

Page Charges

—For-Profit and Non-Profit Journals—
and Freedom of the Scientific Press

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Recently, the Federal Council on Science and Technology revised its regulations on payment of page charges for "publication of research results stemming from Federally funded research projects." I suspect that many readers may be unaware of the revision. As before, the policy permits payment of page charges "only if the journal is published by a non-profit organization." I have always objected to that discrimination against for-profit publishers. The recent revision, however, has added a clause that seems to me to assure a continued and discriminatory subsidization of professional societies, in spite of stated policy to the contrary: "Mandatory or voluntary page-charge policy will be acceptable, provided that page-charge policy for publication is administered impartially for Government and non-Government research reports." In view of this clause, it is difficult to imagine that page charges in the future will be anything but mandatory.

I'm not opposed to the concept of page charges *per se*. I have many ideas for publications that involve a page charge, with and without refereeing. But I am opposed to government discrimination between non-profit and for-profit organizations, particularly where payment of page charges is concerned. This was the subject of a White House Conference in which I recently participated.¹

In response to my statement and others supporting it, a follow-up conference was held on December 17 by the Science and Technology Policy Office of the National Science Foundation. I assumed—it has turned out wrongly—that the follow-up conference was to permit a more detailed presentation of divergent views than had been possible at the White House Conference. I am frankly chagrined to learn and to report that the December 17 conference was, by invitation, attended only by publishing representatives of professional societies, that is, by non-profit publishers.

Not surprisingly, this group decided that page charges paid with government funds do not constitute a "direct" subsidy. The group may, in all sincerity, believe that any discrimination implied by the regulations can be dismissed by their unanimity. But I find it now doubly important that other views be formally presented to the NSF and to the Federal Council.

The Federal Council seems to be unaware of certain facts. In a 1972 article I listed the 152 most-cited journals in science, and the 152 journals with highest impact. About half of both groups are published by for-profit organizations. These include Academic, Elsevier, Karger, Macmillan, Pergamon, Springer, Wiley, Williams & Wilkins, among others. A good number of the remaining journals on the lists are owned by non-profit organizations, but "published" for them by for-profit publishers. Where such journals stand in view of the new regulations I hesitate to conjecture.

I cannot agree with any continuing subsidy of professional society publications, direct or indirect. Some of the largest have in the past received millions of dollars from government for research on methods to improve information processing and to reduce the costs of journal publication. Little has come of it. Certainly they have no uniquely laudable record for pursuit of efficiency in their operations. The "commercial" publisher is frequently accused of sacrificing scientific integrity to the demands of management and stockholders. In this connection, it would be well to remember that the "management" of many a professional society operates with an autonomy, and disregard of membership opinion, that "private" management can only envy.

As far as I know, only a relatively small number of for-profit publishers have a page-charge policy, but the federal regulations clearly discriminate against those that do. Consider this. As a federally funded research

scientist, you may pay page charges when you publish in *Science*, but not when you publish in *Nature*. In view of the financial plight of the American Association for the Advancement of Science, *Science* will be foolish if it does not institute a "non-discriminatory" page charge.

We all know that the cost of publishing research results is generally small in comparison with the cost of the research itself. Further, research would in most cases be pointless without publication. Need we then worry too much about the cost of publication or who pays it? Indeed we should!

In the past, established researchers haven't worried about the fact of page-charge payments, and they won't in the future. That is not to say that some of them don't worry, as I do, about the *significance* of page charges. To an established researcher with a \$100,000 grant, a \$500 page charge may be a trivial detail. The revised regulations will not question payment if you choose to publish in a non-profit journal. If, on the other hand, you prefer to publish elsewhere, the possible saving of \$500 may still be a trivial matter. If you select a for-profit journal with a page charge, as an established researcher you'll manage somehow.

But what if you have only a \$10,000 grant? If you want to publish in a for-profit journal with exactly the subscriber audience you want and need, it may be out of the question if there are page charges. Equally troublesome, if you want your paper to end up in one of the high-prestige non-profit journals, you will find that the new regulations have made it mandatory that you pay \$500 for the privilege. The revised regulations thus seem designed, whatever the motive of the drafters, to get more people paying page charges for publication of articles in non-profit journals. It seems to me inevitable that, as one result, many authors will fail to get their manuscripts published anywhere. As another, there may already be evidence that page charges are working to lower the quality of the larger non-profit journals.

A restriction in the number of publishing options obviously doesn't bother some scientists. They will continue to publish in journals like *Physical Review* and *Journal of the American Chemical Society* because such journals have large circulations and established reputations for high prestige. But their choice may be ill-conceived. The large journal was an efficient 'paper distributor' in the past; it may be less so today. Just as marketing people in other industries must now be

more selective in their direct mail promotions, journals must be more selective in their choice of an audience. If *Look* and *Life* can fall by the wayside, then large scientific journals may too—unless of course government continues subsidizing them.

The subsidy involved is of substantial proportions. The page charge of the *Journal of the American Chemical Society* is \$70. *Physical Review* charges \$65 a page, plus \$15 per article for abstracting. Even some FASEB journals level page charges. For example, *American Journal of Clinical Nutrition* charges \$30 a page. If the author doesn't pay the page charge, he's charged \$30 a page for the first hundred reprints, which he would otherwise receive without cost. Thus, the page charge becomes in reality a distribution charge. Theoretically, many journals reserve a small percentage of their pages for articles by authors who cannot 'honor' the page charge. The competition for those few pages is keen. And you can expect greater than normal delay in publication if you choose this alternative.

It cannot be far wrong to say that payment of the page charge has become a condition of publication in many journals—a condition that ironically may be self-defeating. Is it possible that mandatory page charges will now encourage some scientists to seek other publication outlets?

Not long ago, eleven eminent chemists, in a letter to the editor of *Chemical & Engineering News*, deplored the appearance of so many new chemical journals. In a later issue, the letter was endorsed in a guest editorial by the president of IUPAC.⁴ Specifically, the letter attacked small journals launched by "commercial" organizations seeking to fill some communication need of the scientific community. The eleven proposed that proliferation of such journals be prevented by boycott, suggesting that their colleagues refuse to serve as editors or on editorial boards, that they submit papers only to non-profit journals, and that they influence younger colleagues to follow their own example.

I prefer to give the eleven signers of that letter to *C&E News* the benefit of the doubt. I believe they are troubled by the crisis in scientific publishing. But they have not looked deeply enough into its causes. They may well not understand them if they have. Their proposal seems to me to offer the eventuality of a control of the scientific press—of who publishes what, and of who publishes where.

Science is perhaps in greater need than other segments of society for complete freedom of thought and expression. The current wave of anti-science even finds its supporters among established scientists. In science, as in politics, Young Turks grow old. There is a scientific establishment—never doubt it. A control of the scientific press, either through something as well-meant as page charges, or through something as seemingly innocuous as a restriction on publishing outlets is basically ominous. It can potentially restrict the very scientific freedom and scientific integrity that the eleven chemists fear is now only threatened by what they regard as “commercial” opportunism.

The page charge is but one of many stop-gaps in an exceedingly complex and little understood system. We should not forget that the page charge is not the only subsidy that non-profit publishers enjoy. It is simply the most visible and most familiar. Probably even more costly to the taxpayer are other government subsidies: discriminatory postal rates, and exemption from all manner of federal, state, and local taxes. These advantages of non-profit status, I believe, largely explain why non-profit journals show up as well as they do in price comparisons and other studies of publications costs.

In recent years, despite the non-profits' advantageous status, their growth and size-increase have been about matched by an increase in the number of for-profit journals. Lately, *despite the subsidies*, the larger non-profit journals have had to cut back their size. In spite of, not because of this, *unsubsidized* for-profit journals continue to appear. I cannot accept the “captive library customer” assertion as an explanation of the appearance of new and usually more specialized smaller

journals. Such a theory, if true, would surely apply equally to the non-profit journals. Disregarding their professional-society imprimatur, they are cheaper. They would hardly be the first to be considered in any library's slashing of its acquisition budget.

Librarians generally purchase journals in response to user demands—not because they have been impressed by publishers' advertising, or because they are all institutionally mandated to ‘buy everthing in the field.’ Using the *ISI Journal Citation Reports™ (JCR™)*,¹ librarians and scientists have an objective method of evaluating the usefulness of scientific journals—non-profit and for-profit. They have good reason to do so now. Since we first examined journal impacts in our study of 1969 data, the impact of many of the “leading” journals of science has shown a uniform decline—even as their size increased. Perhaps when we have examined impact data for 1974, we'll be able to make more definitive comments.

We must hope that the NSF will undertake a review of the page-charge policy that considers the views of all concerned. I hope a new policy can be formulated that will guarantee scientific freedom of expression. That cannot be done by lowering the standards of our leading journals. On the contrary, only by stringent application of selectivity can these journals continue to serve their intended purpose while remaining self-supporting.

I suggest that readers let the NSF know what they think about all this. Write or call Dr. Russel Drew, Science and Technology Policy Office, National Science Foundation, Room 504, 1800 G Street Northwest, Washington, D.C. 20550 (telephone 202-632-9793).

1. **Garfield E.** *The role of the information industry in the nation's economy: preferential treatment for non-profits inhibits sound economic growth in an information-conscious society.* Statement presented at a Conference with the White House Office of Public Liaison, 11 December 1974, organized by the National Council of Professional Service Firms in cooperation with the Information Industry Association.

2. -----, Citation analysis as a tool in journal evaluation. *Science* 178:471-79, 1972. — The calculation and significance of a journal's impact is explained in this article.

3. **Ballhausen C J, Cotton F A, Eschenmoser A, Havinga E, Hoffmann R, Huisgen R, Khorana H G, Lehn J-M, Linett J W, Salem I & Wilkinson G.** Too many chemistry journals. [Letter to the editor of] *Chemical & Engineering News* 51(50):43-44, 1973.

4. **Thompson H W.** Proliferation of journals in chemistry. *Chemical & Engineering News* 52(40):2, 1974.

5. **Garfield E.** ISI's *Journal Citation Index* data base; a multi-media tool. *Current Contents® (CC®)* No. 16, 19 April 1972, p. 5-8.

6. -----, The new *ISI Journal Citation Reports* should significantly affect the future course of scientific publication. *CC* No. 33, 15 August 1973, p. 7-8.