

Old toddy in new bottles

It has been reported last week that some of our 'excellent' universities will be designated as 'navaratna' universities by the HRD Ministry on the basis of 'their performance in research, academic performance, sound infrastructure and the ability to attract foreign students'. These universities 'will be selected from among the 504 universities from across the country'. The number of these navaratnas may be more than nine. A committee has been set up to work out the modalities for this brave new foray into the glittering world of higher academics.

The HRD Ministry has mentioned that these navaratna universities will be 'modelled after the prestigious Ivy League of USA', and that 'they will have financial as well as academic autonomy and their status would be reviewed periodically to adhere to the highest standard of excellence'. The HRD Ministry has also mentioned that the 'The Ivy League refers to about eight institutions in USA which are widely associated with academic excellence, selectivity in admissions and social elitism'.

The academic community of this country should thank the HRD Ministry for taking all these initiatives and for explaining to us what the Ivy League is all about.

They should also do a reality check on the present moribund state of the university system in our country. A university does not become 'excellent' or 'navaratna' through declaration or edict. This

is a status that comes after decades, even centuries, of hard work. The Ivy League universities did not become famous overnight. No senator or committee in USA sat down and decided that Harvard was excellent. In our own country, the five original Indian Institutes of Technology (IITs), which are perhaps among the few institutions that can properly claim an exclusive status, did not achieve this status just because a committee called them excellent. Yes, mountains can be moved but only if, and I borrow from the words of J. C. Ghosh, the first director of IIT Kharagpur, who said that India was capable of maintaining her position if we have 'prudence and foresight, liberal statesmanship, resolute cooperation and efficient leadership'. Where are all these noble attributes today? Do the present vice-chancellors of our country have these qualities?

One has only to look at the sloppy and demoralized state of our universities today to realize that the HRD Ministry is dreaming when it talks about navaratnas. I do not know how the HRD committee will decide on which universities are to get the exalted status. Perhaps, it will be some combination of half-hearted citation statistics, social engineering, personal expediency, job hunts and a lot of good old-fashioned Tammany Hall politics.

The academic situation in the university system is in a precarious condition. Citations, impact factors and quantitative

measures are being used in a skewed manner to project some universities as excellent. A closer scrutiny will show that in all such cases, the high numbers are due to special factors and circumstances – what the statisticians call outliers. These factors have been brought out abundantly clearly in the recent articles in this journal by Subbiah Arunachalam and Giridhar Madras, and so I will not trouble the reader with all these painful details once more.

First, we had the 14 world class universities, then we had the new IITs, then the new Central Universities, and now it is the navaratna universities. All these are Potemkin villages and the sooner the academic community demands that the HRD Ministry puts a stop to this nonsense, the better it will be for all of us in the long run. Finally, it is the young people of this country who are being cheated.

I thought of calling this short piece 'Old wine in new bottles', but a little reflection told me that wine being a foreign product, I might be accused of lack of patriotism. Therefore, I have titled the piece 'Old toddy in new bottles'.

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More about irreverence

Mashelkar has raised an interesting point about the need for irreverence in science both in his editorial in *Science*¹, and also in his correspondence in *Current Science*², the latter written as a response to the editorial by Balaram³. Mashelkar² expresses the wish that we can promote that irreverence in Indian science by changing personal attitudes and by creating new organizational values. This is easier said than done. 'To revere' is our trait, be it our senior colleague or a film actor, a singer or a politician. This trait

will not go away merely by 'creating new organizational values', because here we are talking about the essential and fundamental attributes of the Indian cultural baggage which we call 'Indian identity'.

This cultural part of our self determines our attitude towards our superiors and subordinates, obligations in family life, our behaviour at work or in public places, status and several other things in life, as ably mapped in an excellent sociological analysis presented by Sudhir

Kakar and Katharina Kakar in their book *'The Indians: Portrait of a People'*⁴. This cultural part of our life is wired into our brains from childhood. The Kakars find the source of reverence, which is again a reflection of our general obsession with hierarchy and seniority (the word they use for Indians is *Homo Hierarchicus*), to our extended joint family enterprise and its organizational set-up. This family landscape actually is authoritarian (though benevolent) in its dealings, where children are sensitized to a

collective self, rather than fostering individuality. In this set-up we grow with a loss of self and learn to subsume our worth as an individual.

Family relationships also help the members in their future life, like in finding jobs or even getting a promotion or other accomplishments, with the result that an Indian has internalized his 'familial and social position' in his family and has become highly hierarchical in his social attitudes. Thus he is culturally tuned to uphold the family integrity rather than his individual strength and creativity. This is a radical departure from the Western cultural values. The Kakars further say that these patterns of family life provide the template for the relationships in our university departments, scientific institutions, political parties and bureaucracy and thus in contrast to the West, Indians are more prone to revere than admire. This authoritarian familial social structure tends to kill individual bril-

liance and excellence. Is this the reason that Indian scientists who have gone abroad and out of the earshot of Indian cultural ambience are apparently doing much better than the indigenous researchers?

Interestingly, an article on Chinese performance in science, which was published in *Nature*⁴ a few years ago, also accuses cultural factors such as conformity and respect for authority as the impediments to excellence⁵. Maybe some of these cultural attributes are Asian rather than Indian, as the Chinese are steeped in Confucian ethos⁶. The point is, as Mashelkar raises, these countries have to free themselves from the cultural chains of the past to foster original scientific research. This social change will come about as a result of increased urbanization, growth of nuclear families and women empowerment. It will take a whole generation to bring about the change. But then, there will be a trade-

off: the rise of individualism will lead to the decay of a great social security system for the less fortunate and the elderly, which is what the biological function of an Indian joint family is.

1. Mashelkar, R. A., *Science*, 2010, **328**, 547.
2. Mashelkar, R. A., *Curr. Sci.*, 2010, **99**, 7.
3. Balam, P., *Curr. Sci.*, 2010, **98**, 1155–1156.
4. Kakar, S. and Kakar, K., *The Indians: Portrait of a People*, Penguin Viking, 2007, p. 226.
5. Poo, M., *Nature*, 2004, **428**, 204.
6. Rajendran, C. P., *Nature*, 2004, **429**, 501.

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Scientometric comparison of Indian institutions with other international institutions: a *iCX* map representation

A comprehensive and meticulous scientometric comparison of Indian institutions with other international institutions from the US and Asia was reported recently¹. The publication profiles of many science

and engineering departments of top Indian institutions were compared with those from similarly placed institutions in the US and Asia on a 'per faculty per year' basis. Indian universities do not

compare favourably with their counterparts in Asia or the US.

The performance assessment in ref. 1 can be projected in a simple fashion using what is called the *iCX* approach. For

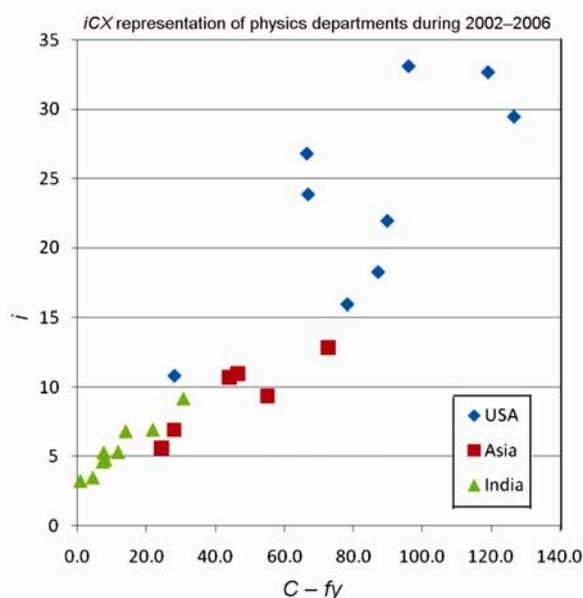


Figure 1. An impact-citations–exergy projection of various physics departments from top institutions in the US, Asia and India.