tight control on ethical codes as practised in the Western scientific community is maintained largely by open debates without even sparing the names, however eminent one may be. I refer readers to just one recent instance devoted to the creationist–evolutionist debate[4] in which Richard Dawkin and Stephan J. Gould among others were involved. Dawkin[5] opens his comment with the following:

'A cowardly flabbiness of intellect afflicts otherwise rational people confronted with long-established religions (though, significantly not in the face of younger traditions such as Scientology or the Moonies). S. J. Gould (1997) communicating in his *Natural History* column on the Pope's attitude to evolution, is representative of a dominant strain of conciliatory thought, among believers and nonbelievers alike . . . '.

Surely, Vidyasagar and Karandikar would label it as 'personal squabble' between Gould and Dawkin. Tiwari may suspect it being 'solely at the editor's initiative' which could even be true. But can they deny its influence on the behaviour of scientists, young and old, going astray?

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3. Polany, M., in *Science Faith and Society*, The University of Chicago, 1964, pp. 63–94.
4. The Pope's message on evolution and four commentaries, *Q. Rev. Biol.*, 1997, **72**, 377–399.
5. Dawkin, R., *ibid*, 397–399.

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What is genius?

Ramaseshan's article on Fritz Haber is well written, informative and thought-provoking (Ramaseshan, S., *Curr. Sci.*, 1999, **77**, 1110–1112). Clearly, scientific talent and morals are entirely unrelated issues. However, I do find the last statement 'any number of talented chemists could, and no doubt would, have done the same work before very long' a little jarring. It brings to mind Colin MacLeod's statement about the discovery of the structure of DNA. He wrote, in a note to Maclyn McCarty, 'Some day perhaps you will enlighten me about the earth-shaking significance of the double helix, etc. If it hadn't been worked out on a Tuesday, it would have happened in some other laboratory on Wednesday or Thursday' (Friedman, M. and Friedland, G. W., *Medicine's 10 Greatest Discoveries*, Universities Press, Hyderabad, 1999, pp. 200–201).

It is ironical that the above statements question the genius of what are among the greatest scientific advances of the century. Is it fair to do so? The fact remains that numerous scientists had the same opportunities – but it was Haber (and Crick and Watson) who beat the others to the finishing line. Most endeavours in science – and other activities – do require a slice of luck and timing, in addition to talent and dedication. No one, for instance, would make a statement to the effect that if Roger Bannister had not run the first sub-four minute mile, someone else would have! In the same vein, we can be quite certain that if Vesalius had not dissected the human body and corrected Galen's mistakes and if William Harvey had not been the first to introduce the principle of experimental method in science, *someone else would have soon done it!*

Indeed, Haber's discovery of ammonia synthesis process provides adequate proof for the statements 'Genius is 99% perspiration and 1% inspiration', and 'Necessity is the mother of invention'. I suggest that genius lies in being the first to recognize or discover something 'simple' that could have been discovered by many more people – but was not!

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Measurement of copper and mercury

The article 'Total dissolvable copper and mercury . . . off Kalpakkam, Bay of Bengal', by K. Selvaraj (*Curr. Sci.*, 1999, **77**, 494–497) shocked me. I find the article to be erroneous on many counts. The concentrations of the two metals reported in coastal waters of the Bay of Bengal were extremely high. The occurrence of such levels, if at all, would render the whole area 'lifeless' and can create an environmental catastrophe, similar to Minamata tragedy. The Minamata Bay in Japan, had witnessed severe mercury poisoning of fish, which led to deaths and crippling of several humans who consumed them.

Serious errors in measurements of these two metals might have occurred due to the following:

1. For measurements, the method of Mentasti *et al.* (1989) was used, which advocates different pre-concentration methods: The author has used APDC/

sequent dilution in water column. Thus, the clear seasonal differences in Hg concentration suggest that the concentration of Hg is diluted in the water column slowly. The interpretation made by me is not a convenient one and it is purely based on available literature. For comparison of my results, available references are cited in my communication and all the references carry Hg concentrations lower than what I have obtained in my study. In addition to waste heat, power plants also release chlorine, trace metals, fly ash and also low level radioactive wastes into the aquatic environment[11]. According to Nair[11], trace metals like Fe, Cr, Cu and Zn are also high in cooling water effluents because they are used in water treatment programmes and are also products of corrosion of condenser tubes. Moreover, residual chlorine is an important constituent of power plant effluents where chlorine is used as a biocide to control macrofouling. Patel *et al.*[12] had reported trace metal toxicity in power plant effluents. According to Krishnamoorthy *et al.*[13], concentrations of Cr, Cu, Mn and Hg in fish were found to be higher in Thane Creek waters, an area incorporated with power plants, due to liquid effluent discharge than those from Bombay harbour bay.

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Occurrence of Golden Mystery Snail *Pomacea bridgesi* (Gastropoda: Ampullaridae) in West Bengal, India

The ampullarid snails *Pomacea bridgesi* (Reeve) are natives of Peru, Bolivia, Brazil and Paraguay[1,2]. They were introduced into Florida[3] and Hawaii[2] for aquaculture purposes. It is stated that, the population of *P. bridgesi* consisting entirely of yellow-shelled individuals, a variety is said to have been generated originally in Florida in the aquarium trade[2]. Such yellow-shelled individuals were subsequently taken to many parts of the world. These snails are called 'Golden Mystery Snails' in Hawaii because of their yellow shell-colouration.

In November 1992, five pairs of adult live specimens of the above variety of *P. bridgesi* were received by an aquarium trader in Calcutta from Thailand along with aquarium fishes. He reared these snails in pond water in small tanks as per supplier's instructions. These snails started depositing egg clutches by February 1993. The eggs hatched within 7–10 days. The hatchlings were also reared in the same tank. He started selling these snails when they were three months old. Some of them were given to his business partners with a view to developing rearing centres at different places in West Bengal. Accordingly, during the last five years several rearing centres have been developed in different districts of West Bengal.

In March 1998 we received some four-month old *P. bridgesi* individuals from the Icchapur rearing centre for culturing them in our laboratory. We reared them in small glass and/or plastic containers containing pond water. They were fed with lettuce. We placed a brick of height 24 cm at the centre of the container in such a fashion that 14 cm of the brick was exposed to air. The snails thrived well in all the culture containers and from May 1999 started depositing egg clutches on the airy part of the brick, 5–8 cm above the water level. Hatching as well as growth of the hatchlings were satisfactory. At present (on 21 September 1999) we have more than 200 *P. bridgesi* individuals belonging to different age groups in our laboratory. We are presently studying the bioecology of *P. bridgesi* in our laboratory and the results would be communicated in due course.

P. bridgesi can be seen in many aquaria in West Bengal, especially in Calcutta where a pair of four-month old *P. bridgesi* costs Rs 20. Our surveys around the culture centres failed to locate these snails in the wild. Occurrence of a large number of individuals in small tanks in flower gardens or in fountain-