CONFERENCES: BIG OR SMALL?

MORE science means more information, in the form of books, journals and conferences. No scientist needs to be reminded of this. It was estimated recently that to keep up with all the current work a physiologist would have to read nearly four hundred papers a day; Sir George Thomson has even gone so far as to suggest that it is the impossibility of absorbing the necessary information that will ultimately halt scientific progress. Communication is therefore a subject that we cannot afford to neglect. The purposes of books and journals are, or should be, obvious; but the functions of conferences are more complicated.

Scientific conferences grew as an answer to the problem of assimilating in a reasonable time the vast quantities of information scattered throughout the journals. They do provide an answer—the meeting together of workers in similar fields and the collection of their ideas are the obvious advantages. But is it the best answer? The basis of a conference is the presentation of papers; but why bother to read them? The distribution of all the papers to all the members would serve the same purpose. It would even have advantages: it is much easier to read a foreign language than to follow it by ear, and it is difficult to grasp a complicated argument at a single hearing. In fact, something of the sort often happens when preprints are issued or when the proceedings are published in book form afterwards.

The preprint was introduced to save time. If all his audience are armed with his complete paper, there is no need for a speaker to give more than a summary. This frees time for discussion or, more frequently, more papers. But the possibility of discussion is the great advantage of conferences. Questions can be asked and suggestions made in print, but it is a very slow business and what takes months in the journals may take only minutes in the conference room. Conferences have other advantages, of course. Meeting other workers in one's own field is an obvious one. But this is really an extension of the main advantage: one meets in order to discuss.

Conferences are getting bigger. The Fourth International Congress of Biochemistry held in Vienna last September was attended by nearly five thousand scientists and the published proceedings run to fifteen volumes. Two thousand one hundred papers were submitted at the Second Geneva Conference on the Peaceful Uses of Atomic Energy, and there are thirty-three volumes of proceedings. These two examples are exceptions, but they do represent a real trend, at least in international conferences. The question is whether this trend is a good thing. Are bigger conferences necessarily better? In particular, are they better with regard to the advantages that conferences have over other methods of communication? The answer is, surely, no. It has already been pointed out that the great asset of conferences is discussion, and the value of a discussion is usually inversely proportional to the size of the group. There is such a press of papers that it is difficult to find time to read them, let alone discuss them. Furthermore, most big conferences have to split up into sections which meet at the same time, and so it is impossible for an active member of a section to get any idea of the conference as a whole. 'Interdisciplinary cross-fertilization', as it is unhappily called, does not take place.

Fortunately, many people are aware of these points; in particular, some of the research foundations, such as the Ciba Foundation in Britain which recently celebrated its tenth anniversary, and the Josiah Macy Jr. Foundation in the United States, deserve mention. Both these organizations sponsor symposia. Membership of a symposium is restricted to a small number of experts, so that profitable discussions are possible. Afterwards, the complete proceedings are published. It is a pity that there are so few institutions of this type interested in the physical sciences; most of them are biological, with a bias towards medicine.

The Gordon Research Conferences, many of which are held every year in the United States, illustrate yet another approach. They cover both the physical and biological sciences, and the membership of any one conference is restricted to a hundred. They are "intended as a means of disseminating information which otherwise would not be realized through the normal channels of publication and scientific meetings". They differ from other conferences in that nothing is published, and no information may be disclosed without the speaker's consent. At first this may seem odd in connexion with a conference "intended as a means of disseminating scientific information", but it enables those present to speculate freely without feeling that hundreds of critical readers will later censure them for making suggestions not backed up by adequate evidence. Speculation is a vital part of science, so it is desirable that there should be some means whereby people can do so together, as well as alone. A series of meetings of the Gordon type has recently been established in Britain. The first Miller conference*, on radiation chemistry, was held at Portmeirion in North Wales during April 20–24 and was a success. The conferences have been named after the late Dr. N. Miller, of the University of Edinburgh, who did much to help establish them.

Big conferences are obviously here to stay. Many important aspects of them have not been discussed here, such as their significance as social events which promote international understanding, though it is to be hoped that the tendency to compete for national prestige, evident at some recent conferences, will not have the opposite effect. Nevertheless, the small informal gathering, where ideas are exchanged as freely as facts, should not be neglected.

* Further information about the Miller conferences can be obtained from the chairman of the next meeting, which is to be held in 1961—Prof. F. S. Dainton, School of Chemistry, The University, Leeds 2.