

# CURRENT SCIENCE

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## EDITORIAL

### Journals

This is an exciting and testing time for traditional journals. On the one hand there has been a remarkable increase in the number of new journals advertised by commercial publishers; on the other there has been the mounting pressure to go electronic, exploiting the new and powerful technologies of the information age. A few years ago the possibilities of electronically submitting a manuscript, which is then transmitted with almost no delay to referees and the wonderful feature of reading accepted papers that are yet to appear in print, were almost unheard of. Open archives of peer-reviewed, 'postprints', together with citation linking promise to revolutionize the manner in which scientists will navigate through the increasingly dense maze of scholarly literature (Harnad, S. and Carr, L., *Curr. Sci.*, 2000, **79**, 629). The preprint archive or the 'bulletin board', where authors 'electronically post' unpublished papers was restricted to the limited domain of particle physics, which indeed seeded the birth of the Internet. Today, preprint archives are being considered in many fields of science, in a move that is likely to redefine the role of reviewers and editors, as gatekeepers in the dissemination of scientific research results. Commercial publishing conglomerates have also grown larger, with a single company sometimes controlling many major journals in specific fields of science. In some areas, journal prices have spiralled out of control, forcing libraries to cut back on their holdings. The professional societies, particularly in the United States, produce many of the flagship journals of science, which have maintained their pre-eminent position over the last century. However, the ongoing electronic revolution has forced major changes even at venerable journals like the *Proceedings of the National Academy of Sciences, USA (PNAS)*, *Journal of the American Chemical Society*, *Journal of Biological Chemistry* and *Physical Review*. In biology, more than in any other field with the possible exception of computer science, the explosion of research has led to a dramatic increase in the number of journals. There was a time when the *Annual*

*Reviews* were the main source of scholarly overviews of important areas of biology. In the last few years, these simply produced (and affordable) volumes have been severely challenged by the appearance of many attractively formatted and colourfully illustrated review journals.

The *Trends and Current Opinion* series have begun to set new standards in providing quick overviews of rapidly changing research areas. *Nature* now has many offspring as the stable under the magazine's umbrella continues to grow; the most recent being a review journal. Printed journals have undergone a remarkable (and agreeable) transformation, with colourful covers and colour illustrations no longer being the sole prerogative of a few chosen journals. The constraints of limited library budgets and space, dictates that the competition for subscriptions, particularly print versions, is becoming brutal; the world of publishing follows decidedly Darwinian principles. In Europe, the coming together of professional societies of different countries, to publish common journals in physics, chemistry and biology (in English, of course), is indeed an historical transition. It is clear that integration of the European society journals offers an effective strategy for countering competition.

At this time of transition in the world of scientific publishing, the scene in India is surprisingly placid. There are occasional seminars and discussions, where the status of Indian scientific journals is considered and the importance of disseminating scientific information is emphasized. In these meetings, which are far removed from the realities of publishing in India, a few suggestions are casually dropped for improving both the content and accessibility of our journals. An oft-noted point is that less than a dozen Indian journals are listed in the portfolio of the Science Citation Index, presently the most widely used 'objective tool' for tracking science. The vast majority of the other journals remain invisible, contributing substantially to the 'Lost Science of the Third World'. The impact of even the 'top ten' Indian journals (*Current Science* included) is decidedly low;

ironically their 'impact' even in Indian scientific circles is modest. Why, then, are so many journals published? Why do journals in a discipline get subdivided into multiple sections, when it is difficult to even sustain journals with a broader scope? For example, in chemistry, a discipline in which India has had a reasonable presence, we have two sections of the *Indian Journal of Chemistry*, the *Journal of the Indian Chemical Society* and the *Proceedings of the Indian Academy of Sciences (Chemical Sciences)*. The profusion of academies and societies has also led to a multiplication of journals, many of which remain unseen and unread. How do journals survive if there are few readers and even fewer subscribers? Like many other activities in India, their existence, if not their regular appearance, is guaranteed by a government grant. At almost any forum where Indian journals are discussed, there is a groundswell of support for moves that seek to integrate journals, as a first step in

launching a concerted program for improvement. Unsurprisingly, these ideas are usually discarded as unworkable in the bodies that run journals; the result is, of course, a comfortable status quo. The imperatives of the ongoing technological transition and the need to project a more coherent and positive picture of India's research output, must serve to catalyse fresh thinking on the future of our scientific journals. As in the case of the public sector undertakings, it is quite conceivable that the day is not far when government agencies may consider 'disinvesting' in many of our journals. The time may be ripe to consider strategies that will ensure a rising impact of at least some Indian journals, which in turn will ensure that science publishing in this country has a reasonably secure and successful future.

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