

For a new science-society contract

There is a realisation among sociologists of the need to evolve new linkages in the multi-dimensional science-society interface and to reorient discourses on science and technology to include the disciplines of social sciences and humanities.

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A MAJOR failure with regard to the modes of technology-led development and the established science-society linkages of the post-War period has been that the gains of science and technology (S&T) have not helped a large section of the world's population meet its basic needs – adequate nutritious food and potable water, good health and hygiene, primary education, employment and shelter. Over the last five decades, the gap between the developed and the developing countries, and between the rich and the poor within countries, has only widened.

In addition, S&T applications have led to the depletion of natural resources, widespread environmental pollution, unsustainable growth paths and loss of plant and biological diversity. Indeed, even where S&T successes have led to economic growth, for example, in the fields of agriculture, electronics, telecommunication, information and energy technologies, they have been achieved at huge costs, including ecological degradation, displacement of local societal groups, massive rural-urban divide, large-scale migration of rural populations into cities and so on.

From the perspective of developing societies, this palpable failure to convert advances in modern science to the good of a vast majority of the people, calls for a reassessment and redefinition of current science-society linkages and the existing paradigms of this relationship. There is a realisation among sociologists that there is a need to evolve new linkages in the multidimensional science-society interface which spans across diverse societal groups, cultures and nations, and to reorient discourses on S&T to include the social sciences and humanities. Indeed, as the millennium comes to a close, there is perhaps a need to draw up a "new social contract" for science.

The world scientific community, as

well as international agencies such as the United Nations, have been aware of the problem for at least two decades. However, the imminent aggravation of the problem in this era of globalisation – with increasing evidence of the withdrawal of the state from a process that should seek to ensure that activities in the fields of science, technology and industry are directed towards the public good, and of S&T becoming more and more subservient to the market rather than to the demands of society at large – has forced them to come to grips with the problem in the immediate term.

A World Conference on Science (WCS) is scheduled to be held in Budapest from June 26 to July 1 under the aegis of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the International Council for Science (ICSU). This conference will serve as a forum to discuss ways and means by which the benefits of S&T can be better harnessed to improve the quality of life of the people and the development of societies in the 21st century. The deliberations in Budapest are expected to lead to the adoption of two documents: "The Declaration on Science and the Use of Scientific Knowledge", and "Science Agenda: Framework for Action". These documents are aimed at providing a long-term strategic framework to promote cooperation and coordination among the scientific community, governmental authorities, non-governmental and international organisations and the private sector.

In preparation for Budapest, an international symposium on "Science in Society: A New Social Contract" was held in Bangalore in January. It focussed on the social dimensions of S&T. Organised at the initiative of Prof. Y. K. Alagh, former Union Minister for Science and Technology, the symposium was co-sponsored by the Department of Education, the Department of Science and Technology (DST) and the National

Institute of Advanced Studies (NIAS), an autonomous centre for multi-disciplinary research and training based in Bangalore. The symposium sought to address issues related to science, technology and development in developing countries from a social sciences perspective. Indeed, at the symposium there appeared to have been a deliberate attempt to ensure greater participation from the social sciences as compared to the natural sciences and engineering (roughly in a 3:1 ratio).

The use of the word "contract" to describe the science-society relationship is perhaps not an appropriate one. The word suggests a legally drawn-up agreement, in which each party has the liberty to pull out by paying some penalty, rather than something that has evolved from within the society. What the developing countries are seeking from science is a long-term commitment from the scientific community, governments, non-governmental organisations (NGOs) and industry to work for the public good. Unfortunately, however, the word "contract" has come to be used in social science discourses on issues concerning science, technology and development.

In order to arrive at a new science-society contract, we need to know the essential elements of the old and the ongoing contracts. As Dr. Ali Kazancigil, Executive Secretary in UNESCO's Ministry of Science and Technology in Paris, pointed out in his inaugural address at the symposium, the basic element of this five-decade-old social contract has been the science push-based model as put forward by Vannevar Bush, the Scientific Adviser to United States President Franklin D. Roosevelt in 1945 in his now-famous document, "Science: The Endless Frontier". While there have been country-specific variations in terms of institutional arrangements and policy instruments, the Bush model remained the main framework for policy-making on science or the science-society contract in the West. This model has also been