

## Astrology, Science and the Tragedy of Murli Manohar Joshi

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There are some fights that do both sides no real good and Mr. Joshi and his Sancho Panza, the UGC Chairman Mr. Gautam, have picked exactly one of these in their move to start funding astrology courses at Indian Universities.

First things first. This move is brilliant politics for Mr. Joshi. His market niche in the hyper-competitive world of Indian politics is that of the fearless defender of India's ancient, whence necessarily Hindu, culture against the "self-hating, secularized/westernized elite". Being attacked by *Frontline* and in this journal for coming to the defense of Vedic Astrology suits him just fine.

There is anecdotal evidence for his tactical brilliance. A default faith in astrology is a part of the lives of many Indians. (Not just Hindus, of course, as in other matters involving the common culture. However Vedic astrology involves an appeal to the classical Hindu tradition so in the following I will focus on fellow Hindus.) As Mr. Joshi's critics have, inevitably, attacked a belief in astrology as part of their response large numbers of people find their cherished beliefs mocked in public. They will likely respond by digging *their* heels in on the other side of the debate. Perhaps they will even adopt Mr. Joshi as their standard bearer in the national arena.

Indeed, from Mr. Joshi's perspective this move had the same compelling quality that Mr. Vishwanath Pratap Singh detected in accepting the Mandal report. Sadly, it shares with that other masterstroke the feature that all Indians on both sides of the debate would be better off if it had never been invented.

Its political logic notwithstanding, two actual arguments have been marshaled in support of the UGC's move. Let me consider these in turn.

### Planets and People

The first of these was nicely summarized by the underemployed K. N. Govindacharya who said (Times of India, May 28<sup>th</sup>):

"This decision has, in fact, triggered a debate in the country as to what constitutes scientific temper. It is well known that gravitational force affects human beings. But just because science is still to evaluate and quantify the impact of planets other than earth on human beings, should we dismiss that possibility? Science is a continuous process of learning. Till the recent past, scientists did not accept the existence of the fourth dimension or black holes. Even now we do not know whether sub-atomic particles are indeed particles, or energy packets, or waves. Science is yet to tell us what exactly life

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and consciousness are. Just because we do not know about a thing, let us not deny its existence.”

This paragraph illustrates nicely why Mr. Govindacharya is accurately described as an ideologue rather than as an intellectual, and why one fears that a little learning is a dangerous thing. He is deluded in thinking that science itself offers a basis for defense - on the contrary, the world-view of modern science (for instance reviewed recently in Edward Wilson’s *Consilience*) is remarkably complete. To begin with it is hardly the case that Science is yet to quantify the impact of planets other than earth on human beings. The opposite is true - it is precisely because the relevant gravitational effects of distant planets are tiny compared to the other forces that shape human biology that scientists are confident that we can ignore them. To say that “scientists did not accept the existence of the fourth dimension or black holes” is to falsely imply that the mathematics of Lorentz invariance (which is what the recognition of time as a fourth dimension was about) and that of singularities in general relativity theory was available in the Vedas or anywhere else and all Einstein and Chandrasekhar and colleagues had to do was to read them. As for sub-atomic particles they are basis states for irreducible representations of the Poincare group in the Hilbert space of a quantum field theory (Wigner) and from that mathematical statement follow properties that can be characteristic of macroscopic particles *or* macroscopic waves. It is conceivable that a future formulation will replace this ontology by one involving a yet to be formulated “string theory” for the purposes of understanding phenomena at inaccessible energies but *it will not change the practical utility of our current formulation for understanding everyday phenomena around us*. The technical basis for this last assertion is the idea of the “renormalization group” whose spectacular development won Kenneth Wilson the Nobel Prize and this feature of our world is what has allowed the exponential, cumulative, growth of science despite dazzling changes in the “fundamental ontology” along the way. As for life, the basis of heredity was established almost at one fell swoop by Watson and Crick in 1953 and some time in the next decade or two I expect that the simplest organisms, such as bacteria, will allow an understanding of their behavior on the basis of their genetic code and the implied biochemistry. Consciousness is more of a problem but there seems little reason to think that it will not ultimately receive an explanation as an “emergent property” of particular complex systems as opposed to a fundamental ontological element.

Now Mr. Govindacharya may say, “But how can you be absolutely sure that there isn’t more to the story than you have allowed above? After all I learn from reading Karl Popper that science contains no true statements, only falsifiable ones.”

The answer to that is that I can’t be *absolutely* sure that there isn’t anything else, neither can anyone else about anything else. For instance, Mr. Govindacharya can’t be absolutely sure that tomorrow Mr. Vaypayee won’t forgive him and dismiss Mr. Jaswant Singh to make way for him at the Ministry of External Affairs. But he isn’t planning on this improbable event. Likewise, India as a society shouldn’t plan on the much greater improbability that something will be found which will in some sense validate the conjectured connection between the destiny of individual humans and the motion of heavenly bodies, when a truly enormous body of existing knowledge indicates otherwise.

In response to Mr. Joshi's move, three Indian physicists working in the United States: Shyamsundar Erramilli of Boston University, Harsh Mathur of Case Western Reserve University and Anupam Garg of Northwestern University have drafted a letter protesting it on the grounds that astrology is not a science and hence should not be taught as one. About 300 people including this author have signed this letter with the more eminent signatories including the Nobelists Sheldon Glashow (one of the discoverers of the "standard model" of particle physics) and Phillip Anderson (regarded by many as the greatest living condensed matter physicist). If the list isn't vastly longer it is simply because the drafters are first rate scientists with other uses for their time. There is little question that central proposition in the letter commands nearly universal assent among leading scientists. Interested readers may wish to peruse <http://caffeine.bu.edu/vigyan.html> for the text of the letter and the list of signatories. The letter, modestly, confines itself to making the point that methodologies in scientific and astrological practice are completely different, but as I've noted above substantive case is overwhelming on its own.

### **Supply and Demand**

A second rationale offered by Messrs. Joshi and Gautam is that there is a demand for trained astrologers, especially in Indian communities outside India which needs to be met. The Government of India, being the *mai-bap* of the Indian nation is duty-bound to respond to this. A kinder version, which is not what is on offer, is that in an open society surely people have a right to lead their lives as they see fit as long as they do not actively harm others, and if they want a steady supply of astrologers why shouldn't they have it?

To this last sentiment I have no objection whatsoever. By all means let Hindu society nourish its traditional institutions, alongside all other groups in the Indian mosaic. I myself belong to the ranks of those who feel that the Nehruvian emphasis on a dry "scientism" as a prerequisite for economic prosperity was misguided and confused the need for an industrial culture with that of a scientific temper. More generally, little was gained by decades of organized disdain for traditional Hindu practices which mostly served to demoralize the country which should have been better occupied building a robust prosperity that would have ameliorated many more problems a lot faster.

But it is crucial to remember that this stifling of Hindu civil society was a product not just of Pandit Nehru's intellectual stance, but also of his supreme creation the Nehruvian-bureaucratic state which sought to set up a Department with its Own Secretary for every conceivable project and to outlaw all competitors. The reforming spirit of the Indian freedom movement was killed off when *every* argument was forced to take its place in a cobwebbed file.

I would cheer on Mr. Joshi if he wants to undo this by freeing education and culture from the dead hand of state control. Let a hundred schools of astrology flourish - with private money - alongside a hundred private Universities where Vice-Chancellors can focus on producing academic excellence instead of kowtowing before the entry level desks at the

HRD ministry. But this is not what he wants to do. Instead he wants to *perpetuate* the Nehruvian paradigm and perhaps set up a second IAS (the Indian Astrological Service) . I can confidently predict that if he succeeds this will be the end of a vital Hindu culture - nothing can survive bureaucratic paralysis. He need look no further than the difference between the two Anglo-Saxon twins Britain and the United States. There is a Church of England but it is in the United States that religious expression is far stronger, courtesy of a history of private arrangements.

Oddly, this does nothing for the State's own long terms interests either. In common with Mandal, this move has no natural limits - if it is seen as politically successful, every group in India will come to ask for its own traditional practices to find representation in public universities and such demands will be met by successor governments. Perhaps it is worse. With reservations at least one is forced mathematically to stop at 100%, with courses who is to say how many are enough. The net result will be to increase the flight away from public institutions - perhaps to Internet based education from private institutions in other countries as technology improves.

In sum, with a *mai-bap* like the Government of India, who needs enemies?

### **Conservatism and the Left**

Mr. Joshi is eager to remind people that starting with Mr. Nurul Hasan the Left engaged in exactly the practices he is condemned for today. This is completely correct. Indeed the Left was perhaps even less impressed with science which is why for the better part of two decades starting with 1970 one could hear moronic incantations of vulgar Marxism ("all history is the history of class struggles") passed off as social "science". It is worth remembering that the "prestigious" Jawaharlal Nehru University was founded with no faculty of mathematics or of the physical sciences - and that leftist members of its professoriate argued against the eventual remedying of this egregious omission that has not been attempted by any university with pretensions to stature anywhere in the world. If the sciences in India survived the Left it is because they fled to specialized institutes.

It is a truism as old as the hills that two wrongs do not make a right and *mutatis mutandis* that the replacement of left wing mediocrity by right wing mediocrity is not progress. Mr. Joshi is well within his rights to attempt to displace the left trade union that has controlled Indian academic patronage for so long (a private conversation with the young, gifted scholars that populate many of Delhi's colleges is all one needs to be convinced of this) but he should do so by opening up the system to genuine, part international, peer review and by looking for conservative projects that are intellectually defensible and for gifted people to man them. The left litany that there aren't academically talented rightists is ludicrous - it mistakes the outcome of a system of rent-seeking and suppression for its causes and there *certainly* isn't a shortage of conservative intellectual projects.

### **The Tragedy of Mr. Joshi**

With so much to be done, Mr. Joshi has chosen to fund courses in astrology instead. Worse, he has brought into the open a conflict, between the collective import of contemporary natural science and one minor component of the inclusive Hindu mix by which large numbers of Indians live, that could have been left well enough alone. It is not as if the Hindu in the street goes around under the delusion that he is a puppet of the heavens. Instead he does what he can, in common with fellow humans across the globe to deal with the complexities of life. What he faces is a complicated and shifting environment, more treacherous in India than in some other places and less treacherous than in others. In negotiating a life's journey through shifting sands, armed with imperfect information, we all need some articles of faith, a sense of destiny perhaps, and as part of Hinduism's offering on this score, there is indeed the lore of astrology. Certainly Indian politicians who lead their professional lives in the snake pit that shames all others, need all the help they can get! But that as I've argued above is grounds for masterly inactivity not foolish advance.

It is hard to believe that Mr. Joshi has come to this pass. When he took office, much was expected of him. He is a physicist by training and that already makes him one of the very few people with scientific training to hold high public office anywhere on the planet. In an age bristling with technological and scientific issues in governance he should have been out ahead of his colleagues in framing questions and soliciting and synthesizing the expert opinion needed to confront them instead of playing the philosopher-king in speeches to captive audiences at National Science Congresses. There is a new India headquartered at InfoSys and at the Indian Institute of Science in Bangalore that has won respect worldwide and would welcome him as their leader if he would listen to them and would promise to extend to the nation the basis of their success. With the help of this India he could really go places.

Thus far he has completely failed to capitalize on this opportunity to move beyond the confines of Allahabad and the world of its university, once a proud institution - now a pale shadow with no presence in the international world of learning. This is truly a tragedy - not just for him, but for India which could benefit from the talents of a man of undoubted native intelligence placed in so strategic a location.

Perhaps it is not too late for him to change course by taking a leaf out of the book of his fellow MP from Uttar Pradesh, the Prime Minister Mr. Atal Behari Vajpayee, who happily traded "Gandhian Socialism" for economic liberalization when responsibility beckoned. He can begin by firing Mr. Gautam and blaming him for the astrology fiasco. As he has already fired the heads of the ICHR and ICSSR he has lots of practice, and this time he'll even have reason on his side.