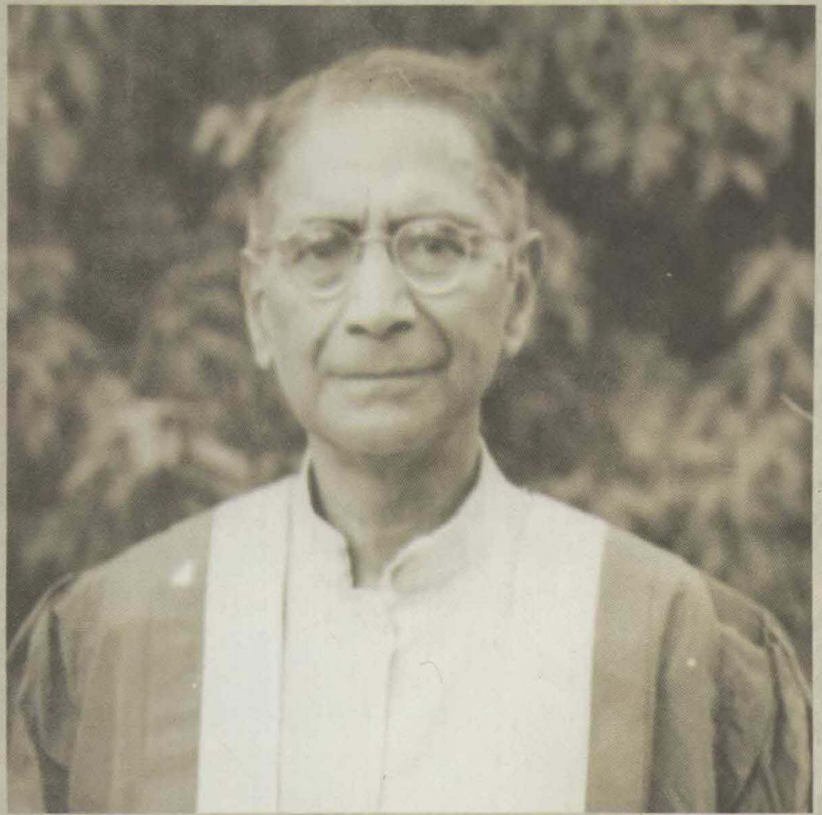


P. C. Mahalanobis

Professor Prasanta Chandra Mahalanobis was born in an enlightened Brahmo family in Kolkata on 29 June 1893. After completing his Tripos in mathematics and natural sciences at Cambridge University by 1915, Mahalanobis was drawn to statistics through reading the volumes of *Biometrika*, edited by Professor Karl Pearson. After returning to Kolkata, one of his first statistical works came out of an assignment on examination system of Calcutta University, entrusted by Professor Brajendra Nath Seal in 1917. Mahalanobis started functioning, since 1922, as a Professor of Physics at Presidency College, where he soon set up a Statistical Laboratory which paved the way for the foundation of Indian Statistical Institute (or ISI) on 17 December 1931. Mahalanobis became the founder Secretary and Director of the Institute which was registered as a learned society on 28 April 1932, with the headquarters at Kolkata. This organizational step set in motion research in the theory and applications of statistics as a new scientific discipline in India.

From the inception, Professor Mahalanobis perceived statistics to be “a key technology”, representing inseparable relation between theory and practice, and he encouraged in ISI a relentless interaction of statistics with various other sciences. Mahalanobis also emphasized that, in a developing country like India, it was essential to make statistics purposive “to help in solving scientific or practical problems” of the society.

Within a few years of the foundation of ISI, Professor Mahalanobis’s achievements in the application of statistics in the urgent problems of the country, which included innovative projects on sample surveys of agricultural crops, jute surveys, socio-economic after-effects of the Bengal famine, and problems of flood control, were highly acclaimed. As regards his significant contributions in statistical theory and



methods, particular mention should be made of his D2 Statistic known as Mahalanobis generalized distance, his concepts of the pilot surveys, interpenetrating network of sub-samples, and optimum design of sample survey, along with his other major achievements.

After independence of the country, Professor Mahalanobis was appointed, in 1949, Honorary Statistical Adviser to the Central Cabinet, Government of India. In 1950, he initiated the National Sample Survey (NSS) in ISI for conducting socio-economic surveys of all-India coverage for the first time in the country. Soon after, he helped the formation of the Central Statistical Organization (CSO) to provide the Government of India with a sound statistical system. In 1954, Prime Minister Jawaharlal Nehru entrusted Professor Mahalanobis and ISI with the responsibility of preparation of the draft Second Five-Year Plan for the country. The draft submitted by Mahalanobis and the planning models formulated by him have since been regarded as major contributions to economic planning in India.

Sankhya, the Indian Journal of Statistics, began to be published by ISI since 1933 and carried much of the path-breaking research work of Professor Mahalanobis and his close associates like Professor R.C. Bose, Professor S.N. Roy and Professor C.R. Rao in both theoretical and applied statistics. Throughout his life Mahalanobis wrote more than 200 scientific papers; however, his contribution to statistical science goes far beyond his publications.

Through the guidance of Professor Mahalanobis, teaching in ISI took shape during 1950s in response to the research perspective



Professor P. C. Mahalanobis delivering Convocation Address on the occasion of 5th Convocation of Indian Statistical Institute held on March 17, 1967. On the dais from left to right Shri C. D. Deshmukh, Shri K. P. S. Menon and Professor C. R. Rao.

of the Institute, which was actively supported by Sir Ronald A. Fisher, Professor J.B. S. Haldane, Professor Satyendra Nath Bose, and Shri C. D. Deshmukh.

In the early 1950s Professor Mahalanobis initiated the use of Statistical Quality Control and Operations Research (SQC & OR) in India by organizing a visit of Professor W.A. Shewhart in 1948.

Mahalanobis had the vision to recognize the need for development and use of accurate and fast computing equipment for the processing and analysis of data. His stress was on both hardware and software. The first electronic computer in India (HEC – 2M) was installed in ISI in 1956. In hardware, Mahalanobis's farsight took a definite shape when the Institute, in collaboration with Jadavpur University, undertook the design, development and fabrication of a fully transistorized digital computer, called ISIJU-1, which was commissioned in 1966. In software, Mahalanobis's perception was realised, later on, when the Institute established the first soft computing research facility in the country.

In 1950, at the initiative of Professor Mahalanobis, the International Statistical Education Centre (ISEC) was established at Kolkata in order to impart training in statistical science to the participants from the developing countries of Asia and Africa.

The remarkable achievements of the Institute, under the leadership of Professor Mahalanobis, in theoretical and applied statistical work motivated the Government of India to recognize ISI as an 'institution of national importance' by the enactment of the ISI Act of the Parliament, which was steered by Premier Jawaharlal Nehru in 1959.

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Professor Mahalanobis was elected a Fellow of the Royal Society, London, in 1945. He became the first Indian President of International Statistical Institute in 1957, a Fellow of the American Statistical Association in 1961, and the first Foreign Member of the USSR Academy of Sciences in 1958. He was elected the Chairman of the UN Statistical Commission for the period of 1954-56. He was nominated as the Chairman of National Income Committee, Government of India, in 1949. He became the General President of the Indian Science Congress in 1950, the Vice-President of International Biometric Society in 1947, and a Fellow of the Econometric Society in 1952. He was a founder Fellow of the Indian National Science Academy (1935) and its President (1957-58). The Government of India honoured him with one of the highest civilian awards, 'Padma-Bibhusan', in 1968. He was endowed with Visva-Bharati's highest award, 'Deshikottama,' in 1961.

Mahalanobis, from his young days, was deeply influenced by the humanist ideals of Rabindranath Tagore and enjoyed the abiding affection of the poet. In 1921 Tagore nominated Mahalanobis to be a Joint Secretary in the formative period of Visva-Bharati and entrusted him to draft its constitution in Santiniketan. Mahalanobis and his gracious wife, Nirmal Kumari, accompanied Tagore during the poet's tour to Europe in 1926, where they met eminent scientists and philosophers like Albert Einstein, Sigmund Freud, and Romain Rolland. Mahalanobis wrote an erudite introduction to the English version of Einstein's 'Principle of Relativity', translated by Meghnad Saha and Satyendra Nath Bose in 1923.

Professor Mahalanobis brought into focus an encyclopaedist's perspective towards science and society, where boundaries of different disciplines would mingle with one another, situating the key technology of statistics in a unifying role for weaving the philosophy of 'unity in diversity'. Prasanta Chandra Mahalanobis passed away in Kolkata on 28th June 1972.