Address delivered by the Vice-President, Dr. Zakir Husain at the Second Convocation of the INDIAN ACADEMY OF MEDICAL SCIENCES held in India International Centre, New Delhi on January 30, 1965

Dr. Sushila Nayar, Fellows of the Academy, Ladies & Gentlemen.

Permit me to thank you for the very kind but rather puzzling invitation to be with you this afternoon. I said puzzling for I have failed to see how I deserved this honour at the hands of the cream of the medical fraternity. I need not even confess to you that I am totally ignorant of the field of learning which you adorn; for the fact is obvious. I have had a great deal to do with your profession as a good obedient patient, and can never adequately thank it for keeping me going in a way which the great Plato would not have quite approved. But that hardly gives me the title to be here today.

The other remotely relevant fact is that medicine was my first choice of a career and I never stopped regretting that circumstances, over which I had no control, prevented me from doing so. That too does not give me any title to be here. But it explains the interest I have cultivated and continued to have in problems relating to health. Disease has not interested me but health has. I have always been fascinated by what has been termed the 'Wisdom of the Body'. For is it not fascinating to get acquainted, even from a distance with the coordination of the body's organs by the nervous system and hormones, with its characteristic architecture and with the probe into the extent to which its functioning reveals its structure to be the result of some well-ordered plan. To realize the significance of the constancy of the internal environment; the constancy of internal temperature for instance, or the constant level of the alkalinity of the blood, the constancy of sugar, of protein, of hemoglobin to name only a few instances, and the mechanisms of redressing any considerable deviation from the normal levels; this realization, however sketchy, has been to me a thrilling experience. So also to see the principal of maximal activity observed in determining the sizes of the various organs of the body; to wonder at the wise economy of the body in the operation of the principle of mobilized units, how, for instance, the degree of the shortening of the muscle depends upon the number of fibres thrown into contraction and not upon the degree of contraction of all and each; how the gradation of a nervous sensation depends on the number of nerve fibres stimulated simultaneously, for all are not always so stimulated; how the tubules of the kidney seem to work in shifts and the degree of activity of the kidney is determined by the number of tubules in action at a time ; how when the muscle is at rest, the majority of the capillaries are entirely closed and open out in requisite numbers as the muscle becomes more and more active. It has been to me a source of great self-assurance to know how the wise body acts upon the principle of substantial reserves by keeping a store of the principle materials beyond that placed at the seat of metabolism, a process which we are at long last learning to imitate by trying to build up reserve stocks of food-grains, and how considerably it provides for dual controls in almost all systems of the body. It gives me a strange feeling of amazement to come to know of the principle of antagonistic nerves, like the checks and balances in a well regulated society, to realize how the actual coordination of an organ at a given time is a balance of antagonistic influences; in the case of the heart, for instance, the vagus making it go slower and the sympathetic driving it faster; how in the case of the eye one nerve dilates the pupil while the other contracts it and so on and so on. Thrill after thrill even for a layman only very distantly interested in knowing something about the body in health. How much more fascinating discoveries must be awaiting your scrutiny of the body in health and in disease. Much is known, but judging from how much has been recently brought to light there must be many dark and unknown spots which one would expect you to probe and disclose. For I am sure men of your eminence and your competence, will not be content only with knowledge that others have amassed for them, but will exert themselves to add something of their own to it and help in extending its boundaries. Insight into these dark spots are not the work for a genius, but it is usually the product of interest and persistent work over a period of time. It is more and more becoming a sort of team work; it is usually the result of the joint work of many over a number of years. It would be a great thing if in the un-inhibited atmosphere of your Academy common interests bring competent men together for cooperating in the work of research.

There is another thing which I feel your Academy may well be trusted to do. It may help in removing some of the narrowness which the compartmentalizing of knowledge due to ever-growing specialization is bringing about. It may be possible for you to apply some effective corrective to it. Some of the most fruitful areas of research as you would naturally know, are marginal borderline areas on the frontiers of several so-called subjects. You may more easily bring together men who operate in neighboring territories and may be interested in allied problems. You may succeed in establishing contacts not only with experts in the natural sciences but also with men from what 'appears to be a distant region like Philosophy. For as a consequence of the impact of Darwinism upon the sciences of man and nature there has been a marked shift in scientific thinking to temporal perspectives, to more stress on relations and activities as against terms and substances, a shift from 'structure' to 'function'. The philosophical school identified with the elaboration of 'function' as an instrument of interpretations is that of pragmatism. It may be an enriching experience for you to get to be familiar with the development of this philosophical tendency which occupies a growingly more important position in the modern mental posture and methodology.

Representing as you do the elite of the medical profession you may with reason be expected to exert your influence on the framing of programmes of scientific advancement, and specially medical education and medical research. A great deal is being done in this behalf by the Government but that should not absolve you from the responsibility of suggesting ways and means for making medical education more fruitful, and stimulating medial research by creating a favourable environment for the scientists to constructively strive for the pursuit of knowledge. You may be legitimately concerned about encouraging and augmenting the various agencies for the promotion of research in medical colleges. Only so will Indian health problems, and they are many-be solved by Indian scientists under Indian conditions. In the outlining of our major health problems, in encouraging and enabling our scientists to deal with these problems and in effectively transmitting knowledge about the control of disease to the community you have a triple role of great material significance to play.

You have another significant role to play. You should lead the way in prescribing the standards of research in the medical sciences. You should resist superficiality in the training of scientists. You will have to insist on throughness in techniques but also on breadth of vision, a broad view of the problems, their ramifications into several compartmentalized areas of medical knowledge and a capacity to adopt an integrated inter-disciplinary approach to problems. In bringing about this emphasis on the philosophy and discipline of scientific research I believe your Academy can play an important part.

Our country offers innumerable opportunities of research on the health problems of grave consequence to humanity. Large parts of the world including India, face serious malnutrition and hunger. Scientific knowledge for the prevention and treatment of nutritional disorders is readily available. This knowledge waits to be applied to the welfare of mankind. Education in nutrition is the crux of the problem. This Academy can play a part in spreading scientific knowledge about healthful living and nutrition, and thus make an impact on the health and ways of life of the people.

Then the sociological aspects of the health are largely sadly neglected. There is a great opportunity here for research that has a direct bearing on the promotion of human welfare. Then, again, problems of moral health constantly knock at the door of medical knowledge. Your efforts should contribute to open that door wide. Many problems specially relating to our social and physical environment, will claim your attention if you resolve to do so. I am sure the Academy will promote investigations not only into the prevalence of disease in rural areas but also into the background which favours the spread of disease and thus reach conclusions of far-reaching importance for the health of rural India.

I have very great pleasure in handing over to the Fellows and the Members the Scrolls of the Academy. It must be coveted distinction to belong to this Academy which seek to give recognition to merit in the profession. I am sure the work of those who constitute the Academy today will make it a distinction to attain which younger men of ability and talent will apply themselves with diligence and devotion and attain results of professional and scientific significance.

You have big tasks awaiting you, they are by no means easy tasks, but most of what is worth doing is difficult. I am sure your knowledge, your competence and your devotion to the cause of national health will know how to get over these difficulties. I wish you all success in the great work to which you have set your hands.

Jai Hind.