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## Troublesome Portents for Scientific Journals

The 1960's were golden years for scientific publications. But times are changing. Current trends in the base of support point to a shake-out during the next several years in which some journals are likely to disappear and others will survive only if they can place heavier burdens on members of scientific societies.

At one time, most journals were owned by societies and received their financial support from members' dues. Then in the postwar era, with expanded scientific activity supported by grants, there was an increase in the number of publications and a shift toward dependence on page charges and sales of reprints. Later, it was discovered that libraries were a prime source of financial support and that they would subscribe to journals even when the rates were as high as 7 cents a page or more than \$100 a year. Private publishers found that they could obtain sufficient revenues from libraries so that they need not depend on page charges or on subscriptions from individual scientists. A large number of new journals were created that depended entirely on library subscriptions. As grant money dried up, member-owned journals with page charges found that authors tended to shun them or to refuse to honor page charges. They, too, turned to libraries for support.

At a symposium of editors and publishers last month,\* recent developments and future prospects for financing of journals were discussed. Robert Cairns of the American Chemical Society, which publishes 16 journals, revealed that to balance the budget, his society was raising its prices to institutional subscribers: the new rate will be about 35 percent more than this year's.

Other journals have been raising their charges, and the burden of costs on libraries has been increasing rapidly. To pay for journals many libraries have found it necessary to diminish purchases of books and are approaching limits on their resources. The moment is near when many libraries will no longer be able to pay for the large numbers of expensive periodicals they now buy. Some weeding out of journals will occur. Among the vulnerable periodicals are highly specialized, expensive publications that serve small readerships and have no source of revenue other than the libraries.

At *Science* we too have had problems with inflation and have experienced changes in sources of support. This year, costs of paper have risen more than 30 percent. Other costs, such as printing and mailing, have also gone up. A 10 percent rate of inflation was budgeted for, but there was no way of absorbing the increased cost of paper this year short of a temporary drop in the amount published.

In common with other publications, *Science* has experienced changes in its base of support. In the early 1960's, about 60 percent came from advertising, 32 percent from members, and 8 percent from nonmembers and libraries. But starting around 1968, advertising in many publications dropped sharply. That in *Science* was not as severely curtailed as in most magazines, and advertising revenues have held constant for the last 4 years. But this has been a period of increasing costs, and advertising now provides only 36 percent of support. Members furnish 39 percent, nonmembers and libraries 22 percent, and other sources 3 percent. The trend is toward about equal contributions by the three major sources. Prospects for the next year are reasonably good, and unless inflation gets much worse, *Science* will be able to resume its customary number of pages. For the longer term there are, as always, uncertainties, but with its multiple base of support, *Science* should be able to adjust to the circumstances.—PHILIP H. ABELSON

\* Conference on the Economics of Biomedical Publications, National Library of Medicine, Bethesda, Maryland, 22 and 23 October 1974, organized by Martin Cummings.