



सत्यमेव जयते

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No.TIFAC/Misc/88

My dear Prof Reddy,

Kindly recall my earlier letter regarding my request to you to send the copy of the title of the book on **Nuclear Fuel Cycling**. I would appreciate it if you can arrange to send it soon.

In addition, as per our discussions I had promised to send some points regarding the role of the Indian Academies. A first cut draft is enclosed herewith. You may have to introduce the aspect regarding the **theory of roots** which you explained so lucidly.

With kind regards,

Yours sincerely,


(Y S RAJAN)

Prof A K N Reddy,
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P.S. I have sent some papers regarding TIFAC seeking your advice. I also request your help on the matter.

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ROLE OF INDIAN ACADEMIES

1. Presently role of the Indian academies even for the best ones has been reduced to :
 - a. Recommendation of candidates for international conferences. (But even after the recommendations they do not have any wherewithal to fund them; it is left to INSA which again depends on limited govt. grants. One has to see and believe how the scientists are **shuttle cocked** before they finally go abroad for a conference. Here again the value system attached to the foreign conference is the motivating factor to suffer all these troubles.
 - b. Bringing out scientific publications and journals. To a certain extent INSA and the Indian Academy of Sciences are doing a reasonable job-the latter does it much better. However, there is lot to be improved in terms of Indian scientists contributing their first rate work to these journals as well as increasing the circulation of the Indian journals. About 95% of Indian scientific journals become **sink** of information rather than a source.
2. Practically there is no role of the Indian Academies in terms of contributing to certain science policies or issues. Most of the Indian scientists do not talk about issues at all. Some talk about it only in private and in hushed voices. The social conscience ends there. There are also confusing Governmental regulations regarding **public contacts, secrecy, confidentiality**. Many scientists from elite organisations like ISRO, BARC, DRDO etc. never talk anything to the public. There is only one official **spokesman** and one official press-release. Everybody else have to parrot it or else keep quiet. This leads to a situation where issues on Science matters are taken up by persons who are mostly ill-informed or probably who may be inspired by some other agencies to write certain type of articles.
3. Such a situation as a corollary leads to a peculiar Indian phenomenon where scientists who want to gain some popularity rush to the press, make all sorts of statements. Better persons among the scientists avoid talking to press or writing on issues. Thus we have a situation that only muck gets into the press and generally real issues are never discussed in public. We have some sensational news - some scoop - Then silence or defence by the Establishment. Of course, there are some prima donnas within the Establishment who also give to press their distorted versions.
4. The only recourse left, therefore, is to have these real issues discussed in forums organised by official channels, whether they are seminars, workshops or formal or informal meetings by Departments, Ministries etc. and these naturally have their inhibitions of goose dancing and things do not get focussed sharply. Almost everybody who attends such meetings is a departmental person with an official brief or no brief (in which you stall everything). My Secretary has told or Director

told or our view is that. Also the minutes or resolutions are highly compromised texts leading to practically **non-stand** on any issues. The syndrome is : "All of us will be safe and we will grow powerful empires. Let us not rock anything". This being so, the Indian science virtually depends upon Officialdom for its direction (or non-direction) and there is no question of academies or **free** scientists saying something. Thus the question of relevance or otherwise of science is virtually left to the wisdom of government institutions or government sponsored forums. (We know about internal freedom amongst these institutions). Such a state of affairs is not good either in terms of scientific enquiry or for the democratic institutions which can sustain and grow only on healthy feed back. Even Committees of Parliament do not fulfil their role since the MPs who question do not have any back up policy, research facility or expert information just as they have in USA. So in the final analyses if there is government, government, government everywhere and there is nobody to say something else, contrary to what government departments think - in a cogent manner.

WHY DO WE WANT A CHANGE AT ALL

5. One way is to drift along, not to do anything, talk in private parties or in some evening parties of like minded people, despair and leave it alone. It could become an excellent game in itself (as described by Eric Berne's book). However, if something has to be done there has to be certain free opinion expressed outside the governmental channels which by the very nature of things tend to become highly bureaucratized whether they are headed by the so called bureaucrats or technocrats. The compulsions for making it so are for too many and one need not discuss it here. There is nothing basically wrong if something is Government opinion alone, if only it had mechanisms of objective analysis. But official opinion no longer represents as integrated govt. policy - but a set of fragmented views of self-preserving high powered individuals, who do not want to think beyond their nose (or are not capable of) Not that nothing has been done in S&T but the results no where commensurate to the inputs.

6. The Indian Science & Technology (S&T) is under heavy pressure. Though funding for S&T in the country has reached one-percent of GNP level, whether S&T will at all be considered as a force and whether it will be supported would depend upon how Indian S&T can enhance the socio-economic needs of the country. Unfortunately, over a period since independence the Indian S&T has developed along channels which did not have the roots within the country nor with the masses (the people) as envisioned by the founding fathers though not very clearly. Therefore, Indian S&T system was chasing the state-of-art; we were chasing **good science. Excellent science, international standards etc. were the cliches** that were used. So we got tied to Stanford, Massachusetts etc. Value systems were such that an Indian scientist was judged by whether he was an FRS; NSF fellow etc but not whether one was a fellow of the Indian Academies or whether he has contributed to India. All these created distortions in the system. The very content of Indian Science & Technology itself got confused. What was basic research, was projected many times as things of great practical relevance etc. as the administrative and political circles do require results with short gestation periods. They, therefore, expected something very great to come out very soon. They have got disillusioned. Indian S&T, therefore, is in great trouble. What can academies do?

HOW TO GET OUT OF THIS MESS

7. The reason academies have not functioned effectively so far in the country is because they depend upon annual grants almost 100% from the Govt. as much as any Govt. funded institution or a Govt. department. This leads to a situation where the academies have to concentrate on developing patronage within the gov. departments and institutions. If one scans through the list of executives of academies, one will find most of the people in **power** in various institutions including the academic hierarchies. It is not really surprising because most of them have got into one governmental net or a governmental committee etc. So much so the difference between what is government and what is not government is very thin. The word quasi-government is perhaps unique to India where the quasi itself can be 99 percent.

8. One of the important things to be ensured is regarding the funds ; the academies should get separate funds which are self generating. This means government should give a large one-shot grant without placing unnecessary conditions ; then the academies can also raise funds from private individuals etc; create a trust in which the money is secured. Their deposits (short & long term) should be wisely done to earn sufficient running expenditure without affecting the basic capital.

9. The academies should concentrate not on finalising tours, international delegations etc. but on specific issues of national relevance. In other words they should behave as a sort of a conscience keeper in terms of Indian S&T and bring out forthrightly their views on issues. In order to do this it will be necessary to have a firm rule that those who are the officials in these academies should not hold any governmental position nor should they hold key positions in governmental committees or institutions etc. Of course, there is a danger that such bodies can become totally anti-establishment without having any inputs or idea about some of the compulsions under which certain decisions of government have to be taken, since after all practical life has many situations requiring compromises.

10. Finally, of course, such things always depend upon how well the human beings behave in the best interest of the collective. Just to say something **anti** is always easy without being constructive. It is good to follow some ground rules. There should also be a convention to have sufficient cycling of personnel of the executive position in the academies so that different and fresh ideas can come. The younger generation should be given more opportunity to articulate their views. This is very necessary because it appears that many of them are losing their capability of conceptually interconnecting, different elements in life, partly because of education system which has become totally streamlined - conveyor - belt - operation; a mass production memory machine. Also because the institutions they enter into now have been built up since independence and these institutions have become sufficiently bureaucratized that they are nothing but a cog in the wheel at the lower most levels. **If our younger generation does not know how to raise issues, and see things in totality, our future is in danger.**

11. In view of what is stated above it may perhaps be necessary for the academies (specially because of the peculiar Indian situation) not to be concentrating too much on electing fellows, or doing such routine official matters at least perhaps for next five years but to concentrate more on issues and create institutions which will think for India. This may even demand a situation wherein our academies go through a peculiar (short) anarchic phase in which they ignore the big executives, fellows etc. It will almost be something like opening up of the national freedom movement as it emanated in the early part of the century.

HOW WELL ONE CAN DO IT
(i.e. effect the change)

12. It is a big question. It can be done if there are sufficient number of committed individuals who could think beyond certain ritual and think of Indian science and technology and its relevance and making its roots into its masses. Otherwise, the danger is that the Science & Technology will also become one of those costly rituals which have been absorbed in the Indian social milieu. Where can we find a Mahatama Gandhi to lead such movement ? But a Mahatama raises out of thousands of selfless actions of many individuals who have some feeling for the people and a faith that **good** will prevail. The national S&t system requires such actions - albeit small. S&T is to be addressed not because it is a fashion nor because it is a profitable business for a few individuals but because it is one of the important & essential elements in the betterment of human life. Such a powerful tool should be released from its bondage of being at the **darbar courtesan** level. If a few good steps are taken, it is most likely that the political forces in the country will grasp the significance better than the S&T Community.