

REPORT

SEMINAR ON SCIENCE, TECHNOLOGY AND SOCIAL CHANGE, 1900—1980

A seminar on Science, Technology and Social change covering the period 1900 to 1980 was held on February 22 and 23, 1985 at the Ramakrishna Mission Institute of Culture, Calcutta as part of the Golden Jubilee Celebrations of the Indian National Science Academy. The seminar was sponsored by the National Commission for the Compilation of History of Sciences. Some of the leading institutions which collaborated are the Ramakrishna Mission Institute of Culture, University of Calcutta, Jadavpur University, Indian Association for the Cultivation of Science, Bose Institute, Saha Institute of Nuclear Physics, Geological Survey of India, Indian Statistical Institute, Centre for Studies in Social Sciences, Calcutta, Central Glass and Ceramic Research Institute, Indian Institute of Chemical Biology, Birla Industrial and Technological Museum, Chittaranjan National Cancer Research Centre and Indian Institute of Jute Technology.

The seminar was inaugurated by Prof. R. C. Majumdar a senior physicist and a past General Secretary of the Academy and was addressed by Swami Lokeshwarananda, as guest of Honour. Dr. Majumdar recalled the early activities of the History of Science Board and the National Commission for the Compilation of History of Sciences, both set up by the Academy, and expressed satisfaction that a seminar on the history of development of modern sciences in India, the first of its kind, was being organized. Prof. Manindra Mohan Chakraborty, Vice-Chancellor of Jadavpur University delivered the key-note address.

The seminar was organized in three sessions on Science, Technology, and Social Change. The largest number of papers, as naturally expected, were presented at the Science session and concerned various aspects of physics, chemistry, biology, geology, *etc.* Prof. H. N. Bose spoke on the development of researches in luminescence and allied phenomena. Prof. G. B. Mitra on impact of x-ray investigations on science and technology, Prof. C. K. Majumdar on solid state physics during 1900-1980, Prof. Santimay Chatterjee on nuclear physics, Prof. S. N. Biswas on evolution of particle physics. Theoretical astronomy and astrophysics in India in the present century formed the subject of a paper by Prof. A. K. Raychaudhuri while Prof. M. K. Das Gupta dwelt on the emergence of radio-astronomy in India.

Prof. J. N. Kapur spoke on development of mathematical science in India in the twentieth century.

Prof. D. K. Banerjee spoke on the role of physical tools in the development of synthetic organic chemistry and Prof. Animesh Chakravarty dealt with the many facets of coordination chemistry.

Dr. S. K. Mukherjee developed the subject of mineral exploration in the twentieth century, Dr. R. Srinivasan discussed researches on early precambrian crustal evolution of South India and Prof. A. K. Saha presented the history of growth of knowledge on the evolution of the continental crust of India during 1900-1980. There was another paper on crustal structure determination from deep seismic soundings by Dr. K. L. Kaila.

The papers on genetics and its social impacts by Prof. N. K. Notani and on progress of agriculture since 1900 by Prof. S. K. Mukherjee were taken as read.

Prof. J. Das reviewed the progress in telecommunication R and D during post-war years. In the absence of Prof. R. R. Daniel, Prof. M. K. Das Gupta dealt with the development of space science in India.

Relating to social change a number of areas were marked for discussions in the seminar, namely, science and technology in national development and planning, role of science in Government and of Government in science, but these topics could not be taken up in the absence of the principal speakers.

The seminar discussed a few papers presented on scientific education and research, *e.g.* by Prof. P. C. Vaidya on mathematics education in universities, Prof. P. K. Bose on social change and pattern of scientific education in universities, and Shri S. N. Sen on factors in the development of scientific research in India between 1906 and 1930. Dr. Alok Sen spoke on role of media in unfolding the impact of science and technology on society.

The plenary session of the seminar, while taking note of the suggestions and points of view expressed by the various participants considered, in particular, a number of suggestions placed by Prof. J. N. Kapur on the subject of organizing research on the development of modern science in India. Prof. S. K. Mukherjee, the convener of the seminar, proposed that these suggestions would be placed before the National Commission for the Compilation of History of Sciences in India for its consideration.

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