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EDITORIAL

Universities: Restructuring and Reform

January is the month for conferences and overseas visitors. The weather over India is at its best, attracting both tourists and others on more serious business. The annual Science Congress is the most visible event, with its centrepiece being the inaugural session, where the Prime Minister publicly articulates new programmes and policies, related to science and scientists. This year the Congress was held in the coastal town of Vishakapatnam, on Andhra University's large and magnificently located campus. Having spent some of the best years of my youth, in what was once a small provincial town, I returned to Vishakapatnam, hoping to revive memories of my long forgotten period of adolescence. In keeping with the times, the city had transformed beyond recognition, but the campus of the University seemed still recognizable; magnificent stone buildings, atop a hill overlooking the Bay of Bengal.

In the brief period that I was there, I could sense that much had changed. The University had probably seen better times. Even as the city around it had evolved under the selective pressures of a liberalized economy, the intellectual environment of the University had probably declined; the institution I had in my mind's eye once boasted of some of the best departments in the country, spanning a wide range of disciplines. On my way back, I was consoled, somewhat ironically, by the thought that this process of academic decline was not specific to an institution, which I had once admired from afar, but a phenomenon that appears to have permeated the entire University system in India. The decline of intellectual discourse, the absence of a vibrant academic culture and difficulties of attracting the best of faculty and students in our Universities have of course been the subject of much discussion. Can anything more be said? Even more importantly, 'Can anything be done?'

Returning to Bangalore in a pensive mood, I was confronted with the task of speaking at a course on 'An Integrated Approach to Knowledge and Information' intended for university and college teachers. The organizers were clear in their instructions. I was asked to speak on 'Restructuring Indian Universities: Renewed Focus on Research' or 'Reforming Indian Universities: Triad of Universities, Research Institutes and Industries'. As a pliant

and submissive invitee, I worked hard to put together a presentation, which would, in some measure, address the concerns of the course organizers. Two words in the suggested titles made a deep impression on me, *restructuring* and *reform*. They immediately brought to mind the two words in Russian that were immortalized by Mikhail Gorbachev in the mid-1980s; *perestroika* and *glasnost*. The former is translated as *restructuring*, while the latter means *transparency* or *openness*. The events that followed in the Soviet Union and Eastern Europe, largely as a consequence of the effects of *perestroika* and *glasnost*, are now part of history. A new order appears to have evolved out of the turmoil. Restructuring, especially when accompanied by a desire to be transparent, can be a powerful weapon of change. Is India's university system now at the cross-roads? Is this the opportune moment for a major intervention by governments, state and central, and academic bodies, which might catalyse a transformation?

In thinking about universities, assistance appeared from an unexpected quarter. January brought to India and Bangalore a distinguished academician and administrator, Alison Richard, the Vice-Chancellor of the University of Cambridge; an institution with an unmatched history and tradition as a centre of scholarship. Over a period of almost eight hundred years, Cambridge has grown to be a model for universities worldwide. Two books, both published by Cambridge University Press, provide a glimpse of the institution's influence in shaping the modern world; *Cambridge Minds* (ed. Mason, R., 1994) and *Cambridge Scientific Minds* (eds Harman, P. and Mitton, S., 2002). The trail of Cambridge's contribution to modern science begins with William Gilbert (1544–1603) who discovered the Earth's magnetism. It ends in the present with Stephen Hawking. Along the way are many iconic figures: Isaac Newton, Charles Darwin, Charles Babbage, James Maxwell, Paul Dirac and Alan Turing. Some are paired with others or their laboratories: Stokes and Kelvin, Thomson, Rutherford and the Cavendish, Hopkins and biochemistry, Sherrington, Adrian, Dale and the Physiology Laboratory, Russell and Whitehead, Hardy and Littlewood, Crick and Watson. The list is remarkable also for its omissions, Francis Bacon and Henry Cavendish, among others. I have not touched upon the humani-

ties, social sciences or disciplines that border science; *Cambridge Minds* provides some profiles including John Maynard Keynes and Ludwig Wittgenstein. But, Cambridge today is indeed challenged by the large American universities in a manner that could hardly have been anticipated at the beginning of the 20th century, when the scientific revolution was well and truly launched from England and Germany.

Thus, the Cambridge Vice-Chancellor seemed to be uniquely positioned to answer the question, 'What makes a world class university?' (Alison Richard, *The Economic Times*, 7 January 2008). Having often been challenged to make the Indian Institute of Science truly world class, I was encouraged by her somewhat cautious start: 'Many people talk about "world class" universities, but what the term means is often left hovering in the air, undefined'. She goes on to identify four factors that are critical in reaching 'world class'. First, there must be 'a commitment to breadth and excellence in all fields of human inquiry, not simply in a particular niche'. Her second point is one that may not find wide approval in our research institutions: 'World class universities engage in cutting edge research whilst at the same time teaching the next generation, their students. Teaching and research are intrinsically bound together, with top researchers inspiring and mentoring their students. In turn, students themselves inspire and challenge their teachers'. Her third point is one that will leave both faculty and administrators, in our midst, bemused: 'Great universities must allow their researchers the freedom to experiment, succeed and sometimes fail. They must be able to make grand mistakes as well as grand discoveries'. Her last point is a recognition of the rapidly changing face of science: 'World class universities must have permeable boundaries. This means encouraging interdisciplinary research and teaching; it means working with the private sector for example, fostering and encouraging partnerships with industry; and it means encouraging international collaboration'. While Richard has reiterated much of what is recognized as the mandate of a modern university, her conclusions are important: '... universities must never forget that they are very much embedded in their countries and their regions... We are all very much part of where we live and, as we look to the future, managing the balance between the international and the local is one of the main challenges universities confront'.

In thinking about Universities my attention was drawn to a somewhat unusual source, the Silver Jubilee Volume of the *Journal of the Annamalai University*, February 1955. Here, in an essay entitled 'The New Idea of a University', M. Ruthnaswamy discusses the transformation of Cardinal Newman's original mandate of a university, '...diffusion of knowledge and extension of knowledge rather than the advancement', into the modern research driven institution. In India, for a brief period before the

growth of the specialized research institutions, universities did indeed fulfil, in large measure, this dual duty of both research and teaching. Sadly, the emphasis on research has diminished over the years in the universities. The fragmentation of these centres of learning into specialized technical universities has hastened the decay. In many states there are medical, engineering and law universities (agriculture's separation seems to have happened even at the start) leaving the original university to function with only the sciences and humanities as areas of study. The separation of undergraduate and postgraduate teaching is almost complete, the former largely the province of affiliated colleges. Autonomy of colleges with postgraduate courses, but little or no research activity, ensures a complete separation of teaching and research. The institutions that are intended as research centres do little or no teaching, contributing in negligible fashion to either undergraduate or graduate education. The rise of the 'directed universities' intended to produce students trained to fulfil a special need is a new phenomenon. The strategic sectors of space, defence research and atomic energy have all turned into educators, creating a new definition of the term 'university'. Ruthnaswamy's 1955 essay anticipates the problem: 'A University teaching one special subject is a contradiction in terms. It is opposed to the basic idea of a university which is a corporation of teachers and students engaged in a variety of studies. Corporate social life and a liberal education are its differentia'.

The importance of higher education has been recognized by the impressive allocation of resources projected in the 11th Five Year Plan. The promises of a dramatic increase in the number of new universities must, of course, be viewed in the context of the quagmire in which our present university system finds itself. The National Knowledge Commission's Report (2007) is candid: 'We recognize that a meaningful reform of the higher education system with a long-term perspective is both complex and difficult. Yet it is imperative'. The report offers suggestions, but implementation of any agenda for reform has never been easy. Indeed, if reform and restructuring must happen, the movement for change must come from within the universities. The faculty and administrators at our universities must be active participants in defining the reform process. We must also reassess the policy of starting small and specialized institutions, which by a regulatory sleight of hand, transform themselves into deemed universities. In the modern world, universities are key elements in driving economic development and in facing the challenges of global competition. Restructuring and reform of our existing system must accompany the process of expansion.

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