of the United Nations. It shall also enjoy the academic freedom required for the achievement of its objectives, with particular reference to the choice of subjects and methods of research and training, the selection of persons and institutions to share in its tasks, and freedom of expression. The University shall decide freely on the use of the financial resources allocated for the execution of its functions. . . .

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**REPORT OF THE UNITED NATIONS UNIVERSITY EXPERT GROUP
ON HUMAN AND SOCIAL DEVELOPMENT**

TOKYO, JAPAN, 10-14 NOVEMBER 1975

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PREFACE

The United Nations University held three working meetings of international experts at its Tokyo headquarters during the fall of 1975 to explore strategies for its initial work in three priority areas: world hunger, human and social development, and the use and management of natural resources. The reports on these meetings provided the background for the first programme recommendations the Rector of the University made to the University Council.

Each of these working meetings involved approximately twenty participants and lasted five days: World Hunger, 22–26 September; Human and Social Development, 10–14 November; Use and Management of Natural Resources, 1–5 December. At the beginning of each meeting guidelines for the University were discussed (see Appendix) and the attention of the participants was drawn to three basic questions with regard to their areas of expertise:

- a. What is the present state of the art with regard to world-wide problems and activities in the field (i.e., hunger, development, or natural resources)?
- b. What are appropriate strategies for the UN University to follow in commencing work in this field?
- c. What are the most urgent projects the University should undertake in this field?

In the course of the discussions, participants were urged to suggest how the University might serve their fields of expertise most effectively. Emphasis was placed on the basic charge to the University in its Charter to concern itself with “pressing global problems of human survival, development and welfare.”

After plenary sessions on general world conditions in the subject areas of the meetings, the groups were divided into smaller committees which considered particular aspects of the subject and prepared recommendations on specific strategies and programmes. These recommendations were then combined into a general report that was discussed in final plenary sessions.

Obviously, with such broad and complex topics, meetings of five-day duration could not be expected to produce exhaustive reports. Participants were not asked either to prepare position papers in advance or to vote approval of the final report. They were not invited as organizational representatives but as individuals knowledgeable about what has been

done, what is being done and what needs to be done. They were not expected to speak as advocates of the interests of particular nations and regions, but an attempt was made to include experts with knowledge of as many parts of the world as possible. Not all those invited were able to come, and this reduced some of the breadth of geographical distribution that was sought.

These reports are useful, therefore, as reflections of the views of distinguished international experts called together to discuss world-wide needs in their areas of special knowledge that should be met by the United Nations University. Fortunately, in each meeting the participants coalesced quickly and worked diligently. While there were many conflicting views vigorously expressed, the three groups were able to agree to the reports as faithful reflections of what had been discussed and recommended. It must be emphasized, however, that none of the reports purports to present a consensus and that the participants were not asked to take responsibility for their contents.

Naturally the University is extremely grateful to these distinguished men and women for giving time and thought to this essential task. It is difficult to imagine how the University could begin its work without consulting such groups of knowledgeable people. There are many others who might have attended and whom we hope to consult in the future, but we are particularly in the debt of those who have given the University this initial guidance.

The three reports are naturally quite different, just as the three topics, while intimately interrelated, are also quite different in nature. Of the three, World Hunger is the most specific, and from the outset, the group that considered this topic took the most specific approach to its work by excluding two aspects of the subject to which considerable attention is already being given by other UN agencies (food production and population). Having identified quite specific areas in which the University might begin its work, particularly post-harvest technology and nutrition policy, the World Hunger meeting gave the most detailed attention of any of the groups to the institutional means by which the University might conduct its work.

The report of the working meeting on Human and Social Development contains a strong message to the University to assume obligations other institutions are not fulfilling with regard to the conceptualization and application of knowledge. It argues that "research on development is in disarray" and urges the University "to clarify thought and action, to overcome existing barriers to a unified approach and to contribute to informed policy-making and to discovery of the main paths to human betterment." Recommendations of this group range from such pragmatic subjects as improving the effectiveness of science and technology and of education for development to the conceptual tasks of studying new styles of living and economic growth, new ideas about the role of the nation-state, and improved comprehension of global issues, including the use of world models.

The report of the working meeting in the Use and Management of Natural Resources also takes the position that the University should concern itself with conceptual problems and strongly urges it to help find ways to overcome obstacles to the effective utilization of knowledge. The participants also urged that consumption patterns must change and that new life-styles must be found, and proposed that the University study ways of living involving less resource use. Projects with regard to resource management, specific resources

such as land, water and energy, and specific regions of the earth were recommended as urgent priorities for the University's attention.

It could be stated that what the United Nations University is meant to be is the institutionalization of the process of international intellectual collaboration. The reports on these highly successful working meetings support the validity of that concept. They show that it is indeed possible for scientists, scholars, public officials, educators and administrators from many areas of the world to work together effectively to try to find better ways to use the world's intellectual resources for the practical improvement of the conditions of existence. In these meetings the work of the University has begun and the spirit that must animate its future efforts has been demonstrated.

James M. Hester
Rector

I. INTRODUCTION

1. Many confusing and complex issues become clearer and simpler if we can clarify the purpose of development. In particular, questions about energy, the environment, pollution, technology, consumption patterns, urbanization, the relation between agriculture and industry, international trade and regional integration, domination and dependence within and between countries, and other issues can be answered more readily if we know where we want to go. Apparently technical and separate problems are seen to be connected and become more amenable to solution, at least in principle, if we bear basic objectives in mind.

2. Development is fundamentally not about index numbers of national income and its growth; it is not about savings ratios and capital coefficients; it is about, by and for human beings. Development must therefore begin by identifying human needs. The objective of development is to raise the level of living of the masses of the people and to provide all human beings with the opportunity to develop their potential. This implies meeting such needs as continuing employment, secure and adequate livelihoods, more and better schooling, better medical services, cheap transport and a higher general level of income. It also includes meeting non-material needs like the desire for self-determination, self-reliance, political freedom and security, participation in making the decisions that affect workers and citizens, national and cultural identity, and a sense of purpose in life and work.

3. A development strategy guided by the goal of meeting the needs of human beings everywhere, in both poor and rich countries, not only leads to a different composition of products and techniques from that simply transferred from already industrialized countries; it also reduces the demand that rapid urbanization makes on scarce capital and scarce natural resources. By raising the level of living of the poor people in the countryside, it may reduce the pressure to leave the land and to expand expensive urban services. It introduces different incentives into the direction and composition of international trade, encouraging more self-reliance and trade among developing countries. Starting with similar types of society, groups of developing countries can more readily produce for one another what they consume, and consume what they themselves produce. But all this depends upon countries opting for a way of life and a style of development that gives priority to satisfying the needs of the large number of poor people, and gives the highest priority to those most in need.

4. This does not mean that opting for such a style of development is an easy matter. Handling more complex systems of decentralized administration and services, the required changes in policies and the attack on the living standards and the power of those profiting from the present pattern of trade, technology and products are enormously difficult tasks. The point, however, is that no solution is possible unless these difficulties are faced, and unless the fundamental purpose of development is borne in mind.

Challenge to the United Nations University

5. In spite of the apparent simplicity of the diagnosis, research on development is in disarray. Import substitution versus export promotion, industry versus agriculture, formal versus non-formal education, physical investment versus investment in human capital, free international trade versus regional integration and protection, triage versus aid to the neediest, balanced versus unbalanced growth, growth versus redistribution, employment and the environment, centralization versus decentralization, mass participation versus professionalism, schooling versus deschooling, these and many other issues are under dispute. Not only are changes which are suggested opposed bitterly by interest groups likely to lose privileged positions, but there is often doubt about the right course to take, and this doubt arms those opposed to change.

6. Amid a confused and confusing welter of recommendations, the UN University has a unique opportunity to clarify thought and action, to overcome existing barriers to a unified approach and to contribute to informed policy-making and to discovery of the main paths to human betterment.

7. Strategies for the eradication of poverty and for human development are easy to devise so long as they are formulated in purely technical terms that by-pass political realities. For example, nothing is easier than to design models of redistribution of income and assets and to trace the improved fate of the poorest 40 per cent of the population as they are given access to improved technology. But there are critical links between power and technology, technology and income distribution, income distribution, patterns of demand and decision-makers, and decision-makers and policy objectives. The usual models too often ignore these crucial links. The professions and declarations of the ruling elite do not normally correspond to their actions. We hope that the UN University will not shy away from identifying and analysing these links and their implications for the distribution of power and access to power, and its use for development.

8. The most important task of the UN University is to break down existing barriers that stand in the way of better understanding and of more effective action: (i) barriers between disciplines, where these have become an obstacle to realistic and relevant work; barriers between preconceptions which guide or dictate the standards of viewing and analysing problems; (ii) barriers between nations, societies and cultures which divide the world; (iii) barriers between administrative agencies and areas of competence which are reflected in the UN system; (iv) barriers between intellectuals and ordinary people, between non-manual and manual workers, between the educated and the non-educated; and, above all, (v) barriers between those who analyse and speculate about the development process and those who are involved in it, either as agents or as victims: between thinkers and doers. We elaborate this point in the next paragraph.

The University's Opportunities

9. Urgent practical problems are not respecters of the boundaries between academic disciplines.

(9.1) The UN University is particularly well-placed to conduct and encourage work that brings together teams of scholars from different disciplines and to contribute to the design of more appropriate concepts, models and theories which ignore the existing frontiers of academic subjects and which are of practical use. One of the University's principal tasks should be the comparison of different sets of strictly defined presuppositions which prevent people with different approaches from communicating with each other and which limit the views of different "schools" by imposing standards of "rigour" and "excellence" within those presuppositions. The autonomy of the University and its freedom from the restraints under which many other institutions work make it possible to convene meetings at which not only the established but the young from many countries, those without established reputations and those without clearly defined places in the hierarchy, can engage in a dialogue with the professionals and reflect critically on the products of the academics. In this way, our perception of the world will be made more relevant and more practical and our values and speculations will not lose touch with reality.

(9.2) The focus on the nation-state in isolation has been an obstacle to viewing development as a global process in which different countries and societies interact. The increase in the speed of communications and the large scale of modern technology have made it more difficult to fulfil the desire and the need for self-determination and participation in small communities. Partly as a result of these technological achievements we see today an unprecedented clash of integrating and disintegrating forces. On the one hand, the increasing suspicion and arming of political camps, growing threats of trade and investment wars, a grasping for resource independence whether within national territory or in unclaimed areas such as the seabed, alienation of group from group both within nations and between them; on the other hand, within the present decade, headlong expansion of global links — commercial, social, cultural — and above all intellectual, which have made the problems of food, energy, urban chaos, into world problems with origins often remote from the places where they are apparent. An inevitable result of these integrating and disintegrating tendencies, and of the evidence of breakdown where they collide, is a desire to reach beyond the familiar patterns of thought and action. It should be the task of the University to integrate global and local views: to transcend the limitations imposed on our perception both by over-simple world images and by the fragmentation of the world into separate units.

(9.3) The fragmentation of the UN system, which, for historical reasons, is made up of a number of specialized agencies and other organs responsible for education, health, agriculture, industry, labour, the environment, peace-keeping, etc., has been an obstacle to viewing development as a unified system in which all these factors act upon one another. We see the University as an integrating force that will not respect boundaries imposed either by existing disciplines or by established administrative agencies. In this way, the University can make an important contribution to the work of the United Nations, to the various forthcoming world conferences and, beyond that, to our understanding of development and to the effectiveness of development policies.

(9.4) There is a barrier between intellectuals on the one hand and artists, administrators, religious leaders, communicators, teachers, businessmen, and ordinary people in all walks of life on the other. It should be a challenge to the UN University to break down the isolation and the vested interests of researchers and to make them a living part of the social life which they study.

(9.5) Finally, and most important, the University must break down the barrier between thinkers and doers. The ultimate test of the value of its work will be found not in professional excellence (though this is important), not in academic prestige (which will come as a by-product), but in the degree to which it proves useful to those engaged in the business of human and social development. We are confident that, if this test is passed, if the man in the planning office, the extension worker, the village level worker, the rural health officer benefit from the work of the University, then academic recognition will follow.

10. While the dismantling of barriers that are obstacles to better understanding, to cooperation and to effective action is a central task, the University is especially fitted to investigate the world's variety and diversity of ways of living and styles of development, and to explore alternatives imaginatively, but in hard detail, and so to counteract the trend towards uniformity and conformity. As an essential basis of this, it should set itself as one of its major aims the careful and critical assessment of existing facts and figures (often biased, unreliable and deficient) and the collection of new, more reliable and more usable statistics.

11. Much of this is controversial and we are not all in agreement. But the University should not be afraid of controversy; on the contrary, it should encourage it. It should serve as a meeting ground for the articulation, comparison and confrontation of different approaches.

II. A FRAMEWORK FOR THE UNIVERSITY'S PROGRAMME

12. We have tried to identify a framework for the University's programme in certain key areas of work. We wish to stress that the framework must be flexible. Issues that seem important today will be replaced by quite different issues tomorrow. Not many of the issues on the agenda today would have had high priority on an agenda ten years ago. A continuing critical review and appraisal is therefore essential in order to avoid premature crystallization of orthodoxies and unrealistic, irrelevant or stale research.

13. An important consideration should be the selection and recruitment of people who can give leadership to research teams, and of institutions, through incorporation, association or research contracts, with a potential for good work, and to let these people and these institutions get on with their work. The University must be sensitive to the fact that good research is a rare flame and wherever there is a spark it should be fanned.

14. There is a need for more, and more accurate and relevant, data for policy makers. There is also a need for quantifying relationships, for testing hypotheses and theories and for providing a firmer, more reliable base for development policy and strategy. On the other hand, there is the danger that social science research, in emulating the "hard" sciences, focuses on the measurable and neglects the rest. Some of the most important obstacles to the eradication of poverty and to fuller human and social development lie in areas in which measurement is still very difficult or perhaps impossible. Among these are:

- a. unwillingness of governments to implement land reform, effective tax policies, labour mobilization and wider access to education and health services, due to unwillingness to break the power of large landowners, big industrialists and multinational enterprises;
- b. elitism, nepotism and corruption;
- c. mass slaughter of ethnic minorities (often entrepreneurial and therefore hated) and political opponents, imprisonment without trial, torture, expulsion, large sums spent on armies, terrorism and its endorsement by governments, and other aspects of barbarism.

15. To avoid these issues because they are not readily quantifiable is ministering to an ideological escape mechanism and serves, opportunistically, vested interests.

16. The UN University needs a system of strategies and research priorities that corresponds to the analysis made above. Even if the University had unlimited funds, it would

still need a programme limited to what it can efficiently manage and disseminate.

17. Such a programme should (i) be consistent, (ii) be coherent with the various projects supporting each other, (iii) complement work being done elsewhere, (iv) be international in scope, (v) be consistent with the guidelines set by the Council, (vi) raise sufficiently new and challenging issues to attract good talent, (vii) provide an umbrella covering different schools and ideologies, (viii) be relevant to makers of policy and yield practical results fairly quickly, and (ix) unite economics and technology on the one hand and social, cultural and human considerations on the other. We emphasize particularly the last two criteria: a non-technocratic, unified approach with a human face; of direct practical value and with the individual at the center of its concern.

18. This set of criteria suggests work in the following fields:

- a. improving the social relevance of science and technology,
- b. education for development,
- c. ways of life, communities and the nation-state,
- d. world models and global issues.

19. These do not make up the whole programme of the United Nations University, but they offer broad guidelines. We offer them with the conviction that, as our own meeting so vividly showed, there is a need for contact, dialogue and studies amongst people from different societies and walks of life. In the sections that follow, we make specific proposals and recommendations which are intended as a flexible framework for future work.

III. IMPROVING THE SOCIAL RELEVANCE OF SCIENCE AND TECHNOLOGY

20. We start with improving the social relevance of science and technology because we believe the question raises an issue at the very heart of the development process: What can be done to encourage the application of science and technology to reduce poverty, malnutrition, disease, illiteracy and squalor, while at the same time promoting independence, self-reliance, equality and progress? All countries, no matter what the stage of their development, urgently need answers — although the University — in keeping with its mandate — should initially concentrate on the special problems of the poorer countries.

21. The capacity to produce technology is heavily concentrated in the world. Statistical evidence suggests that more than 90 per cent of the world's capacity for research and development is concentrated in the rich countries, comprising one-third of the world's population, and only 2 per cent is in countries containing two-thirds of the world's population. The bulk of this research is either irrelevant or harmful to the development efforts of the poor countries (and much of it is of dubious value to the rich countries themselves). Of the rich country research, 70 per cent is devoted to developing technology and 30 per cent to science. Of the small capacity for research and development in the poorer two thirds of the world, only 10 per cent is devoted to technology and 90 per cent to science, much of it aimed at publication in international scientific journals and not at the solution of important local or regional problems.

22. All countries can benefit from research conducted in the world's leading scientific centres. Nevertheless, it is clear that much more research and development work needs to be done on alternative modern technologies appropriate to the needs of developing countries, and that much of this work (though not all) should be done where the problems exist, because of the value of learning by doing and because of the specific personal, social, climatic and ecological conditions which the technology must serve. (Some of this research may well turn out to be useful to the developed countries also, in view of the energy crisis and the scarcity of certain resources.)

23. Therefore, we see as one main objective for the United Nations University the enlargement of research and development resources directed at special problems of poor countries. In addition, the University should investigate the social and cultural impact of the spread of science and technology throughout the world, and how this impact can best be

used or modified to serve the values and aspirations of human beings.

24. Areas have been identified in which existing technology is ill-adapted to the economic, climatic, cultural, and social circumstances in poor countries — or in which the relevant technology does not exist at all. Water supplies and sewerage systems cannot be provided for the exploding cities of the less developed world with the existing techniques, designed to fit higher-income areas; methods for dealing with some endemic diseases, such as bilharzia, have not been found; systems for developing health care for low-income groups in cities and for rural groups in less-developed countries are in the early stages of experimentation; appropriate equipment for small-scale industrial production has not been designed except in rare cases; the development of low cost applications of solar energy is lagging far behind the need; the same can be said for improved forms of low power mechanical equipment, low cost irrigation on farms. There is a long list of similar gaps. In addition, the present patent system prevents developing countries from benefiting fully from existing knowledge on which they might wish to draw.

25. What can the UN University do to help? The chief task is not to transfer existing technology; it is to adapt existing technology — modern or traditional — and to invent new technology. This is a creative, complex task, requiring scientists of the highest quality — natural scientists as well as social scientists and others with sensitivity and imagination.

26. The University should aim at research and training programmes which perform the same functions that are now performed (still imperfectly) by the international network of agricultural research centres — that is, to cluster at one place as a centre for training additional scientists mainly through their participation in the research, to link the research at the centre with the best relevant fundamental research going on in the world, and — most important of all — to link the research at the centre with continuous testing and application of the results so that the work of the researchers is constantly measured against the real improvement in the lives of the people affected.

27. The diffusion of technology is a difficult process, especially among small-scale producers in agriculture and in industry, because it involves not only changes in techniques employed but also changes in attitudes and institutions and in ways of life. The social changes which result from the adoption of new technology, such as changes in employment and income distribution, should be studied. The spread of technology has often been associated with social distress, and methods to reduce such distress should be adopted in any society trying to introduce revolutionary technology.

28. The consequences of technical change for the environment also need careful consideration. We have already seen illustrations of the introduction of new technologies which have altered the environment in ways which involve high social costs, poison air, water and earth, use scarce resources in wasteful ways, and degrade the quality of life. Systematic means need to be found to assess the environmental costs of technical change and to weight these costs against the benefits of innovation and economic progress.

Strategies

29. The UN University should attempt:

- a. to increase and concentrate the research devoted to specific problem areas, and thus to speed up the process of adapting existing modern and traditional technology and inventing new technology;
- b. to increase the speed and effectiveness of disseminating the results of research;
- c. to improve two-way communications between researchers and those working and using their results — so that the research is informed by experience and experience enriched and improved by research.

30. It will be vital, therefore, for the UN University to explore carefully and choose wisely the subjects and problems on which it conducts research. We suggest as basic criteria:

- a. the likelihood that research will yield important, relevant results;
- b. the size of the impact of the results on the world's problems — how much difference will it make if the research yields useful results; and
- c. the likelihood that the UN University can attract first-class talent to design and carry out the research and training programmes.

Recommendations

31. To help accomplish the above, we recommend that the UNU do the following things.

- a. Appoint a leading expert who should organize and lead the exploratory work on the production of better technology.
- b. Initially select two or three subjects and establish a task force for each — the task force to include persons from different parts of the world and with different types of relevant experience, ranging from laboratory science to field work in development programmes. These task forces, aided by appropriate staff work, should systematically explore the selected problems area, assist the best work now being done in the world, identify those fields in which additional work seems promising, and design research and training programmes accordingly. This exploration, for the initial problem areas selected, would probably require the bulk of the year 1976 and not all of them would necessarily result in recommendations for UN University action. For those where action is recommended, the University would proceed as indicated, meanwhile selecting additional problem areas for future exploration.

32. The work of the University in this field would be incomplete, however, if it limited itself only to science and technology as an instrument to solve problems. For the introduction of science and technology results in far-reaching changes in social and cultural conditions, ranging from relatively minor changes in consumption habits to deep and fundamental changes in attitudes, beliefs, values and power distribution. In our view, the University should seek to contribute to the world's understanding of the effects of the spread of modern science and technology, a process which has only just begun in large parts of the world.

33. Therefore, we also recommend that the University do the following.

- c. Address itself to several complex questions that will require the talents of philosophers and historians as well as sociologists, engineers and other scientists. How far is it possible for a society to adopt science and technology rapidly without losing central values of its cultural identity? How can a society absorb science in such a way as to acquire or increase the power to innovate and be creative, and how can it avoid ways which

leave it passive, dependent on foreign technology and a pallid imitation of others? What policies and instruments are most useful for achieving social and cultural autonomy and "independence" without losing the benefits of scientific and technological progress and interdependence? In particular, the UNU would be particularly suited to explore the impact of some UN technical assistance programmes and to assess critically the extent to which these have fulfilled the criteria laid down above, the extent to which they tended to be excessively technocratic and the extent to which they transferred western models and techniques without adequate adaptation to the needs of the developing countries.

- d. While we are not all in agreement on the best procedure to follow in finding answers to these questions, we suggest beginning with a seminar or study group which would design a research and training programme for the University. The key persons in such a seminar should be widely informed historians, sociologists and economists who have thought deeply about the process of absorbing modern science in different societies, rather than persons whose main experience has been in thinking about science policy as governmental laws and regulations.
- e. In the past, it has been taken for granted that all that can be done in science and technology must be done; that more is always better. Recently, a new morality has emerged according to which man must accept not to do all that he is capable of doing. In scientific and technological advances that endanger our natural environment, in biological engineering and even in such mundane areas as the search for synthetic substitutes, research may produce dangers and risks. We, therefore, believe that the UNU should (i) take a world-wide initiative in supporting and encouraging bodies concerned with the social responsibility of science and scientists; (ii) launch an inquiry into the limits to, or danger areas in, fields of scientific and technological inquiry; (iii) attempt to formulate criteria for the limits of scientific inquiry in the light of explicitly formulated human values.

IV. EDUCATION FOR DEVELOPMENT

34. Our recommendations for improving the social relevance of science and technology lead straight on to the problem of education for development, where progress in the application of science and technology must have its foundation. Moreover, even as in science and technology, education does not operate in a socio-economic vacuum, and educational improvements must be set in the larger social context. This is what makes it such an integral part of social and human development.

35. Education should be the engine of development; in fact, the opposite has been true. The structures and practices of formal education — which tend to be highly institutionalized and resistant to change — have proved themselves insufficient and inadequate and thus at the very heart of many difficulties.

36. This has applied with particular force in the developing countries, where the educational infrastructure taken over at independence often reflects the systems in European countries. But whether it be in the developed or in the developing world, one fact is evident — that, in varying degrees, neither world has educational systems properly equipped to handle today's dynamics of change and to respond to the immediate needs of mankind.

37. There is nothing radically new about this situation. Indeed, there is already much useful research and there are many operational programmes at the international and national levels. Nonetheless, there is a major role here for the UN University. This is so because its autonomy should enable it to formulate research programmes that have as their goal the unbiased and constructive reappraisal of present educational strategies and approaches.

38. The emphasis for this reappraisal should be the improvements so desperately needed in the less developed countries. We are witnessing there the failure to eradicate illiteracy and to create relevant skills and motivations, the financial constraints that hamper the spread of basic schooling, the unbalanced nature of many educational efforts (unbalanced between primary, secondary and tertiary levels of education, between buildings and staff, between town and country, between men and women, between children and adults), the result in serious shortages of skilled manpower and the imbalances now so evident in several areas, the equally serious lack of trained managers and adequate organizations such

as cooperatives leading to a lag in agricultural development, the extent to which all this has contributed to growing unemployment and internal and external brain drains. The list is long but every item on it demands further research.

39. The emphasis on education as human capital investment, particularly when it comes to the training of highly skilled manpower or specialists, is insufficient and can be misleading. Education has a much wider role than that of accelerating economic growth. Its overriding objective is to achieve individual self-fulfillment, to permit the fullest development of the individual's potential. It can also promote social and cultural development, thereby helping the individual to fit into his community and environment, to arrive at a national identity and to obtain a better basis for a wider understanding.

40. Closely related to this is another problem that is integral to all efforts at social development through education — that of language. In reaction to the cultural distortion and dominance often implied by the use of a very few world languages, there is a world-wide trend of return to emphasis on teaching and communication in indigenous tongues. The impact of such choices on societies and social groups needs urgent consideration.

41. We are not equating education with formal schooling or with what is happening in the classroom. We also give it a much broader role than, for example, the achievement of functional literacy and include the non-formal influences in the family or community, such as imaginative and creative "animators" or "catalysts" who can stimulate and influence the educational development of the young and of adults. And we note the important role of opportunities for continuing lifelong education.

Strategies

42. The strategies of the University should not be designed to advance a uniform world model of education. Rather, they should aim at improving existing strategies and at filling lacunae and suggesting alternative approaches. The University should initiate and facilitate innovations (supplementing but not necessarily replacing traditions) that will make it easier to achieve the objectives described above. Much of past work has been concerned with the way in which education can be used as a vehicle for modernization and economic development. This work should now be supplemented by studies devoted to examining how education reflects existing power structures and how these have prevented education from becoming a vehicle of social and human development. The narrow approach that sees in education a form of investment in human capital has, unintentionally, ministered to these vested interests.

43. The strategies we propose, therefore, consist to a large extent of experimental work and seeding programmes, but also of research on the adequacy of formal schooling. It is here that the basic re-appraisal of the present curriculum with regard to classification and categorization of subjects as well as of content is so badly needed in order to produce the skills and motivations relevant to our world.

44. We feel this involves, among other things, research on curriculum development and an evaluation of the educational outcomes of schooling. A new approach ignoring existing barriers between disciplines, particularly at the post-secondary level, should be explored,

together with the relevance of today's teaching. In many places there is a striking disparity between the images, hopes, and expectations of the students on the one hand and the teaching on the other. Therefore, a re-examination of training programmes for teachers and educators is a fertile area for seeding programmes sponsored by the University. The training of managers in rural areas is a particularly important part of this programme.

45. Still another cardinal task for innovation relates to the creative use of available physical facilities. For example, how should different methods, such as the use of radio, TV and printed material be combined with formal teaching and the space provisions be used to the best advantage.

46. One of the most important areas in which the University could have a major impact is in the development of strategies that would prevent, or at least minimize the brain drain from developing to developed countries by increasing the relevance of the advanced training the students receives for work in his home country and by providing conditions for a "sandwiching" of the training between the home and the host country. This is a problem that does not require sophisticated analysis but research aimed at correcting a critical situation, and is properly recognized as such in the Charter of the University.

Recommendations

47. We recommend that the UN University should do the following.

- a. Appoint a committee to survey the existing educational arrangements relating to the issues we have described in order to identify institutions and individuals whose work and competence are relevant.
- b. Establish a fellowship programme whereby individuals engaged in research or advanced training can be given opportunities for reviewing the state of the art, exchanging views, serving as consultants and developing proposals for further research and experimental projects. This programme could have results well beyond its immediate scope in permitting the exchange of ideas, training and dissemination of knowledge, for it could serve as a stage in the preparation of other research projects within the overall programme.
- c. Use existing training and research centres in different countries which will become associated with it for the implementation of the above fellowship programme as well as other programmes it decides to sponsor. The transfer of scholars in this fashion would help innovators with cross-disciplinary interests to explore new approaches to social development.
- d. Create, at a later stage, institutes or centres under its own auspices, to do work not covered by existing centres.
- e. But the University should not stop here. It should combine the above activities — as well as others that it may evolve — into a unified strategy for development education.

V. WAYS OF LIFE, COMMUNITIES, AND THE NATION-STATE

48. We come now to what is one of the most controversial aspects of the development problem — the question of how people live and the impact of changing life styles on the international order. There is an obvious link here between human needs, life styles and the nation-state itself, and this link offers the UNU a wide range of activities for original and much-needed research. These activities fall into two categories.

49. First, within the context of known natural resources and technology, it is physically impossible for everybody in the world to achieve the level of consumption now enjoyed by large segments of rich societies and small minorities in developing countries. Secondly, while resources set the outer limits of the growth process, industrially advanced countries are emitting to large populations in the developing world impulses for emulating their way of life. This is likely to impose, on the one hand, a severe burden on the developing world of coping with the task of development. On the other, it is also likely to disrupt their existing way of life without making it possible for them to achieve the way of life of the industrial countries. It is therefore necessary to articulate alternative ways of life and their requisite productive and institutional structures in order to clarify the options.

50. Economic growth, in turn, is related to modes of living in two ways. First, a “mode of living” implies certain commonly agreed upon values for which a particular level of material well-being is necessary. Secondly, the nature of economic growth itself will have certain implications for modes of living that make this growth possible.

51. There are three components of “modes of living” which can be isolated so that their interaction can be studied: (i) material well-being which derives from the use of technology; (ii) the institutional structure of the society; and (iii) its world-view, or the values prevalent in that society.

52. Given these three components, we observe two forces operating in the world: One is the industrially advanced world, where there is widespread concern over alienation, disruption of a sense of community, loss of a sense of participation and work satisfaction, growing violence, degradation of the environment, exhaustion of scarce raw materials, and poisoning through pollution, much of which is attributed to a particular type of productive system, geared to ever increasing consumption, growing technical sophistication and ever larger-scale units of decision-making. The other exists in the developing

world about the evil consequences of inadequate economic growth. The ultimate cause of these opposing forces is to be found not in the exhaustion of material resources, but in social and political arrangements and in human valuations.

53. Any investigation into alternative "modes of life," therefore, must begin by acknowledging a plurality of purposes and a diversity of means among different groups, cultures and states. No absolute or universal formulation is possible or desirable. But having formulated reasonable alternatives, articulated by various groups, societies or states, the impact of these options upon one another should be explored and areas of possible conflict be identified. We believe that the dangers lie not in material famine or excesses but in social and political conflicts and disintegration of the world community. It is therefore at these issues that research should be directed.

54. The strategy for UNU-sponsored research and study should focus on three broad questions. These deal with:

- a. the determination of what constitutes a better life for people in different societies;
- b. the determination of the factors that facilitate or hinder the realization of a better life;
- c. the determination of the means of insuring the removal, or preventing the emergence, of constraints on equitable access to social resources; and
- d. the international implications of a variety of styles of development adopted by different societies and the types of institutions required to resolve conflict and avoid international disintegration.

55. Two types of research methods are called for — comparative research on different cultures and historical research. Since the problems posed do not pay attention to existing boundaries between academic research projects in this area, it is necessary to adopt a transdisciplinary approach, and this, in turn, requires that the UNU select scholars and institutions that can support such an approach.

56. The UNU strategy should proceed in three stages. First, scholars and institutions should be identified. Next, groups should be formed which can design the appropriate research projects. And, third, once a research project has been designed, its implementation should be allocated to institutions whose activities should be coordinated by a committee set up by the University.

Recommendations

57. We recommend that the UNU proceed as follows.

- a. Undertake comparative studies of different societies at various stages of economic growth in order to acquire a deeper understanding of (i) the nature of interconnections between the three components and their implication for a better life, and (ii) the capability of different societies to absorb and assimilate the consequences of technologically induced modern economic growth.
- b. From these perceptions of what constitutes a better life, move on to studies that help determine the level of material well-being, and the nature of the domestic and international institutional order required for making the conception a reality. Conversely, other studies should aim at finding out the nature of internal and international obstacles to development and the means to surmount them.

- c. In addition, undertake an investigation into the nature of structural constraints that operate in different societies and which make the value of equitable access to the societies and the world's resources difficult to realize and an examination of means to overcome them.

58. Two parallel studies should be undertaken simultaneously with the identification of appropriate scholars and institutions, a task that should be done with the following purposes in mind:

- a. conducting an inventory of existing literature — published or unpublished;
- b. utilizing the available data to ascertain (i) life styles in different societies; (ii) association between different components of life style; (iii) the formulation of leads, guidelines, etc., for specific research design.

Nation-State

59. As we pointed out earlier, closely related to the problems raised by “modes of living” are those connected with the nation-state both as an instrument for change, and as an obstacle to it. Indeed, in the search for the kind of world community that could best serve the interests of human and social development, the nation-state is bound to continue to play a central role. Therefore, it should also be an area of major emphasis for the UNU.

60. The fact is that the state has become a growingly powerful instrument for national integration. It has multiplied its agencies, its payroll and the number of its officials; it disposes of an ever larger share of the nation's wealth, and it assumes an ever wider range of responsibilities. This is partly the result of the new awareness of resource scarcities and pollution, partly of added social goals like full-employment, economic development, social security and greater equality. These new functions have strengthened the power of the state and its bureaucracy at the expense of countervailing forces in society, often at the expense of the rights and freedom of the individual on the one hand, and at the expense of international solidarity and cooperation on the other. Paradoxically, growing national integration has led to both international disintegration and diminished satisfaction of the states' citizens, as well as often an appearance of declining confidence.

61. But the exact role of the nation-state in human and social development varies from state to state, and contains many contradictions. It is also at the present time subject to many pressures which may change its role over time. Among the phenomena of which account must be taken are the greatly increased interdependence of nations — the growing resource scarcities in the face of a rapidly growing population — the rise of the trans-national corporation — the emergence of new communications technologies — migration of large numbers of workers across frontiers to seek employment in the highly industrialized countries — the brain drain — natural disasters and war. These are all manifestations of processes which many states now have difficulty in controlling, with one result being that some governments have started to search for larger political units and regional organizations transcending the nation-state and the traditional concept of national sovereignty accompanying it.

62. The working of the nation-state itself and its role in the international system is chang-

ing as a result of shifts in value orientation by individuals, sub-national and national groups. These changes stem from a new understanding of the limits to natural resources available to man, of the fragility of human ecology, of the smallness of the earth as the habitat for an increasingly large number of people, and of the precarious foundation of our social and political institutions and their inability to respond to these new dangers. They threaten the destruction of civilization and human life itself. But the new understanding has led to a new sense of human solidarity, an awareness of the need for more effective global collaboration and more effective means to prevent the destruction of the conditions for civilization and human life. These shifts in value, especially among the young, but not limited to them, have also changed and are in the process of changing even more, man's perception of himself, of his relationship to society, and of his attitudes towards the nation-state as well.

Recommendations

63. The University should stimulate work on the changing role of the nation-state, the tendency towards larger regional units, the threat of fragmentation and loss of social cohesion from the assertion of particular sectional and other sub-national groups, the forces making for stronger national integration resulting from the added range of objectives of national policy, the limits to action set by multi-national enterprises, international agreements, federation, etc.

64. Included in this work is a study of the different ways in which the international system, the life of the nation, and the life of individuals and groups of individuals within the nation act upon each other. What is important is to study not only the interaction between governments and their impact on life at the international, national, sub-national and individual levels but also the direct interaction between peoples and cultures through non-governmental channels.

65. To help supplement University-sponsored studies in "modes of living" as an essential background to its other initiatives in human and social development, we therefore recommend that the University formulate its activities in the following areas involving the nation-state.

- a. Establish a working group to explore the desirability and feasibility of setting up a new international centre for the comparative study of national socio-economic structures.
- b. Explore programmes of research at existing centres on various problem areas we have described (e.g., cultural dependence and the dynamics of the developments of bureaucratic powers) or regional networks of comparative studies through the regional social science associations. A particular need here is for a comprehensive research programme into the nexus of international influence on the nation-states which has been outlined very briefly above.
- c. Form study groups to further explore these largely novel problems. The groups would be helped in this task if research papers were commissioned from institutes and the regional associations documenting and analyzing recent developments especially in technology and in the distribution of power, between and within countries. These groups could then recommend subsequent institutional steps to develop the programme of work in the light of both deeper understanding of these problems and greater knowledge of existing research projects and institutional capacities.

- d. Look first into the significance of a trend within the United Nations system itself, in which each UN conference on specific problems such as food, population, status of women, and the environment were all accompanied by non-governmental forums for the expression and discussion of views which could not be adequately represented by government representatives. The question here is how this trend can be most usefully and productively developed.
- e. Arising from this would be an investigation of the need to help develop ways that would give fuller international expression to opinions, aspirations and interests of non-governmental and voluntary organizations as a necessary complement to the governmental representation on which the UN system is based. It appears to us — and the study could reflect this — that the reduced capacity of super-powers to shape the international system is undermining coercive diplomacy, and is increasing the reliance on persuasion, negotiation and bargaining as the effective instruments of diplomacy, even in relation to the redistribution of power across the globe, necessary to overcome the dichotomy between the industrial rich and the poor countries of the world.
- f. This makes it all the more important for the UNU to break out of the present inadequate stereotypes about international understanding and initiate studies that would delve into the deeper layers of group identity, interests, motivation and behaviour necessary to develop the kind of intercultural understanding on which policies for the conciliation of conflict of interests, perceptions, fears and aspirations of nations could become effective.
- g. Such studies should also take into account problems of dependence resulting from disparity of political, economic and cultural power, including the flow not only of information, but also of ideas and concepts. And they should bring together various other studies that have already been made or are on the way, as well as initiating new studies — to illuminate (i) the manner in which processes and institutions at the international level interact with nations, and (ii) the linkages created in this way in the political, legal, economic and cultural fields between these international factors and elements within the nation-states.
- h. A study of federalism and other forms of wider international integration might be combined with the resistance to the impersonal nature of large, centralized organizations and how these two tendencies can be reconciled. Attention should here be paid to the mismatch between the scale of political organization and the scale of political matters requiring attention.
- i. Finally, we recommend the study of patterns of violence over the last thirty years, both between and within states. By and large, the study of development and the study of armaments, conflict and the military have been conducted by separate and often non-communicating groups. We suggest that it is important to link up these studies and to investigate the threat and the use of force and their implications for social and human development.

VI. WORLD MODELS AND GLOBAL ISSUES

66. There is an obvious connection between what we have already proposed in this report and the new awareness that exists today of the global character of certain vital, pressing and interdependent issues confronting mankind. The global character they have in common has two aspects:

- a. Geographically they transcend national and regional boundaries, and any one country's or region's capacity to solve them.
- b. They cannot be reduced to fragmented treatment under the aegis of any single academic discipline or any single institution or agency.

67. Some of these global problems have already received worldwide attention through a series of world conferences, or special sessions of the UN General Assembly, and these for the most part have concluded with world plans for action — Environment (1972), Natural Resources (1974), Food (1974), Population (1974), Law of the Sea (1974–75–76), Women (1975), New International Economic Order (1975); and others are scheduled for the future (Human Settlements, Water, Employment, Science and Technology).

68. Three relevant observations for social research in general and for the UNU programmes in particular are suggested by this series of UN conferences:

- a. the need for more and better research in order to evaluate scientifically and support the various practical proposals for national action and for international co-operation;
- b. the need to translate different technical conclusions into terms which can be used politically to improve the various decision-making processes;
- c. the need for an integrated approach which will take into account the global interdependence of the various issues raised.

69. There is sufficient evidence to predict that in the near future more issues will reveal their global character and will thus command the attention of international bodies, engaging them in efforts to find solutions.

70. The time required from inception to institutional maturity of an issue varies: there was, for instance, an interval of five years between the first resolution and the first conference on Environment, while the issue of Natural Resources came up more rapidly.

71. The existing universities and the research around the world provide a laboratory

where certain problems of this kind can be identified in advance, and conceptualized and prepared for investigation. The United Nations University, by virtue of its very position within the UN family as well as its multi-disciplinary approach, has a unique role to play in coordinating, encouraging and stimulating programmes both with regard to latent issues that have not yet reached global attention, and at the interface between issues, old as well as new.

72. Apart from co-ordinating existing approaches to global issues as suggested above, the UNU should put special emphasis on launching new research programmes for a more systematic treatment of present and future global issues. New typologies of issues are required, which might include, among others, the following:

- a. violence — war and the threat of war within and between countries;
- b. poverty — inadequate provision for such basic needs as food, water, shelter (or habitat in a more general sense), health and education — including the energy requirements to provide for the satisfaction of these needs;
- c. repression — the issues of social justice, such as the position of class and geographic location, etc., and the issues of human rights, such as freedom of expression, of some pattern of political confrontation, of due process of law, etc.;
- d. environmental deterioration — the problems of depletion of raw materials and resources in general, of pollution of man and the environment alike, the population pressure on the limited resources of the planet.

73. Human and social development is to be seen as a process that tries to come to grips with such problems. It must be conceived of more broadly than the eradication of poverty even with due regard to the natural environment as a requirement of future generations. Human and social development must also include efforts to overcome violence and the threat of violence, particularly wars, that may wipe out generations of progress and prevent developmental processes from being initiated. And it also includes the fight against repression, injustice and the violation of human rights that distribute the fruits of development unequally between social and ethnic groups. It is a major intellectual task to develop ways of conceiving of all these issues in their totality, and one approach to the problem is in terms of world models, currently being developed in many parts of the world.

74. There are several ways of constructing world models, as there are different ways of trying to clarify the relations between the pressing issues of mankind. One way is to explore their correlations on a world scale, over time in any given society, and at the same period in different societies. A different approach would be to ask for the underlying structures that might generate the problems; for instance, in various types of centre-periphery models this is the basis for exploring the distribution, incidence, and relation between the phenomena of violence, poverty, repression and environmental deterioration. Among such models, studies of world capitalism and transnational corporations would be of major significance.

75. Another difference lies between predictive and prescriptive models. Thus, some models take the existing world structure essentially for granted, and work out predictions about its short-term and long-term performance: for instance, exploring symptoms of stress and the possibilities of break-downs of the system. Other models might take as a point of departure images of the good or adequate world in terms of satisfaction of

basic needs, and ask what are the implications for world structure, production patterns, etc.

76. Still another difference is that between the specific and the more comprehensive models; the former focusing on a limited range of issues (from the list given above); the latter trying to come to grips with as many of the issues as possible within one conceptual framework.

77. At present, models tend to polarize into one group that is correlationist, predictive, specific and production-oriented (usually built around economic variables), and another that is structuralist, prescriptive, comprehensive and need-oriented (exemplified by the Club of Rome Project, the World Order Models Project, and the Bariloche Project respectively). The UNU does not necessarily have to take any stand on the questions raised above; rather, the function of the UNU might be to serve as an umbrella wide enough to cover all approaches, comparing them, clarifying and broadening them and stimulating new approaches, especially those including qualitative and structural variables.

Strategies

78. As we have said, we believe the UNU has an imaginative role to play in illuminating work on global issues and world models. It should devote its resources:

- a. to establishing fruitful contacts among the universities, research institutes, international organizations, including the specialized agencies, and the various centres of initiative, private or public, in the field of world models;
- b. to promote elaboration and dissemination of new concepts, methods, and indicators, which will facilitate a global approach to social, cultural and economic problems;
- c. to help national institutions to make use of world models, correlating and contrasting their plans with the outcomes of the world models, and enlarging and changing the scope of their activities;
- d. to confront and to compare the existing models and to direct efforts towards the research needed for their improvement, especially in their social dimensions, including social equity and justice;
- e. to encourage the study of technical and social systems, where material elements are combined with humanistic elements.

79. With the purpose of helping national institutions and policy-makers to use research more effectively, we propose a programme to clarify and evaluate the assumptions on which various types of models which are influencing policy decisions around the world are based. Work within this programme would involve a range of disciplines including politics, history, geography and anthropology as well as sociology and economics. The aim would be to illustrate implications which could result from various problem-solving options, and to do so both for the international system as a whole and for individual countries within it.

Recommendations

80. The considerations above suggest four broad areas of research:

(80.1) *World indicator research.* Several research institutes, some of them in the UN family, are today engaged in the development of new indicators of development, in the economic, social, political and environmental fields. We believe, therefore, that the UNU should enter this field of inquiry as follows:

- a. Organize conferences, workshops and seminars for the comparison and dialogue between the various approaches, synthesizing them into a family of world or global indicators (global accounting).
- b. Encourage, stimulate and initiate research on new indicators — indicators reflecting new types of thinking in the fields of production and consumption (such as the level of need-satisfaction, degree of self-reliance, range and level of participation, trade indicators, indicators of economic and social performance and also cyclical indicators).
- c. Encourage, stimulate and initiate research on new indicators of relations between countries to complement the present indicators that mainly deal with differences between countries; this would contribute to the clarification of issues of world structure, centre-periphery relations, inequality, fragmentation, penetration, and dependence (there is also a challenge to mathematicians here in that structural rather than statistical indicators may be needed).
- d. Encourage, stimulate and initiate research on indicators that do not use countries as the units of account. Some of these indicators would reflect the situation of sub-national units (districts, classes, minority groups); others would look into regions and relations between regions; still others might look into non-territorial units, such as transnational corporations, non-governmental and inter-governmental organizations and so on.
- e. Undertake studies to find ways of presentation that are accurate and comprehensible to the general public and indicative of policy implications in the field of human and social development. (The problem of presentation is a major challenge and this should be seen as an unusually important topic under this general heading.)

(80.2) *World models.* In addition to the general strategy of bringing the results of the above together for comparison and dialogue, the UNU should do independent research in the field of world models. More particularly, the UNU should try to generate the type of models in four broad areas of concern that would make it possible to work out implications of policy recommendations in various parts of the UN system — with a view to exploring policy measures already suggested and those still needed. The four areas — the New International Economic Order, self-reliance, over-consumption and a disarmed world — should serve as a guide to model-builders, and the results should help facilitate an informed discussion of key issues on today's or tomorrow's political agenda. The issues, which should determine the nature of the world models rather than vice versa, are:

- f. The New International Economic Order can be seen as one effort to establish a more horizontal world order, less characterized by overriding centre-periphery relations. Another recent approach in the same direction, not necessarily incompatible with the New International Economic Order, is summarized under the heading of *self-reliance*, at the local, national and collective levels. Although self-reliance does not imply economic self-sufficiency, there is a need to work out the economic geography of self-reliance (what are the reasonably viable units?) and to explore the possibility for enhanced human and social development given various implementations of the New International Economic Order and the self-reliance formulas.
- g. The problems of overconsumption can be looked at from many viewpoints — how it

taxes the limited resources in a finite world, to what extent it may be incompatible with emerging norms of international social justice if a small percentage of the world population consumes a major portion of resources; the extent to which such resources (including the use of land, the oceans and the seabed, and eventually space) should be used for the benefit of those who need them most; whether overconsumption leads to disparities that turn into power differentials; and, finally, whether overconsumption has harmful effects on the health and welfare of the overconsumers themselves.

- h. One way of looking at the problem of anticipating what a disarming and disarmed world might imply in terms of human and social development is to continue the exercise of converting resources absorbed by the arms race into development efforts, particularly for those most in need. Another, and complementary way would be to explore its connection with special patterns of repression, and environmental deterioration. Still another way, today largely unexplored, would be a study of the relation between global and domestic structures on the one hand and patterns of violence on the other, thus trying to gain more insight into the causes underlying contemporary arms races, threats of violence and patterns of violence in general and wars in particular.

(80.3) *New issues.* The UNU should also serve as a forum for discussing and preparing the public in general and decision-makers in particular for new issues confronting mankind. We indicate only a few of the topics here because they follow to some extent what we have recommended above. They are not, therefore, spelled out in detail.

- i. The emergence of old people as a group capable of articulating its grievances, with emphasis, perhaps, in the industrialized countries.
- j. The emergence of alienation, again with emphasis, perhaps, in industrialized countries, as a key issue, giving rise to problems of finding modes of production with a more direct relation between worker and product, less fragmented patterns of production and consumption, less repetitiveness, greater freedom to participate in decision-making, and a less impersonal nature of organizations.
- k. New types of scarcities, oxygen (water already being scarce), including climatic variations due to man's impact on the environment.
- l. Social implications of recent and/or probable discoveries in the fields of biology (genetics), electronics, co-ordinating information systems and the like.

(80.4) *The Cultural Dimensions.* No world model has so far been able to bring in, explicitly, balanced cultural or in a broader sense civilizational factors. Major reasons for this may be that Western assumptions have been taken for granted by the model-builders, or that in the very concept of a world model there are some Western assumptions that should be brought into the open for penetrating discussion. Yet culture is essential to the whole discussion of human development because it is through culture that meaning is given to the various arrangements, structures, production patterns, etc. And civilization, as a broader and deeper cultural framework, is essential in defining how parts of humanity see their place in the family of man. The research aspect of this might be:

- m. An exploration of the basic values inherent in major civilizations. Ideally, one could conceive of the UNU as a meeting place for a dialogue between civilizations where no civilization is considered superior to others. One purpose of this would be to stimulate the imagination; another to deepen and broaden the very concept of human and social development, not with a view to arriving at a universal concept, but a richer diversity of concepts, an active coexistence of diverse civilizations.

- n. Contrary to the other proposals in this section that would mainly call on the skills of social scientists, this area of research should call on humanists, including historians, leaders of religious thought and anthropologists. It should also serve as a basis for establishing more direct contact with the people who are the carriers of cultural patterns, not only with the intellectuals who reflect them. It would, finally, show how educationists, planners, economists and other social scientists reflect the societies in which they work rather than (or as well as) the ways in which they attempt to change them.

VII. TRAINING

81. The recommendations we have made for the four problem areas would be incomplete without our saying something about training, which should be one of the key functions of the UNU. There is an urgent need, not so much for more and better trained experts, as for experts who are socially and culturally sensitive, who, while commanding the tools of their discipline, are aware of its limitations, people who can grasp imaginatively the global issues confronting mankind without losing sight of the needs and aspirations of the individual. Such training should correct the technocratic bias that is inherent in much present training. This has been a main theme running through all our discussions. It is essential that research and training mutually enrich one another.

82. We therefore recommend that the University should organize seminars, workshops and courses in distant places (some in association with existing institutions) with the following purposes:

- a. discussion of what constitutes the major issues confronting mankind;
- b. probing and working out vocabularies that are generally acceptable, so that people can at least communicate their disagreement;
- c. critical presentation and comparisons of the various models, theories, approaches, bringing out the differences in valuations, assumptions, methods and in the selection of evidence;
- d. appraisal of the scope and the limits of established techniques in the social sciences, such as cost/benefit analysis, manpower planning, linear programming, systems analysis and others;
- d. discussion of both research issues and policy issues arising from the work in the four problem areas.

83. The participants in such seminars should be both theoreticians and practitioners — thinkers and doers, men and women who exercise their imagination, while at the same time paying careful attention to details, people who can exercise informed fantasy, people with a capacity to view the world whole and unfragmented by professional blinkers. They would be drawn from research institutes, from international and national organizations, governmental and non-governmental, likely to have a substantial impact on the discussions and to benefit from them in their day-to-day work, thus contributing to a broadening of the ways of conceiving of human and social development. The goal would be to encourage a world intellectual climate where one would no longer discuss problems of

economic growth without considerations of the environment; problems of the environment without considering implications in terms of repression, poverty and the human condition, etc. The goal should be, on the more individual level, to give participants already well-rooted in one discipline or field of work a broader view, enabling them to do their jobs as researchers, teachers, and decision-makers in the light of more general and global perspectives, and at the same time to be more sensitive and responsive to the variety and diversity of local social and cultural conditions, which require intelligence and imaginative modifications and qualifications of the prescriptions of a purely technical approach, whether it is in agronomy, engineering, management or economics.

VIII. DISSEMINATION OF KNOWLEDGE AND COMMUNICATIONS

84. Finally, we believe that the development decisions can be illuminated and improved by the dissemination of knowledge. This should not be confined to intellectual communications between researchers and policy-makers. The purpose should be to contribute to the important task of making the entire human condition, the whole world system, more transparent, more comprehensible to everybody concerned and interested. The UNU can perform one of its most important functions here.

85. One way of approaching a goal of this kind would be to publish a year-book, containing an analysis, with diagnosis and prognosis of the state of the world, bringing together under one cover the type of information generated by all the research projects.

- a. There is not, nor need there be, one unified approach of how to do this. More useful than a year-book reporting a consensus among a team of authors might be a book presenting the readers with a small number of different ways of viewing the world. They should, however, all be subjected to a certain number of rules: they should take into account the whole world, a comprehensive set of issues, and make use of a common data bank — adding to it data they find missing. The year-book contemplated would differ from most existing ones by being more comprehensive, with an effort to synthesize existing information, also generating new information in line with the global approaches indicated above. An important function of such a year-book would be to criticize the existing statistics, which are often grossly misleading and biased, and encourage the collection of more reliable and less biased facts and figures.
- b. Still one more approach we urge the UNU to explore involves the possibility of employing the techniques of the Open University more widely as a most effective means of disseminating ideas on urgently needed advanced training courses in presently inaccessible areas of the globe. We are impressed with the successes of on-going experiences of the "Universities of the Air" (such as the Open University now operating in the United Kingdom). By helping to advance this approach to education, the University could also help provide a major means of disseminating the sort of training and the research findings it will initiate and support, which may be critical to our future well-being and even survival.

IX. CONCLUSION

86. Some of the recommendations we have made in this report are elaborated in greater detail than others. Some are just ideas, some bare suggestions. They are neither definitive nor exhaustive, but are intended to indicate the general direction in which we believe the University should move. In order to think out more carefully a research programme, working parties selected by the criteria we have indicated will help the University to formulate more precisely its line of action. The University will have to be selective and will have to establish priorities.

87. Other organizations and institutes, both within and outside the United Nations system, are already studying various aspects of the priority areas of research. We do not propose that the University should repeat what they are doing. Indeed, one of the first studies of the University should be devoted to ascertaining what research is carried out, by whom, and with what method.

88. But while wasteful repetition and overlap should be avoided, in the arena of ideas there is scope for several people and institutions investigating the same problem, adopting different assumptions, approaches and methods. The University need not necessarily avoid doing what others have done or are doing. But its role is not to compete with other institutions. On the contrary, it should be a source of support and strength for them. In order to achieve this, its work must be built on firm intellectual foundations. It must be critical, particularly about the powers of narrowly technical approaches to solve social problems and the reliability of statistics and, through criticism, attempt to improve their quality. It must be clear about the purpose and the method of its work, and it must combine imagination with careful attention to detail. It should not be afraid of being controversial.

89. If these principles are borne in mind, the UN University will contribute to bringing order into the present disarray of development studies and development policies. By clarifying thought, by illuminating action and by overcoming existing barriers to a unified approach that can improve policy-making, the University has a unique opportunity to make a distinguished practical contribution to human betterment.

APPENDIX: UNITED NATIONS UNIVERSITY INSTITUTIONAL GUIDELINES

A. The University's Charter prescribes the following characteristics:

1. The Charter specifies that "The University shall be an international community of scholars engaged in research, post-graduate training and dissemination of knowledge" and "shall devote its work to research into the pressing global problems of human survival, development and welfare."
2. The Charter specifies that "the University shall enjoy autonomy within the framework of the United Nations. It shall also enjoy the academic freedom required for the achievement of its objectives, with particular reference to the choice of subjects and methods of research and training, the selection of persons and institutions to share in its tasks, and freedom of expression. The University shall decide freely on the use of the financial resources allocated for the execution of its functions."
3. The University is to be "a network [world-wide system] of research and post-graduate training centres and programmes."
4. The University may set up research and training centres on its own; it may take over responsibility for already existing activities; it may make arrangements with "associated institutions," sharing responsibility in various ways; or it may contract with institutions or individuals to organize internationally coordinated research.
5. A central objective of the University is the continuing growth of vigorous academic and scientific communities everywhere and particularly in the developing countries. "It shall endeavor to alleviate the intellectual isolation of persons in such communities in the developing countries which might otherwise become a reason for their moving to developed countries."
6. The training functions of the University are to be designed to assist young scholars, in particular, to increase their capabilities, and may be used to acquaint technical assistance workers with interdisciplinary approaches.
7. Academic excellence, universality of approach and the highest standards for re-

search and training are to be maintained in all aspects of the University's work and by those institutions and individuals associated with it.

8. The activities of the University are to be coordinated with those of the United Nations and its agencies and the world scholarly community.
9. The University is to promote exchanges of scholars, scientific and technical ideas and information, using conferences and workshops as appropriate.
10. The University shall serve as a depository of information on expertise available on subjects of relevance to its work and maintain up-to-date rosters of qualified scholars.
11. The staff of the University shall be engaged with "due regard to" appropriate representation of geography, social systems, cultural traditions, age and sex.

B. The University's Council has approved certain characteristics for the University's activities:

1. Arrangements with other institutions should be mutually beneficial partnerships.
2. Flexibility should be maintained in arrangements with other institutions to accommodate various options and situations. Rigid formulae should be avoided.
3. Arrangements should be evaluated periodically with the option of termination clearly understood.
4. Work undertaken by institutions associated with the UNU should reflect the following characteristics: the use of science for the sake of humanity; the interests and aspirations of underprivileged peoples, particularly in the developing world; concern with practical world problems viewed in relation to the future of mankind; concern with United Nations experience and objectives; concern with innovative and multi-disciplinary methodologies for research and training and dissemination of knowledge.

C. The Rector has suggested guidelines with regard to the work of the University which the Council has approved. They included these points:

1. The University must establish a very high standard of significance and effectiveness in all its work from the outset. Otherwise it will not gain the interests and participation of the people on whom its usefulness will depend: the world's leading scholars, scientists, and thinkers.
2. The University must establish processes that will protect it against undertaking insignificant or ineffective activities, or making inconsequential affiliations.
3. The University must base its initiatives on thorough studies of relevant existing

activities, comprehensive data collection, frequent consultation with the world's leading experts, and detailed analysis of programme proposals.

4. The University will define its own character through selecting priorities and seeking appropriate means of implementation rather than simply responding to proposals from other institutions.
 5. Criteria for establishing priorities and programmes and for undertaking institutional associations, in addition to reflecting primary concern for meeting the whole world's greatest needs, must weight in balance special regional needs for training and research activities to advance academic, economic and social development.
 6. The University should avoid any unnecessary duplication of effort and resist any tendencies toward competition and rivalry with other institutions.
- D. *The Rector has proposed and the Council has approved various provisions with regard to establishing new institutions, incorporating existing institutions, or making arrangements with associated institutions:*
1. The University should establish a new centre only when no suitable institution exists to meet the programme purpose in question or when a developmental need in a particular geographical region justifies so doing.
 2. The University should enter into an association with another institution when:
 - a. a duplication of effort can be avoided;
 - b. a better result can be achieved through an association than through a new unit;
 - c. association can lead to the development of further capability within the existing institution;
 - d. association provides a desirable presence for the University.
 3. Associated status should be a mutual exchange that results in significant benefits for the associated institution and for the fulfilment of the purposes of the University. Associated status should not be entered into merely to further the appearance of an international community of scholars without clear programme impact through the associated institution.
 4. Involvement by the University with an associated institution could take the following or other forms:
 - a. sharing the governance on a limited basis for a specified period;
 - b. sharing in financial support;
 - c. supplying personnel to strengthen management, programme planning, research or training capability;
 - d. providing arrangements for personnel and information exchanges with other institutions.
 5. Arrangements with associated institutions should make them as close to integral parts of the University as possible, since they will be the major manifestations of the University around the world, at least for some time to come. Their designation

as associated institutions of the United Nations University should be prominently identified and agreements by which associated status is established should contain mutual commitments to University-wide principles and practices including academic freedom, academic excellence, and where possible, representativeness of staff and commitment to the University's general purposes and methodologies.

6. The United Nations University must judge academic excellence not just according to traditional academic practices but in relation to the capacity of an organization to accomplish important work in a particular location for the benefit of the region and those sharing similar problems around the world.

E. *The following characteristics are generally assumed to be germane to the University's purposes and methods:*

1. The University will be more directly involved in the application of knowledge to the solution of urgent practical problems than in long-term fundamental research.
2. The orientation of the University is toward the solution of problems rather than the development of academic disciplines. It is therefore assumed that most work will be multidisciplinary.
3. Scholars of the University bear a duty to help achieve solutions to world-wide human hardship, beyond all otherwise worthwhile endeavours of the human mind.

The University's present endowment income is extremely limited. Therefore, proposals for activities must include consideration of possible operating support from host countries, donor agencies, foundations and other possible sources.

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