paper, or that the Bureau of Standards should serve to the same end. Our technical institutions and colleges should also pay more attention to the manufacturing of paper and should add to their curriculum the manufacture of paper and lectures on the paper industry.

But far more important is it that publishers and libraries and learned institutions should work together in such matters to the end that all publications, books as well as periodicals, to be used and preserved by such institutions, should be printed on paper of good lasting quality. Such publications must have printed on their title-pages the words, "For Library Use." To be sure, publishers will charge more for such copies than for the ordinary ones. The libraries and learned institutions will gladly agree to this. The same would apply to certain newspapers.

I must believe that what has been pointed out above will be sufficient to invite attention to this most important question; and as the space in these columns is of unusual value its consideration will not be further touched at this time.

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THE CANONS OF COMPARATIVE ANATOMY

IN the discussion in this journal[1] of the so-called canons of comparative antaomy as illustrated in the vessels of angiosperms and *Gnetales,* Professor E. C. Jeffrey employs his canons (!) in the familiar methods of the believers in *schrecklichkeit.* As such methods in any field of activity have very little effect on the real issues, the writer declines to be drawn into tempting retaliations or into discussions of unnecessary side issues apparently intended as diversions, but proposes to end the matter, so far as he is concerned, with a simple summary of the facts and the conclusions which have been drawn from them on both sides.

1. Two of the canons (recapitulation and conservatism in certain regions) are beautifully illustrated in connection with the vessels in question. In regard to this statement Professor Jeffrey and I are in entire agreement.

[1] SCIENCE, N. S., Vol. XLVII., Nos. 1214, 1221 and 1231.

2. The porous perforation of the vessel of *Gnetum* has been evolved by the enlargement and coalescence of circular, haphazardly-arranged perforations (*Ephedra* type) which are themselves in turn derived from typical bordered pits. In regard to this statement also Professor Jeffrey and I are apparently in entire agreement; at any rate our disagreement is not based on it.

3. The similar porous perforation of the vessel of higher angiosperms has been evolved by the disappearance of the bars from the perforations of the scalariform type found in lower angiosperms. With this statement Professor Jeffrey was in entire agreement when his very recent and excellent book "The Anatomy of Woody Plants" was written. On page 379 of that work he wrote, "The vessel with the porous type of perforation is clearly derived, as has been demonstrated in an earlier chapter, from the scalariform condition." (See also pages 101 and 102.) In his latest contribution to this discussion he states, however, that in some cases it originates as described in statement (2) for *Gnetum.* Nevertheless, inasmuch as he gives no instances of this phenomenon in angiosperms, and does not even mention it in his book, we may conclude that statement (3), which is merely another way of expressing his own quoted statement, is essentially correct.

4. From (2) and (3) it follows that the porous vessels of angiosperms and *Gnetales,* though similar, have been evolved in entirely different ways and therefore have no genetic connection. They can not, therefore, be used as evidence of relationship between these two great groups of plants. From this statement Professor Jeffrey dissents, apparently believing that it is not a legitimate inference from the given premises. To the writer it appears to be the only logical inference.

W. P, THOMPSON

QUOTATIONS

THE COORDINATION OF SCIENTIFIC PUBLICATION IN GREAT BRITAIN

THE Faraday Society arranged a meeting to consider the "Coordination of Scientific Pub-

lication" on May 7 last. The discussion was opened by Sir Robert Hadfield, President of the Society and a member of the Subcommittee appointed by the Conjoint Board of Scientific Societies to deal with the "Overlapping between Scientific Societies." Among others who spoke were Professor Schuster, Dr. R. Mond, Mr. Longridge (president of the Institute of Mechanical Engineers) and Mr. Wordingham (president of the Institute of Electrical Engineers). Sir Robert Hadfield's chief suggestion was that there should be a Central Board (such as the Conjoint Board) appointed to receive all scientific papers and to allot them for reading and discussion to the society to which they would be of most interest. In addition the board should circularize other societies likely to be interested in order that their members might be aware of what had been done and enabled to attend and take part in the discussion if they so desired. This plan would, of course, involve some degree of federation between all the larger societies; a federation which was evidently regarded very favorably by those present at the meeting. It has indeed already taken place in Germany, where a Union of Technical and Scientific Societies, with a roll of some 60,000 members, has been formed more especially to cope to the best advantage with the problems which must arise at the end of the war. In New York also the United Engineering Societies have a central building and library, provided by the generosity of Andrew Carnegie, where the several societies meet for discussions, and where they are brought into closer contact than is possible with the decentralization which obtains here. Nor should the federation be limited to the United Kingdom alone. The great societies should have Colonial representatives, particularly those dealing with problems of an industrial character. In pre-war days the Iron and Steel Institute had a representative of the German Empire, which was thus kept in touch with English research, but no representative from our own Dominions. With a federation of this kind it might be possible to maintain a common building (*e. g.*, an enlarged Burlington House) for meetings and to house a joint library which should contain, in particular, all the publications referred to in the International Catalogue. Several speakers dilated on this idea, Dr. Mond suggesting that it should have a staff of translators competent to provide complete translations of papers written in the more difficult languages (*e. g.*, Russian or Japanese) when they were required; while Mr. Longridge went further in desiring a College of Librarians; men able to discuss research with inquirers and not merely to put them on the track of past work, but also to inform them of the work then in actual progress! Less utopian was the demand for uniformity in publication. It is most desirable that all Proceedings, Transactions, etc., should be printed on the same sized paper and in the same type so that collected papers on any one subject may be bound together. The scheme for the pooling of papers was opposed by the institutions on the ground that they awarded prizes for the best papers submitted to them and that, under the scheme, this incentive to research might disappear. Obviously, however, this difficulty might easily be overcome if each society retained the right to print any papers sent to them irrespective of their ultimate fate at the hands of the board. A more serious objection is that a paper is usually written for a particular class of reader. A treatment suitable for the Physical Society would probably not be best for the Iron and Steel Institute. Having regard to this fact it seems probable that a central board would find its most important function in issuing a weekly or monthly list of forthcoming papers with intelligible abstracts, as suggested by Professor Schuster.—*Science Progress.*

SCIENTIFIC BOOKS

Dynamic Psychology. By Robert Sessions Woodworth. New York, Columbia University Press. 1918. Pp. 210.

A critic in the *Nation* once remarked, "When a statement is obviously false we call it stimulating; when it has no meaning what-