

Indian Science

I read with interest the letter from G. Padmanaban about "The Indian psyche" (10 July, [p. 175](#)). I fail to understand the correlation between general euphoria among Indians over recent nuclear tests and a feeling of Western alienation and bias among Indian scientists. The general public in India has little or no idea how the Western press depicts India. Hence, one cannot attribute the euphoria over nuclear explosions to Western alienation. Various points and personal experiences mentioned by Padmanaban are not specific to India or to any Indian scientist. They are common for anyone from a developing country.

The feeling of alienation and the sense of purposelessness among Indian scientists and academics have their historical roots in the policies pursued by post-independence India. After taking over the baton from the British, instead of revamping the educational system to meet India's societal needs, successive governments made few changes in the colonial legacy, mainly for political reasons. Under the British, a system was developed to produce lower-level Indian bureaucrats and technicians who would administer British rule and pursue British economic interests. Average Indians believed that an English education was the only passport to a successful job. Eventually, there was a "brain drain," with a mass movement of scientists and professionals to the West. With few exceptions, the kind of research undertaken by leading Indian universities and institutes today has nothing to do with the immediate societal, economic, or scientific needs of India. With meager funding and bureaucratic controls, it is definitely not easy for Indian scientists to compete with their Western counterparts. Against this backdrop, an average Indian scientist can neither relate what he is doing to the immediate needs of his society, nor can he show his Western peers that he can do what they are doing in the West. India is fighting a relentless battle to eliminate social inequalities. The progress is quite impressive among illiterates, the semiliterate, and the middle-class public that span every sphere of Indian society. But there is something terribly wrong with a system that alienates a truly spirited Indian scientist both from the West and from his own society. True democratization and accountability to both government and society are needed.

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Response

I have so far received about 250 e-mails, mostly from Indians in the United States, to my [letter](#) of 10 July. I would like to respond in a broad sense. Nearly 95% of the messages agree with my analysis and state that India's image in the West is in general unfairly negative and that there is a feeling of alienation and discrimination even among scientists and professionals settled in the United States. About half a dozen letters from Indians in United States are critical of my analysis and state that it shows a defeatist mentality.

I was at the University of Chicago between 1973 and 1986 as a visiting scientist, and my visits are still continuing, so I can claim to have some understanding of the United States and Western society. In my letter, I was trying to emphasize that despite all its problems and defects, India has a certain resilience and inner spirit to make progress. Indian science, notwithstanding the existence of several substandard

institutions, has started focusing on indigenous needs and the alleviation of human suffering. India has launched indigenous commercial recombinant hepatitis B vaccine production. An indigenous AIDS diagnosis kit is available, and three more are in the pipeline. A leprosy vaccine has been released for commercial use. A recombinant cholera vaccine is on the way. The Indo-U.S. Vaccine Action Program has led to a candidate rotavirus vaccine. India is a world leader in plant breeding and a major exporter of bulk drugs.

Does not India deserve a better representation in the West, supporting its struggle for progress?

A few American nationals expressed warm feelings for India and Indians and stated that on the basis of press reports that reflect vested interests and the bureaucratic dealings of Indians with the West, I should not conclude that Western society has a poor image of India. I respect and appreciate these sentiments and wish they were the reality. Most of these individuals cannot reconcile themselves with the nuclear tests.

I believe that the purpose of the nuclear tests is to remind the world that India is not a pushover. At times, force is the only language that is taken note of. But most intellectuals in India would like to put the tests behind them, and the general feeling (to the extent I can gauge) is that India cannot afford an arms race or nuclear stockpiling and that it should get on with its other priorities.

My letter does seem to have touched a sensitive chord among intellectuals concerned about India. Can this be put to a positive use? May I suggest an international conference in India with nonresident and resident Indians as well as other intellectuals who have a concern for India to set an agenda for the 21st century?

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