

*Prof. Sreekant*

Response to Award of Honorary Degree by  
Utkal University on January 3rd, 1977 at Bhubaneswar (India)

( Robert E. Marshak )

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Mr. Chancellor, Mr. Minister Education,  
Mr. Vice-Chancellor, Mr. President and Guests from  
the Indian Science Congress, Ladies and Gentlemen :

The high honour conferred upon me today - halfway round the world from my own country - is deeply meaningful to me. I first visited your country in 1953 as a Guest of your illustrious scientist, Homi Bhabha, who invited me to lecture at the Tata Institute in Bombay. I was greatly impressed at that time - when most creative scientists in the United States declined to shoulder any societal responsibilities - by the social vision of Dr. Bhabha, by his dedication to humanistic values and by his intense commitment to the welfare of India and its people. Having experienced the joys of profound creative research in theoretical physics, Dr. Bhabha was nevertheless ready and willing to surrender that happy life so that he could contribute his broad talents to help establish a comprehensive scientific infrastructure in India and ensure that the fruits of scientific advance and technological development would serve his fellow-citizens.

I want to make it absolutely clear. I yield to no one in my love of basic research - its passionate pursuit of truth, its thoroughgoing respect for the inner logic and structure of scientific knowledge and its unswerving resistance to the dictates of external authority. Pure science is unquestionably the jewel

of modern culture and the indispensable ingredient of human progress for many decades to come. But the fact remains that the explosion of scientific knowledge and technology since my first visit to India almost a question of a century ago, has been accompanied by the emergence of global problems of staggering proportions, not only in the developing nations but in the developed countries as well. And these global challenges must be met.

While the solution of these global problems can only be achieved by the creation of more knowledge, I should like to suggest that the scientific enterprise during the next quarter of a century will have to function in greater consonance with the spirit of Homi Bhabha. By this I mean that the total scientific community will have to balance the celebration of scientific creation, the application of scientific knowledge to societal needs and the sensitivity to human values in subtle combinations which were so well exemplified in the life of Dr. Bhabha. In a word, we scientists must embrace what I should like to call a new scientific humanism - a sensible mixture of intellectual detachment, which maintains the integrity of our science, and of social concern, which gives humanity some hope for the future.

Looking ahead, I would enumerate several ways in which the new scientific humanism might operate. On the international level, scientists should employ all existing international agencies to the utmost, for a global attack on those problems that transcend national boundaries. When appropriate inter-governmental agencies do not exist, there should be no hesitation on the part of the international scientific community to establish new centres,

institutes or programmes under the aegis of a consortium of national science academies or similar organisations. The International Centre for Insect Physiology and Ecology in Nairobi, the International Institute for Systems Analysis in Vienna and the International Foundation for Science in Stockholm are examples of the latter type. There is room for many more non-governmental instruments of international scientific cooperation.

On the national level, the new scientific humanism implies that our scientific work should be organized so that basic research is protected and adequately supported, multi-disciplinary initiatives are undertaken wherever possible, applied science and technology are pursued in maximal collaboration with our colleagues in the social sciences and the humanistic disciplines and mutually beneficial relationships are worked out with policy makers in public institutions. It is also important that the national science enterprise fully exploit its role in higher education by redesigning the scientific curriculum so that the student is not only trained in the methods and concepts of science but is exposed to its moral-social dimensions as well.

I could go on for many hours to expound on the urgent need for a new scientific humanism. But I believe that I have said enough to indicate how much pleasure I derive as the recipient of an honorary degree, at this midpoint in time between my first visit to India in 1953 and the science fiction year 2001. To the faculty, the Chancellor and Vice-Chancellor of Utkal University, I express my humble thanks and to all of you I bring warm greetings from the City University of New York.