

Narlikar's Four Questions That History Might Answer

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J.V.Narlikar the well-known astronomer, and a scion of famous family of Sanskrit scholars, puts four questions to people who think that all knowledge, regardless of its nature, is already contained in the *Vedas*. Prof. Narlikar, concedes that his questions are just a layman's curiosity, and if they have been already answered satisfactorily somewhere he would like to know. Obviously, Prof. Narlikar does not want to restrict the search for answers to just the history of science in India but in fact challenges the entire history of India or the interpretation thereof. Indeed these questions and the larger questions to which they give rise to have not been answered in a scientific spirit yet. The four questions that Prof. Narlikar asks are:

1. What is the scientific content of the Vedas?
2. Can astronomical allusions of the past and the present be used to date ancient writings or events, as is usually done in support of the scriptural history of the Indian subcontinent?
3. Were any supernovae observed in India during the Siddhantic Period, the golden period of Indian astronomy? If not then how reliable Indian astronomy would be in spite of the ignorance regarding the rare cosmic phenomena that were recorded in contemporary China? And
4. Why did scientific activity decline after the Siddhantic Period, if at all the period may be referred to as scientific?

These questions may sound simple, yet do pose a grand challenge to base our answers on factual, objective evidence that could stand the test of being recognized as scientific knowledge.

Prof. Narlikar in this article elaborates upon his questions and gives reasons for asking so, so that objectivity is rendered to the answers to these questions and that no mistake is made in understanding them while an answer is attempted. For instance, under the first question Prof. Narlikar questions the credibility of the Vedic Mathematics if it contains the essentials of higher mathematics, algebra and geometry. To him

Vedic mathematics looks like a compendium of methods of quick calculations probably emerging due only to the exigencies of the socio economic conditions of the times. Besides mathematics Prof. Narlikar would like to know more about technology. He asks even if simple things and amenities like the water through taps, drainage systems and electricity were not there how far it is reasonable to suppose or insist that nuclear power or ballistic missiles were utilized in those days. Narlikar says what we require is an unambiguous key to the code to interpret what looks like a superficial poetic description that the Vedas and the scriptures resemble in order to arrive at a technical interpretation, if these hold scientific knowledge as is alleged.

Now when we find that a date of the compilation of the Vedas, some of the scriptures and the events mentioned therein cannot be fixed with any certainty, Narlikar questions if accurate and credible dates can so be fixed for them with the help of the astronomical allusions as did Lokmanya Bal Gangadhar Tilak?

The third question leads us to as to whether any supernovae were observed in India during the Siddhantic period. Narlikar asks so because if astrological and astronomical details in India are all that accurate as they are alleged to be then why it is that nothing is found in this regard in the scriptures. This absence becomes more conspicuous when we find that some of these celestial phenomena occurred at the golden era of Indian Astrology.

The fourth question asks as to why scientific activity declined after the Siddhantic period in India. In seeking an answer he ponders over various reasons that are usually given for this and Narlikar points out the hollowness of these arguments.

It is not Prof. Narlikar alone in raising such questions but indeed all belonging to the scientific community and people professing to hold scientific attitudes have cast doubts over the scientific veracity of the scriptural texts that have influenced the people living east of the Indus since millennia. Prof. Narlikar's four questions are but representatives of a wider set of questions that if answered to the satisfaction of the scientific world would either liberate the multitude from stark ignorance or would enrich the knowledge of the entire humanity immensely. Before anyone attempts to answer these questions posed by Prof. Narlikar, would it not be much more enlightening to answer the following underlying

questions that would help in answering questions similar to what Prof. Narlikar has raised.

- Does fear of the unknown always take precedence over the fear of the known and immediate?
- Does fear of the immediate and the known give rise to the creation of some supernatural being, a god perhaps or rather compels one to act on his own, whether through instinct or godless thought?
- Does the un-manifest exist and also affect the mind of man when he seems only to be surrounded by diverse manifest phenomena?
- What were the reasons that obliged the Indian mind to think of the Unity of the manifest and the un-manifest generally considered as relating to other world, when they confronted all the manifest diversity and complexity of phenomena in front of them whether in their march across the Indus or while they resigned to the stability of residence?
- Why did the Indians have to take some part of the manifest and the other part as un-manifest in all their thought? Were they particularizing truth or simply generalizing it?
- Could we possibly, in the case of India, recognizably draw a distinction between strictly religious/ secular texts on the one hand and scientific/ knowledge texts on the other?
- If there were exceptions in the field of scientific pursuit in those old historical days as Prof. Narlikar concedes, were these exceptions just coincidental or were representative and specimens of already dying out phenomenal science that might have had its own historical antecedents and precedents in the form of institutions, gradually losing ground to non-phenomenal science as they were being recorded then?
- Were not astronomy and mathematics largely utilized in *Jyotish* (a *Vedanga* - an essential means for the interpretation of the Vedas) to simply indicate possible obstruction or unhindered evolution of phenomenal events affecting the human mind with the experience of pain or pleasure through the analysis and interpretation of the position of celestial phenomena rather than prediction that has been wrongly accorded to *Jyotish*? Prediction part may have emerged later within religious sects and cults that professed to study *Jyotish*. Would it not be wrong to reject the ancient knowledge for the absence of theories with regard to the phenomenal universe but unrelated to the human being, when

what it contains is knowledge strictly in relation to human beings? Perhaps the *Vedas* and its *Angas*, inclusive of *Jyotish*, were highly generalizing texts leaving particularization to interpretation depending upon one's perspectives.

- Were *Shrutis* really composed of knowledge that preceded the discovery of written language or was it that knowledge was deliberately withheld from allowing it to go public or being put on written record? Are *Vedas* only a part of *Shrutis*? Why did the ancients have to guard knowledge from the common populace? Just because of power play or they had the necessity to do so, similar to the nuclear-club of today?

We need to seek answers to such questions to truly understand our scientific legacy.

Source:

J.V. Narlikar. 1996. Four Questions That History Might Answer. In *Science, Philosophy and Culture; Multi-disciplinary Explorations*. Part 1. (Ed.) D.P.Chattopadhyaya and Ravinder Kumar. PHISPC. Delhi. Pp. 178-184.