Physicists and the War

J.A. Crowther

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Physicists and the War

The importance of physics and the physicist in this most mechanical of all wars is becoming daily more obvious. There is evidence that the Government are now fully aware of the necessities of the situation, and are either taking or have in contemplation adequate steps to meet it. A certain amount of confusion existed in the early days of the war, and in particular the actual number of physicists who would be required for service either with the forces or in industry was grossly underestimated, even by those who were in the best position to judge, and a certain number of students with respectable but not outstanding qualifications were called up and posted to units where their training could not be adequately used. The exigencies of the situation, assisted perhaps by representations made by Officers of the Institute, and particularly by our President, have produced a complete change. All men completing a University degree course the specialized branches of the Forces are filled. I have first-hand knowledge of the efficiency, skill and sympathy with which the officials of Central Register are carrying out this important task.

The Government are fully alive to the necessity of ensuring a continuous flow of trained physicists into the 'pool.' No pressure is at present being exercised upon the Technical Committees, who have the responsibility for the decision, to interrupt a man's scientific training at an unduly early stage, though the stringent scrutiny to which each student is now subjected at each stage of his training will probably result in the partial elimination of the 'third class Honours' man, for which we may feel no regret. It is understood that steps are being taken to ensure an adequate entry of physics students into the Universities from the secondary schools. On the other hand, University departments are to a certain extent modifying and abridging their courses to adapt them to the urgent needs of the times, and the student of to-day and to-morrow will be less widely read than his predecessors. In particular, he will not have had the advantage, which was becoming fairly general in recent years, of com-

In these days when more and more American physicists are being called into defense work, the present situation of physicists in Great Britain may perhaps be a forecast of things to come. With that in mind, the accompanying article by Dr. J. A. Crowther is reprinted with permission from "Notes and Notices," a private publication for members of the British Institute of Physics.
pleting his studies with a year or so of research training. It is very much to be hoped that, after the war, the Government will adopt some scheme for returning at any rate the best of their recruits to the Universities for 'reconditioning.'

It must be emphasized that, while the need for more physicists is urgent, the demand at present is mainly for junior physicists; for men, that is, to carry out highly skilled but nevertheless mainly routine jobs, both in industry and in connexion with the fighting forces. The construction, testing, maintenance and operation of new and complicated experimental devices calls for knowledge and technical ability which only the trained physicist can adequately provide; and obviously calls for their employment in large numbers. It is certainly not research, in the sense in which the word is used in peace time, and it is understandable that some of the brilliant young physicists called upon to carry it on (some of whom would have normally been experiencing the thrills and torments of original research) may feel that their talents could be employed to better purpose.

A similar feeling undoubtedly exists among the younger members of industrial research organizations, who, having served a few years apprenticeship in their present jobs would now, except for the war, have been reasonably expecting promotion to more important work. One can sympathize with them in this temporary halting of their career, though it is only fair to point out that many young professional men have had their careers much more drastically interrupted by the demands of military service, and one can appreciate still more their sincere desire to devote all their talents to the service of the nation. The Institute is sparing no effort to ensure that, as far as is possible, this desire shall achieve fulfilment. It must, however, be remembered that this routine work, dull and unimportant as it may seem to the individual worker, is in the aggregate a vital, possibly the most vital part of the war effort; the accuracy and skill with which it is carried out will play a decisive part in the ultimate event.

There is a little evidence that some firms, harrassed by pressure of work, are not making it easy for members of their staffs to seek more important posts elsewhere, fearing the difficulties of replacement under present conditions. The Institute is prepared to advise members, should such cases arise; though, where all is so important, questions of 'priorities' are not easy to decide. The Ministry of Labour possesses wide powers in such cases, though it is, quite rightly, reluctant to exercise them, and would only act on the grounds of national, not personal, advantage. In the meantime, we shall continue to notify all members whose names are on the Appointments Register of vacancies as they occur.

Of genuine fundamental war research it is unprofitable to pronounce. Very few people can be in a position to estimate either its magnitude or its quality; and they, for obvious reasons, cannot tell. The new, ad hoc, teams have been manned by the obvious people from the world of pure research, though there is a feeling that a larger admixture of men with industrial research experience might have expedited the work. There may be some justification for this feeling, though it has to be remembered that some of our leading industrial teams are engaged as such on full-time war research. We can, at any rate, welcome the fact that the newly appointed Engineering Advisory Committee has, on its membership, three distinguished Fellows of our own Institute, Dr. A. P. M. Fleming (recently a member of the Board), Dr. C. C. Paterson (ex-President) and Sir Henry Tizard. Their presence on the committee should ensure that the vital contribution which physics still has to offer to the national effort will not be disregarded.

J. A. C. HOWE

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