ABSTRACT
              This document was prepared on the basis of
discussions at a workshop organized by UNESCO and other groups on the
subject of education facing the crisis of values from the point of
view of: (1) cultural identity and cultural diversity in education;
(2) humanistic, ethical, and aesthetic values in education; and (3)
education facing the ethical problems that arise from scientific and
technological progress. The document presents summaries and
recommendations made regarding these themes. The first of five
sections contains presentations by representatives of UNESCO and the
Association Descartes. The next three sections each take one of the
three featured points of view. Section 2 on the point of view of
cultural identity and diversity contains: (1) "The reasons for
providing intercultural education and an assessment of experiments to
date" (Perotti); (2) "Cultural diversity and promotion of values"
(Batelaan; Gundara); (3) "Ideology and ethical values in education"
(Avakov); (4) "Prospects in Africa" (Wininga); (5) "Prospects in
Latin America" (Lopez); (6) "The 'Musee en herbe'" (Lusardy). Section
3 on values includes: (1) "Humanism today: peace, tolerance, and
democracy" (Best); (2) "Values and the school curriculum" (McNicoll);
(3) "Prospects in Asia" (Rajput); (4) "The responsibility of local
authorities" (Schuster); (5) "Art and one's everyday surroundings"
(Langlois); and (6) "Art as salvation" (Rosenfeld). Section 4 on
ethical problems contains: (1) "A jurist's viewpoint" (Gerin); (2) "A
philosopher's viewpoint" (Lecourt); (3) "The ethical problems arising
from research" (Adam); (4) "Education and bioethics" (Huber); (5) "A
worldwide code of ethics: the role of universities" (Jaumotte); (6)
"The role of industry in education" (Carrigou); and (7) "Physics
teaching and the crisis of values" (Lovas). The fifth section
contains conclusions and general recommendations. (DK)

EDUCATION FACING THE CRISIS OF VALUE

EDUCATION FACING THE CRISIS OF VALUES

Strategies for strengthening humanistic, cultural and international values in formal and non-formal education

INTRODUCTION

This document has been prepared on the basis of discussions at the workshop organized by UNESCO, the Hungarian Academy of Sciences, the European Academy of Sciences, Arts and Humanities, and the Association Descartes on the subject of education facing the crisis of values from the point of view of the following:

(a) cultural identity and cultural diversity in education;

(b) humanistic, ethical and aesthetic values in education; and

(c) education facing the ethical problems which arise from scientific and technological progress.

The document presents summaries and recommendations made regarding these themes. A more complete report exists in French.

CONTENTS

I. PRESENTATIONS

1. By Ms K. Savolainen, Acting Director, Division for the Development of Education, UNESCO

When dealing with values, especially humanistic, cultural and ethical, we also have to deal with the historical, contemporary and futuristic dimensions. Language, art, religion and ethical practices are usually learnt; they vary according to different cultures and are usually based on long-standing historical traditions, adapted to the changing times. Throughout history the period of adaptation to change has been long, but in the present day, these changes are coming about more rapidly. Their possible effects differ. For example, some Asian educators have been concerned that the phenomenal developments in science and technology tend to accentuate the materialistic tendency of humanity which has also brought new rationality and modernity which erodes and, in some cases, destroys, social institutions and their traditions, values and morality. The development of science and technology raises entirely new ethical problems for society as a whole, as is the case with biotechnology, which makes possible the manipulation of genes, the transfer of organs, etc.

Furthermore, social, political and economic changes are also affecting value systems, as well as those caused by the development of science and technology. The far-reaching political and social changes, which are occurring not only in Eastern Europe but also in Africa, Asia and Latin America, call for an analysis of values, when many 'old' values are no longer valid. We all know that political change can come about more easily than cultural change. In practice, long-standing customs, habits, prejudices and traditions inhibit many enthusiastic initiatives and may arouse problems when faced with different new customs and/or traditions.

At the same time, the internationalization of cultures and economies has led to dealing with people representing different cultures and values. One of today's problems is that conflicts arise between different cultural, ethnic and religious groups, both within and between countries. Education is an important factor in the transmittal of values. However, in the present-day turbulent world, education is now facing a crisis of values. We are faced with the question of how education can contribute in assisting society to perpetuate and renew itself, cope with rapid evolution and the growing, complex and even faster changes, as well as the fragmentation of knowledge and its application. How can education preserve its humanistic dimension as well as the values of mutual tolerance, solidarity, respect and honesty?

Naturally we need to have access to education before we can talk about its role in transmitting values. Providing education for all is a value in itself. The importance of literacy recognized on a worldwide basis at the World Conference on Education for All, which took place in Jomtien, Thailand, in 1990; the Conference adopted the World Declaration on Education for All and the Framework for Action. The question of values is included in the Declaration which states in Article 1: 'another and no less fundamental aim of education development is the transmission and enrichment of common cultural and moral values. It is in these values that the individual and society find their identity and worth'. It is clearly defined in the Declaration that the basic learning needs 'comprise both essential learning tools (such as literacy, oral expression, numeracy and problem solving) and the basic learning content (such as knowledge, skills, values and attitudes) required by human beings. Furthermore the Declaration states that: 'The satisfaction of the basic learning needs empowers individuals in any society and confers upon them the responsibility to respect and build upon their collective

cultural, linguistic and spiritual heritage, to promote the education of others, to further the cause of social justice, to achieve environmental protection, to be tolerant towards social, political and religious systems which differ from their own, ensuring that commonly accepted humanistic values and human rights are upheld, and to work for international peace and solidarity in an interdependent world.'

If we are to reach the education goals defined in the Jomtien Declaration, it is important to realize that enhancing the quality of education does not only mean higher achievements in the final tests of each subject, but also paying enough attention to those qualities which enable people to live in harmony and with the environment, and to develop their personality as a whole, including humanistic values. It has been said that knowledge has no effect if values are not involved. However, one should not deny the importance of knowledge when it is required for people to undertake justified value judgements.

On the threshold of the twenty-first century, humanity is confronted with a number of interrelated problems which constitute challenges for our very survival. We have to deal with crucial issues on equitable and sustainable development, protection of the environment, population control and the promotion of democracy and respect of human rights. In view of the urgent need to find solutions to these major problems, would it not be justifiable to discuss universal values and new universal ethics, which could be called, for example, planetary ethics, world citizenship, global or holistic thinking, based on human and cultural values and on the realities concerning the survival of our planet and the maintenance of decent life, as well as recognizing the necessity that people have to all live together with different cultural identities and backgrounds.

UNESCO is devoted, in its fields of competence, to meeting the challenges confronting the world at large. In his Introduction to the third Medium-Term Plan (1990-1995), the Director-General recalled that UNESCO's purpose is fundamentally ethical. Its Constitution states: ' ... *[to] contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for human rights and fundamental freedoms, without distinction of race, sex, language or religion'.* Within the United Nations system UNESCO is responsible for building the defences of peace in the minds of men, on the foundations of development and international co-operation in its relevant spheres of competence. UNESCO should try and meet (in its fields of competence) the three major challenges of our time: *'peace, development and protection of the environment'.* In each of these areas, ethical and value aspects are important. The Director-General further stated: *'The uncertainties hanging over the future of developing and industrialized countries alike are not only economic. They are to an equal, if not greater extent, ethical and cultural'.* Concerning the environment it is stated that: *'the battle for the environment cannot be won unless it is based on a new ethic of the relationship of human beings with nature, entailing rights, duties and solidarity'.*

UNESCO's programme action to enhance the humanistic, cultural and international dimensions of education (both formal and non-formal) represents a major contribution to the World Decade for Cultural Development. It is also an integral part of UNESCO's contribution to peace, human rights and the elimination of all forms of discrimination.

The fourth Conference of Ministers of Education of Member States in the Europe Region recommended, as the most important goal for the development of national education systems and the development of co-operation in the field of education, the instructional,

educational and intellectual, as well as moral and vocational training of the younger generation, and also of older people, so that they have a more lively perception of the values, thinking and behaviour which follows from the recognition of humanistic, cultural and international dimensions of education. The Conference also recommended the expansion of efforts, at both the national and international levels, in reviewing syllabi and courses of all types and forms of education, within the framework of an integral concept of humanistic, cultural and international education, as a lifelong process starting at the pre-school age and continuing through all scholastic levels, as well as university and postgraduate education.

In order to enhance the humanistic, cultural and international dimensions of education, efforts have been concentrated, during this biennium, on developing strategies to strengthen content relating to values in formal and non-formal education in Africa, Asia and the Pacific and Europe.

During the ninth Meeting of Secretary-Generals of UNESCO's National Commissions in the Europe Region (held in Izmir, Turkey), the theme 'The Development of European Co-operation for the Promotion of Humanistic, Ethical and Cultural Values in Education' was discussed. A synopsis was prepared, together with a selected bibliography which was based on the work already undertaken by UNESCO, intergovernmental and non-governmental organizations in this field. This synopsis highlights the universal values based on the United Nations and UNESCO's standard-setting instruments and can serve as a reference document for similar activities undertaken in other geographical regions. After the Izmir meeting, we wrote to all the National Commissions in Europe with proposals for launching actions to this end. The present workshop is a major European action foreseen for this biennium and, at the same time, we would wish that it could also serve as an interregional consultation to provide ideas for further action in all regions of the world, in spite of the fact that we have only been able to invite a few participants from outside Europe.

I should also like to mention the activities of UNESCO's Regional Office for Education in Africa (BREDA), which has completed five studies on humanistic, ethical and cultural values in several African countries in connection with traditional education, educational reforms and non-formal education.

The UNESCO Principal Office for Education in Asia and the Pacific (PROAP) recently organized the Regional Meeting for the Promotion of Humanistic, Ethical and Cultural Values in Education in Tokyo, Japan. This meeting, which was organized with the assistance of the Japanese Ministry of Education and a Japanese institution, was of two weeks' duration with the participation of 13 countries from the Asia region.

At UNESCO, we should like to analyse values and the crisis of values in relation to the creation of a culture for peace, attitudes and behaviour of tolerance and democracy throughout the world where opposing tendencies might prevail. As an example of the emphasis UNESCO puts on the development of democracy, I should like to mention a series of meetings:

Democratic Culture and Development, Montevideo, Uruguay;

International 'Culture and Democracy' Forum, which was held in Prague from 4 to 6 September 1991 with the assistance of the Czech and Slovak Republic; this forum discussed the various experiences of transition to democracy and ways of creating a

new awareness and a more responsible form of citizenship. It provided an opportunity to consider the complex issues involved in the development of democracy. The forum also highlighted the fundamental role that education, communication and information should play in developing a democratic culture likely to last. A large number of paths were identified for research and future action to promote the emergence of true culture - both civic and political - in which the values of democracy, which were recognized by participants as forming an integral part of the universal heritage of humankind, might take root.

I noticed an interesting proposal (published in a newspaper) which was made during the Prague Forum, in favour of, I quote: '*The ecumenicalism of cultures. This ecumenicalism has nothing to do with cultural cross-fertilization, which is a biological process and a rather Utopian one at that. It means not the merging of cultures, but their democratic, peaceful existence side by side both within and beyond institutional boundaries. This coexistence must be the work of democratic politicians who agree to declare and apply the equality of all cultures as the new doctrine of international relations*'.

I have earlier described UNESCO's action to enhance ethical, humanistic and cultural values and democracy. Primarily, we are interested in educational actions, but also other intersectoral actions related to culture and democracy which are also relevant from the educational point of view. Other programme sectors in UNESCO have dealt with problems relating to their field of competence, as in the Science Sector in analysing the ethical implications of contemporary science and technology. They have organized, among other activities, a round table on ethical and legal aspects of safeguarding living species, as well as a seminar on the distribution of information on questions of science ethics and bioethics. The Sector for Social and Human Sciences has also contributed to the development of philosophical and ethical reflection.

Values and democracy in education should, in fact, be looked at from a broad point of view; how are education systems organized, and whether people can be involved in running educational institutions. How are teaching/learning situations organized? Are human rights exercised in everyday situations and school environments; is there freedom of expression, as liberty of creation and expression is the core of cultural, artistic and scientific activity?

In conclusion, values education should provide elements for an important programme action '*Learning for the twenty-first century*' which is aimed at strengthening international thinking on a new approach to education and on the renewal of educational content and methods. The future is not a place we are going to, but one we are in the process of creating and its paths are to be made, not found. In this context our interdisciplinary meeting can be a contribution to creating these paths. What is interesting in this process (according to the Australian expert who is writing for *Education for the twenty-first century*) is that '*the making of those pathways changes both the maker and the destination*'. I think that this is an important observation if we are ready to accept creation of a genuine culture for peace, tolerance and democracy.

2. By Dr G. Huber, Head of Department, Association Descartes

The revival in values bound up with human rights is a task that has assumed fresh significance at a time when it is tempting, on an international level, to think that these values will not stand up to the changes and upheavals that are having a lasting effect on the world.

Moreover, we know that 1992 could mark a turning-point because it is also the year when the United Nations Conference on Environment and Development is to be held in Rio de Janeiro. Education and the environment are thus becoming the main themes of a growing awareness which is not yet able to counter the many destructive forces throughout the world which hinder our desire to think and to learn, and also to respect the environment. Among the factors to be borne in mind are the findings of the Conference of European Ministers of Education held in Bergen, Norway, in October 1990, whose recommendations included entrusting to education systems the task of highlighting the need to keep choices open for future generations - choices at present threatened by the destruction of the biosphere and ecosystems, and by the erosion of biological diversity.

Faced with such a task, and faced with all the forces already enlisted and all the projects which have already been carried out without really altering the underlying problems, some people might question what is the point of our workshop. It is true that behaviour patterns taught in schools can be destroyed in. a short space of time under pressure from violence or despair, or simply because of people taking a short-time view; but no other approach is possible. It would be a great mistake to imagine that education has demonstrated its uselessness and should be replaced by bringing about a change - by whatever means - in human nature; such a policy would be a barbaric attempt to teach pupils to perform like automatons. What we should be doing, now as ever but with even greater determination, is to shift the rock of Sisyphus and bring the education question up to date.

Association Descartes

Our Association will try to show how science and technology make this question even more difficult, if not intractable. Scientific and technological progress has provided solutions to many of the problems that have arisen in society worldwide, but it can also be used for less human-friendly purposes. In order to provide a useful contribution to your deliberations on values, the Association Descartes will share with you the views of the National Curriculum Committee and the National Advisory Committee on Ethics, which in France are the only bodies empowered to decide on the principles of education reform. Their aim is to focus this reform on two goals: educating adults and educating citizens. The Association will also draw on the results of the various European and national conferences it has organized on what has become known as bioethics.

To the Association, bioethics comprises both the full range of metaphysical (nowadays we should probably say metabiological), moral and legal issues raised by the development of new biological and medical techniques, given that the biological sciences are not capable of coming up with the answers themselves; and the democratic debate itself, in which citizens take opposing sides, sometimes acting as individuals and sometimes as members of a group or even both, either simultaneously or one after the other.

The geopolitics of education

The experience of the Association Descartes has led it to the following conclusion: education cannot be regenerated unless the inclusion of values related to human rights laid down by internationally agreed educational thinking is one of its main objectives.

The right to knowledge is a human right which is just as important as other rights, not only because it is clearly stated in the Universal Declaration, but also because it plays a part in the way societies develop. It can no longer be disputed that the economic development of societies depends to a large extent on the way scientific knowledge is used. A society where the right to knowledge is flouted is a society in danger. Access to the advance of knowledge is certainly one of the world's most unevenly distributed assets. If we accept that the gulf between industrialized and other countries will go on widening, we will be responsible for inflicting irreversible harm on the economic development of nearly three quarters of the human beings living on this earth, as well as for an unprecedented degree of international anarchy. That is why it is now up to scientists and technicians, both male and female, and more generally to all those throughout the world who are aware of the critical role played by science and technology, to help all peoples to become involved in the conquest of knowledge, first and foremost through the right sort of education.

We must be careful not to explain the existence of this gulf by arguing that the social organization resulting from the new uses of science and technology developed by rich countries is diametrically opposed to the empirical knowledge developed by the education system in respect of the different social groups in poor countries. At the very most we can observe relative contradictions; but this is equally true in rich countries, because their new uses of science and technology also conflict with the empirical knowledge systems and the cultural representations of their people, so much so that they now conduct 'science studies' which are responsible, as it were, for ensuring that the biological and social sciences develop in appropriate ways, and for giving useful advice to the authorities on the supervision of health, research, the environment and development. It is obvious why the debate on the new deal in education cannot be monopolized by the Western world on the pretext that it is the West that takes the decisions on scientific and technological progress.

Education and cultural diversity

The first reason why such a monopoly should be rejected is that reasoning guided solely by high technology is incapable of taking into account the multiple requirements of tomorrow's education. This is moreover fully appreciated by fundamentalist movements, which by contrast are advocates of obscurantism and anti-science.

Education involves first and foremost the ability to teach men, women and children how to master their perception of the world, analyse objectively and synthesize creatively; and it also gambles on an understanding of otherness and an intelligent awareness of the resources needed to transform reality. Education allows the mind to move towards reality and then break away from it. It also signifies the values of respect for the individual and for the effect individuals have on their surroundings, through the agreement that they have jointly entered into. Acquiring scientific and technological knowledge, and training people in scientific ways of thinking, are therefore important and necessary steps in the education process, but they are not enough in themselves.

We have to accept the following paradox: we believe in the benefits of scientific progress (especially in the areas of health and housing), but we do not believe that they are enough in themselves.

The second reason is that the monopoly referred to above would put humanity at risk of losing its living cultural diversity.

Tension exists between the universalism of thought and the defence of the greatest possible cultural diversity. We know that cultural relativism cannot be applied to knowledge in general, and to scientific knowledge in particular, without killing them. There is no such thing as national knowledge, class knowledge, masculine or feminine knowledge. At the same time, knowledge is not produced in a social and cultural void. Thus scientific research takes place both in a cultural environment to which it is linked and within a framework of social relationships involving domination and autonomy which have a direct bearing on the capacity for scientific thought. Furthering the cause of truth therefore implies the ability to subject to criticism the very conditions required for that truth to emerge, in order to keep open all the options of later discovering other truths. Only critical relativism enables us to include our own reality in a broader sphere that also contains other people's reality.

The problem for the Conference of Ministers of Education of Member States may be to come up with a practical complementarity between knowledge of the world we live in, through science, and understanding of others, through ethics. This can be achieved if participants begin by recognizing and understanding social and cultural diversity, that is if they show lucidity and the breadth of vision that sometimes seems contrary to personal interest. Hans Jonas points out (in *Le Principe de la responsabilité*, Cerf, Paris, 1990, p. 243) that personal interest 'has an ineradicable tendency to restrict everything to a narrow view, given that the "self" is each time represented by the people concerned at a particular time and place'. When all is said and done, the outcome of our deliberations will depend on our ability to include in our 'self' the living population of the entire world.

Conclusion

While therefore, on the one hand, the policy of widening the gulf between the countries of the North-West and those of the East and South holds out no future other than anarchy and nihilism, on the other hand, a Utopia of despair which advocates that knowledge should either be destroyed or taken by force - in the same way as the workers of the nineteenth and early twentieth centuries sought to take over the means of production in industrialized countries - would simply be another major delusion.

The message that the Association Descartes would like to get across here is that the North-West, the East and the South have no alternative but to solve the problem of education together.

II. CULTURAL IDENTITY AND DIVERSITY IN THE FIELD OF EDUCATION

1. The reasons for providing intercultural education and an assessment of experiments to date

Mr Perotti, Director of the Information and Studies Centre on International Migration of the Council of Europe

The reasons for these experiments are basically the following:

the search for a European identity made necessary by the numerous unifying processes taking place, as shown by the existence of the Commission of the European Communities, the Council of Europe, the CSCE and the unification of Germany;

the opposing trend of the reappearance in Europe of nationalist movements often reflecting ethnic and religious problems:

the flows of immigrants from Eastern to Western Europe and from developing countries, especially countries on the southern shores of the Mediterranean.

As Resolution No. 1 on migrations adopted by the Conference of Ministers of Education points out, further research is necessary for a better understanding of:

the parameters that define cultural identities and the resulting behaviour patterns;

the characteristics of intercultural communication;

the origins of rigid cultural attitudes and of the rejection of other cultures;

the process of social exclusion.

There is now an urgent need to reorganize education in such a way that pupils and students can acquire a greater awareness of the following basic concepts:

democracy, human rights and fundamental freedoms;

tolerance and pluralism;

interdependence and co-operation;

conflict and change.

Further experiments are needed in the field of intercultural education. They should:

involve children, whether they are citizens of the country concerned or of foreign origin;

build a bridge between knowledge and education, and therefore go beyond the language problem;

meet both individual and group requirements;

aim to integrate children not only into schools but also into the community;

move beyond the context of the school and traditional education, extending it to include all those involved in education, especially parents, associations, the media and local authorities; the intercultural dimension requires that no solution should be introduced unilaterally;

involve all the subjects of the survey; to this end multidisciplinary teams of teachers should be set up;

take account of the many different functions of language;

encourage curriculum reform, especially in the fields of history, geography, literature and education in civics and societal life.

2. Cultural diversity and promotion of values

Mr Pieter Batelaan and Mr Jagdish Gundara, of the International Association for Intercultural Education

Education on its own cannot resolve the crisis of values. More appropriate social and economic policies must be introduced in the fields of housing, work and health.

In industrial societies, education has three goals:

to provide vocational training;

to facilitate the democratization process;

to ensure the balanced development of human beings and to transmit ethical, cultural and humanistic values.

The democratization process should therefore do more than merely take account of the culture of the other groups represented among the pupils.

Yet the fact is that the knowledge, language and culture of minority groups are often not recognized at all.

In a nutshell, we must aim to encourage the right education for all at the dawn of the twenty-first century. We have seen the emergence of a 'fourth world' proletariat, made up chiefly of immigrants and minority nationalities. The position of education has changed, since the educating role of the family is declining. This means that schools must take over the tradition of transmitting values. The diversification of society and greater interdependence between peoples means that ethnocentric and national values are now less important.

Faced with the increasing complexity of interaction between religion and education, greater stimulus should be given to encouraging religious tolerance, not only among believers

but also among atheists. Education should therefore put forward values in a way that will endorse the values of all pupils.

After this introduction, the authors suggested a model which defines the goals of education and is based on the perception of values. Obviously, it is the hope of parents and the authorities not only that children should obtain a qualification but also that they should be integrated into society.

The educational model should make it possible, at one and the same time, to provide vocational training, emancipate the individual, perceive values and promote human behaviour of a high quality.

The basic values for a pluralist society are linked to:

interpersonal relations;

the relations between human beings and their cultures;

the relations between human beings and nature.

These are mainly:

respect for human dignity and human rights;

respect for different cultures;

respect for the natural environment.

The opposing forces are ethnocentrism, racism, fascism, violence, vandalism, waste and pollution.

A philosophy of education could be based on the tension that arises between these values and the forces opposing them.

On this basis, a system of values can be established that is shared by several cultures, provided that there is sufficient knowledge of these cultures.

To sum up, all educational work aimed at solving the crisis of values must:

seek a consensus at national, local and school level on the goals of education in a pluralist society;

provide teachers with the information they require to turn to account the tension that arises between values and the forces opposing them;

inform teachers how to negotiate the school curriculum with all the communities represented at the school.

3. Ideology and ethical values in education

Professor Avakov, member of the European Academy and of the Soviet Union Academy of Sciences' Institute of World Economy and International Relations

The purpose of education is to teach the 'truth', the incarnation of all ethical values, whereas ideology is an 'interpretation' of facts, especially when it is the ideology of a totalitarian country which is 'a formidable partner capable of crushing education beneath its massive weight'.

As Alfred de Vigny said, ideology 'substitutes symbols for reality in all areas'; R. Aron calls it a secular religion. Professor Avakov commented on the role of ideology in teaching, both in a worldwide context and in the ex-Soviet Union, now that it is on the verge of making an historic choice. A single world economy is tending to develop, replacing the old three-part system (Third World economy, planned economy and market economy).

The collapse of the planned economy which, under the influence of an economic empire, ruled the Third World, is the main reason for this trend. Market forces now seem to be the only economic development model that could dominate the world economy.

In the socio-political sphere, mankind is managing to bring the Cold War to an end, heralding a new era in which the international order is based on peace and disarmament.

Following this analysis, Professor Avakov commented on the Soviet problem and attempted to bring out the workings of an ideology that is still exerting an influence on education and the development of ethical values.

He thought that one of the basic reasons for the perestroika crisis is that it underestimates or is even blind to ethical values.

Much is heard about the market economy, privatization and the convertible rouble, but very little about culture, morality, the spiritual heritage to be preserved and non-material values.

It is therefore necessary for three things to happen in the ex-Soviet Union:

the revival of ethical values that developed during the country's earlier history but that have been stamped out or forgotten;

the shaping of the new ethical values that will be needed in the difficult period the country is going through;

the acceptance by Soviet society of universal ethical values; this would ease the country's integration into the international community.

If all nations followed these principles, intercultural dialogue would be much easier and more fruitful. It would also simplify the search for answers to the major world problems, keeping a balance between the many local cultures and a universal culture that would act as a guide.

4. Prospects in Africa

Mr Wininga, former professor of philosophy in Burkina Faso

UNESCO's major objective is to construct peace on positive lines, encouraging everything that might bring about a change in the minds of men and women and win them over to working for peace. If culture is to become a means of effecting such a change and contribute to strengthening peace, all education systems must reconcile two equally vital aspects: the acknowledgement of the cultural identity of each nation, and of cultural diversity.

The first of these aspects is essential because it gives each student self-awareness, an individual card of identity and also a national one. But if we go no further than this, we run the risk of making pupils contemptuous of others, even if only through ignorance, or of encouraging superiority reflexes which lead to a desire for power and domination. Contempt leads to violating other people's rights.

The second aspect stresses the virtues of mutual understanding, tolerance, respect and love for others by demonstrating that mankind is inexhaustibly varied and that, just as physical and psychological differences do not prevent us from recognizing one another as members of the same family, group or country, cultural differences should not prevent us from recognizing one another as members of the same human family, all destined to live together. This second aspect leads ultimately to the introduction of a new 'identify card' that is valued all over the world.

It is obviously important to attempt to reconcile these two elements in schools, not just because of the curiosity which makes growing children open to anything new but also because the prejudices that come with age, often setting minds in a rigid and hard-to-alter mould, are not yet established. Everyone willingly agrees on this need to reconcile cultural identity and cultural diversity by means of education and to introduce intercultural dialogue in schools, but we still have to define methods and to invent effective ways of putting this into practice.

In Europe a fair number of experiments along these lines are already taking place: language teaching, letters between schools in different countries, exchange tours, associated schools, co-operation between schools and museums, schools and academies of music or drama, and so on. Where these experiments are possible they are still valid to a certain extent in African countries such as Burkina Faso. Some, or others of a similar nature, have already been put into effect. Twinning of schools is one example, in much the same way as towns, but where schools are concerned the experiment may fail entirely and turn out to be a disaster. The danger threatening school twinning - and which apparently also affects town twinning - is that instead of being a sort of cultural transfusion, a chance for children from one school to acquire the outlook of those from another, a chance for mutual discovery, it is often reduced to a sort of 'one asks, the other gives' syndrome, a blend of begging and alms-giving.

In these circumstances, twinning projects and all similar experiments, instead of giving the two parties access to both identities, distorts these identities by casting them in a false artificial mould.

If a school twinning project is to provide the opportunity for genuine intercultural dialogue, the adults - in this case the teachers - responsible on either side for organizing and

supervising the experiments must keep them constantly on course towards their prime target: genuine, mutual intercultural dialogue.

5. Prospects in Latin America

Mr Luis Enrique Lopez, University of Altiplano, Peru

The education situation is tragic in Latin America. This is particularly true in five countries whose populations include large numbers of Indians or people of Indian origin: Mexico, Guatemala, Ecuador, Peru and Bolivia. In the Andes subregion there are more than 200 ethno-linguistic groups, and a huge socio-cultural gap separates these groups and people in the towns, who speak Spanish. Moreover, the type of education given to Spanish-speaking children in the so-called 'majority' social groups gives them an image of the continent that does nothing to encourage the spread of tolerance and respect for pluralism. Latin American countries are presented as 'Western, Christian and white' societies. The existence of the Indian population is not acknowledged in curricula, school textbooks or teacher-training programmes.

It is against this background that people in Latin America began talking first about bilingual education and later, during the past two decades, about bilingual *intercultural* education.

Intercultural education is seen as a system rooted in the culture of the pupils and which is also open to the culture and knowledge of Indian groups, in a context aimed at helping Indian children to acquire strategies, abilities and values which will prepare them to negotiate their role and place in society.

In this process the development of the pupil's mother tongue is regarded as having a primordial function. In their mother tongue children can develop abilities related to their own reference culture - their existence as Indians. It also gives them an understanding of others, existential experience and the basis for learning a second language so as to widen their communication possibilities.

The theory underlying the introduction of bilingual intercultural education is that a continuous learning process can be built on the self-respect and positive image of oneself that can be developed when one's own mother tongue is maintained in school.

In this context Indian children are continually reassured that their society is of our time, valid and necessary to the development of the country of which it forms part.

Whereas in the past cultural and linguistic pluralism were seen as problems to be eradicated, the trend now is to see them not only as regional features to be preserved, but also as additional resources and values for heterogeneous societies.

Against this new backdrop, countries like Guatemala and Peru have started discussions to update their national curricula, incorporating both notions of cultural pluralism and intercultural education for all. The goal is to foster tolerance and respect for others in all pupils, and especially Spanish-speakers, so that they will not end up with the idea that everyone should think, feel and speak like them.

Intercultural education could also help to build a more democratic society and lower the political tension linked to ethnic conflicts which in countries like Guatemala, Nicaragua and Peru have led to violence and jeopardized democracy.

At Jomtien, we spoke of education for all in the varied world in which we live. That means establishing education based on hope and democracy. We can achieve this through intercultural education and, in some cases through bilingual education.

6. The 'Musée en herbe' ('The beginnings of a museum')

Ms Martine Lusardy

Ms Lusardy introduced an interesting project: the 'Musée en herbe', a children's museum which was opened in the zoological garden of the Bois de Boulogne, near Paris, in 1975.

The aim is to introduce children to museums from the age of 4, to provide them with a place where, along with articles of artistic worth, they can find clear information, games and amusements, a stimulating world waiting to be discovered.

The way this museum is organized takes account of the findings of the psychologist Jean Piaget, who showed that in early life children's brains go through a syncretic, illogical phase when they are especially responsive to art.

At the 'Musée en herbe', art and science are found side by side. Leonardo da Vinci, for instance, is presented as a painter, architect, military engineer and botanist.

A display entitled 'Le jardin dans tous les sens' shows how observing, listening to and experiencing nature is often a source of inspiration for artists.

A spectacular and moving presentation of the objects on show reveals their many facets and encourages an emotional response in the children.

Comparing different forms of expression, such as the fine arts, the theatre, music and poetry, gives a broader view of how the creative process works.

Children are encouraged to look, listen, smell and touch, making the museum a place of freedom and fun that stimulates their imagination and creativity.

There are three categories of games: for four to seven-year-olds, seven to eleven-year-olds and children over eleven.

In 1992 the 'Musée en herbe' plans to set up a European Art Centre providing an introduction to art from prehistoric painting to contemporary works. Children will be able to learn about, for instance: The Charioteer of Delphi, the Book of Kells, the Flight into Egypt by Giotto, the Tower of Belem, Turner's 'Snow Storm', and the 'Demoiselles d'Avignon' by Picasso.

7.   Recommendations

1.   Education must be entirely recast. It is recommended that education be provided in such a way that all human beings gradually come to feel they are members first of their families, then of their immediate community and lastly of their nation and their country, citizens of a region and citizens of the world. They should feel individually responsible and caring towards their environment, and should gradually mature towards an increasingly widening feeling of citizenship.

2.   Education systems should take care to avoid any kind of indoctrination or dogmatism.

3.   It is recommended that human rights education be included in the curricula and syllabi of all education systems. National curricula should include key elements of community and individual education which will result in a local and national consensus on health, rules for living, and rights and responsibilities, against a background of equal opportunity, mutual understanding and tolerance.

      UNESCO should set up its own formative and summative evaluation committee to assess the progress made with projects which promote the exchange of ideas and experiences in this field.

4.   It is recommended that the *intercultural approach* should be regarded as essential to the construction of peace, democracy and a spirit of tolerance. Experiments in multilingual teaching should therefore be introduced as a general and frequent practice. The mother tongue plays an important part in implementing intercultural and bilingual education programmes, both as a means and as an end in itself, since it helps to ease the tensions and conflicts often generated by pluralist societies. Research should therefore be carried out to determine the efficacity of these programmes in achieving these objectives.

      It is recommended that Member States be invited to ensure that in international school twinning projects exchanges are truly reciprocal, so that the pupils involved become genuine partners.

5.   Education and knowledge go hand in hand, and both are living and dynamic. They must therefore go beyond the school context and be made part of a co-operative project involving all the partners in education, especially parents, associations, local authorities, the media and the local economy. This will lead to better recognition of cultural diversity, and ensure greater interdependence and negotiation between social groups.

      It is recommended that each school should arrange for negotiations and joint consultation with a view to reaching an agreement which will make it possible for all the values in the school community to live together in harmony.

6.   *During teacher training*, future teachers must be helped to recognize and take account of the otherness to be found in all pupils. It is important for teachers to be trained to lead intercultural discussions. We must stress the training of secondary-school teachers, administrators and planners; and also review from time to time the curricula, teaching and learning materials required to achieve the goals which are possible, given the

tension between the fundamental values which motivate all individuals and the negative forces working against them.

7.   In the teaching process, it is recommended that more importance be accorded to the social and human sciences, and that a new subject should be constituted, cultural anthropology, in order to study the processes by which individual and group identities are formed as well as the historical and geographical circumstances in which cultures originate.

On the same lines, it would be desirable to remodel the teaching of history to take in a broader spectrum of issues, such as case-studies of national and regional cultural models and the development of specific methods for teaching a universal history and the history of the regions of the world.

III.   HUMANISTIC, AESTHETIC AND ETHICAL VALUES

1.   Humanism today: peace, tolerance and democracy

Ms Francine Best, French Education Ministry Inspector-General

Apart from its function of passing on the knowledge and wisdom of humanity, the ultimate aims of education are to achieve understanding and the emergence of values. Without education, humankind would run the risk sooner or later of losing its ethical and aesthetic heritage.

Education is thus a symbol of humanity, of the constant effort to hand down and revivify a heritage that is made up of values just as much as of material objects and works of art.

Education is a part of contemporary humanism and is necessary as a means for expressing it.

The humanistic values on which the work of education is based (respect for others, the desire for knowledge of cultures in all their diversity, the need for international understanding, the thirst for learning) are those that the entire United Nations system, including UNESCO, seeks to promote, and that are laid down in the major internationally recognized texts (the Constitution of UNESCO, the Universal Declaration of Human Rights, the European Convention on Human Rights, UNESCO's 1974 Recommendation concerning Education for International Understanding, etc.).

The very concepts of law and human rights exist because every human being, in making a value judgement with the aim of acting in the best interests of society, *refers to* a system of ethics and thus sets off a process of ethical thought. Ethics is a sort of 'horizon' representing the goal of positive moral values towards which one should strive for the good of the human race.

Education means introducing a system of ethics that reconciles action with respect for others, both individually and collectively, against a background of equal rights, in other words, a system of ethics that corresponds to the basis of human rights and is in harmony with recognition of these rights.

The ethical system promoted by education should be neither a particular view of morality, nor a dogma, nor an ideology.

It should be an inducement to think about the rights and obligations of all human beings, the relationship between the individual and society, about peace, tolerance and respect for others. All human beings are capable of reflection and critical thought. It is this sort of thinking, universal in scope, that we should introduce into and through education.

Aesthetics and education

There are other values, just as important, as those concerned with ethics, that have been devised and built up by mankind in the course of its history.

Art in all its forms (the fine art, architecture, music, images, dance, the theatre, literature, poetry and so on) is the work of human beings and is an intrinsic part of the heritage to which we refer.

Thus aesthetic values, which are more than merely useful or 'usable', to quote Sartre's distinction, are evidence of human creativity. They cannot be excluded from education.

Much remains to be done concerning education in the field of aesthetics and a knowledge of the works of art produced by different cultures or by a combination of influences. In this field too much is left to chance, with the result that it is the prerogative of an élite, whereas culture should belong to everyone.

It is in this field, therefore, that many experimental projects should be taking place: we must encourage Member States to introduce and develop school situations in which it is possible for the children to have frequent contacts with artists and works of art.

The creativity of children and young people should also be developed more than it is at present.

In conclusion, education cannot remain indifferent to values. The fields of ethics and aesthetics should be taken into account in school and in all types of educational work.

The dubious principle of neutrality which has often prevailed in the past has restricted education to the sole task of passing on scientific knowledge - important though this is. There is, however, another type of knowledge, of a reflective and philosophical nature, which is concerned with values. Contemporary humanism means recognizing the values established and perpetuated by humanity, understanding the meaning of this heritage and acknowledging that every human being is free to aspire, act and create. This humanism can and must provide the basis for humanism in education and teaching.

2. Values and the school curriculum

Mr David McNicoll, Consortium of Institutions for Research in Education in Europe (CIDREE)

On the basis of experiments carried out in Scotland, the following features of a general curriculum can be set out.

The curriculum is not just about learning facts and developing skills. Good relationships between pupils, between pupils and teachers, between teachers and parents and between the school and the local community contribute to children's personal and social development.

The development of personal and social skills should be considered as a basic goal of education.

1. The teaching skill is to capitalize on, or exploit, an incident or situation which can illustrate a behavioural principle. Whatever the subject being taught, it is possible to find a theme that concerns personal and social development (rights and responsibilities; the struggle against racism and drugs; preventing AIDS, and so on).

2. The curriculum also includes specialized optional courses of ten to forty hours dealing for example with aspects of health, environmental or media education.

3. The topics are presented in the form of curricular inserts.

4. Evaluation: a fourfold strategy is used to ensure that education in values permeates the curriculum.

The table below deals with the education of pupils aged twelve to fourteen and summarizes the combined contribution of these strategies to the personal and social development of each pupil.

It should be noted that CIDREE has encouraged its member organizations to develop their own research projects on human rights, moral and religious values, European culture and democratic culture. Symposia are planned to compare the results of these experiments.

3. Prospects in Asia

Professor Rajput, Adviser to the Minister for Human Resources Development, India

The use of modern technologies has brought nations closer together, but it also reveals dangers. Some peoples feel that they are being submerged culturally by the nations which are the most developed in the technological sphere.

Education can help to restore lost confidence by restating moral, ethical, cultural and humanistic values. There is a growing regrettable trend to seek the possession of what are considered luxury goods in order to acquire social status. The result is that interest in other people is declining, and the end becomes more important than the means.

The consumer society is tending to destroy humanism. Education can prepare the citizens of tomorrow so that they will see their role clearly and become useful citizens of the future.

With the end of the Cold War, the risk that advanced technologies will destroy the world is receding, but the depletion of the ozone layer, the greenhouse effect and deforestation are other dangers which are more imminent.

Education must be regenerated in order to help men and women to face up to these challenges.

Countries that have lagged behind in the technological and scientific fields are also those that are developing most slowly. During the past decade, educational reform has become necessary in these countries to make room for technology in the curriculum.

As a counterbalance to these new disciplines, education in humanistic, ethical, moral and cultural values has been strengthened, either in specialized courses or as a part of a variety of subjects.

CURRICULAR FRAMEWORK FOR S1/S2   GUIDELINES FOR SCHOOLS

SCCC

MODE	LANGUAGE AND COMMUNICATION	MATHEMATICAL STUDIES AND APPLICATIONS	SCIENTIFIC STUDIES AND APPLICATIONS	SOCIAL AND ENVIRONMENTAL STUDIES	TECHNOLOGICAL ACTIVITIES AND APPLICATIONS	CREATIVE AND AESTHETIC ACTIVITIES	PHYSICAL EDUCATION	RELIGIOUS AND MORAL EDUCATION
Short Description	Reading, writing, speaking and listening skills; linguistic resourcefulness; study of literature and the media; study of a second language	Numerical skills; mathematical understanding; problem-solving; practical and everyday applications	Scientific observation and experiment; problem identification and solving; practical applications	Knowledge, understanding and investigation of aspects of the community, society and the environment past and present; economic awareness	Development of technological and practical skills; designing, making and using artefacts; practical problem-solving and applications	Aesthetic appreciation; design; expressive, practical and creative activities	Physical activities; health and well-being; movement; leisure skills and interests	Study of religion; religious awareness; moral development; human conduct; related personal and social issues

KEY SKILLS AND ELEMENTS

a Process skills

↕ COMMUNICATING AND LEARNING SKILLS: language and numeracy - accessing and processing information - learning strategies
TECHNOLOGICAL AND CREATIVE THINKING: reasoning and problem-solving - designing - practical applications — — PERMEATING ALL MODES, COURSES AND ACTIVITIES — —

b Elements of Personal and Social Development

HEALTH - RULES, RIGHTS AND RESPONSIBILITIES - EQUAL OPPORTUNITIES, UNDERSTANDING AND TOLERANCE - CARE OF THE ENVIRONMENT -
CRITICAL APPRECIATION OF THE MEDIA - GUIDANCE RELATED TO EVERYDAY LIVING AND FUTURE EMPLOYMENT

NOTIONAL MINIMUM % TIME OVER THE TWO YEAR PERIOD	Minimum 20%	Minimum 10%	Minimum 10%	Minimum 10%	Minimum 10%	Minimum 10%	Minimum 5%	Minimum 5%

CORE 80% 20% FLEXIBILITY FACTOR

CORE — Courses making major contributions to the Mode	ENGLISH MODERN FOREIGN LANGUAGE	MATHEMATICS	SCIENCE	SOCIAL SUBJECTS	TECHNICAL EDUCATION HOME ECONOMICS	ART, MUSIC AND DRAMA	PHYSICAL EDUCATION	RELIGIOUS AND MORAL EDUCATION
ENRICHMENT	Additional Languages Classical Studies Media Studies Scottish/Celtic Studies	Computer Applications Money Management	Electronics Energy Studies Safety	Classical Studies Economic Awareness European Awareness International and Multicultural Studies Media Studies Scottish/Celtic Studies	Computer Applications Electronics Enterprise Activities Keyboarding Skills	Design Leisure Activities Media Studies	Health Studies Physical Recreation	Related Personal and Social Issues

27

26

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Since the main responsibility is that of teachers, the basic problem is to give them appropriate training which will develop the following qualities:

skill in establishing relationships with pupils and groups;

the ability to help pupils learn on their own;

the ability to provide guidance, to make suggestions rather than to preach;

a thorough knowledge of both science and the arts in order to develop the human personality towards truth, beauty and excellence;

the ability to inspire students sincerely to seek moral and ethical values.

The school cannot achieve all these objectives on its own; society as a whole must also play a part. The development of a society is intrinsically linked to the growth of humanistic values and the extent to which these values are respected. Education is still the most important method of passing on these values.

4. The responsibility of local authorities

Dr Schuster, Mayor of Schwäbisch-Gmünd

How can a town contribute to the teaching of values?

In our pluralistic and liberal societies the State is not the guardian of group morality, nor is it qualified to be a moral and spiritual leader. For individuals divided between the wish to organize their lives as they see fit and the need to submit to the rules of a community, coping with freedom is a process that must develop in the context of culture and education.

In the sphere of community politics it is possible to make a contribution to a set of ethical values. The most important of these values is trustworthiness, the creation of a climate of tolerance, frankness and confidence.

Active encouragement must be given to culture and instruction in local communities so that inhabitants can identify with their surroundings and receive stimuli enabling them to establish their own scale of values.

More than ever, education is a tool for learning to live. It is important to acquire key abilities such as an independent mind, perseverance and team spirit. We must always be ready to learn and to feel socially responsible.

Education should take into consideration the human being and his personality as a whole, and should help people to develop their intellectual and moral qualities. Local authorities should therefore ideally co-ordinate the school and out-of-school activities they offer, thus helping to foster social qualities, sporting abilities and artistic and creative talent.

Teaching people to respect the natural environment is a sphere particularly well suited to inculcating a sense of values. This should be done using environmental teaching methods based on direct contact with nature and a perception of it through the senses. This teaching-

by-experience is a perfect illustration of how to create a sense of responsibility for nature alongside responsibility for one's fellow human beings.

Education is a complex process in which 'undesirable educators' - television, advertising and the leisure industry - have a great influence. Education in the sense of helping people to learn how to live can only have a positive effect if it is directed at the pupil as a whole, including his/her moral and intellectual abilities and talents for creativity and sensitivity. Such education is particularly effective when an example is set by all those with whom the pupil is in contact.

5. Art and one's everyday surroundings

Mr Christian Langlois, member of the Institut de France and the Board of the European Academy of Sciences, Arts and Humanities

Can one still dare to talk about beauty?

Has beauty been swallowed up, like Venice sinking beneath the waters?

It is time for education to step in to safeguard this value. Whereas teaching restricts itself to the transmission and use of knowledge, education is more ambitious, and aims to complete the teaching process through training, that is to develop the child's intellectual, sensitive, practical and physical faculties as far as possible, to pass on knowledge alongside guidelines on making the most of it, and to stimulate the child's imagination and teach him or her to be imaginative.

Children must understand that both knowledge and imagination are tools they have to learn how to handle. They are not ends in themselves.

Setting goals such as these leads us to discover the importance of art and one's everyday surroundings in education. Art requires:

imagination, as a raw material;

a constructive mind to organize this material;

a critical mind to judge one's own work;

self-control, so as to have the courage constantly to question the value of one's work and to reshape it until it reaches its final form; and

finally, wise judgement, to know when to stop.

It should be noted that this sort of training is just as essential in the scientific field, and that the approach we have just described is basically the same as that followed by a researcher drawing up a scientific theory.

'Environment' should be understood in a wide sense, to include the actual siting of a school in relation to a town.

Recently, the French 'Grandes Ecoles', or higher education establishments, were systematically removed from the city of Paris and rebuilt in the suburbs - already a common practice in the English-speaking countries. It is questionable whether isolating students in this way is a good thing or whether, on the contrary, having the 'Grandes Ecoles' within the capital is not an asset to students in integrating into society once they graduate. This brings us back to the purpose of education: true education should go beyond the simple acquisition of knowledge.

It could be said that a better contribution can be made to balanced education by means of appropriate physical surroundings rather than by regulations, and that the type of teaching counts more than the timetable in developing a taste for study in children and young people and in promoting their self-fulfilment.

In conclusion, Mr Langlois put forward six recommendations:

1. Teach all pupils, not just at nursery school but throughout their studies, to have practical experience of an art rather than learn about it in an academic way.

2. Avoid confusion between unbridled 'creativeness' and genuine, conscious, organized artistic creativity.

3. Use practical experience of art to develop a child's critical sense and determination.

4. Create schools whose aesthetic qualities are suited to the age of the pupil and the type of subjects taught there.

5. Avoid the standardization of schools, and try to give each one a specific architectural identity.

6. Prevent the unwarranted decentralization of institutes of higher education and locate them where possible on prestigious cultural sites.

6. Art as salvation

Dr C. Rosenfeld, Adviser to the Director-General of UNESCO

Art seems to be one of the least contested specifically human activities of the human being.

Just as Paul Valéry said that 'literature is the only thing that is not just meaningless words', art, however varied its forms of expression, is not a question of chance but has its roots in the individual and in society, in specific mechanisms that can be subjected to psychological analysis. (Dr Rosenfeld then gave an admirable analysis inspired by Freud and Winnicott, which cannot be summarized without distorting it.)

We should return to Winnicott's first article *Transitional Objects and Transitional Phenomena*: 'We are assuming here that acceptance of reality is an endless task and that no human being can escape the tension generated by the relationship between inner reality and

outer reality; we are also assuming that this tension can be eased by the existence of an intermediate area of experience which cannot be disputed; this is where Art as salvation is situated, as well as religion, science and philosophy...'. This intermediate area of experience gives a baby the illusion that what he is creating really exists.

This has led, for instance, to the following description of the great artist Lewis Carroll: 'He was the most serious man in the world; he spent his time playing...'. These reflections give rise to the accepted paradox of this intermediate area of experience... Is this not precisely one of the reasons for our meeting today? And this despite the daily problems of life in society, and even though each of us must simultaneously fulfil a social function, solve personal problems and leave time, not without feeling guilty, to experience the shared pleasures of creativity and imagination?

This is where 'Art as salvation' takes on its full significance.. Art helps us to resolve inevitable tensions. It enables a healthy person to stay in good mental health because of the ease of transition from the spheres of dreaming and affectivity, which have to be kept in check, to all the constraints of reality; the *cultural space* which is the home of art and other cultural products *socializes the individual's inner creations* and allows *the solution or easing of conflicts and tensions in individuals as well as within groups of people*. Art has a *specific* role to play in this respect, in that its *universality* enables it to convey what is inexpressible, magic or sacred. all elements that are seen to form part of man's relationship with nature and creativity. The rational products that govern our everyday existence in the West, often making it restrictive and obsessional, further increase the importance of art in restoring a *psychological balance* and vital contact with the intuition of universal beauty which we all possess.

7.   Recommendations

1.   Since art is a basic factor in a child's balanced development and the mental health of all individuals, it is recommended that education should, from nursery school onwards, be organized in such a way that each pupil is encouraged to have practical experience of an art.

2.   It is recommended that schools and colleges should be built with aesthetic qualities that take account of the age of pupils, the type of subjects taught and the creativity of children, so that young people can study in beautiful and harmonious surroundings.

3.   It is recommended that local authorities be invited to contribute to the development of a type of education which takes values into account, especially regarding environmental education and harmonious relationships between people of different generations and different cultures, and from different neighbourhoods.

   Since it is difficult for people cut off from their origins to acquire a practical sense of responsibility as regards the future, local authorities should make it easier for them to settle down in an atmosphere of understanding and trust. Local authorities should also be invited to establish links between schools and cultural institutions in order to develop art education.

IV. EDUCATION FACING THE ETHICAL PROBLEMS ARISING FROM SCIENTIFIC AND TECHNOLOGICAL PROGRESS

1. A jurist's viewpoint

Mr Guido Gerin, International Institute for the Study of Human Rights

In the face of the problems raised by applying the new technologies produced by scientific progress, the only legal guidelines the jurist can find are a combination of national and international law resulting from the treaties and conventions signed between States.

A further normative source could be the documents published by intergovernmental organizations, even though some of them only have the force of recommendations.

Consequently, norms vary greatly from one country to another.

To establish norms in this sphere, national and international legal authorities must have in-depth knowledge of the progress made by science and take this into account in defending the right to life.

The Commission and the European Court of Human Rights in Strasbourg, the Inter-American Court in Costa Rica and the African Commission on Human and Peoples' Rights are particularly well placed to take on this task.

However, we must not forget that each individual must be free to act as he or she pleases within certain limits, as long as this does not cause harm to others.

Bioethics was established when it became possible to modify the human genome, carry out artificial procreation and predict people's medical future from a detailed examination of their genetic make-up. Two separate paths are now open to society:

one is to call doctors to account if they decide to modify the human genome;

the other is to introduce an ethical viewpoint as soon as scientific research has a direct effect on human beings.

The aim of bioethics is precisely to make it obligatory to consider the ethical side of any action that might alter human personality.

Bioethics must first develop in the vast sphere of the professional code of medical ethics before entering other fields of activity such as biology, chemistry and physics. We should not confuse bioethics with the philosophy of science, since the former is concerned solely with ethical questions.

Bioethics must be included in school curricula. It is however also important to set up national committees on ethics in all countries and, on an international level, regional committees on ethics. The experience of the French National Committee on Ethics has proved very fruitful in this respect.

2. A philosopher's viewpoint

Professor Dominique Lecourt, philosopher and corresponding member of the European Academy of Sciences, Arts and Humanities

The exact nature of bioethics needs to be defined. Is it the same as 'medical ethics', a subject that goes back to Hippocrates in the fifth century BC, on the basis that a doctor's work involves duties and prohibitions?

In one sense we can reply in the affirmative, if it is a case of deciding between the patient's interests and treatment carried to excess, or euthanasia.

However, bioethics seems to go beyond the scope of medical ethics. There are two theories at the moment:

According to the first, all types of research are ethical in nature, which means that it would be dangerous to ban certain types. Professor Lecourt believes this theory is wrong. Ethical considerations should concern only the uses made of the results of scientific research.

These uses have raised new legal questions, for instance over the contracts signed between childless couples and surrogate mothers, or when artificial insemination is carried out after the death of the donor.

Economic issues also arise, for example because of the increasing use of expensive drugs. There are likewise political problems, such as those regarding the sale of human organs.

The second theory regards bioethics as a fusion of biology and ethics aimed at basing ethics on biology. It is equally pernicious because it implies that science can come up with certainties about how life should be lived.

We should remember that the ontogenesis of an individual is largely independent of his or her genetic inheritance; epigenesis plays just as important a part, because a new-born baby is immediately immersed in and influenced by the world of the senses.

As a result, since neither of these two theories is satisfactory, the ill-defined word 'bioethics' does not encompass a discipline which can be taught. Teachers of scientific disciplines introduce their pupils not only to the results obtained but also to inventive thinking, which presupposes free access to 'the history and philosophy of science and technology', between which a distinction should be drawn.

Ethical issues can therefore be tackled without attempting to teach permanently established values.

In the study of biology, students should be reminded that humans are sensitive beings and not just collections of molecules.

Finally, and most important, a philosophical type of education worthy of the name should be provided everywhere: a living, non-dogmatic philosophy that lays particular

emphasis on the questions raised by the advance of science. Do we need reminding that ethics is an integral part of the act of philosophizing, an act of freedom if ever there was one?

3. The ethical problems arising from research

Professor Adam, member of the Hungarian Academy of Sciences

In the context of the ethical problems raised by biological and medical research, it is important to recall the existence of a harmful anti-scientific movement. The following recommendations could be made to limit its effects:

the educational process should start early both at school and in the family with the help of books and the mass media. It should relate to three spheres - moral, rational and affective;

the moral element is important, because the anti-scientific movement preaches compassion towards living creatures. We must demonstrate the ethical superiority of the scientific community by emphasizing the damaging effects of moratoria on research;

the rational aspect is important too. Schools should have documents available which prove that anti-scientific writings are inconsistent;

the affective aspect should be included, bringing out pupils' compassion for human suffering but introducing them as early as possible to rational argument.

4. Education and bioethics

Dr Huber, Head of Department at the Association Descartes

As a partial reply to Professor Lecourt's question, Dr Huber gave his definition of bioethics as the set of all the moral, legal and social questions raised by the development of new biological and medical technologies likely to be used on human beings, from fertilization of the egg cell to death.

In France the principles and methods relating to educational work, which are derived from the National Advisory Committee on Ethics and the National Curriculum Committee, are aimed at:

making present and future social actors aware of the ethical aspect of the problems facing them now or in the future;

informing the educational authorities of the findings of scientific and technological research;

working out a common language for pupils, parents and students;

providing practical answers to specific questions;

respecting the plurality and multidisciplinarity of educational experiments.

Proposals are addressed chiefly to the Education Ministry's national teacher-training services and establishments such as the medical research institute INSERM, the CNRS (National Centre for Scientific Research) and the Institut Pasteur.

After these observations on bioethics, Dr Huber turned to more general recommendations.

He proposed that ministers of Member States should include a joint message in all their national curricula stressing the indissoluble link between the significance of education, respect for human rights and respect for cultural diversity.

Secondly, he recommended evening out inequalities between peoples throughout the world by educational and instructive transfers of scientific and technological knowledge, including also the social and human sciences, in order to narrow the gulf which at present exists in these fields between the countries of the North and of the South.

Thirdly, he noted the need for education systems to think about defining values for the twenty-first century. Ministers should instigate joint research projects into future values, based on unchanging values. It was desirable, with a view to achieving this objective, to organize international youth and education meetings, and to set up a 'World College of Science and Ideas' which would be responsible for organizing such meetings and fostering dialogue between researchers and teachers throughout the world.

5.   A worldwide code of ethics: the role of universities

Professor Jaumotte, member of the Royal Academy of Belgium and the European Academy of Sciences, Arts and Humanities

If industrial society is to restate its values, bring about more participatory democracy and maintain a pluralism that ensures a creative state of balanced tension, its centre of values must be set in human rights, which now encompass economic, social and cultural rights and the right to peace and to a protected environment.

Democracy must once more become the concern of citizens. It is now beset by three crises: of representation, citizenship and politics.

It is obvious that we should recommend moving towards a democracy that leaves more room for debate, where politics would be essentially a public discussion process. Citizens would be informed about what was at stake and the criteria to be used in making choices which would involve them in joint projects.

If this were to come about, universities would be directly called upon to take part. The result should be an increase in general culture and closer links between teaching and research.

The university should be a melting pot for studying and thinking about the problems of society. It should provide innovation both in the social and cultural spheres and in the field of safety and security. It should publicize research by the major international organizations.

From the environmental point of view, the university is gradually assuming its role of providing objective scientific information. The university should be one of the architects of a

worldwide code of ethics; all nations must adopt this code if they are to live together in harmony.

6. The role of industry in education

Mr Carrigou, Chairman of the Economics and Culture Committee of the Toulouse Chamber of Commerce and Industry

Since the dawn of time, the mere fact of being involved in a commercial or manufacturing activity implied an element of training. Over the past 30 years however, technological education has become firmly established and company training courses are now a basic part of a technician's training.

The French Engineering Society finds a sponsor for each of the eight young people it accepts for a course leading up to the professional *baccalauréat*. Suitably trained professionals are responsible for running courses in State schools. The Midi-Pyrénées region has set up a Regional Institute for education in the workplace.

In 1988 the Toulouse Chamber of Commerce and Industry set up an Economics and Culture Committee - a 'first' in France - to abolish the compartments between cultural and economic activities.

Four working groups have been established:

the first deals with patronage, or sponsorship;

the second is concerned with organizing cultural activities;

the third is concerned with the purchase of works of art as part of a company's assets;

the fourth is responsible for forging links between international cultural and economic exchanges.

Finally, an International Association for the decompartmentalization of economics and culture has recently been set up with a view to strengthening the part played by companies in providing comprehensive education for their employees.

7. Physics teaching and the crisis of values

Professor Lovas, member of the Hungarian Academy of Sciences and the European Academy of Sciences, Arts and Humanities

Physics teaching which is not geared to students' abilities can be a factor aggravating the crisis of values. To avoid this problem, students should be divided into two categories: those who are very gifted for using mathematical concepts, and the rest. Modern physics should then be introduced in ways appropriate to the abilities of each category of students.

Professor Lovas also listed a series of errors that should be avoided. The most important are:

failing to introduce pupils to real phenomena;

failing to define the purpose of a course;

confusing training in the techniques of problem-solving with the teaching of physics;

encouraging pupils to be over-competitive;

accustoming students to adopt a passive attitude;

teaching in a way that encourages the belief that researchers should slavishly imitate teachers;

looking at everything from a quantitative viewpoint without clarifying the nature of concepts;

concentrating the attention on 'how', and not enough on 'why'.

8. Recommendations

1. We should take greater account in education of one universal value, health, defined by the World Health Organization as 'physical, psychological and social well-being'.

   Better teaching should be given on everyday health and hygiene, preventive medicine (taking as a starting-point adequate food for all), and basic nutrition - all of which make it possible to avoid several serious and sometimes fatal illnesses. Medical studies should also be reformed and their scope enlarged to include consideration of the economic, social, legal and ethical repercussions of medicine. In this way, doctors would take into account not only preventive but also therapeutic aspects.

2. As proposed by the Vancouver Declaration, there is an urgent need for science and its resulting technologies to be better incorporated into general education, bearing in mind that techniques are a means and not an end. The applications of science can only be steered in the right direction if we take account of ethical, cultural and humanistic values.

3. The widening information gulf between researchers and citizens makes it difficult to hold democratic discussions on the ethical implications of research and its social applications in the sphere of biology and medicine. Education in schools and universities should therefore include consideration of the findings of research so that students are able to take part in discussions and decisions about the ethical consequences of the applications of scientific research. Depending on the level of teaching and the age of the pupils, different ways of teaching bioethics may be used, ranging from case-studies to the philosophy and history of the sciences and techniques likely to shed light on the ethical problems related to scientific development.

V. CONCLUSIONS: GENERAL RECOMMENDATIONS

1. An international seminar should be organized as part of the education programme for the twenty-first century, against the background of the world's growing political, social and cultural interdependence. Its subject would be philosophies of education in pluralist societies and it would aim to extend the introduction of intercultural and multilingual curricula in all regions of the world. The opportunity to compare experiences would help to broaden the political, social and cultural role of school education in a pluralist society.

2. International youth and education meetings should be organized regularly by UNESCO Member States. These would provide opportunities for young people to mingle with each other and to exchange ideas, and they would develop international understanding, a cosmopolitan outlook and intellectual stimulation with a view to encouraging intercultural dialogue.

3. The university should also be a melting-pot for studying and thinking about the problems of society. It should provide innovation in the social and cultural spheres. The role of the university is to combine a knowledge of the world we live in with an understanding of other people.

4. Heads of industry should be invited to consider the workplace as a source of cultural enrichment.