Publication Delay

SIR,—Delay in the publication of manuscripts in specialized scientific journals is becoming more and more frustrating because of the pace of science today. In many domestic journals it takes 6–9 months to publish a manuscript after receipt. In the case of European journals, it takes at least 2 more months because of postal handling of manuscripts and galley proofs; there can be even further delay if the manuscript has to be revised. In addition to this, journals can take about 2 months by surface mail to travel between Europe and the United States.

This means that 8–11 months may elapse before a submitted manuscript reaches the scientific community. This delay is frustrating for two reasons: (i) the work may be needlessly duplicated by the efforts of colleagues which might more profitably have been spent on the other aspects of the same problem; and (ii) the scientific and social impact of the information may be diminished.

Several solutions to this problem are available. (i) Journals could publish more manuscripts in each issue, change to a larger page size, or publish more frequent issues. Some periodicals have already adopted one or more of these solutions. (ii) Reviewing procedures could be made more efficient; more European journals could let their US editors review North American manuscripts and vice versa; (iii) mailings could be made by air; (iv) journals (which do not already do so) could make available a list of accepted manuscripts along with the authors' names, addresses, and expected dates of publication. This list could either be published by the journal itself or by some scientific abstracting or indexing service (for example, *Biological Abstracts, Chemical Abstracts, Current Contents*) and the pre-publication manuscripts could be obtained either directly from the authors or, at a reasonable cost, from the particular journal.

We are aware that each of these suggestions entails additional publication costs. However, we believe that the fourth suggestion should be considered because it could greatly diminish the communication delay with the minimal additional publication expense.

Yours faithfully,

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How to Succeed . . . ?

WE have received the following chain letter from an offended reader.

Dear Doctor,

Publish or perish? Today, more scientists than ever before are faced with this problem. This letter brings you the opportunity not only to publish but to appear as a co-author of many interesting and important articles bearing on research problems in a variety of scientific disciplines. Naturally, we want to help you, but in order to do this you have to help us.

Below are the names of eight well-known scientists. Include them as co-authors in your next publication.

Then make eight copies of this letter with the list of names amended as follows. Strike out the name of the first mentioned scientist and advance the positions of the remaining names by one place upwards. Then include your name at the bottom of the list.

Send the eight copies to eight well-known scientists of your acquaintance. Try to maintain as far as possible the high standard of scientific excellence represented on the present list.

If you send eight copies off within a few weeks and publish, as you usually do, within a few months, you should by the end of a year be the co-author of approximately 16,000,000 first-class papers. Not bad going—Eh!

Obituary

Dr H. Barrell

HARRY BARRELL, who died on February 16, 1972, was a former Superintendent of what was then the Standards Division of the National Physical Laboratory. His reputation was international and he was for many years one of the leading metrologists who brought about the replacement of mechanical standards of length and time by the present atomic standards, the wavelength of a line in the spectrum of krypton-86 and the caesium-133 atomic frequency standard.

Barrell, whose family came from Herefordshire, took his BSc degree at Imperial College and then worked for a time with R. H. Fowler, the spectroscopist. He was appointed to the staff of the Metrology Division in 1923 and between the wars worked with J. E. Sears on the measurement of the metre in terms of the wavelength of the cadmium red line, and on the refractive index and dispersion of air; the latter work is definitive.

The distance over which interference fringes can be obtained with the red line in the spectrum of cadmium is much less than 1 m and therefore, much as in the work of Fabry and Perot and others, Sears and Barrell used a system of fringes of interference in white light to relate a length of one ninth of a metre, directly measurable by interference in the cadmium red line, to a length of 1 m in two stages of comparison in white light. The experiments were characterized by imaginative design and careful execution, supported by the excellent facilities of the workshops of the National Physical Laboratory.

In the primary work, the length of a mechanical end standard about 1 m long was determined in a vacuum by an interferometer in terms of the cadmium line; at the time the result seemed discordant with that of parallel determinations in Germany but later studies of the properties of the light sources showed that the agreement was in fact very close. It was, however, clear that the discrepancies between these and other determinations of the metre arose mainly from the errors in making micrometer microscope settings upon the line standards of length by which the metre was then defined. Accordingly, when after 1945 single isotopes became available, it was decided that there was no point in making further comparisons with the mechanical standards but that, instead, the mean value of the metre in terms of the cadmium line should be accepted and should be converted to a value in terms of a single isotope line through purely interferometric comparisons of the wavelength of the latter with that of the cadmium line. Barrell was one of the first to study the radiation from single isotopes, making use of the refined interferometric techniques he had developed and, in particular, he made a careful study of the dependence of the wavelengths of lines in the spectrum of mercury-198 upon the conditions of excitation.

He was prominent in the international discussions that led to the adoption of the krypton-86 line and succeeded J. E. Sears as a member of the International Committee for Weights and Measures. Meanwhile Dr L. Essen was developing the caesium atomic beam standard of frequency, and Barrell, as a member of the International Committee and as President of its Advisory Committee on the Definition of the Second, had a decisive effect on the adoption of the present