Disposal of old, ailing and outdated scientific instruments

At the end of my postdoctoral stint in the University of California, Los Angeles in late 1969, I decided to return to India to pursue geochronological studies in the Indian context. A mass spectrometer for isotopic analysis of select elements is crucial to this work. Import of a commercial, state-of-the-art mass spectrometer was ruled out then, as its cost far exceeded the foreign exchange spending limits of even affluent laboratories. So I requested my professor (highly respected in his profession) if he could help get me an old/unused mass spectrometer lying with any of his professional colleagues in USA. He could trace an old, homemade mass spectrometer kept in a dismantled condition and persuaded its former user to donate it to me. The Indian professor (also eminent) who recruited me in his scientific group reimbursed me the cost of packing and shipping the machine, and provided the funds needed to buy the small missing parts. I could initiate modern geochronological research in India in 1971 by managing to resuscitate this machine. This experience gave me the necessary confidence to design and fabricate better mass spectrometers later in India. I know at least two famous but old mass spectrometers built and used effectively by eminent scientists in USA, which were made available after their retirement free of cost to anybody anywhere, who is willing to pay for packing and shipment.

Many Indian laboratories now should have a large number and variety of analytical instruments discarded as clinically dead, terminally ill, chronically ailing, outdated for cutting-edge research or simply deserted by their original masters. The usual fate of these machines is to be written off by a formal committee, and eventually sold with similar other instruments for their scrap metal value. Lowest-end such apparatus include vacuum pumps, vacuum gauges, microscopes, balances, ovens, centrifuges and high-end, application-specific instruments include spectrometers of all kinds like X-ray fluorescence spectrophotometers, atomic absorption spectrophotometers, scanning electron microscopes and even electron probe micro analysers. I would like to suggest that the details of such instruments be made available to university departments and colleges in the vicinity, and of high-end instruments be published in the back pages of widely read journals like Current Science for national coverage. Many of these so-called preused gadgets can be refurbished with a minor investment for at least demonstration and hands-on experience to postgraduate students in university and college departments. I know of one formerly affluent US laboratory which used to buy state-of-the-art machines, but is now refurbishing their old work horses with the help of engineers retired from the firms that manufactured them in the first place. C. V. Raman is reported to have said in great exasperation that Indian laboratories are the graveyards of imported equipment. I wonder what he would say if he were alive now. I do believe that many instruments can be refurbished for instructive applications by or at least training of postgraduate students in various sciences. Even instruments clinically dead and buried under a thick layer of dust can be exhumed and displayed as museum specimens to show the anatomy of scientific tools.

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S&T news coverage

I have read with interest the results of the analysis on ‘S&T coverage in English-language Indian dailies’, by B. Dutt and K. C. Garg. They have rightly observed that ‘S&T coverage is not the priority of English-language Indian newspapers. Even celebration of science, like the Shanti Swarup Bhatnagar Prize distribution ceremony, is absent from science news.’ The coverage of the annual Indian Science Congress sessions is also inadequate. Only the Presidential speech of the Prime Minister is briefly reported. The Press Trust of India does very little to disseminate S&T news.

However, I feel that the English-language newspapers have a limited readership. The Indian-language newspapers are the most important media for disseminating S&T news. It is difficult to make any assessment of the S&T news coverage by Indian-language newspapers. If we want to create a scientific temper in our country, the Indian-language newspapers must give due importance to S&T news. Apart from publishing daily reports in the paper, they could devote one exclusive weekly page, not only devoted to S&T news, but also popular articles on issues relevant to the rural population, such as child nutrition, potable water, prevention of malaria, environmental pollution, agriculture, fishery, etc. Several Doordarshan regional language channels are doing a commendable job by telecasting programmes useful for agriculturalists and fishermen. I subscribe to a Bengali monthly titled Jnan Bichitra, published from Agartala, which publishes only popular science articles. There is also another Bengali monthly, Prayas, which carries stories of scientific inventions in simple language.


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