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SCIENTIFIC AND TECHNICAL LITERATURE AND INFORMATION

THE incidence of hostilities has already brought in its train considerable dislocation in the various activities that are concerned with the provision of literature and information. In the world of science and technology this dislocation may seriously affect the national effort unless its implications are rapidly appreciated and appropriate readjustments made. To the disturbance that, as in the War of 1914-18, resulted from interference with the supply of foreign literature and from the diversion of money and labour into activities apparently more necessary than the provision of information, the present conflict has added the distraction caused by air-raid precautions. In consequence of these latter, many institutions have ceased their activities, or transferred them to locations relatively remote from centres of storage and distribution of information.

A re-orientation of scientific and technical investigation is essential in war-time. To a certain extent research based on careful analysis of previous work must yield place to intensive experimentation devoted to the rapid solution of urgent problems, and to enhanced productivity along well-established lines, involving observation and testing rather than co-ordination and deduction.

There is still a case to be made out for research of the more fundamental type, divorced from considerations of purely war-time expediency, just as there is a case strongly supported for the provision of intellectually satisfying literature and art. But the present review is more concerned with the provision of literature and information specifically germane to the war demands.

Of outstanding importance in this connexion is the supply of current scientific and technical periodicals, both domestic and foreign. Second

only to this factor of supply of literature is that of its distribution for individual consultation in accessible localities. Lastly, there is the problem of adaptation of the literature to meet specific needs, that is, the problem of co-ordinated information or documentation.

As regards the supply of scientific periodicals, there is no reason to anticipate interruption in the receipt of the publications of non-European countries. But there may be delays in receipts, and occasional lacunæ due to enemy action. Probably the only real trouble will be delay, since replacement of any issues actually lost will be fairly simple. In the case of supplies of European periodicals, especially those emanating from Germany, considerable reduction in the normal supplies must be anticipated, and replacements will be difficult, if not impossible. It is important, therefore, that such stocks as are received should be wisely allocated to storage and distribution centres, and that any copies received for purely temporary perusal should be conserved in case of need. A clearing-house for this section of literature is needed at the outset, to which surplus copies can be sent for conservation, and demands for filling gaps submitted. Something on the lines of the Smithsonian Institution service might perhaps serve the purpose.

In regard to distribution, it is obvious that more elasticity will be needed in consequence of the re-distribution of centres of research. Many provincial libraries will have abnormal calls upon them for literature, whereas many London libraries will experience a falling off in demand, especially for consultation on the spot. The necessity for lending will be augmented, and the risk of casual losses in transit enhanced; added to this risk,

there will be that of destruction of publications issued, due to enemy action or accident.

From the point of view of increased need for borrowing publications, it is satisfactory to know that the lending service of the Science Library, South Kensington, will be maintained, and augmented to any necessary degree. The situation is being carefully watched, and appropriate steps are to be taken to meet any increase in demand for these widely appreciated facilities. But it must be remembered that this library is situated in a fairly vulnerable area, and alternative supplies ought to be provided in case its own are dislocated. The National Central Library is still functioning as a clearing-house for demands for books on loan, but it relies very largely upon the Science Library for supplies of scientific and technical publications. Probably, in this respect, it is not so much necessary to create alternative central scientific lending libraries as to establish a system of co-ordination among the various provincial libraries, of the university and research types.

A union-catalogue of war-time holdings of important foreign (especially European) periodicals in such libraries as are willing to lend appears to be a necessary first step. This catalogue could very rapidly be compiled, and located at the proposed institution serving as a clearing-house for supplies.

Finally, there remains the problem of supplying information, that is, of documentation; this service naturally comprises the initial one of indexing or abstracting. So far as is known, the normal peace-time British abstracting services are continuing to function, and our workers can rely also upon a steady supply of abstracts, etc., from the United States. But these latter may be delayed and interrupted, and the importance of an acceleration in the tempo of abstracting must be emphasized. A review of the available machinery in Great Britain is obviously needed in the present circumstances. Perhaps, as the sequel, a better co-ordination will be secured and overlapping avoided; what is important, however, is that any gaps should be closed.

On the wider question of documentation, a warning against over-emphasis upon specialization is needed. British research services are rightly proud of their diversity and individuality. But with the threat of war-time economies, and the urgent need for increasing the speed of the survey of available literature on certain problems, there is grave danger of undesirable duplication. Moreover, it has always been a defect of system in

Great Britain that undue attention is focused upon outstanding publications, whereas others are very largely neglected. This criticism applied particularly to publications in difficult languages. There is no excuse for neglecting such publications at a time when thousands of refugees, representing many different languages, are living in Great Britain and anxious to assist in any possible way the national effort.

Finally, the methods now in vogue for reconstituting published scientific and technical records into forms adapted to easy reference in relation to specific problems need to be improved. It has long been obvious that our present methods are largely a legacy from the last century, when records were much less numerous and activities less interdependent. Moreover, new techniques have been introduced, for example, into the business world, that are capable of adaptation with great resulting advantage into the field of scientific documentation. Hitherto their use in this field has been hesitating and half-hearted, and consequently their value has been diminished. A co-ordinated, large-scale adoption of modern methods is long overdue, and the present emergency suggests itself as providing the necessary inducement, for the reason that now the efforts of research workers, technologists and business *entrepreneurs* are directed to a specific task, and canalized in particular channels. Co-operation of endeavour and interchange of information are essential if the effort is to be a maximum.

To sum up: a central body is needed immediately to meet the conditions now obtaining in respect of the supply and use of current European scientific and technical periodicals. Its functions would be to record holdings of such publications in the various centres of research and libraries, and to maintain a service of spare issues for replacements in the various centres. It would also serve as a centre for lending via regional services outside London, and to co-ordinate information services and ensure adequate 'coverage' of the periodicals selected for attention. Any additional abstracting or digesting, translation or reproduction necessary might also come within its purview. Eventually it might be possible to cover non-European literature in addition, but the establishment of a central body for the limited purview suggested appears to be an urgent need. Lastly, it would act as a repository of information, and distribute appropriate extracts, epitomes or complete dossiers as needed.