

Indian Philosophy and Philosophy of Science. Sundar Sarukkai. Centre for Studies in Civilizations, Project of History of Indian Science, Philosophy and Culture, 36 Tughlakabad Institutional Area, New Delhi 110 062. 2005. 268 pp. Price: Rs 450.

Indian philosophy is a broad spectrum encompassing among others, what are called six orthodox systems (those that owe allegiance to the *Vedas*) and two major heterodox ones. The former comprise the *Sāṃkhya*, *Vaiśeṣika*, *Nyāya*, *Yoga*, *Pūrva* – and *Uttara Mīmāṃsā* (or *Vedānta*). The latter include the Jaina and the different schools of Buddhist thought. Though each one of them differs from the other in its external thought structure, the core of all of them is principally concerned with emancipation or liberation (*vimukti*) from bondage or suffering. The pathways of all knowledge and all practices that they deal with, are tuned as it were towards this end. These systems are called the *darśana-s*, the word *darśana* meaning incise, holistic insight or knowledge. The word *philosophy* in English is hardly an equivalent for it, except perhaps in the Socratic sense. When one thinks about Indian philosophy, one has to keep in mind the word *darśana*, its goal of liberation. To overlook this pristine objective of Indian philosophy, as the author has done in the book under review, is to traverse the periphery, trying to interpret the surface without understanding its deep roots.

It needs to be recognized that philosophy of science, apart from its concomitant dimensions of logic and methodology, is also concerned with reality or the basic stuff of the Universe. In this concern, however, philosophy of science does not go far beyond science and its sensorial and verifiable determinants. Nor is it involved in any manner with the ultimate purpose of life like liberation from bondage – the forte of Indian philosophy. In any case, there has been no finality in science, and its conceptual foundations have been changing from time to time since the time of Renaissance.

The author rightly says that philosophy of science explores the foundational structure of science (p. 7) and he tries to explain the kind of philosophy that would be most useful for such an exploration. He claims that certain aspects of Indian philosophy 'are not only relevant to a foundationalist description of sciences, but

that they also share something in common with scientific methodology' (p. 9). In this connection, he has projected as a candidate the Indian theory of doubt (*saṃśaya*), especially of the *Nyāya* system, and its relation to doubt in science.

There is no denying that the *Nyāya* system has its own epistemology towards the acquisition of valid or precise knowledge. However, the very first two *sūtra-s* of the *Nyāya* speak of *niḥāreyas* (the highest good; beatitude) and *apavarga*, connoting the knowledge leading to liberation. Towards this end, *Nyāya* has developed its epistemology and lent its support to another *darśana* called the *Vaiśeṣika*. The Syncretic *Nyāya-Vaiśeṣika* is a dominant Indian school of realism and is well suited for a critical examination of its thought structure vis-à-vis the philosophy of science. The author has deliberated upon the *pramāṇa-s* (means of knowing), including direct perception and the kinds of inference, as well as doubt, debates and the like, as expounded by the *Nyāya* system. He has also discussed the five-membered syllogism of *Nyāya* as well as the cause-effect relationship, besides some aspects of Buddhist (*Dignāga* and *Dharmakīrti*) logic. For his understanding of Indian philosophy and what he calls its rationalist tradition, the author, as admitted by him (p. 18), has drawn extensively from the secondary sources, viz. the works of Matilal and Mohanty as well as a few others. Since his concern is more with *Nyāya* epistemology, he could well have studied the original *Nyāyasūtra-s* (ed. tr. into English by Ganganath Jha, Motilal Banarasidass, Delhi, 1984, in four vols with commentaries by Vātsyāyana and Udyotakara, and their responses to Buddhist logic). This would have led him to his own, original insights particularly in respect of the four *pramāṇa-s*, doubt and others.

Verbal testimony (*āptavākya* or *āabda*) has been included among the four *pramāṇa-s* and this has its own nuances in the *Nyāya-Vaiśeṣika*. It is naïve to think and go along with the author when he says (p. 215) 'that in various ways scientific knowledge is also dependent on testimony as a source of knowledge, whether in learning science as children or even as professional scientists who gather knowledge from books, journals and peers'. It needs to be emphasized that scientific knowledge being acquired through textual sources, is already tested and verified, besides being permissive of re-testing

and re-verification, if desired. The innate strength of science lies in its method. The verbal testimony in the *Nyāya-Vaiśeṣika* scheme is more in the nature of belief and trust in the words or opinion of a reliable person. Even doubt, a method of inquiry or examination in the *Nyāya-Vaiśeṣika*, can also lose its form and rigour on the anvil of verbal testimony as an authority. Science recognizes no authority. When the great scientific luminary, Albert Einstein stated that light rays bend when they pass through a heavy gravitational field, his statement was not accepted immediately as one coming from a reliable or authoritative person. Its acceptance had to wait till it was experimentally verified by A. S. Eddington during the solar eclipse of 1919. Verbal testimony as a *pramāṇa* in the *Nyāya-Vaiśeṣika* cannot be regarded as scientific. Even Kaṇāda, the author of *Vaiśeṣika*, did not include testimony as a *pramāṇa*.

In recent decades, cosmology has been scaling new heights. The Big Bang cosmology has thrown up some far-reaching issues like the four forces (weak, strong, electromagnetic and gravitational) and the fine-tuning of the Universe, intelligent design, anthropic principle of life and observer-related Universe. Philosophy of science needs to reflect upon these and allied issues for understanding the reality of the Universe. Interestingly, the *Vaiśeṣika* concept of substance (*dravya*) includes the observer, the observed matter and motion, mind, space and time – all towards comprehending the basic reality. Perhaps Sundar Sarukkai could have examined in this book, the concept of *substance* from the point of view of philosophy of science and the *Nyāya-Vaiśeṣika*.

Sarukkai has discussed what he calls 'Logic in science: the Western Way' and 'Science in logic: the Indian Way?', the nature of scientific knowledge and allied aspects. The issues dealt with by him are stimulating and debatable alike.

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