

"Beyond the crisis of European Sciences", by R. Sundara Rajan, Indian Institute of Advanced Study, 1998, Rs. 300/-.

Western Science is thought to have its origins in Ancient Greece. The first natural philosopher, as scientists were called until recently, is generally believed to be Thales of Miletus, who is reported to have predicted a solar eclipse in 585 BC. The tradition was continued by others like Pythagoras, Aristotle and Archimedes. Though some progress was made in the medieval times in Europe, Modern Western Science really began with the Copernican revolution and it is that tradition of the "scientific method" which is sought to be studied in this scholarly work of the late philosopher R. Sundara Rajan.

The title of the book is a reference to the German philosopher Edmund Husserl's last work called "The Crisis of the European Sciences and Transcendental Phenomenology". Written at the height of Nazism in Europe, Husserl talks about science and philosophy being essentially European achievements and dreams of a European revival. Sundara Rajan's work, is in some sense a critical extension of Husserl's work. Here is an attempt to identify "those general features of style and motivation which seem to characterise modern sciences". The idea is that the European character, (which for Husserl is a strength) is seen as a primary reason for the "crisis". Though a similar argument has been advanced by several post modernist writers, Sundara Rajan's work is not the usual confused post modernist verbiage.

The relationship between science and philosophy of science has always been controversial. Practitioners of the two vocations have for the most part, seen science very differently. Ask a scientist the simple question as to "what is science?" and she would probably shrug and respond that "science is what I do". On the other hand, philosophers of science spend their lives trying to identify precisely what is it that constitutes science, by itself and in contrast to other human activities like religion. Apart from identifying and analysing the major signposts in the landscape of modern science from a philosopher's point of view, the book also seeks to explore the relations between science and philosophy.

For this purpose, the author identifies four contexts of science: science as a possibility, science as a fact, science as a problem and science as a hope. Here he argues that the relationship between science and philosophy is not static but different at different stages of what he calls the "life history of science". Thus in the first stage of possibility, philosophy performs a facilitative role to science, primarily in legitimising science. This was roughly the stage at the beginning of the renaissance when science had not yet gained total legitimacy. In the second stage of science as fact, philosophy has a limited role of clarification and no longer that of criticism. One can think of the heydays of Western science, say the Newtonian period as a second stage of science. Again in the third stage of science as a problem, the critical role of science is restored. One only has to think of the ecological crisis brought about by modern technology as an example of this stage. Finally, science as hope returns to the first theme of science as a possibility to transcend the present crisis.

In the history of any discipline, there are few occasions when the thematic horizon of the subject gets transformed. These so called epistemic shifts are of profound significance for the development and advance of the subject. The old ways which seemed natural and obvious get replaced by a completely novel framework and in this way the subject is enriched. The impetus for the shift could be either observational (as in the case of physical sciences) or even theoretical as in the case of most humanities. An example could be the rejection of the idea of absolute space and its replacement with the Einsteinian concepts of space and time. In our times, at least one such transformation, namely the ecological one has gained immense importance. As the rapacity of humanity takes its toll on planet earth, more and more people are realising the need to look at our place in nature not as one of a conqueror but as an integral part of a complex web of life. In this book, the author analyses three such epistemic shifts: the linguistic, the ecological and the

feminist. He tries to understand the impact of these transformations not on science but on culture in general.

This book is not a bed time read. It is abstruse and scholarly and hence requires an effort on the part of the lay reader to follow the arguments advanced by the author. This work was planned as the first volume of a two volume work. Unfortunately, R. Sundara Rajan died in 1997 while still at work on the second volume. This last complete work of one of India's foremost philosopher is his bequest to us.