



PC Mahalanobis : Father of Statistical Studies in India

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Prasanta Chandra Mahalanobis was born on June 29, 1893. After his brilliant performance in matriculation examination, he did his B.Sc (Honours) from Calcutta University in 1912 and later M.A. from Cambridge University in 1915. On his return to India he joined the Calcutta University as Professor of Physics in 1915 and later headed Department of Physics in the University from 1922 to 1945 and was attached to it till 1948. He felt a keen interest and affection in statistics when he was attached to the Presidency College. Mahalanobis became Professor Emeritus in 1948 and in 1949 was appointed Honorary Statistical Advisor to the Government of India.

His name is linked with three major developments, namely, 'distance', his contribution to the design of experiments, and his theory and practice of large scale sample surveys. Mahalanobis's 'distance' is the measure of the separation between any two geographical locations in any space such as the surface of the earth or the three-dimensional perceptible space around us. In 1925, when he first formulated his concept of generalised 'distance', he also worked on what is called design of experiments. He led the movement for the introduction of new and revolutionary methods of experimental design in India and also wrote a score of 'statistical Notes for Agricultural Workers' wherein his methods along with other innovations devised in his own Statistical Laboratory at Calcutta were presented as prefabricated procedures ready for direct application known as Latin Square or Graeco-Latin Square arrangements and randomised and 'confounded' designs.

Mahalanobis's contribution lay mostly in two principal directions — a more extensive permeation of his theory and practice of large-scale sampling with Fisherian ideology. It also traced the path to invent in 1958 a new tool called 'Fractile Graphical Analysis' (FGA) for

interpreting the data collected in the course of several rounds of the National Sample Survey conducted by him. His innovation (FGA) designed to present sampling data neatly resolves the difficulty encountered in comparing socio-economic conditions of a group of people at two different epochs or of two groups of people at the same epoch.

Mahalanobis became a Member of the Planning Commission in 1955 and earlier was chairman of U. N. Statistical Commission (1954), as well as Honorary President of International Statistical Institute. He was also nominated as Fellow of the Royal Society.

He contributed a lot more not only to the branch of science but also actively participated in the social, cultural and intellectual movements in Bengal associated with the names of Raja Ram Mohan Roy and Rabindra Nath Tagore. Mahalanobis even explored the ancient Indian Jaina dialectic of 'sayadvadva' to show "certain interesting resemblances" of that school to "the probabilistic and statistical view of reality" sparked by the developments in quantum physics. He delved deeply into economic theory and even developed econometric models known as Mahalanobis's two and four sector models for determining optimum investments in different sectors of national economy.

A feather of glory was added to his hat when he was awarded the Weldon Medal by Oxford University in 1944. He was also honoured by the Sarbadlikari Medal from Calcutta University (1957); Honorary D.Sc from several universities and the Padma Vibhushan in 1968 for his major contribution to the field of science as well as social life. This eminent scientist and social reformer breathed his last on in 1972. Country will remember him as a Scientist whose devoted effort brought a newly independent country to statistical work map.