

Appointment of VCs

In his letter on the topic (*Curr. Sci.*, 2001, **81**, 628–629) H. S. Virk points out approvingly, the five terms that Asutosh Mukherjee had as Vice-chancellor. Yet the very first point by Virk eliminates such a possibility. While *maximum* caution should be applied in giving extensions, this

option should not be closed. If it is in the interest of the institution, *all* objections for extension should be overruled. Leading universities select and retain outstanding leaders for as long as they can. For example, Princeton had outstanding Presidents during the last hundred

years, but only a total of six of them.

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Science and human culture

P. Balam has again produced a splendid editorial (*Curr. Sci.*, 2001, **80**, 1361–1362), this time on the general topic of science and society, using C. P. Snow's *The Two Cultures*, as his foil. At the end, Balam takes but one small step in the right direction by suggesting that instead of two, we might have three cultures.

Not long before he died, I had the privilege of hosting Lord Snow in our laboratory in a wide-ranging conversation basically on science and culture. At one point Snow said (my paraphrase) 'Although I am not a religious man, the evidence is in that the power of religion (= ideology = strong cultural forces) to move humans to action, is vastly greater than the influence of science.' He cited, Maoist China as a prime example! 11 September 2001 is another example.

In the protodiscipline of S–T–S, which several of us, mainly scientists and engineers helped establish in many major university campuses, the issue Balam addresses – what is the place of science in human culture, has been thoroughly discussed by academics for the last 30 years. The gurus of the field include Jacques Ellul, Thomas Kuhn, Robert K. Merton, G. Bugliarello, Jean Jacques Salomon, etc. Few research scientists appear to have enough breadth of learning or vision to be engaged at the heart of the matter, where it matters to the public. Michael Polanyi and Leo Szilard would have been science's champions, but were too early. Today John Ziman, Carl Djerassi, Roald Hoffman have each made contributions but in different, narrower

segments of the discussion. To put it succinctly in the Snow–Balam terminology, a minute's reflection will show that it is neither 2 nor 3 cultures, but n cultures (where n is a smallish integer). Indeed I presented this argument that the relationship of the scientific *Weltanschauung* to culture can never be other than as one part is to the whole, in my Hibbert Lectures in London in 1979 (published as *Experimenting with Truth*, Pergamon, 1981). Balam quotes William James – who gave the Hibbert Lecture 70 years before mine. In my more than thirty years *active* involvement in science's interaction with policy, philosophy, sociology and religion my empirical data confirm rather fully James' view (excluding the pejorative phrases): 'Of all the insufficient authorities as to the total nature (i.e. whole) of reality, give me the scientists . . . I know of no narrower sect or club, in spite of their excellent authority in the line of fact they have explored, and their splendid achievements there.' The empirical data of the 20th century prove James to be right.

Two illustrations from the very same day's mail that brought *Current Science*, *Nature* (2001, **413**, 461) brought Philip Morrison's review of a new book on Galileo 'Concerning the two chief world systems' (preceding Snow by centuries) in which he first explained Galilean relativity. The subtitle of the pages is 'Physics is crowded with evocative phrases' (*I would add and very powerful equations*) but those alone cannot show the *whole* picture! The second connection is to the

ongoing controversy in *Current Science* about the teaching of astrology. That is India's parallel to the U.S. issue of Creationism. S. C. Tiwari (*Curr. Sci.*, 2001, **80**, 1365) argues the case that much of what passes for orthodox science – Big Bang cosmology (also chided by Morrison) and standard models, etc. – are in fact experimentally untestable speculations. Teaching a single course on Vedic astrology can do zero damage to the public's knowledge of science, which is hardly robust. I give you the facts recorded in elaborate TV-recorded research on *graduates* of Harvard and MIT, where over 90% believed that we have winter and summer because of the earth's changing distance from the sun. And not one could explain that the mass of a tree trunk was derived from $\text{CO}_2 + \text{H}_2\text{O} + \text{photosynthesis}$ (Pyramid Video, 1-55 981-515-9). A little astrology can hardly make a dent! And there is little doubt that Chinese Qi-Gong and Indian Ayurveda will make a major contribution to the emerging dominant Whole Person Healing paradigm, which is replacing (in the West) reductionist 'Scientific Medicine'! Surely scientists should be in the forefront of championing a free market place of ideas (even astrology!)

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