

INDIAN STATISTICAL INSTITUTE, CALCUTTA 17 FEBRUARY 1977

CONVOCATION ADDRESS

By Professor Harald Cramer

Mr. President, Mrs. Mahalanobis, Dr. Rao, Dr. Kallianpur and
Dear Fellow Statisticians,

It has been a great honour for me to be invited to come here, to have received an Honorary Degree from an institution of such great fame as the Indian Statistical Institute, and to have my name added to the list of previous recipients of this degree, all eminent scientists, many of whom I am happy to call my friends.

I now want to make some remarks which come naturally to my mind on the occasion of this Convocation.

It has always seemed to me that the greatest treasure of a nation is its young intellectual elite. It is the creative work of successive generations of this group that has gradually, through hundreds and thousands of years, formed the vast building of human culture, each generation building on the foundations laid by their predecessors.

This being so, it seems evident that one of the most important tasks of any Government is to form adequate organizations to receive its young intellectuals, to give them opportunity to develop their spiritual and intellectual qualities and to lead them on to use what they have been taught in a way that will create new values, to the benefit not only of their own nation, but of all humanity.

To-day we are in the head quarters of one of these organizations, the Indian Statistical Institute founded by the great Indian statistician Professor Mahalanobis and successfully developed by him and by his successors, Professor Rao and Professor Kallianpur.

I cannot remember when I first heard the name of this Institute. But I have followed its development to international fame through a long series of years, and I am happy to have had close personal contacts with its leaders, due to common scientific interests. This type of common interests, more perhaps than anything else, is able to unite people all over the world.

And we have before us a group of members of the young elite, who have now finished their training and received the signs of their new degrees. I am happy to see you all, new members of our profession and future leaders of its development. As an old man, I want to wish you good luck on the many different paths that you will choose for your work in the vast field of statistical science.

Statistical science - that is a branch of human knowledge that has gone through a revolution during the course of the present century. When I was a young man trying to take up scientific research work, some sixty years ago, statistics were hardly more than rows of figures on demographic and economic data. Only a few isolated pioneers tried to look into the background of these data, and to work out methods of using them to reach valid conclusions and decisions.

It soon became clear what kind of mathematical tools should be used in this connection, namely those belonging to mathematical probability theory. Already at an early stage these tools were applied to statistical problems, and important results were obtained, mainly by English, Indian and American statisticians, such as Fisher, Mahalanobis, Neyman and Pearson.

At the same time, purely mathematical probability theory went through a powerful development, and was rigorously based on new foundations. In the first place this was due to the work of French and Russian mathematicians, and the leading names were Paul Lévy in France, Khintchine and Kolmogorov in the Soviet Union.

Gradually the statistical and the mathematical lines of development were united, and the science of statistics, in the present day sense of the word, was beginning to take shape. This science, as we know it to-day, is based on pure modern mathematics, and has worked out a statistical methodology designed to use available data to give plausible answers to questions related to the vast field of the unknown.

We all know that in the course of the development of statistical methodology there have been strong differences of opinion, and that many questions are still controversial, and are being answered in different ways by different groups of statisticians. I believe that it is highly important that differences of opinion should be freely discussed, and that the occurrence of such discussions is a sign of health, and can only further the progress of science.

And I should like to conclude these remarks by saying to my young colleagues: do not be afraid of forming, after hard and conscientious work, your own opinions on scientific matters, and of discussing them freely with others, who may perhaps not always share them. In so doing, you will find satisfaction for yourself in your field of work, and you will take a part in the great creative work of science, to the benefit of all humanity.