

Astrology and science

We scientists from the scientific/academic community in the so-called 'elite' institutes have once again shown our customary apathy in not coming forth to preempt the UGC's attempt to start courses in vaastushastra and astrology. Despite several newspaper reports and a clarion call given by P. Balaram in his excellent editorial (*Curr. Sci.*, 2000, **79**, 1139–1140) we were too apathetic (timid?) to challenge the UGC on this issue. The scientists in these so-called elite institutes do not really have to depend on the support of the UGC and there is no reason for their timidity! Recently some scientists have been registering strong protests. But alas, it may be too late now. The UGC has actually passed a resolution giving legitimacy to such courses and many universities may well be forced to start them in July. Some of the scientists at the Indian Statistical Institute have written a letter of protest to the UGC. We urge academicians at other institutes to follow suit.

Instead of trying to start courses in astrology, etc. which will surely take us back to the dark ages, our educators should perhaps think of having a course on 'Indian heritage', designed so as to salute the wonderful contributions that we have inherited from *all* the different communities in India in the fields of music, art, mathematics, *astronomy* (*not* astrology!), etc. and also what has been passed on to us by the many tribal communities who have peopled this land for centuries.

We do not want to waste our time nor the readers', in rebutting point by point the long rambling letter by K. N. Ganeshaiiah (*Curr. Sci.*, 2001, **80**, 719–720). We think serious scientists should spend time on serious science rather than responding to such letters! Since he has unnecessarily dragged in the name of the great Indian statistician C. R. Rao, we can perhaps cite other anecdotes to establish that C. R. Rao has no belief in astrology. We suggest that our scientific colleague Ganeshaiiah look at the excellent book by S. Balachandra Rao (*Astrology, Believe It or Not*, Nava Karnataka Press), where he describes and then proceeds to debunk this pseudo-science and ends with a quote of Swami Vivekananda. 'Let stars come, what harm is

there? If a star disturbs my life, it would not be worth a cent'. Finally we would like to add that two of our great scientists of yesteryear, Meghnad Saha and C. V. Raman had expressed utter contempt for this pseudo-science.

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This is in response to K. N. Ganeshaiiah's letter published in *Current Science* (2001, **80**, 719–720). It is indisputable that we should have freedom of speech and free access to knowledge. After all, that is the premise on which science functions and its remarkable self-correcting power originates. However, scientific work is not arbitrary. At any given time in the history of science, there are definitive problems which are lurking in the minds of experts that are about to find expression. That is why it is legitimately claimed that if the great Rutherford was not in the scientific arena, atomic physics would perhaps have been delayed at the most by an year! It is not to deny that there are no blind alleys or cul-de-sacs in science. However, it is possible to identify problems that are either totally outside the scope of science or outright meaningless. Investing public money or resource on activities that go

completely against well-established science is indeed very unwise and wasteful.

I once knew an individual who had blisters all over the body – a probable consequence of infrequent baths and malnutrition. He went away to get a 'treatment' for his skin problem. I learnt that the treatment consisted of pasting the entire body with the waste removed from the intestines of slaughtered goats! It is possible that this treatment was effective. However, I doubt if any self-respecting scientist will undertake a statistical analysis of the efficacy of such treatments. Similar comments hold for many activities that are commonplace, including astrology and palmistry.

Funding agencies in India, in their unfortunate generous moments, have supported 'Pseudo science' projects such as effect of music on plants and geomagnetism and human health, with disastrous consequences. It is not lack of open mindedness or intolerance that prompts us to criticize allocation of resources, manpower and monetary, for astrology or palmistry. The opposition is based on sane scientific sense. If a 'guru' claims that he could levitate, the evidence he provides should exceed the totality of experience of countless experiments that have been carried out since Newton! In north Karnataka, a black magic called 'Banamathi' is a source of terror. It does not make sense to initiate a scientific study of Banamathi as a means of destroying people and homes, although the social psychology that provides fertile ground for such black magic could indeed be scientifically investigated.

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In an article published in *Current Science* (2001, **80**, 719–720) K. N. Ganeshaiiah pleads that astrology and palmistry should be allowed into university curricula. The title of the article 'An unscientific way to bury astrology' hints that he

knows how to bury astrology in a scientific way, but does not want to reveal it. Throughout the article he protests too much, is understandably ambivalent and equivocates, and the imagery of death of astrology and burial recurs. '... these subjects are perhaps dying due to neglect by guardians of the new schools of knowledge. Before we hit the last nails on the coffins of these subjects ...' and so on. Again 'even considering it is unscientific ... why should anyone hesitate to study astrology?'. The author also remarks that history, art and literature are not science subjects, but are being taught in universities.

One would have thought, especially in Bangalore, that astrology was being seriously studied and believed by a worryingly lot of people. Every newborn child in a family has its horoscope cast. The late founder editor of the astrology journal often used to lecture in the Department of Mathematics at the Madurai Kamaraj University, when the topologist M. Venkataraman was there. So what is Ganeshaiiah talking about? Possibly about the editorial on the subject in *Current Science* (2000, **79**, 1139–1140). Then why is he neglecting occult science, voodoo, black magic, seance and other such fascinating subjects? Tycho Brahe (1546–1601), Nicolaus Copernicus (1473–1543) and Johannes Kepler (1571–1630) also practised some magic besides their serious work. But those were times when women were first branded as witches and then were burnt at the stake. Are Brahe, Copernicus and Kepler today remembered today for the magic they practised? Whoever protested against Indian or Hindu heritage studies? All the great Indologists like D. D. Kosambi, A. L. Basham, Helmut Glasenap, Paul Thieme and Max Mueller have been always held in high esteem.

For all we know there might indeed be universities which might offer to teach astrology and palmistry in lieu of botany and zoology, which is not a bad idea at all. Everyone can identify trees such as the neem, banyan, mango, cashew, mayflower and pine without having to study botany for six or more years. Even philosophers can tell apart a bat from a frog, or a roach from a beetle. These days our universities are in such bad shape that they will gladly teach any subject (like

they are already doing with biotechnology, information technology and bioinformatics) to attract funding and students. Many departments of zoology were christened over-night as departments of microbial technology in our universities. But I am digressing. I am only surprised that Ganeshaiiah is vehement in making his point when he knows, as well as I do, that superstitions die hard. Have not astrology and palmistry survived all these centuries and do they need to be defended in the pages of a mere science journal? Ganeshaiiah is in excellent company, for most scientists in India are undercover astrologers and will be only too happy if palmistry, astrology, etc. are at last given academic respectability.

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I am surprised to note that K. N. Ganeshaiiah (*Curr. Sci.*, 2001, **80**, 719–720) is 'disturbed' by the editorial in *Current Science* (2000, **79**, 1139–1140) expressing concern at the efforts of the Government of India and UGC to introduce astrology in Indian universities. On the other hand, I am disturbed that Indian scientists have not protested, in one voice, against efforts to accord this kind of respectability to astrology.

Ganeshaiiah's main contention seems to be that we should not make 'a body of knowledge' unavailable to 'willing students'. There are several such 'bodies of knowledge' such as phrenology, numerology, omenology (I have seen a book of about 200 pages in Kannada on *Halli Shakuna*, omens related to house lizards), etc. not available to 'willing students'. Universities are not expected to squander their resources to make available useless and patently absurd 'bodies of knowledge' and thereby encourage superstition in young minds.

Ganeshaiiah has doubts as to whether astrology is really unscientific. Granted it

is, he mockingly asks, 'Are art and literature scientific?' Art and literature are cultivated for their aesthetic value, not because of their scientific value. But astrology claims to be a science. Its claims are belied because (a) its premises are false, (b) its approach is at variance with the tenets of the scientific method, and (c) it does not grow like other sciences by the self-corrective method adopted by science.

Its premises are absurd as it is based on geocentric astronomy. It looks upon sun (a star), moon (a satellite) 'Rahu' and 'Kethu' (points in space) as planets, while it ignores planets like Uranus and Neptune which are massive and also Pluto, not to mention the asteroids.

Its method is unscientific because the supposed effects of planetary positions on men are not arrived at on carefully collected empirical data. Questions are not raised as to why and how planetary positions produce the effects attributed to them. No hypothesis or theory has been proposed to explain the effects of planetary positions on human beings.

In the absence of any hypothesis or theory, the question of checking their validity does not arise and so all roads to growth by the self-corrective procedure are blocked.

Ganeshaiiah quotes C. R. Rao to make the point that there must be something in astrology: 'Among 3458 soldiers Jupiter is to be found 703 times, either rising or culminating when they were born. Chance predicts this should be 572'. If he thinks that the figures are very telling, I suggest that he calculates the chances of all the 80,000-odd horoscopes of 80,000-odd citizens of a single city pointing to a particular day and time of death. Such a thing happened on 6 August 1945 in Hiroshima. The 'miracle' repeated three days later in the city of Nagasaki.

It was not without good reason that the eminent mathematician, David Hilbert said, 'When you collect the ten wisest men of the world and ask them to find the most stupid thing in existence, they will not be able to find anything stupider than astrology'.

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