

Innovative India: Science & Technology Review. L. K. Sharma and Sima Sharma (eds). Medialand, London, ISBN: 0 9534981 0 7. Case bound. 1999. 350 pp. Price not known.

This book on India's achievements in science and technology in the past fifty years is more a coffee table book than a critical assessment. Sponsored by government agencies such as the Department of Biotechnology and Videsh Sanchar Nigam as well as by corporate giants such as Indian Oil, Reliance Industries Limited, and Hindustan Lever Limited, it is designed to promote modern India, says the publisher's note, and it is intended to reach 'buyers and sellers of technology and those planning to site their research in India'.

Released in time for the World Conference on Science for the 21st century, that took place in Budapest during 26 June–1 July 1999, this neatly-bound volume gives the reader an overview of the many successful projects and some lesser known but equally important scientific achievements of India. The more than 90 articles cover virtually every field in which India has invested in the recent past – agriculture, astronomy, atomic energy, aeronautics and space science, biotechnology, computers, defence research, electronics, information and communication technologies, medical research, oceanography, energy research and so on. Although there is considerable variation in the depth of coverage and style of presentation, as is to be expected in a collection of this kind, many of these articles can be taken to be authentic as they are written by people who actually managed important programmes and projects. The editors have persuaded most of India's leaders of science – some of them currently active, e.g. C. N. R. Rao and M. S. Swaminathan – to contribute to this volume. The list of contributors include many past and present heads of Government of India's science departments, past presidents of Academies of Science, policy makers, a few captains of industry, diplomats, a few foreign scientists, several technocrats, a couple of journalists and some officers of science-related ministries of the Government of India. Unfortunately, the affiliations of some authors are not given. A notable inclusion is N. Raghuram, who

only about two years ago came in for considerable criticism from the S&T establishment for what he and co-author Madhavi wrote on the decline of Indian science, in terms of numbers of papers published in refereed journals, in a brief note in *Nature*. Actually, Raghuram has contributed two articles to this volume, one on the Giant Meterwave Radio Telescope and the other on the National Chemical Laboratory, Pune. Predictably, there is nothing in these two articles that can invite the wrath of the custodians of Indian science!

Apart from NCL, other institutions profiled include Raman Research Institute, Saha Institute, M.S. Swaminathan Research Foundation, SAIL, Hindustan Lever, BHEL, and Reddy's Laboratories. There is a 4-page write up on the Department of Biotechnology: highlights. It seems to have been lifted from a brochure of the department without editing.

I was impressed by some candid statements. Here are a few examples. Gifted with world-class intellectual and other resources, we are unable to manage them well, says Roddam Narasimha, and pleads for internal liberalization of science and technology. 'Why does Indian science and technology have so little observable impact on the national economy?' asks P. Rama Rao, and pleads for strengthening university research. He is in excellent company. Hermann Bondi observes 'many university departments have little time, energy or facilities for research'.

Apart from recounting the achievements of Indian science, the book offers two sections – one called 'View from afar', wherein some eminent foreign scientists give their impressions, and the other on 'International co-operation' that covers scientific co-operation with USA, UK, Germany and France. There is also a brief section on our scientific heritage and a two-page note on technology exports. But there is no index.

As I read through the book, I could not help asking myself why a book trying to sell Indian technology could not have been printed and published in India. Or for that matter, why is it that the indigenously developed wireless local loop technology, about which Ashok Jhunjhunwala has written so lucidly, is not yet widely used in the country? Is it for the same reason that the process for the production of silicon developed by

Vasudevamurthy and Suryan of the Indian Institute of Science was dumped in favour of Hemlock's technology in the early eighties?

I got the feeling that although the editors devoted much time in collecting and putting together the volume, at the end they had to finish the job in a hurry.

I am not sure if the publisher's ambition, viz. reaching out to potential buyers abroad of Indian technology, will be fulfilled, but I recommend that the sponsors distribute this book widely within India – not only to college and university libraries but also to schools and public libraries. Our countrymen, especially students and the lay public, ought to know about our achievements in science and technology and many of these achievements are narrated here.

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Reconstruction or Destruction? Science and Technology at Stake in Transition Economies. Claes Brundenius, Bo Göransson and Prasada Reddy. Universities Press (India) Limited, Hyderabad. ISBN: 81 7371 200 X. Paperback. 1999. 260 pp. Price: Rs 550.

This book is a compilation of revised and edited contributions by a dozen participants in a workshop at the Research Policy Institute, Lund University, Sweden, 6–8 June 1996, entitled *Economic Restructuring with Equity and Competitiveness – Implications for Science and Technology Policies*. The countries in focus at the workshop were nine 'former Centrally Planned Economies (CPEs); Three former Soviet Republics (Russia, Belarus and Ukraine); three Eastern European countries (the Czech Republic, Hungary and Slovenia) and three 'Third World Economies' (China, Cuba and Vietnam)'. The contributors are from these countries in focus (except China) and from Scandinavia. Their contributions deal with the 'transition (in these