India matters: Changes needed in various sectors

India is a country with 1005 million people and a large science community. The Indian science scenario started from the period of Aryabhatta, Varaha Mihir and others. Needless to write, this country has achieved great success in constructing a large network among a large number of scientists and technologists in the world. However, the science endeavour has not been successful as it has failed to make outstanding contributions[1], apart from the work of a few outstanding scientists like S. Ramanujan, P. C. Roy, C. V. Raman, J. C. Bose, M. Saha, H. J. Bhabha, S. S. Bhatnagar, P. Mahalanobis, H. G. Khorana and G. N. Ramachandran. At present, India has more than two hundred and fifty universities. All universities in India consider teaching as their major activity. However, research and accomplishment in the area of knowledge improvement are a secondary aspect in their curriculum. Holding examinations at regular intervals and maintaining the existing infrastructure with little or no improvement is the present-day rule for all universities, even though they have large scope for upgradation. Presently, university ranking is a major factor in world-class education policies, strongly suggesting that research is a major aspect to come into the picture of high-rated universities[2]. However, India provides high quality education only in IITs and their performances are quite significant. World academies have highlighted the construction of a new forum for globalization on these aspects that has been initiated with the birth of the Inter Academy panel and the Inter Academic council. While discussing accomplishment in Indian academia, a hurdle has been imposed in the form of age limitation in various services. Many services related to scientific endeavour are restricted to young persons only even though the retirement age is fixed for all types of jobs, thereby giving less importance to their accomplishment.

Interestingly, a person working for many years in a governmental service is also a burden for a government. Perhaps, a service period of 20 years is good enough for a developing nation while many fellows with equal ability are waiting for a position. Besides, it is a burden to the national budget to pay a huge amount in the form of retirement benefits. In the science profession, age limitation should also be included, leaving an opening for the elderly, an emeritus status that will be based on accomplishment and ability. India needs a change in recruitment policy in science and in academies. An important factor for the deterioration in standards in various academic aspects is reservation in jobs for various social classes. The Shanti Swarup Bhatnagar award, the most coveted prize in science, is available for a person within 45 years of age only. The age limited science and technological accomplishment is the main consideration. Most contributions of various fellows are of low or no significance in terms of world-level accomplishment. It is better to remove age limitation and to solely entertain endeavour. In Indian science there are very few emeritus scientist positions even though India greatly needs expert personnel to make high quality contributions. Better scientific endeavour comes from well-experienced persons even though exceptional cases might be cited. Indian science and technological journals have less impact factor or no impact factor like that of many developing nations which is of great concern[3,4]. Globalization has introduced the trend to seek publication in high impact factor journals. Funding is also an important factor in developing nations. We should keep in mind that competition for funding is very keen in developed nations. Many agencies such as NIH, WHO, UNIDO, etc. have made openings for all nations. Ability to achieve funding from these sources should be given substantial consideration. Emeritus scientists should seek funding from extra-mural sources. It is true that India lacks work culture as well. Globalization and privatization both have been highlighted in the present Indian policies. Arguably, politicized policies are jeopardizing the aspiration of the human race in all nations and politicians play a crucial role in all aspects[5,6]. We need a change and that can only be done via wise modulation of the present system.

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Rituals of Science Congress

Too much of anything is bad. M. K. Unnikrishnan[1] has rightly pointed out the fallacy of too much adherence to rituals and VIP fetishism in the annual *mela* or mçlée of the Indian Science Congress. His is probably the most recent one in a very long chain of attempts at drawing the attention of people of importance in our scientific establishment and in our thoroughly unscientific political establishment to the mores of a serious professional and academic gathering. But the coterie of leaders in the Indian Science Congress have proved themselves champions in putting both scientific and unscientific together and sacrificing the former to the latter. This is not new, rather very old – at least as old as our republic. I quote from two well-known personalities to support my points.

J. B. S. Haldane wrote[2]: 'At Bombay, the Science Congress appeared to be an organized conspiracy against originality in Indian Science… I had asked, both in my own name and in that of a distinguished foreign visitor, that the custom normal in Britain, USSR, USA, France, Germany, Italy, Sweden, Japan, and other countries where I have been to scientific meetings, might be followed'. The root cause of all this incompetence and worse is not far to seek. A large number of Indian scientists have no pride in their profession, though they are proud of their salaries and positions. The opposite attitude is common in Europe, as it was in ancient India… In India today the unworthy successors of Durvasa and Visvamitra actually invite governors, vice-chancellors, and the like, to address them. This may be a relic of British rule. If so it is a regrettable one. I am quite aware that some British scientists behave in the same way, and that some of the most distinguished Indian scientists do not, and consequently do not appear at meetings of the science congress.

'But the object of the Science Congress should be to advance science in India, and this, in my opinion, it failed to do. There would be little difficulty in making it useful. This would involve discourtesy to some influential people. But in science efficiency is more important than courtesy.'

Nil Ratan Dhar of Allahabad was a chemist of very high repute. His name was considered for the Nobel Prize more than once for his (and his team's) contribution on photochemical fixation of nitrogen. He was elected a fellow of the French Academy of Sciences (1961) and was Sectional President of Chemistry in 1922 and in 1961 General President of Indian Science Congress. I quote some lines from his reminiscences[3].

'As I observed in London, Paris, Berlin, Uppsala and New York that all European and American Scientists are extremely keen on attending the Meetings of the learned Societies and take part in the discussions of the scientific papers… Frequently, announcement of a scientific discovery is made and discussed in the annual gathering… .

'When Mr Nehru became the powerful Prime Minister of India, most of the leading scientists… were keen on attending the inauguration of the Science Congress with Mr Nehru in the Chair, perhaps, to gain the favour of the powerful Prime Minister, who was described as a great Moghul. Usually, these men left the Congress Session soon after the departure of the Prime Minister. Frequently, the Congress Session was delayed to fit in with the timetable of the Prime Minister… .

'In the October meeting of the Executive Committee at Delhi, presided over by me, the two General Secretaries…told me that they had written to and also seen Mr Nehru with the request to inaugurate the Roorkee Session, but, Mr Nehru could not accept the offer as he had an important meeting elsewhere at that time… .

'The Secretaries, perhaps, tried not to break the Nehru tradition of inauguration of the Congress, but failed. Shortly after our October meeting at Delhi, … the outstation General Secretary, wrote to me that the President of the Indian Union had kindly consented to inaugurate the Roorkee Session of the Congress.

'Rajen Babu (the then President of India, Dr Rajendra Prasad was referred to thus by his friends. Incidentally, Dr Dhar and Dr Rajendra Prasad were both students in the Presidency College in Calcutta in the early 20th century and knew each other. Rajendra Prasad attended classes of J. C. Bose and P. C. Ray) on opening his mouth, stated why he had been called because the 'Inauguration Ceremony' had always been done by Mr Nehru.

'Many regular Congress members thought (and told me) that the Roorkee Session of the Science Congress was the best during the last 20 years, no fuss, no flattery, whatsoever… . I gathered from this session that if the Science Congress is run on right and correct lines with honesty and with the sole object of improving the Congress, the achievement and prestige of Indian Science without flattery to the men in power and without favour to the friends of the organizers, the Indian Science Congress has a great future.

'The big guns during the Nehru regime have disappeared from the field. The young scientists of India should work hard… and create a Brotherhood of Science and advance Indian science and industry in their march to progress and service to the common man of India.'

The above two samples are sufficient pointers. Things have not changed for the better so far. No comments are probably necessary except one. Unless we change our styles and fashions of functioning in matters scientific and care for nothing except scientific excellence in organizational activities like the Indian Science Congress there is little value in comparing our scientific achievements with the Chinese or so to say, any other country. I have just three hopes against hope with very small probabilities. The compound probability would therefore be infinitesimally small. Hope one – this letter is published. Hope two – someone somehow brings this to the notice of our Hon'ble Prime Minister. Hope three – the Hon'ble Prime Minister takes some positive action.

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