

ENVIRONMENT, SURVIVAL AND BIOETHICS: THE DRAMA OF CONTEMPORARY CIVILIZATION

[Professor Dusan Kanazir](#)

President
Serbian Academy of Sciences and Arts
Yugoslavia

It is anticipated that new knowledge arising from the molecular biology of man will dramatically influence life on the genetic, emotional, mental and spiritual level. Therefore, it is expected that the impact of molecular biology upon the social and ethical life as well as on human thought, will be significant in the future. The ethos of our civilization is evolving from the complex interplays of human genes and the environment. The survival of mankind will, therefore, depend on the further evolution of man's intelligence, wisdom, cultural and ethical principles. Thoughts and human ego are outlined in the genes. The environment-social and physical factors-regulates gene expression. However, because a damaged environment is altering the expression and structure of the human gene, the future of mankind is unpredictable.

In view of the existing threats to the preservation of life, it is our urgent need to redefine the priorities of civilization, to develop the cooperative educational and research activities, and to promote the coordinated actions within universities, governmental and social organizations.

The survival and wisdom of our civilization will depend on our ability to assimilate and control the explosive progress of technology and to unify the standards of ethos. Emphasis should be placed on social competence in generating control of complex needs depending on the character and ethics of societies. The main problem of today's societies is how to enable survival and improved development of human species in harmony with the environment or bios. The International University for the Bio-Environment(I.U.B.E.) should foster these goals through global bio-education and enlightenment.

The philosophy of the International University for the Bio-Environment

We need new education today, a global bio-education system and interdisciplinary science for survival to bridge the gap between the present time and the future. All the above-mentioned facts should underline the philosophy of the I.U.B.E. The central aims of scientifically grounded education at the I.U.B.E. might be man, his behavior, mind and intelligence, his ethos and responsibility. The education should be focused on human behavior and conduct because of the fact that complex environmental destruction and degradation is generated by man's egoism, aggressive behavior and destructive conduct. Science and new technologies provide man with enormous power, and the risk from disastrous misuse of this power is obvious. This is the true dilemma of our civilization. The main questions to be considered are: what is the cause of the erosion of moral values, and do contemporary education and science provide new moral values? My feeling is that we don't know the answers to these questions, and that these philosophical and ethical issues might therefore be the basic subject of the I.U.B.E. education programs.

The most important problem today is how to use new knowledge for the benefit and prosperity of mankind and how to substitute new for present-day technologies. These are the global problems of mankind and can only be solved in a global way. It means that we have to broaden our knowledge on the biological nature of man and his relations with the worlds of the biological ecosystems and the physical, natural resources-with bios and the physical environment. This is becoming increasingly important when political decisions, made in ignorance of the biological facts or in defiance of them, may, as we have already seen, jeopardize our future and the future of our children. All political decisions from now on should be based on interdisciplinary science-bioethics.

Many internal (genetic) and external (environmental) factors exert influence upon man's conduct and decision-making. Irrational human behavior and destructive conduct have been and still are the sources of many troubles in the world. It is evident that man is a very egoistic creature and that knowledge is power used to generate new power to satisfy the needs of man and societies.

A civilization is supposed to enjoy a 'golden age' when its competence and control are minimal and do not exceed the social needs. Moral problems arise when knowledge is applied and when decisions are made, usually on the basis of insufficient knowledge or lack of education in the humanities and ethics. It becomes clear then, that the responsibility of scientists, the unpredictable consequence of science application and modern technology and the increasing erosion of morality create the greatest dilemmas of our contemporary civilization, modern science and contemporary ethics. In fact, the rush for profit has been most responsible for changing and destroying the environment. The main characteristic of the present societies is the speed with which technology seizes &127; upon new knowledge and converts it to action and technological applications with unpredictable consequences. The main question is how to slow down the rush for profit, how to change our way of life to prevent the approaching apocalypse.

The philosophy of the I.U.B.E. education might be to approach, in a scientific, interdisciplinary and pragmatic way, all biological (genetic), biosocial, philosophical, cultural, ethical and technological issues of bios and integrate them into education programs and curricula.

Implementation

In order to implement global bio-education, contemporary societies have to promote global cooperation of their universities, research institutions, governments and industries in an effort to reach a new vision of the future of mankind. It is an urgent need to increase the global public awareness of the threats to bios.

The I.U.B.E. could serve as an education center for advanced interdisciplinary studies with curricula and innovative teaching programs approaching all basic problems and issues of bios. To realize the objectives of the new global bio-education, the I.U.B.E. must:

- A. Develop different activities with a view to promote international cooperation at bilateral, regional and global levels;
- B. improve regular educational programs with new concepts of bios from the pre-school up to the university level through special programs related to bios;
- C. devise teaching programs for satellite transmission in order to increase public awareness of the problems of survival and bioethics;
- D. develop scientific research concentrated on the main problems of bios, i.e., the preservation of the planet and bio-environmental issues;
- E. encourage the exchange of information between universities, cities, regions and states on a world-wide basis;
- F. develop an information system, a computerised Bank of Ideas, and new thoughts on the bios, survival, education and so on in order to create a rich depository of information and reflections on bios and man-environment relations;
- G. establish an integral system of financing the I.U.B.E. activities;
- H. promote institutional conditions for an efficient cooperation between the I.U.B.E. and relevant partners.

The road leading to the realization of these goals is a difficult but urgent one. At the first stage, the I.U.B.E. has to identify the educational and research projects of very high priority for which the international support would be of great importance.

During the last several years, we have been witnessing rapid progress of the ideal and fundamental principle of the preservation of bios and its diversity. In these efforts, the Biopolitics International Organisation (B.I.O.) played an important role.

It is also evident that humanity and our societies need a new understanding, and new ethical approach to the problems of life, ecology, and bios in general. All the problems which our civilization is facing are basically ethical. We need a new and rational approach to bioethics, based on moral education, new ethics, critical scientific rationalism, science and technology. Therefore, the problem of bios preservation should be approached as a social and cultural phenomenon. Culture itself reaffirms the very essence of nature. The survival of mankind and of nature could be achieved only through development of eco-consciousness, as part of the civil culture based upon human rights.

The survival of humanity demands adequate information, education and morality at all social and professional levels. Education, training and information are today the cornerstones of nature preservation, ecological evolution and biopolitics.

In order to survive and improve the quality of life, we need a new science- bioethics-which will combine the humanities and science, and whose goals are wisdom, knowledge, morality and culture. Wisdom can be defined as knowing how to employ knowledge for the good of our civilization. The search for wisdom is obligatory today because the survival of man can no longer be taken for granted. Ethical values cannot be divorced from the biological nature of men, their genes, and must be tested in terms of the future. Thus, all political decisions from now on should be based on the interdisciplinary science of bioethics.

The International University for the Bio-Environment should promote the search for wisdom and accelerate the growth of knowledge of bioethics and of interdisciplinary science for survival. The I.U.B.E. should teach and study the molecular biology of man, his behavior and conduct. We should, first of all, understand the intellectual, emotional and moral capacities of man. Education might serve to strengthen important positive values, most notably the respect and admiration of nature, the respect of knowledge and the questioning of authorities and ideologies.

Because irrational human behavior continues to be the source of many troubles in the world, we now ought to re-examine man's biological nature, to relate it to our moral values and look for better ways to reach a consensus of the nations on the global problems of the survival of mankind, which should be based, as far as possible, on science. The survival of mankind will, therefore, depend on further evolution of man's intelligence, wisdom, culture and ethical principles.

Summary-the Yugoslav policy

By now, it has become clear that isolated national efforts made to protect and improve the environment are being revealed as less and less efficient because of the global nature of many environmental issues and problems. International cooperation in addressing them is therefore becoming ever more important as nations must work together on common tasks. On a global basis, it has become evident that:

- A. It is necessary to pursue a policy of environmental protection as a part of overall development.
- B. Joint efforts are needed to address global problems.
- C. All forms of cooperation should be used in order to resolve environmental problems, with the active assistance of developed countries through joint projects, education, training and technology.

Yugoslav society is in the process of major changes in the domain of socio-economic development, whose imperative is to eliminate material, cultural and ecological poverty. Parallel to the socio-economic reforms, the process of democratizing the society and changing the SFRY Constitution with a view to introducing a multi-party system and free elections are taking place. The government is aware of the fact that political, economic and cultural reforms cannot be carried out successfully unless the protection and improvement of the environment do not become their integral part. Care for the bio-environment should become an everyday concern of the protagonists of development, science, industry, technology and all branches of the economy, the social, private and mixed sectors.

The objective of these efforts is the attainment of sustainable development, with full care for the environment and the concerted action on the part of political, economic and scientific factors. Nowadays, Yugoslavia fully realizes that there can be no development in many branches of the economy without environment protection; there can be no exports without observing environmental standards and regulations; no development of tourism without a protected environment; no import of new technologies unless they are environmentally safe; and that the establishment of market relations must comply with the regulations and standards of international organizations (EEC, UNEP, OECD).

With these objectives in mind, the Federal Executive Council has initiated the elaboration of long-term policy of protecting and improving the bio-environment in Yugoslavia. The main objective of such policy is long-term sustainable socio-economic development compatible with environmental capacities and conditions. To realise this objective, we are developing different measures and activities with a view to:

- A. Preserve and rationally use natural resources;
- B. promote institutional conditions for efficient environmental management;
- C. establish an integral system of financing and economic relations in this area;
- D. promote technical and technological arrangements;
- E. develop territorial management as an instrument of active, preventive environmental protection;
- F. develop an information system;
- G. develop scientific research and better use of their results;
- H. promote education through regular educational programs from the pre-school up to the university level, and through additional training;
- I. promote the public information and the popularization of environmental protection; and
- J. promote international cooperation at bilateral, regional and global levels.

The priorities of interest to the whole country are: the protection of the atmosphere by combating air pollution from stationary sources of energy production and use (burning of fossil fuels), from mobile sources and from industrial processes; the protection and management of land resources by combating deforestation, erosion and land degradation caused by inadequate fertilizer application; the protection of natural and cultural heritage; the improvement of the supply and quality of fresh water resources; and sound environmental management of toxic chemicals and hazardous wastes.

The promotion of institutional conditions can be achieved through: promoting legislation and its enforcement; promoting administration at local, regional and national levels; introducing environmental impact assessment for all new investments and evaluation of environmental effects as one of economic criteria; educating experts and training them for administrative work in this area; promoting interdisciplinary scientific research and using better its results in decision-making processes by developing inter-sectoral cooperation.

The technical and technological measures should include: the introduction of performance standards through technological process licenses; the introduction of technical discipline control systems; the introduction of instructions for product use and waste disposal; improved product and production quality with lower energy and raw material use; the standardization of measurement instruments and equipment; the restriction of the circulation and marketing of products which do not conform to international standards; technological programs such as the introduction of: new technologies for the use of lead-free petrols, of diesel fuels with low sulfur content, development of modern fire places and facilities for desulfurization of flue gases, development of equipment for reducing SO₂, NO_x, CO emissions, for reducing noise, for reducing waste from production processes, and the gradual abandoning of CFC and PCV use.

The long-term policy will be implemented through programs of measures and activities at local, regional and national level. They will include measures for: revitalization -the improvement of environmental quality in critically degraded areas and settlements through afforestation,

construction of treatment facilities, reconstruction and restoration of architectural heritage, etc.-and development through preventive protection and promotion of the environment through integral planning of socio-economic development and through economic investment, tax and urban policy measures. The road leading to the set objective is a difficult one, but it is discernible. We are also aware of the things we cannot do for lack of information, knowledge, trained personnel of funds, which also makes us turn to those who are prepared to cooperate. At present, we have identified projects of very high priority for which international support is required.

Professor Dusan Kanazir, former President of the Serbian Academy of Sciences and Arts, and former Minister of Science and Technology for the Government of the Republic of Serbia, studied medicine in Paris and received a Ph.D. in physiological sciences from Universit? Libre de Bruxelles. He has been Professor of Biochemistry on the Faculty of Sciences at Belgrade University and Scientific Counsellor at the Boris Kidric Institute. He has taught in the USA, Japan, Belgium and Argentina, and has been inducted in numerous learned societies, academies and boards. Appointed Commandeur de la L?gion d'Honneur by the French government, Professor Kanazir has also earned the Decoration of Merit for the Yugoslav Peoples – Gold Star – the Plaque of the Institute for Nuclear Energy Application in Agriculture, Veterinary Science and Forestry, and the Decoration for Work – Red Flag – on two occasions.