

Vikram A Sarabhai

Dr Vikram Ambalal Sarabhai was the father of India's space programme. A man of indefatigable energy, Dr Sarabhai left his impress on varied fields of human endeavour. All over the country, from Kashmir to Kerala, there stand a number of institutions of learning, research and experimentation, which bear witness to his great vision, his devotion to the cause of national advancement and his dedication to promotion of knowledge.

Born at Ahmedabad on 12th August 1919, he had his early education in the family school directed by his mother Saraladevi Sarabhai. This was not a school as commonly understood. It was a veritable nursery of great ideals and aspirations cherished by his parents, in which the children get involved in educational pursuits and grow in them in fullness of personality. Shaped in this environment and enriched by great values of life given to him by his parents, Dr Sarabhai completed his secondary school examination and joined Gujarat college, Ahmedabad for higher studies. Thereafter, he joined St. John's College, Cambridge (U.K.) and in 1939 took his Tripos in Natural Science. On return to India, he took up research in Cosmic Ray Physics at the Indian Institute of Science, Bangalore and worked under the inspiring guidance of the great scientist Sir C.V. Raman, N.L. This was an important period in his life making a strong base for his unique career and happy family life. After the war was over he went to Cambridge again and conducted research in photofission at Cavendish Laboratory, Cambridge. In 1947, he received a doctorate from Cambridge with a thesis on "Cosmic Ray Investigation in Tropical Latitudes". After the comple-

tion of post-graduate and the post-doctorate research in 1950 and until the time he left his industrial interests in 1966 to join the Atomic Energy Commission, he was responsible for the development of quite a few industrial enterprises. He created a number of industries in Baroda, namely, Sarabhai Chemicals, Sarabhai Glass, Suhrid Geigy Limited, Symbiotic Limited, Sarabhai Mark Limited and Sarabhai Engineering Group. In Ahmedabad he set up an Operations Research Group known as ORG (now located in Baroda) and a research organisation for investigation of natural and synthetic medicinal products (Sarabhai Research Centre, Baroda). In Bombay, he took up the management of the Swastic Oil Mills introducing new developments in the field of oil extraction, synthetic detergents and cosmetics. In Calcutta, he took over the management of the Standard Pharmaceuticals Limited in which he introduced large scale manufacture of penicillin, besides increasing the range of pharmaceutical products.

Dr. Vikram Sarabhai was outstanding in his own way, yet typifying the great family traits – being impeccably upright, indefatigable in enterprise, having a creative urge and pioneering spirit, informal and unconventional yet compelling a high sense of discipline, kind, humane and intimate, with always a special smile for every employee he met. This gave all his colleagues and workers a sense of belonging to the Organisation.

He founded the Ahmedabad Textile Industry's Research Association (ATIRA) and did everything possible to build it up as a useful adjunct to the developing textile industry in India. He

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worked as its first Honorary Director upto 1956. Management was another interest of Dr Sarabhai. Feeling the great need for professional management in India, he founded the Indian Institute of Management in Ahmedabad in 1962. This Institute he headed as its Honorary Director upto 1965. Between 1947 and 1965 he directed his purposive mind to the founding and thereafter fostering of the Physical Research Laboratory for developing scientific research in India and this was his signal creation of a scientific institute of great eminence in India.

In 1962, Dr Sarabhai took over the responsibility of organising space research in India and became the Chairman of the Indian National Committee for Space Research (INCOSPAR) for setting up the Thumba Equatorial Rocket Launching Station and initiated a programme for the manufacture of French Centaure sounding rockets in India. He was the moving spirit behind the manufacture of Indian Rockets at Thumba – “**Rohini**” and “**Menaka**” are among the rockets produced there. In 1966, he was appointed Chairman of the Atomic Energy Commission and Secretary to the Government of India. He was President of Physics Section of the Indian Science Congress held in 1962, Chairman of Electronics Commission, Union Department of Defence Supplies, and Electronics Corporation of India besides being member of various important national and international committees. He was a Fellow of Indian Academy of Sciences, National Institute of Sciences of India, Physical Society, London and Cambridge Philosophical Society.

He saw tremendous potential of modern science to help in the process of development. He drew up plans to take modern education to the remotest villages by using satellite television. His interest in education resulted in his establishing

the Community Science Centre for science education for children, an institution where new ideas in science education could be tried out. He often said that on retirement he would like to spend time with young children talking to them about science.

The beginning of another institution under the auspices of the Nehru Foundation for development was made by him. The aim of this institution was to act as a forum for people to get together to think about and evolve ideas on various issues of development.

As a mark of appreciation of his work, he was awarded in 1962 the Shanti Swaroop Bhatnagar Award for Physics and he was also honoured with the award of Padma Bhushan in 1966 by the Government of India; the Padma Vibhushan was awarded to him posthumously.

He was a member of the International Council of Scientific Unions (1966), Chairman of the Panel of Experts and Scientific Chairman of the UN Conference on the Exploration and Peaceful Uses of Outer Space (1968), President, 14th General Conference, International Atomic Energy Agency, Vienna (1970) and Vice-President, Fourth UN Conference on the Peaceful Uses of Atomic Energy (1971).

He was an ardent visionary who had brilliant ideas on how to link up atomic power development with the industrial development of a large backward area such as the Agro-Industrial Complex in the Gangetic Plain or the arid area of Kutch. No less imaginative was his plan for the use of satellite communication to bring the benefits of television to the thousands of villages in India on a most economic basis. This was a profile for India's development during the seventies as he had imagined. In him rests the ideal for the younger generation of Indian scientists



and scholars to emulate. Science for him was a passion and a useful tool to finally sculpture out social, economic and educational changes in India to make India great and her people happy.

He was a man of deep cultural interests – music, photography, archaeology, fine arts, etc. He was instrumental in founding “**Darpana**”, an institution of performing arts to propagate the ancient culture of India and to create an environment where artists could study and work in an atmosphere of freedom, giving full scope for new experiments in dance and drama. He was convinced that a scientist should never shut himself up in an ivory tower or ignore the problems of society in a mere academic pursuit of ‘pure’ science though ‘pure science’ was after his heart. It was this acute awareness of the scientists’ obligation to the community that urged him to float project after project for the utilisation of communication, audiovisual activity and television as aids to agricultural expansion, family planning and spread of education in rural areas.

A luminary amongst scientists, his passing away left his people orphaned and stunned. Of work he was never tired and often put in 18 to 20 hours a

day. “Stretch your working hours” – he told his students.

Dr Vikram Sarabhai combined the best of being modern and “**Indian**” blended aesthetics with science and consistently canvassed the true role of the administrator as an innovator rather than as a conservator. A warm human being, he remained a sensitive man intensely responsive to the beauty of life around him.

Despite his stupendous workload, he could take time off to see the ‘squirrels and the birds’. He was plucked away just as new fields were opening up as a result of his ideas and exertions. This great scientist of the country, widely recognised internationally in space and nuclear research, expired prematurely on December 30, 1971 while visiting the Thumba Rocket Launching Station.

Vikram Sarabhai lived the life of a practical Karma Yogi – doing his self-allotted duties (Swadharna) with selfless (Anasakta) and tireless devotion till the moment of his final sleep.

*Mrinalini Sarabhai
Darpana, Ahmedabad*



With Sir C V Raman, the Nobel Laureate, who was Vikram Sarabhai’s guide at the Indian Institute of Science, Bangalore from 1940 to 1945.