

## More on Vedic astrology

A lot has been written on the topic of Vedic astrology in recent issues of *Current Science*.

As correctly brought out by Vasant Sathe in his recent letter to the *Times of India* (19 May 2001) there is nothing to justify astrology with a prefix of Vedic. It is rather misleading and unethical to deny the contribution of other heterodox Indian systems of the times.

UGC's step is retrograde in more than one way. It should have rather instituted and funded some research projects for due verification of astrological predictions by modern scientific methods.

Astrology is a subject of symbols and the planets denoted thereof have no extra role. It is a part of Astanga

Nimitta shastra of old times, which is extinct now. It is more intuitive, rather than explicit and prone to subjective errors. That is why, we see many failures in predictions. Attributing a divine status is a motivated game-plan.

By and large, both the advocates of astrology and the Indian scientific community are guilty of the 'holier-than-thou syndrome'.

The Indian scientific community too has no open mind to be critical and conduct unbiased investigations and is shy of admitting its ignorance on the intricacies of this popular but fast-vanishing folklore topic. A case in point is the much-acclaimed prediction of the recent Gujarat earthquake by a local astrologer.

I have no financial support to work out correlation tables between the geographical loci of the epicentres of recorded earthquakes and the planetary constellations at that place and the time of occurrence to draw general predictive algorithms, if any. It is time the scientific community takes due cognizance of Indian traditions and gives a scientific verdict after meticulous studies and avoids merely looking through the lens of the Western world.

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## Astrology and the methodology of science

'I kept saying that the science was irrelevant. That sounds strange and I would like to come back to it. Of course it is relevant, because of the fact that it is relevant to astrology; because if we understand the world the way we do, we cannot understand how the astrological phenomena can take place. And so that is relevant. But for people who believe in astrology there is no relevance, because the scientist never bothers to argue with them'. (Richard P. Feynman, *Pleasure of Finding Things Out*, Perseus Books, p. 109).

Several articles have appeared in recent times questioning or supporting UGC's decision to teach the so-called 'Vedic astrology' as a branch of science in Indian universities. It would appear that many of the supporters are thinking that any criticism of it, is a criticism of our roots in 'Vedic culture and foundations'. The Vice-Chancellor of a university even went to the extent of saying, 'the fault is not in astrology'. Presumably science is at fault! If this is so, science is in trouble, if it cannot draw a clear distinction between the foundations of the methodologies of science and astrology.

In this debate, it was suggested that 'science is what scientists do'. Such an explanation provides flexibility in the methodology of science, which is just not admissible. Pursuit of knowledge through the methodology of science is rigorous, and must comply with some well-defined conditions. The methodology of science strives to provide rational and logical explanations for natural phenomena and enables predictions that are specific and which can be independently verified. If independent tests do not confirm a proposed hypothesis, it is rejected. The concept of cold fusion is a well-known example. Furthermore, science deals with observations of natural phenomena only. The methodology of science is not structured to answer questions that are purely a matter of mind such as, 'Does God exist'?

While we are subconsciously aware of the guiding principles of the methodology of science, it would be instructive to recapitulate them to decide whether astrology could be treated as a branch of science. The conditions that have to be complied with in the scientific method of pursuit of knowledge are (1)

relevance, (2) compatibility, (3) testability, (4) predictability and (5) simplicity. Finally, it is important to note that all scientific theories are tentative. When new observations are made that cannot be explained by the existing hypotheses, new ones are proposed, that not only can explain the earlier observations, but can also explain the new predictions. A classic example is the theory of relativity.

Let us briefly examine the implications of the above criteria.

**Relevance:** To be called scientific, a proposed hypothesis must be relevant to the phenomenon to be explained. It cannot be based on arbitrary assumptions, nor is it to be accepted on the basis of faith.

**Compatibility:** To explain a newly observed phenomenon, the proposed hypothesis must not contradict other well-established and relevant observations. In essence, it must be able to co-exist with them.

**Testability:** If the proposed hypothesis is not testable, it does not comply with

the methodology of science. Not only must the hypothesis be testable, but the results must be independently reproducible. If not, the proposed hypothesis cannot be considered scientifically acceptable.

**Predictability:** A scientific hypothesis must be able to predict things yet unknown. Predictability is an important cornerstone in the progress of science. It was Einstein's quantitative prediction of the bending of light rays as they go past the sun and its experimental confirmation by Eddington, that lent credence to and general acceptance of the theory of relativity.

**Simplicity:** When different hypotheses are proposed to explain the same observed natural phenomenon, the criterion of simplicity states that, the particular hypothesis which is the simplest among them, is the most likely explanation. It was said that Einstein rejected his unified theories by stating, 'The good Lord could not have created the universe in such a complex manner'.

These are the basic principles of pursuit of knowledge about natural phenomena through the methodology of science. The predictions of the future of people by astrologers based upon the locations of some planets at the time of birth, do not satisfy this very first and important condition of relevance. Astrologers cannot logically explain why among zillions of heavenly bodies, the location of few planets at the time of birth, could decisively determine a person's future. Furthermore, they expect you to accept their predictions on faith. Astrologers rarely talk about the failures of their predictions, but only boast about their successes. If astrology is a branch of science, all predictions by all astrologers must be identical and must be specific. They cannot be amenable to flexible interpretations. If this first condition of relevance fails, the other conditions cited above become irrelevant. Against this background, it is hard to believe that Vedic or any other form of astrology is scientific. People who believe in astrology, including some scientists, will have to be considered 'boundedly rational'. Faith, as such, has

no place in science. Intuition certainly plays a role in the progress of science. But conclusions from intuition cannot ignore the above criteria.

Because of the innate urge of human beings to know what the future has in store for them, astrology has come to occupy a popular place in the minds of people all over the world. But it would be absurd to call astrology a branch of science. It would appear that scientists who are a party to this decision are betraying the cause of science.

One may also like to recall Feynman's comment, 'Science is a way of trying not to fool yourself'. Quoting this, the editor of *Scientific American* (June 2001) said, 'The dangers of ignoring its messages (of Science) are greater than merely making politicians look foolish'. Is the decision of UGC any less serious?

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## Futile struggle against Vedic astrology

With reference to the recent editorial 'The astrology fallout' (*Curr. Sci.*, 2001, **80**, 1085–1086), I am reminded of the principle stated by Isaac Asimov in his *Foundation* series of books to the effect that 'sufficiently advanced technology is indistinguishable from magic'. To the layperson, science is technology, and the processes by which 'respectable' technology achieves its successes are indistinguishable from those by which the less respectable ones achieve (or claim to achieve) theirs. If the former is science, so is the latter. Thus, weather forecasting, earthquake prediction and perhaps even electricity generation (given the sorry state of most of our power plants) are considered only as scientific as, or less scientific than, astrology, palmistry, numerology

and other such hermetic pursuits. And, apparently, it is not just the layperson that believes this but also our academic and scientific 'leaders'. Many of my own scientific colleagues are sincere believers in the effectiveness of 'Reiki' and 'pranic healing'. Other scientists are followers of men whose chief claim to fame is the magical ability to produce religious objects from thin air. And most of us would consult an astrologer before we fix a date for the wedding of our children. Thus, the struggle against Vedic astrology now going on in our institutions of higher learning (at least in parts of some of them) is probably futile, though heroic and necessary.

What I find particularly intriguing and objectionable about the whole affair is the emphasis on Vedic, and not (per-

haps) Indian, astrology. What about, for example, Mughal astrology? This partiality is of a piece with the prestige that is awarded by the powers to ayurvedic medicine, while being denied to siddha medicine. It is not correct to hold that the proponents of Vedic astrology are being irrational. On the contrary, if the real purpose behind such endeavours is considered, we have to acknowledge their clear thinking and essential rationality.

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