Conference on Scientific Editorial Problems

With the assistance and encouragement of R. L. Taylor, of the American Association for the Advancement of Science, and Donald H. Hale, Colonel, U.S. Army Chemical Corps, the first Conference on Scientific Editorial Problems was organized for the 1952 AAAS meeting in St. Louis. The purpose of the conference was to bring before the Association some of the important problems that confront those who prepare scientific manuscripts, who are concerned with the preparation of technical reports, or who edit and produce scientific publications.

The first conference was attended by 75 persons representing many phases of scientific writing, editing, and publishing. Speakers included A. J. Riker, "Standardization of literature citations"; J. Cattell, "Offset lithography"; Gertrude Mary Cox, "Role of statistics in technical reports"; L. E. Neville, "Problems of documentation in the Department of Defense"; G. Seielstad, "Format of technical reports"; A. E. Tyler, "Technical reporting in a Naval Research and Development establishment." At the 1952 session, it was decided to make the conference a permanent part of the AAAS meeting. The chairman appointed a steering committee consisting of the six speakers and Jonathan N. Leonard.

At the second conference in Boston, Dec. 27, 1953, attendance increased to 200 persons. Papers were presented by W. A. Noyes, Jr., M. O. Lee, G. S. Tulloch, Ruth C. Christman, R. M. Hewitt, J. D. Elder, R. B. Smith, and R. R. Shaw. (The papers are printed in this section.)

Multiple sessions are being planned for the 1954 conference to be held at the AAAS meeting in Berkeley this December. Members of the 1954 steering committee are: J. D. Elder, Harvard University Press; R. D. Hemens, University of Chicago Press; R. M. Hewitt, The Mayo Clinic; M. O. Lee, *American Journal of Physiology*; J. N. Leonard, *Time* Magazine; L. E. Neville, Armed Services Technical Information Agency; A. J. Riker, University of Wisconsin; G. Seielstad, The Johns Hopkins University; A. E. Tyler, U.S. Naval Ordnance Test Station.

The Conference on Scientific Editorial Problems invites the participation of all interested persons and groups. The 1954 sessions will include speakers on a wide variety of editorial subjects, and group discussions will also be scheduled. Programming is designed to examine questions and problems of interest to the greatest number of participants. Inquiries and suggestions will be welcomed. Correspondence should be directed to any member of the steering committee or to the conference chairman.

In these days of accelerated and expanded research by universities, industry, and government, and increasingly large numbers of scientific papers and technical reports, publication problems merit serious consideration. There is considerable need to standardize—certainly to discuss—techniques involved in effective technical writing and publishing.

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Conference Chairman

Editorial Branch
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Probable Trends in Scientific Publications as Viewed from the Editor's Office

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When one talks about trends, one talks about one's own journal; therefore, what I have to say may not be representative of science as a whole. The problems of the editor today are not entirely financial; they arise to some extent merely from the bulk of the things he has to handle.

The *Journal of the American Chemical Society* today publishes something over 5 times the number of words it published in 1920 and about 2.6 times the number of words it published in 1940. During the 4 brief years that I have been editor, the size of the journal has increased from 4100 pages to 6500 pages; we also print 10 percent more words per page. I can say only that, if this trend continues, a new editor will be needed before very long. The increase, incidentally, is not peculiar to our journal; the *Physical Review* and the *Journal of Chemical Physics* have increased almost exactly in the same ratio.

I have several thoughts about the kinds of manuscripts we receive today. In the first place, there is more fragmentary publication. I suppose that, as the number of chemists and scientists increases, the competitive spirit is bound to become of greater and greater importance. We find authors feeling that they must have rapid publication. They do not wish to wait for posthumous publication. Since presidents of universities base promotions not on the quality of the work but on the avoirdupois of the reprints, it behooves scientists to get out many small articles rather than one big one.

The editors also have been responsible to some extent for this trend, because, with the increase in receipts, it has been necessary to reduce articles to what some people facetiously call the telegraphic style. Unnecessary words have to be omitted; we have to eliminate graphs and tables as far as we possibly can. Consequently, one finds authors who say, "Frankly, I made this paper twice as long as I knew you would accept, because it gives me some leeway when you ask

me to cut it." This is the kind of thing that I as an editor deplore; this procedure wastes my time; it also wastes the author's time because he inevitably has to rewrite the manuscript. Frequently one feels that it would be better for the author to wait until he has enough to make a good manuscript rather than to submit something that is trivial, unimportant, and only part of a large picture.

There are various reasons for this large increase of routine articles since the war, not the least of which is the availability of government money in the form of university contracts. This kind of research is often of a type different from that in vogue before the war when a man shut himself up in the corner with a few graduate students and did what he chose to do. We now have large laboratories, where teams of people work together, where the crank is turned, and results appear without careful thought of their meaning and their interpretation. Moreover, some of these institutions now employ professional writers who do not know exactly what the scientific work is all about and who send us manuscripts that obviously place their emphasis where the author, himself, would not have intended it. A large amount of relatively routine material is submitted to us, and one begins to ask whether a journal that publishes 20,000 copies should accept material which has primarily only an archival value.

About a year ago, the board of directors of the American Chemical Society thought of trying an experiment, an undertaking that made us shudder. They said in effect, let us make the *Journal of the American Chemical Society* into a super journal. Let us take, for example, the best 20 percent of the 3600 odd manuscripts we receive each year and put them into the *Journal of the American Chemical Society*. Let us then establish subsidiary journals or sections of the big journal, if you wish, that will publish the remaining material which should be recorded somewhere but which is not very startlingly new. This made us shudder for several reasons. In the first place, it would have made the editors responsible for academic promotions. Another reason became apparent after we tried to look at the papers and to pick out the best 20 percent. Two assistant editors and I could agree easily that about 5 percent of the papers belonged in the super category; we could also agree that about 50 percent did not belong there; the remaining 45 percent proved extremely difficult to handle. We are grateful that the board of directors backtracked and decided not to make us carry out this program.

What is the quality of the scientific work? We tried to go over the manuscripts we received and to choose those in which there was an honest effort at interpretation of the data and correlation of facts—in other words, something more than the mere description of a routine synthesis or a routine set of physical measurements. Dr. Gates went over the organic and biological material; I went over the inorganic and the physical; our percentages checked exceedingly well. We both found that about 12 percent of the manuscripts really had some meat in the way of scientific discussion; the rest were mostly either recordings of routine observations, syntheses of compounds, or measurements.

I believe that in the near future we will have to decide whether a journal like the *Journal of the American Chemical Society,* which pretends to cover all of chemistry and which prints 20,000 copies of each issue, should accept manuscripts that have little reader value. Admittedly, all valid facts should be put somewhere in the records, because occasionally somebody will need them, but I think that we will have to confine our publication, with its large subscription list, to articles that have something more than just a few isolated facts. The solution, I think, is going to be some device such as microfilm or microprint, which is read with special glasses, or perhaps the formation of more specialized journals, leaving the big journals with large subscription lists for the articles that have some reader appeal. The chemist, of course, does not want to use a reading device. He frequently likes to sit in the laboratory and wave a bunsen burner at something while he reads a journal, and it is not convenient to have a viewer or a special pair of glasses on at the time. Hence, I do not think that the microcard idea will be universally accepted. In addition, the chemist, when it comes to his own field, is a most conservative gentleman. Hence, my prediction is more specialized journals; we will have to be more discriminating in the choice of articles we publish in journals of large circulation. This procedure will leave the problem up to the poor librarian who will have to get the funds to pay for the subscriptions to the specialized journals.

Problems in Financial Management of Scientific Journals

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These remarks on the financial management of scientific journals are intended to apply only to the group of scientific journals that have the following common characteristics: (i) They perform important and/or essential services for communication within their fields. (ii) They are the official organs and, therefore, the responsibilities of scientific societies. (iii) Their circulations are small. (iv) They are devoted largely or wholly to the original publication of the results of research. (v) They are specialized in content, often highly so. The number of such journals in the United States is unknown, but it is large. The birth rate is higher than the mortality; hence, the number is increasing, particularly in newer, highly specialized fields of scientific research.

Each of the common characteristics listed in the preceding paragraph imposes more or less specific financial problems which, although varying in degree among journals, combine to present a rather uniform picture. There is a constant struggle to keep a journal solvent; its physical quality tends to be mediocre; and there is often a losing struggle to meet the pub-