The International Dimension of Universities
in an Interdependent World

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I am honoured by your invitation to address this convention. Your decision to spotlight the international responsibilities of universities will help to refocus attention on this badly neglected - but crucial - subject. I am also delighted to be - once again - a guest of the IAU. Some of you may remember that in Manila - five years ago - as the then newly appointed Rector of the UNU - I was invited to say a few words to the members.

The sheer diversity among the more than 70 institutions represented here today makes it difficult to draw generalizations that are valid for us all. Yet it is vital that we seek common ground because of the reality of global interdependence. No country - and no country's system of education - can any longer hope to overcome the problems they face in isolation simply on the basis of national solutions. Internal problems like inflation, unemployment, technological development, or security, all have major international dimensions. Each nation - and each nation's educators - must help shape the international environment in order to ensure its own survival in a framework consistent with its own people's basic values. Educators do have a responsibility in helping to sustain and enhance the national capability to do so without an easy reliance on armed force or the threat of force. At the same time, universities must strike a balance between the mass educational needs of society and the highly specialized advanced studies that keep scholars at the cutting edge of new knowledge.

It must be recognized how vastly different are the problems educators face in the developing and industrial worlds. In the North, institutions of higher learning have not responded adequately to the new educational needs and opportunities of their rapidly changing societies. As a result, many institutions and organizations other than the universities have entered the field of education - with significant implications for those who are at the helm of institutions of higher learning. Corporations, labour unions, the military, governmental and private agencies, libraries, museums, and professional associations are now the competitors of universities in the North - for students and for faculty.

These kinds of problems, however, seem far from the ones faced in the Third World, where fundamental questions of quantity and quality still plague educational agendas. There are simply too few institutions to

accommodate the relentless growth of population. And those that exist are populated by many students whose primary aim is the pursuit of credentials rather than knowledge. Another fundamental issue confronting Third World universities is the brain drain. A third challenge in the Third World - which is being addressed but still is not resolved - is how to ensure that institutions of higher learning meet the specific needs of a developing society. Many universities continue to pattern their curricula and intellectual orientation on European models that are no longer relevant even in the West. They will not be able to emancipate themselves from this dependency until, among others, they develop their basic capabilities in the natural sciences and technology. Another aspect of this problem essentially is one of building critical capacities to evaluate and relate creatively to the heretofore dominant streams of intellectual thought flowing out of Europe and its cultural off-shoots in America and the Soviet Union. There is a need to revitalize and stimulate the scientific impulse and endogenous creativity in non-Western cultures, in the social sciences and the humanities as well as in the natural and applied sciences. The universities of the Third World need to set their own research agendas and produce their own conceptual and analytical tools necessary for understanding the societies in which they function.

To be sure, the past decade or so has seen efforts by some Third World universities to give greater attention to their local cultural roots - but many, I fear, are still suffering from the Eurocentrism that is characteristic of the Western scientific establishment. We only have to look at the desire to be published in international publications at the major science centres rather than in the budding scientific journals of their own countries to realize the seriousness of the problem.

Despite the differences faced by universities in the North and South, all of us in higher education are understandably engrossed with the problems impinging on our educational systems from the special circumstances that surround us. And undeniably we must answer to the communities we serve. It is vitally important that universities express, and be firmly rooted in, the essential tenets of their own cultures, and respond to the needs of their societies.

At the same time, we cannot allow parochial issues - however urgent or insistent - to eclipse our commitment to the world community. Somehow we have to achieve a healthy balance between legitimate absorption with our own culture and our own community and an alert responsiveness to the international scene.

My insistence on the importance of universities being at one and the same time rooted in their own cultures and also addressing themselves to global problems, by searching for interactions with other cultures and other values, may indeed seem a paradox. There is, of course, a tension between the two demands, but I am convinced that it is a creative tension. Often, it is through exposure to others that we learn to know ourselves, and few would deny that better communication across cultural boundaries is a prerequisite for dealing adequately with global problems of survival, development and welfare.

The urgency of this is brought home forcefully when set in the context of the question we are posing at this forum: how can universities, North and

South, respond to the challenge of an interdependent world, and enhance the commitment to and capacity for international co-operation?

Interdependence has become a very overworked word. I need not go into great detail before this audience about just how inescapably interrelated our concerns are. Like it or not, we are all trapped together in a web of economic, ecological and many other interlinkages. What happens on Wall Street, in Hong Kong, or on a Nicaraguan footpath affects us all.

We are all subject to forces and processes beyond our control. Even on an individual level, the personal safety of any one of us boarding an international flight home from this convention could be jeopardized by grievances or causes half a world away. We are all hostages of international politics. There are no sanctuaries from political instability, not in the most civilized cities or on the remotest farmlands. Resort to violence has become a sickening commonplace of our daily headlines. Just since the end of World War II, we need to remind ourselves, more than 150 conventional wars have been waged, and the entire world lives under the threat of nuclear war.

The impact of science and technology on every corner of the globe needs little elaboration. Our earlier naive faith in these fields is now tinged with distrust. We have seen how easily science and technology can be used for the oppression rather than the liberation of human beings. The satellites that warn us of tropical storms could also be used to target us for nuclear attack. And the same biological research designed to eliminate age-old diseases could create new forms of pestilence.

Above all, we see today a new level of complexity in our problems. The failure to cope effectively with most global concerns stems in part from a tendency to tackle each problem in isolation. We have tried to address the issue of structural poverty, for example, in purely economic terms without considering the tangle of factors - social, political and cultural - that have helped to sustain the awful asymmetry between rich and poor. The famine in Africa is an example of the multi-dimensionality of today's crises. One-dimensional analyses, however intellectually elegant, fail to embrace the complex interlinkages of problems as they exist in reality.

It is in this sort of context that we need to consider the international dimensions of the work that must be undertaken by universities today. Are they addressing the salient problems of an interdependent world? These include, in my view, the imperatives of nation-building; the forging of institutions for the management of interdependence; the staunching of the brain drain; the protection of academic freedom and free exchange of scientific information; the training of new leaders, firmly rooted in the realities of their own societies but fully aware of the necessity of peaceful interaction with the rest of the global society; the language skills and the generation of the self-knowledge that helps make it possible for one culture to interact with others creatively and confidently instead of defensively and hostilely.

One challenge arises from the rapidly growing knowledge gap between the North and South, which is breeding new dependencies. The task of the universities should be to attempt to close - or even, where possible, to leap-

frog - widening gaps and in so doing to facilitate the transformation of Third World societies into learning societies.

The brain drain is, fundamentally, a result of global disparities. Various solutions have been tried by various nations - some by making it difficult for their scholars to leave, others by introducing systems of elite institutions that pay well and, in effect, motivate their best brains to return home - or stay home. Neither response is really very satisfactory: the first merely builds discontent and frustration among scholars; the second is built on the sound proposition that merit should be rewarded, but imperfect selection systems all too often make the merit system one more instrument of elite self-perpetuation.

A more effective response, I believe, is one to which we have been paying a great deal of attention at the United Nations University - global networking of scholars. This allows the individual scholar, working in his own country, access to information from around the world. It permits him to work with other scholars from other cultures and perspectives. And in the process, it strengthens the scholar's own home institution, making it a more intellectually appealing base of operations.

The vitality of the international dimension of higher education also depends a great deal on the vigour and the outreach of international scientific and scholarly bodies at the global as well as at the regional or sub-regional level. Unesco and the various scientific advisory committees within the United Nations system help to stimulate international activities at the university level. Organizations such as the International Council of Scientific Unions, the International Council for Social Science Research, or the Latin American Faculty of Social Sciences (FLACSO) also play a valuable role. The recent establishment of the Third World Academy is another response to the need for such mutual reinforcement. Increasingly, however, there is a need for institutional arrangements to supplement these. Problem-oriented international research institutions like the International Federation of Institutes for Advanced Study and the International Institute for Applied Systems Analysis and - in an even more open-ended way - the United Nations University are early responses to the need for more international, multidisciplinary, problem-oriented research.

It is important to recognize that before we can speak of any truly equitable interdependence - and not the skewed and lopsided state of affairs characterizing the present state of interdependence - developing countries must be able themselves to generate scientific and technological innovation. Without this capacity, the developing countries will remain simply consumers of technology in a situation of ever increasing and continuing dependency.

As things stand at present, however, the dividing line between developed and developing country is basically characterized by three factors:

- the capacity for continuous, self-generated innovation in science and technology; and the ability to apply them to the problems of one's own country;

- the capacity to integrate scientific advances and new technologies with traditional infrastructures and technologies; and

- the capacity for creative adaption and reinterpretation of one's own culture in response to new circumstances.

Helping the Third World countries to develop these capacities is one of the great challenges faced by universities in these nations.

The universities in the coming decades must confront some serious intellectual, pedagogical, and institutional questions. Intellectually, we need to develop a higher level of conceptualization, analysis, and integrative thinking that will allow us to transform avalanches of data into knowledge - and to make that knowledge usable.

One of the greatest difficulties we face is accepting the enormous diversity, complexity, and vulnerability of modern life. The intricate interlinkages among today's problems create in many minds a powerful longing for simple, reductionist explanations, whose foundations in reality are so insecure that they have no capacity for tolerance of other approaches. This intellectual intolerance is one of the greatest dangers of our time. It is a source of conflict in itself, between competing religions or ideologies, for example, and it helps to justify the expression of conflict through violent means. Intellectual intolerance is also linked to the erosion of commitment to multilateral institutions and undertakings, for it makes collaboration with other parties impossible except on one's own terms.

One possible counterweight to intellectual intolerance is an unflagging persistence in the search for new syntheses to serve as the bases for co-operative action on present and emerging global problems. Where can this search begin and be maintained except in the universities? In a world so finely balanced on the brink of self-destruction, there is an urgency about the mobilization of intellectual resources on a global scale, with scholars addressing themselves to the pressing global issues of human survival, development and welfare. It is important to say this at this juncture of human history, when the commitment to multilateralism and international co-operation seems to be eroding. It would be disastrous for all of us if the scholars and educators were to join in this trend. What is needed is for the world's educators and associations like IAU, to help try to stem and reverse this tide, and to recommit themselves to the kind of international co-operation that is a prerequisite for survival in this interdependent world.

In addressing today's interwoven global concerns, the universities should consider two new dimensions in teaching the humanities: a recognition that the humanities can no longer be limited to a single cultural perspective, and a concern with the interaction of science, technology and society. Every technological choice is, in the end, a choice among values: it is a choice of the kind of society that we want to live in and that we want our children and grandchildren to live in.

By tradition, the humanities have served to define the sense of cultural identity and to integrate new knowledge into the existing value system. The fast-breaking developments of both science and technology are rightly part of that integrative process. The value judgments mandated by scientific advances - ethical questions involving the direction that science should take and the

ways to keep it humanized - all of these judgments correctly belong in the province of the humanities. This humanistic filtering of technological development; this matching of the knowledge explosion and the increase in human power with a commensurate increase in human understanding, compassion, capacity for moral reasoning and normative judgment; are obligations on which the universities, in both North and South, have largely defaulted.

These, then, are some of the intellectual challenges facing universities today. On the pedagogical plane, the challenges are just as great. I am more and more convinced that, in the future, it will be the capacity to learn - and in particular to learn from each other individually and collectively - which, more than any other single factor, will determine the viability, autonomy, and integrity of all societies. I am speaking now of a new kind of learning - one which will enable us to survive, in humane fashion, in a world undergoing profound transformation. We have to adjust to living in a world of 10 billion people, a world in which science and technology continue to trigger rapid social changes, and in which configurations of values evolve at an accelerating rate.

How, in these circumstances, do we educate people to face an unpredictable future? By the time people complete their training for any specific vocation, that vocation may no longer exist. Today's longer life expectancies may require preparing people for a two- or three-career life. Because of rapid changes in the labour market, universites need to become more responsive to the needs of the productive sectors of the economy, but without being co-opted by them.

Retraining could well be the key to the sustained productivity and growth of a society. How do we build this into our system of higher education? How do we guarantee sufficient flexibility for our university graduates? Traditionally, the university has been engaged in a dual role. On the one hand, it has been creating knowledge and fostering the capacity to create knowledge - preparing scholars and scientists to work on their own. But it has also served to enhance the general skill level of a society. Lately, however, other institutions have begun to take up this traditional function of the university.

Corporations, in particular, are having a significant impact on higher education in the North. They compete, often successfully, with universities for teachers and promising graduates. The scope and scale of corporate educational programmes is beginning to rival that of universities in some ways, having evolved from modest, in-house training programmes designed to supplement formal education.

The result is that there is no longer a clear-cut distinction between the activities of collegiate and corporate classrooms. The knowledge demanded of, and offered by, researchers on high-tech industrial projects often challenges that proffered by university curricula. Courses offered by some corporations have acquired academic respectability. The cost of such corporate programmes in the United States alone has been estimated at more than $40 billion annually - approaching the combined yearly budgets of all American four-year and graduate colleges and universities. In Japan, the Hitachi Corporation spends

$83 million a year on education - a sum equivalent to two-thirds of its advertising budget. And Nippon Telegraph and Telephone Company estimates that every year 240,000 of its 312,000 employees enroll in a company course. These figures provide an indication of the scale of corporate education. According to the New Scientist (21 March 1985), Japanese industry funds 75 per cent of the country's R and D. It has taken over the role of the universities in essence and has revolutionized the way Japan manages pure science.

From a pedagogical standpoint, corporate education has proven its willingness to innovate - and in some cases has taken the lead. It employs state-of-the-art equipment with the capacity to liberate learning from the spatial limitations of the traditional classroom and from the temporal limitations of a rigid schedule. But its pedagogical achievements are not confined to simple gadgetry. Industry-based educators are doing fundamental research into the learning process itself.

Though corporate involvement in higher education rivals the scale of university-based education, the two are quite different in philosophy and purpose. The goal of corporate education is, after all, the formation of a more productive employee. Some corporations take a very liberal view of the kinds of personal and intellectual enrichment that encourage productivity, but the bottom line is an inescapable factor in business decisions about investment in education. University education is guided by other needs: the generation of new knowledge and understanding that may not have any short-term economic pay-off; the formation of an enlightened citizenry; the development of the skills of responsible social criticism; the preservation and amplification of indigenous culture; the enhancement of knowledge and understanding of other societies; the training of independent leadership in all walks of life. These are essential, but rather intangible, needs that no society can afford to consign to the commercial sector.

However, if universities hope to meet the kind of challenges posed by the corporate world, they will have to explore new ways of learning. They can begin by exploiting more fully the technology already available in, for example, radio, television and satellite transmissions, or video recorders. These techniques could be especially useful in the Third World, where the number of students exceeds the physical capacities of existing classrooms. But universities must also introduce other innovations - radical innovations - in the educational process.

Educators, I think, have been much too timid up to now in dealing with educational changes. They have merely been tinkering with marginal modifications of the traditional system. As George Keller noted in a recent issue of the journal Change, the major issues in higher education are largely ignored by educational researchers. Commenting on the narrow, limited focus of much educational research today, Keller observes: "If the research in higher education ended, it would scarcely be missed."* It is clear, therefore, that much more sweeping self-examination is required. And this brings us to the third kind of challenge confronting universities today, the institutional challenge.

* G. Keller, "Trees without Fruit: The Problem with Research about Higher Education," Change, Jan/Feb 1985.

The interdependence of our world calls for a more integrative approach and demands interdisciplinary responses. It is time to re-examine the way in which we have compartmentalized knowledge. In the past, traditional disciplines have served as the means for organizing knowledge in an orderly fashion. But those same academic pigeon-holes have fragmented perceptions of the larger issues that refuse to conform to limited dimensions. We need to dismantle some of the partitions between these academic compartments and develop a more flexible and dynamic educational structure that will foster, rather than impede, horizontal approaches to global problems.

There was a time when the universities began to respond to this need by establishing area-studies centres or multidisciplinary centres that integrated such disciplines as economics, political science, and social science, for example, within a broader perspective. But many of these interdisciplinary centres have now been sacrificed to budgetary concerns. Universities have fallen back on traditional disciplines, which have the strongest constituencies. And this has occurred just at the time when the need for integrative thinking is greater than ever.

There have been isolated experiments, especially among the younger universities, to broaden the graduate curriculum and prevent over-specialization. There are signs that the university world is changing - but not rapidly enough. For the most part, established universities continue to observe traditional distinctions as if they were set in concrete.

These, then, are the intellectual, pedagogical, and institutional challenges which higher education must face in order to maintain its relevance to our interdependent and pluralistic world. At the same time, the basic integrity of universities is being undermined by several serious trends.

One of these trends is a growing constriction of the access to knowledge at the university level. The problem is most serious, obviously, in those branches of knowledge that are thought to have military or strategic utility. In the case of government-funded research, the condition for sponsorship is, often, secrecy. But even in research programmes that are not government-funded, scientific symposia are increasingly closed to scientists from "unfriendly" countries, even if the subject under discussion has only remote strategic significance.

Secondly, we have the increasing commercialization of knowledge, particularly in fields with dynamic commercial applications such as biotechnology and information technology. Some companies are funding university research on the condition that they retain privileged access to the research results. The decision of the Supreme Court of the United States allowing certain advances in biotechnology to be patented has opened the door for such commercialization. This kind of arrangement contradicts the basic concept of a university as it has evolved on the premise of free inquiry and sharing of knowledge. The Green Revolution resulted from scientific information developed by a number of international research institutions, primarily funded by philanthropic foundations. That information was free. We are now on the threshhold of a second Green Revolution, a "Gene Revolution," based on the most advanced techniques of microbiology. But only those who can afford to pay for it will

profit from this one. The Third World will have to purchase this information unless it can build up its own capacity to develop it.

There are certain social and political preconditions for the pursuit of knowledge and the use of knowledge. Academic freedom is indispensable; without it the whole educational process shrivels, and with it the nation's capacity for creativity and growth. Ways need to be found to keep political upheavals from destroying precious intellectual capacities. One solution could be through a revitalization and strengthening of the concept of asylum for intellectual refugees.

Third World scholars, like others, are confronted with a hierarchy of academic prestige that, for example, elevates nuclear physics above public health. They face a genuine dilemma. The excitement of working at the frontiers of knowledge, the prestige of being published in the leading academic journals, the seduction of fine equipment and facilities are entirely understandable. But these attractions should not blind scholars to the profound satisfactions of work that contributes to solving the problems of the majority of people in their own society: the problems of poverty, of environmental deterioration, of disease; as well as problems of freedom, participation and equity. A commitment to these concerns may bring rewards that are less prestigious according to certain standards, but such commitments may be of greater service to society.

This is not to imply that Third World universities should devote their energies exclusively to domestic problems. But they do need to arrive at some working definition of where the dividing line is drawn between legitimate preoccupation with national problems, and an ostrich-like self-absorption. The reality of interdependence locates the line: there are real penalties to be paid for failing to perceive it accurately, the greatest penalty being irrelevance. But they do need to strike a healthy balance between the pursuit of knowledge at the cutting edge of science and technology and a concern for conditions in their own backyard.

Let me digress for a moment to comment briefly on the flurry of educational self-appraisals that have appeared recently in the Western world. Those reports I have read - and I make no claim to have read all - have struck me by their absence of concern with the global community. There is little discussion of the contribution that universities might make to the global debate on the structures needed for a more just, equitable and interdependent world.

There is a special need to develop teaching materials and modes of presentation that can sensitize students to the problems of global interdependence and to the fact that no country can live in isolation. The capacity of the educational system to do this will depend on the rebuilding of strong area and international studies at the university level, including the humanities.

One of the most effective methods of raising global consciousness is also one of the oldest: the international exchange of scholars. Even in the Middle Ages there were itinerant students who criss-crossed Europe and the Middle East in search of mentors. Knowledge has always been pursued across

borders. In a sense, the scholarly exchange of both faculty and students is an extension of this itinerant tradition. How many lives have been profoundly modified by the enlarged perspective of living and learning in a foreign land? Student exchange is an investment that carries economic and political dividends, though not all governments accord it priority.

Foundations play a valuable role in making these exchanges possible. But the non-profit sector in many countries is vastly underdeveloped. There is also a crucial need for more international research and training institutions in the Third World that are both rigorous and relevant to the problems of a particular region.

It is important, at this point, to step back for a moment and reflect on how the concept of the university has changed over the ages. The medieval universities were primarily schools of divinity, devoted to the study of God and His creation. They were less concerned with developing new knowledge than with simply transmitting received knowledge. Up to well in the 19th century the college, with its single culture orientation, was the model for institutions of higher learning, serving the broad educational needs of national elites. The university which we know today was greatly influenced by the ideas of Wilhelm von Humboldt, a contemporary of Goethe and Schiller, who proposed that the university should serve not only as a conduit for orthodox knowledge, but also as the crucible for new knowledge. He saw academic freedom, underwritten by an endowment fund, as an essential prerequisite to this task. At the time, little more than a century ago, these were revolutionary ideas. Yet we accept them today as a premise of higher education.

The concept of the university, then, is a dynamic one. It is bound to undergo - it must undergo - even greater changes in the future. I perceive the emergence of the international university as one more stage in the process of educational evolution. I hope that the United Nations University will be seen as among the first of a new generation of institutions employing innovative concepts and methodologies to deal with the multidisciplinary and multi-dimensional aspects of global issues.

Nor should this global perspective be the exclusive jurisdiction of the UNU. Our survival on this limited earth is going to require unprecedented levels of understanding and mutual tolerance. Higher education must commit itself whole-heartedly to promoting this understanding.

Thank you.

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