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GUEST EDITORIAL

Ageing of academic institutions

Ageing is a natural phenomenon, for example, of the human body wherein it is accelerated due to malnutrition, unclean 'environment', etc. In Radioactivity, 'ageing' is quantified by 'half-life' – the time by which an element 'decays' to half its initial 'value'. (The quotes here underscore that these adages are to be understood as metaphors.) Here I focus on the ageing of academic institutions of India – universities, institutes of science education and technology, and a slew of research organizations, aided and administered by the central government – of which I have first-hand knowledge.

Unlike radioactivity 'ageing' of institutions can be reversed by providing nutrition, i.e. enhanced funding and continual input of quality faculty. However, there are other factors at work that cause 'decay' of the original 'values'. We ask – what is the 'half-life' – is there a distinction between pre- and post-independence institutions, and with Western counterparts?

Long before we were subjugated, there was a real university in India: Nalanda (5th–12th century AD) – one of the oldest in the world. It was based on truly indigenous values and philosophy, derived from Buddhism, and was an active meeting place of scholars from far and wide.

After the English established their roots in 1757 it took them a century to found three universities – in Bombay, Calcutta and Madras (1857). Although these were real universities the emphasis was on the creation of 'Babus' who, by virtue of English education, would help run the administration – an offshoot of Macaulay-ism: systematic obliteration of traditional vocational education and sciences.

The British, however, must be credited for promoting a liberal academic environment through Asiatic Society, the Indian Museum, Surveys, etc. They encouraged progressive thinkers like William Jones, William Carey..., who in turn, helped nucleate the reform movements of Rammohan Roy, H. L. V. Derozio, Ishwarchandra Vidya-sagar and others.

Almost six decades after 1857 a truly 'Indian' university, Banaras Hindu University (BHU), was established by Madan Mohan Malaviya at Varanasi, 1916. Five years later, another 'Indian' university, Visva-Bharati (VB), grew out of a 'Brahmacharya Ashram', conceived by Rabindranath Tagore in Santiniketan ~160 km away from

Calcutta. Both BHU and VB were founded on Indian ethos, derived from Vedantic, Upanishadic and Buddhist 'values' that embed education within Nature.

There are, however, two important differences between BHU and VB. First, the word 'Hindu' – just as 'Muslim', in the case of another Indian university: Aligarh Muslim University, upgraded (in 1920) from a college founded by Syed Ahmad Khan, 'The Prophet of Education', as christened by Mahatma Gandhi – can lead to confusion, though there is apparently no religious connotation. VB, on the other hand, relates to 'Visva' or the universe – hence, university – envisaged to be a nest in which the West meets the East. Second, BHU consisted of departments, in separate buildings spread over a vast and beautiful campus, whereas VB was built on ideas and ideals in a rural setting with no demarcating boundaries. The motto was to experiment with an educational model, deeply rooted in Nature, with seamless admixture of music, fine arts, eastern philosophy and community-bonding.

The original ideas were eroded when VB was brought under the first Central University Act 1951, as apprehended by the learned parliamentarians (Kumar, R. (ed.), *Selected Works of Abul Kalam Azad, Vol. V*, Atlantic, Delhi, 1992). Today, VB has to grapple with imposed semester-system, 'contact class hours', NET-requirement for faculty and other mechanical criteria.

It is pertinent here to recall what Tagore wrote (in *Creative Unity*, Kindle edition, 2011): 'Once upon a time we were in possession of such a thing as our own mind in India. It was living. It thought, it felt, it expressed itself. The wholesale acceptance of modern, western education has suppressed this mind. It has been treated like a wooden library shelf to be loaded with volumes of second-hand information; in consequence, it has lost its own colour and character, and has borrowed polish from the carpenter's shop we have bought our spectacles at the expense of our eyesight.'

Ironically, the very notion of moving away from the colonial capital has resulted in provincialism and inbreeding which, like incest, furthers ageing. The custodians of the university are totally oblivious to what Tagore wrote to C. F. Andrews, in 1920: 'Keep Santiniketan away from politics – we must never forget that our

mission is not political – where I have my politics, I do not belong to Santiniketan.’

In contrast, BHU had been pan-Indian from the outset. That cosmopolitanism led to enriched departments of studies. Some Vice-Chancellors rose to important positions – of the Vice-President and President of the Republic and Education Ministers. Over the last 40 years or so, however, BHU has largely lost its all-India character. The earlier quote of Tagore is equally applicable to BHU. It is here that the comparison with ageing human body is apt. The body is deeply connected with the mind which needs to be free, unshackled and happy. Politics, however, pollutes the air that the institutions breathe.

I now turn to two other prominent universities that I have served: Jawaharlal Nehru University (JNU) and the University of Hyderabad (UoH). JNU started (1969) as a progressive, all-India University with stress on interdisciplinary teaching and research, and a socially active student body. Within 50 years, however, the university has been in turmoil that has provoked high-handed measures. The resultant schism among students, faculty and administration has taken the sheen off what was earlier a forum for open discourses – a hallmark of a good university.

The story of UoH is similar. In the beginning (1974) the faculty comprised professors from different states – they were top-class teachers and researchers. Subsequently, however, there was a discernible regional slide. One other issue needs to be mentioned about JNU and UoH – neither had an undergraduate curriculum which is a key attribute of a University.

One reason for the ‘decay’ of the universities has been the creation of a plethora of research institutes after independence. In one swoop, research was decoupled from teaching, thus depriving the universities of talented faculty which migrated to greener pastures. The establishment of the IITs in the fifties did help the cause of scientific research, albeit in isolated departments.

The institutes are like subsystems in thermodynamics, isolated from ‘noise’, ‘disorder’, ‘entropy’ ... of the environment, with the hope of nurturing excellence. What was forgotten however was the student body – an essential component for propelling research! Students would, of course, come from universities which paradoxically are strongly coupled to the societal environment. I say ‘paradoxically’, because the coupling with the environment is essential in thermodynamics to bring the subsystem to equilibrium. The corrective measure adopted to mitigate the situation is equally ad hoc, viz. to grant these institutes the status of ‘deemed university’. The net result of the separation of universities and institutes has led to a visible ‘decay’ of the research institutes, the ‘half-life’ of which does not appear to be much longer.

Let me focus next on a recent (2006) initiative in creating a set of ‘science universities’ in the form of Indian Institutes of Science Education and Research (IISER). I have inserted quotes here to stress that a real university

has to have all areas under one roof. The IISERs implemented the noble cause of integrating undergraduate teaching with research, in which the partition between various disciplines was removed. The upward progress of IISERs in the first decade of their existence was recently reviewed (*Current Science*, 25 March 2019). The IISERs are still in their nascent stage for a meaningful analysis of their half-life, though it would be good to keep in mind the experience of the university system.

I now move to analyse the ageing of European institutions. Because we emulated the British it is pertinent to focus on the Universities of Oxford (1096) and Cambridge (1231). It may be emphasized that these universities (and their European and North American counterparts) have undergraduates in all subjects as well as research under the same umbrella. Yet, Oxford and Cambridge, like Bologna (1088), Sorbonne (1257) and Heidelberg (1386), have yielded innumerable Nobel laureates and Fields medallists. The half-life of these universities seems unbounded!

What, in my view, then distinguishes these Western and Indian institutions? Apart from integrating undergraduates and postgraduates with teaching and research – with full autonomy – none of the Western universities bears the legacy of monumental personalities intertwined with their inception. Does it mean we attach more importance to larger-than-life cult figures than institutions?

Summing up, the time has come to wake up to the alarming decline of the half-life of our institutions. One institution which consistently ranks the highest is the Indian Institute of Science (IISc) in Bengaluru. Interestingly, IISc has the least of governmental control, yet is generously funded, and has recently risen to such a height in faculty quality that it does not quite matter what the administrative structure is. The point is: ‘decay’ – such as in radioactivity – is an inevitable Law of Nature but, surely, we can strive to slow down the process. Should we also not try to resurrect our university system based on our own values? It is in universities that ‘diffusion’ across disciplines and imaginative transfer of knowledge from one generation to the next takes place. Indeed, the universities are ‘Where the mind is without fear and the head is held high, where knowledge is free.... where words come out from the depth of truth... where the clear stream of reason has not lost its way into the dreary desert sand of dead habit....’ (Tagore, in *Gitanjali*, Macmillan 1912). After all, J. C. Bose, C. V. Raman, S. N. Bose, M. N. Saha, K. S. Krishnan,, most of whom (apart from Raman) have narrowly missed the Nobel Prize – all belonged to universities (ironically, in the colonial regime).

Sushanta Dattagupta

Uniworld City, ‘Heights’ 6,
No. 002, New Town,
Kolkata 700 160, India
e-mail: sushantad@gmail.com