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UNITED NATIONS EDUCATIONAL,  
SCIENTIFIC AND CULTURAL ORGANIZATION

Address by  
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Director-General  
of the United Nations Educational,  
Scientific and Cultural Organization  
(UNESCO)

at the opening of the  
World Conference on Science for the Twenty-first Century

Budapest, 26 June 1999.

**[The Director-General begins his address in French]**

Mr President of the Republic of Hungary,  
Mr President of the International Council for Science,  
Mr President of the Hungarian Science Academy,  
Ministers,  
Mr Chairperson of the Executive Board,  
Your Excellencies,  
Ladies and Gentlemen,

I am delighted to be witnessing the opening here today of a World Conference in which we place high hopes. Allow me to emphasize how much the stakes, of which we are all aware, are raised by the symbolic fact that we are about to enter a new century and a new millennium. This impending event is sharpening our sense of responsibility.

I am pleased, first of all, to express my gratitude to His Excellency the President of the Republic of Hungary and his Government for their generous hospitality, the efficiency of their preparations and the accessibility of their representatives. We are glad that Hungary has for so long been providing the international scientific community with brilliant researchers whose works have been granted the highest distinctions.

I should also like to express my satisfaction that this Conference has been organized in partnership with the International Council for Science, which has long been one of UNESCO's most important allies, and in collaboration with other international organizations.

I wish to extend a warm welcome to all the participants, the representatives of States and intergovernmental and international non-governmental organizations, as well as to the representatives of the media and of all segments of society.

Ladies and Gentlemen,

With our work about to begin, I should like to stress that we are inaugurating a new type of conference here today. Unless I am mistaken, it is the first time that not only the specialists and decision-makers but all the other actors of contemporary science, including the social sciences, have come together around the same table. The questions of science - the questions which it raises, which it asks itself and which are asked of it -, made it high time for society as a whole to join in the debate. I am convinced that this innovation will help to make the discussions more relevant and add to the effectiveness of the action which will follow.

**[The Director-General continues in English]**

Ladies and Gentlemen,

We are here in Budapest to map a course for science in the years and decades to come. Mapping has been one of the most universally shared human activities across the ages. From the most rudimentary diagrams marked in sand or clay, to the mapping of the human genome, it has been fundamental to the organization of knowledge and to the planning of journeys.

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Here, we will try to map a new future for science. Now, maps are never entirely neutral. They reflect standpoints, are organized around a chosen centre and according to selected criteria. Who makes the map, how it is made and what it charts are therefore of paramount importance. You, the participants in this Conference, offering a combination of talents and representing a range of stakeholders, will give this collective mapping process the legitimacy it requires.

What should feature on our map? I will give you my priorities: science for development, to uplift human dignity everywhere; science for peace and democracy building, science with women, science in the community, science offering the solutions that our society and our planet so urgently need.

Ladies and Gentlemen,

I wish now to address in particular the many government representatives present here. And - if you will permit me to continue a little longer with the same metaphor - I must point out that a map has to take into account the traveller's means of transport. What means do we have at our disposal for science's journey into a new future? Are we to travel on foot, by horse and cart or by jet plane? The scale of our map depends first and foremost on you.

It depends on government commitment translated concretely into a percentage of national budgets. It depends on the overseas development aid commitment of the industrialized nations. This direct, public support is the life-blood of basic research and of all levels of science education. Make no mistake! Science needs political will. It needs funding and structured support and, in return, it must respond to the needs of society.

There is another point I would like to make very clear. A government's responsibility is not over when it has set aside a budget percentage for science. Reflect for a moment on the implications for government policy-makers of the pace of scientific advances. The world as we now understand it through science differs more dramatically from the world of Pasteur than the science of Copernicus and Newton differed from Aristotle's. And reflect on the context: the world today is marked by such rapid change, such complex problems, such a variety of interactions - and of actors - that we cannot just set funding levels and leave science to "get on with it".

We need a financial commitment that reflects an equally resolute political commitment, with both translated into strong research policy. Science is too important to be left to the markets. As for so many other areas of human activity, democracy - active, participatory democracy - is a key part of the solutions we are seeking.

Let us work out together how to forge a new relationship between science and society, harnessing the powerful resources of the private sector and the public sector, setting sustainable development goals, bridging the knowledge gap through capacity-building and knowledge transfer, not just North-South but also South-South, stepping up efforts to communicate science and - last but not least - facing the tough ethical questions to which public opinion quite rightly demands we pay proper attention.

Mr President,  
Ladies and Gentlemen,

There must be no glossing over the issues here in Budapest. Our task is not to rally support to the most easily acceptable aspects of science, avoiding the problems raised by advances in biology or by the control and ownership of scientific assets. This is not the time for any of us to

throw up our hands and say, "You can't stop science", or "You can't interfere with market forces". To paraphrase a remark of Jacob Bronowski, defining the uniqueness of humankind: "We are not figures in the landscape, but shapers of the landscape". Well, let us make sure that is really so. Technophobia, in my opinion, is triggered by a perception that runaway science and technology have become the shapers of the landscape, reducing us to mere figures. The new relationship between science and society must prove that this is not the case.

It is up to us - all of us - to shape the landscape, with government policy-makers, public and private research institutions, IGOs and NGOs, working together to define the goals and the roles, reaching out, through networks and new forms of collaboration, through associations for the advancement of science. The dynamic, participatory nature of this process of transformation requires each and every stakeholder to play a part. UNESCO is fully aware of its own responsibilities in this process.

The founders of our Organization could not foresee what extraordinary developments would occur in science and in the world when they defined UNESCO's roles. But they could not have made a more propitious choice than when they gave the "intellectual arm" of the United Nations system a specific responsibility for science. Then, at the end of the 1940s, IUCN was born and later on, CERN, IGCP; then we had MAB, IHP, IOC, MOST, BAC and MCBM.

Half a century later, we are only now beginning to see just how global scientific research has to be, just how global, the most crucial problems requiring science-based solutions, just how global, the successful approach, the relevant ethical principles, the adequate solutions: solutions we are seeking jointly with ICSU, academic institutions, university associations.

And we have UNESCO: a global body - globally representative, running unique worldwide scientific programmes ranging from a global ocean observing system to microbial research and education networks, offering a global framework for the ethical review process, a global clearing house for best practice in science education and communication. I pledge that we at UNESCO will do everything in our power to put all this experience, which is your experience, all our capacities, which are your capacities, to work. We are here in Budapest to make a new commitment: this is our new commitment: to interact more; to address global matters in all their complexity, without trying to simplify them; to offer decision-makers timely advice.

**[The Director-General ends his address in Spanish]**

Ladies and Gentlemen,

On the threshold of a new century and a new millennium, we are confronted with a range of tendencies and dangers which are increasingly interdependent, and which require all-round responses from society as a whole and not only from one specialized sector. Complexity and democracy are, therefore, two sides of the same nascent reality: the reality which is just coming into view and which compels us to ensure peace, consolidate democracy and promote endogenous and sustainable development. Solutions are always to be found within; within our own selves, and within countries.

One of the fundamental characteristics of the new century will no doubt be the close link between scientific criteria and political decisions, For an effective response to be given to the new challenges, the politicians will have to listen and take scientific criteria into account; at the same time, the scientific community must have enough support for society, expressed in the form of democratic participation in the institutions. All political leaders are responsible, but those who wield most power also bear most responsibility.

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Three conditions have to be met for this symbiosis between science and the authorities to bear all its fruit: democratic participation, medium- and long-term forecasting, and the capacity to share knowledge and resources, responsibility and hope. As our world society becomes more and more numerous and diverse, the links between the need to share, the possibility of participation and the capacity of prevention are becoming increasingly obvious. But prevention and anticipation usually go unnoticed when they are successful, hence much of our work consists in an investment in intangible social factors.

The science of the new century will be a more dynamic activity which, above all, will be conducted on a world scale. The acquisition, transmission and application of knowledge have been transformed by the speed of communications, by the possibility of accessing libraries and the most advanced research centres from any part of the world using electronic media, and by an awareness of the social impact of scientific and technological advances. But the very speed of technological advance, in the midst of the inequalities and imbalances from which the present world suffers, threatens to destroy the moral framework and imperil the future of civilization. The Spanish poet, Antonio Machado, wrote a line of verse which I usually quote in this connection: "It is foolish to confuse value and price". We scientists have the duty of clearly enunciating the values which make up the ethical framework of our world.

The Constitution of UNESCO warns us that economic development is necessary but not sufficient; and that political development is necessary, but not enough. It adds that peace and welfare are based on "the intellectual and moral solidarity of mankind". This same mission of intellectual and moral solidarity is what should guide scientific development in the new century if its results are really intended to contribute to the achievement of liberty and dignity for all.

Mr President,

Budapest is not divided by a river. Buda and Pest are joined together by a river, the Danube, which we fondly imagine to be blue.

Hungary has experienced the splendour of an empire and the bitter obscurity of oppression and silence. We all have a duty to remember, but Hungarians - because of their deep roots as well as their more recent branches - remember vividly each day the value of liberty and the indomitable rigour of the spirit.

All we can do with the past is to record it. It remains as it was. And we must bear this in mind, learning the lesson of what should not be repeated. But we can and should write the future together. We have a duty to remember the future, which is intact before us. We scientists will not remain silent. Joining hands with all the other sectors, we shall not stop writing the future and we must do it differently. The use of force and imposition has failed resoundingly. And at what price! The price of millions and millions of human lives. Immense suffering. Indescribable perversities. We have discovered antibiotics, how to communicate, the most sophisticated surgical techniques; but we have not managed to ensure that dialogue and tolerance prevail over the law of the jungle; we have not succeeded in blending knowledge sufficiently with wisdom.

On the threshold of the twenty-first century, the sciences (natural, social and human sciences), meeting in harmony in Budapest, proclaim to the world from the heart of Europe that they will contribute to the transition from the logic of force to the force of reason, from the culture of war of times past to the culture of those who offer our children the fruits of love for a new age.