

yet drawn their conclusions from their experience of the first decade, they might think about covering the following points in their discussions. First, there is perhaps little to be gained by making ergonomics out to be a science. It is a kind of conglomeration—not even a compound—of technologies; and it might be a good thing for it to continue like that. Possibly the Society should be content to serve the same kind of admirable purpose as the British Nuclear Energy Conference, which pulls in people from a number of fields without seeking to detach any of them from their primary allegiances.

Secondly, there is undoubtedly a lot to be said for the running of courses of lectures and practical work for people, from a variety of levels and types of work, who are faced with 'ergonomic' problems. The short Bristol course outlined by Dr. S. Griew seems sound in its aim, which is to put across useful facts about the structure and functioning of the human body; to show where more can be found; to explain and demonstrate experimental approaches to problems of equipment design; and to suggest that 'fitting the man to the job' and 'fitting the job to the man' should often be tackled together.

Thirdly, however, there is perhaps room for far more stress on the need to look into, learn about and teach people about, individual differences, especially on the psychological side. Mr. Stockbridge's *cri-de-coeur* ("Individual differences are a frantic nuisance. . . . If only we had a standard man . . .") brought out this need. Some workers in this field are clearly tempted, not merely to wish that there were such a creature, but to assume that there is. Mr. Welford seemed almost to succumb when he spoke hopefully

about the discovery of 'standard times' for mental operations, and more particularly when he hinted that one had been run to earth in Antwerp, where telephonists had consistently coped with five bits of information a second. Dr. Conrad, commenting on this later, unwittingly challenged Mr. Welford by revealing that Norwich girls could manage seven without any trouble.

Discrepancies like this cannot really be met by jocular references to the possible existence of 'national' differences. They must be taken seriously. Could they arise from differences in the kinds of people being guided into and selected for the work in different places or at different times? Or from differences in training arrangements? Or from differences in methods of work adopted? Or from differences in equipment? Or from differences in working conditions of several kinds, including the physical, the social and the financial? All these and other possibilities should be explored.

But here we encounter two important snags. Can exploration of the kind needed be carried out satisfactorily on the tiny, homogeneous, doubtfully relevant groups often used by researchers in the vast field of ergonomics? And can it be tackled adequately by researchers whose devotion to 'precise' measurement is such that they are inclined either to forget or to ignore deliberately the existence of possibly influential factors which lie beyond the reach of their cherished clocks and counters? The state of play in ergonomics ten years from now may depend a good deal on the answers the Council of the Ergonomics Research Society gives to these two questions.

ALEC RODGER

DISTRIBUTION OF SCIENTIFIC PUBLICATIONS IN UNDER-DEVELOPED COUNTRIES

THE Scientific Publications Council, which has recently been formed, includes the editors of twenty scientific journals and the authors of a number of scientific books. It was started by a group of scientists who felt the need for an independent body that could uphold the interests of scientific authors and editors in working for higher standards in the publication and distribution of scientific books and journals. The Council is intended to provide a means for scientific writers and editors to maintain contact with each other and exchange views with others concerned in scientific publication in Great Britain and overseas: it provides a forum for the discussion of matters of mutual interest and a means of obtaining advice in technical and legal matters relating to publication. It is intended that the Council should work to establish good relations between scientific writers and publishers, and co-operate in setting up agreed standards that are acceptable to scientists and publishers alike. The officers of the Council are appointed for a term of three years; Prof. G. W. Harris is chairman of the Council and Dr. D. Richter, Neuropsychiatric Research Unit, Whitchurch Hospital, Cardiff, is honorary secretary.

At a meeting of the Scientific Publications Council held on April 10 at the Ciba Foundation, London, Mr. John Hampden (British Council) opened a discus-

sion on the distributions of scientific publications in the under-developed countries. He described the difficulties experienced in many countries in obtaining British books and periodicals. In Asia and Africa there is rapidly growing up a new literate class which wants to read, but in many places no British publications are available. In some places it is hard to persuade any bookseller to obtain them, as the necessary currency authorization is difficult, expensive or impossible to get, and the profit is small. On the other hand, there is an abundant supply of State-subsidized cheap editions from the U.S.S.R., China and also the United States. The English language is now an international possession. The students wanting books are the scientists, professional men and leaders of the future, and it is bound to affect their future reading and outlook if the only books they can get are not British.

Currency shortages are mainly responsible for the situation in some countries, including Poland, Turkey, Israel, Pakistan and Indonesia. How can people in these countries buy British books and periodicals if they have no sterling to pay for them? Other difficulties in some countries include the shortage of bookshops stocking British books and the lack of libraries where British publications can be seen. The difficulty is especially acute for scientific

and medical books, which are needed by specialists. In the Western countries where libraries are largely taken for granted, it is hard to realize that in many places a student may have access to very few books which he does not buy for himself; and the cost of one book may be more than a whole month's salary. In many places it is even impossible to get up-to-date lists of British books and their very existence is in danger of being forgotten.

The Americans have got round the currency restrictions by export schemes in which the publishers are paid directly by the Government, so that the importing countries need no dollars to pay for books. This was originally a British idea (invented by Sir Stanley Unwin) which the Americans have adopted. British text-books have been deservedly popular in Asia and Africa for many years, but there is a serious danger that they will soon be swept out of some important markets. Mr. Hampden said we are not afraid of fair competition, but British publications cannot compete with exports heavily subsidized by foreign governments. It is a matter of considerable concern to those familiar with the situation that the journals of many British learned societies are not organized as the book-publishers are to increase their sales overseas, and it looks as though these journals are getting seriously left behind. It is essential that more information about British scientific books and journals should be made available overseas. The British Council is doing all it can to spread this information abroad.

Dr. P. Rosbaud said that the cultural importance of scientific books has only recently been appreciated in Great Britain. The export of scientific and technical books is not only of benefit to the book trade but also has a far-reaching influence on education and commerce in general, so that it pays high political dividends as well. One of the main factors influencing distribution abroad is the cost. Why are scientific books so expensive in comparison with other books of similar size, and where do all the profits go? For a typical book of 250 pages selling at 30s. the publisher may hope to sell 3,000 copies and break even at 2,400—if he sold less than 2,400 he loses; if more, he gains. For such a book the printer's estimate may be 8s. a copy, including the cost of correction, blocks and paper. There is little to be saved by using paper of cheaper quality. The publisher's overheads might be 2s. 6d., advertising 2s. and the author's royalty at 12½ per cent would be 3s. 9d. Allowing 33 per cent, or

10s. for the bookseller, that left the publisher with only 3s. 9d. as his profit. In any sales in the United States the publisher may need the services of an American distributor who would ask 50–60 per cent of the selling price, and the British publisher would also have to pay the additional cost of freight. There is the alternative of selling a small number of books at a high price or a larger number at a lower price, as with text-books. Text-books have got to be cheap, and this might be achieved by bringing out a large first issue of 5,000 copies without profit and then making a profit on subsequent issues. It was not right that the author should ever be asked to waive his royalty, which was little enough anyway: no reputable publisher would ever ask that. In the publication of scientific journals great patience might be needed before a profit could be made. Sir Richard Gregory had told Dr. P. Rosbaud that *Nature* took more than twenty years before the circulation was sufficient for it to make its first profit. Publishing a journal is like cultivating a garden in which one must wait a long time for the harvest. As the circulation increases and the journal gradually becomes more profitable, the publisher can pass some of this on to the consumer by reducing the price or increasing the size. Scientific journals could be made considerably cheaper by including advertising space. Otherwise, the only way of reducing the cost is to increase the circulation. Where publishing is a government monopoly, as in the U.S.S.R., books and journals can be produced at a very low cost; but there are objections to this practice. Such publications may have plenty of room for the Lysenkos, but not for the Vavilovs and Pasternaks, and the results are tragic. There is an urgent need for the British Government to develop an effective export scheme in answer to the floods of cheap State-subsidized publications from other countries.

The chairman, Prof. G. W. Harris, asked how scientists in Britain could best help in getting scientific books and journals distributed in the countries that need them. Mr. Hampden thought that the Scientific Publications Council might help in bringing the problem to the notice of the learned societies. Dr. F. N. L. Poynter described the work of the Wellcome Historical Medical Library in collecting scientific books and medical journals and distributing them in under-developed countries abroad. He thought it would be helpful if the existence of a voluntary distributing centre of this kind were made more widely known.

MAPPING VEGETATION

AN international symposium on mapping vegetation was held during March 23–26 in Stolzenau/Weser, in the Federal Republic of Germany. This gathering of 112 scientists from sixteen countries, including Japan and the United States of America, was organized by the head of the Bundesanstalt für Vegetationskartierung, Prof. R. Tüxen (Stolzenau), on behalf of the International Society for Plant Geography and Ecology.

The rapid progress of phytosociology (phytocoenology) in this century, especially during the past three decades, has made feasible the scientific mapping of vegetation based upon well-defined plant

communities. In view of recent advancements in this field, an international meeting to facilitate exchange of views, personal contacts and assessment of new future developments was very timely.

Mapping of vegetation at the Bundesanstalt für Vegetationskartierung (formerly Zentralstelle für Vegetationskartierung des Reiches) began in 1931 for the Nature Conservancy Service in Hanover. Then, as now, the mapping of vegetation was preceded by extensive field work on existing plant communities in the respective area by the methods of the Zurich-Montpellier school of phytosociology. In addition to fundamental research on plant communities, their