

# NATURE

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## SCIENCE AND THE PRESS

THE Conference on Science and the Citizen which was arranged last March by the Division for the Social and International Relations of Science of the British Association (*NATURE*, April 3, p. 382) was, as Mr. J. G. Crowther observed, the first in Great Britain to be devoted entirely to the consideration of the means which can be used to increase the public understanding and appreciation of science and the methods of improving them. The Press can exert a most powerful influence in this matter, and appropriately a whole session of the Conference was devoted to a discussion on science and the Press. Unless effective relations can be established in that field, the general appreciation, not only of the powers but also of the limitations of scientific research, which Sir John Anderson stressed as vital for the effective contribution of organized Government research, industrial research organizations and academic and private research institutions to the solution of post-war problems, can scarcely be achieved.

The subject was frankly and fully discussed at the Conference. It was recognized that as regards the human element there have been faults on both sides. While it would be unfair to expect the scientific community to accept the whole responsibility for the failure of science to exert upon the public mind the influence that it should, scientific workers appear much more disposed than formerly to admit their own shortcomings in the task of dispelling public ignorance of science. It is recognized that the task of exposition is vital and that it calls for qualities of mind no less deserving of respect and reward than those of the investigator whose results in some recondite but important field have to be interpreted to the lay mind.

We may leave on one side the admitted weakness of many scientific workers in interpreting their own results, their tendency to keep to themselves, their shyness and technical jargon—these are matters which will undoubtedly be corrected from within, partly as the effect of a wider and more cultural education as a basis for scientific study is felt, partly through the efforts made by scientific men themselves to counteract the effects of excessive specialization now that the danger is recognized, and partly by the pressure of professional opinion awakened to the importance of closer and fuller contact with the world at large if men of science are to play a fitting part in its shaping. What we may fairly look for as one result of the Conference is a more generous attitude to the scientific expositor himself, for he has rarely received from his confreres the honour that is his due. Nevertheless, as Mr. J. G. Crowther pointed out, until it is possible to make a reasonable income from reporting science, very few good men are likely to become what the Americans call 'science writers'. However, it is at least as important that such expositors should be sure of the appreciation and support of their professional colleagues in the world of science.

The ultimate factor on the personal side of this question is the long-range one of education. The difficulties arise as much from the neglect of cultural

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and human elements in the training of the man of science himself, and from specialization at an over-early age making him a half-educated man, as from the failure to include in the education of every citizen such a broad training in the method and outlook of science as will fit him or her to live intelligently in a world in which scientific factors have so profound an influence. They will not disappear entirely until these educational defects have been rectified and come to fruition in the following generation, and this factor must be kept in mind in considering what form of organization should be adopted to improve the immediate position and to serve the needs of adult education in this respect.

There can be no question that, as Mr. H. Brewer has pointed out in a recent letter (*NATURE*, May 8, p. 534), a large measure of responsibility for the present position lies on the shoulders of scientific workers themselves through their neglect of organization to that end. The work which Science Service has been doing in the United States since 1921 has no parallel in Great Britain, and the Institution for the Popularization of Science which now conducts Science Service is even further ahead. It is not sufficient to blame the Press for its failure to appoint science editors or scientific correspondents, when on the side of the scientific worker arrangements for the presentation or interpretation of scientific and technical advance are so defective and poorly organized. The neglect of scientific workers to organize on rational lines their own publications within the fields of a particular science even in these days of paper shortage is a further illustration of this failure.

One of the most significant features in the present situation is the great opportunity which the War has opened up for the wider presentation of scientific and technical knowledge to the many who, in the Forces or in their war-work, have become engaged in scientific and technical operations. Mr. Crowther did well to remind us of the field that is here open for increasing the efficiency of war production, and his suggestion that the Minister of Production should, like the Ministers of Food and Fuel, secure space in the daily Press and run a series of scientific and technical articles on the innumerable fascinating non-secret processes used in the field of production deserves to be explored. To assist the worker to understand what he is doing is a sound method of improving production or maintaining it under stress, and is a prime reason for greater attention to science in the Press. It is equally important that there should be a widespread appreciation of the implications of scientific advance in such fields as nutrition, health, agriculture, fuel, the use of the land, forestry, and the like, so that reconstruction may be formulated and judged on impartial and practical lines. That is a further urgent reason for attention to this question; the problem of the social relations of science, with its claims for wider and fuller consideration, is an additional reason.

Mr. Henry Martin, of the Press Association, in his paper at the Conference, urged with some force that it is for science to take the first step towards a *rapprochement* with the Press, and he referred to the

encouraging results which have already attended some early steps in this field. There was immediate response to the articles issued on behalf of the Central Council for Health Education, and to the work of the British Council. The Press conferences held during the War at regular intervals by the chief medical officer of the Ministry of Health are a further instance of wise co-operation with the Press, and Mr. Martin spoke with warm approval of the Press Bureau of the Ministry of Information. What science needs, he suggested, is a Press Bureau for the collection, collation and dissemination of scientific information, with offices in or near Fleet Street. Such a bureau should have international ramifications and contacts in the foreign capitals so as to permit of interchange of information and rapid and frequent consultation. Each bureau would, as in London, be responsible for organizing the collection of science news in its own territory.

Such a Bureau would require a director, together with an editor or a news editor and a small staff of men with both journalistic and scientific qualifications—men with a practical knowledge of newspaper needs and technique, and with a catholic interest in, and knowledge of, science, combined with a capacity for assimilating material in the raw and turning it into simple language for publication in the daily Press. Such a combination of qualities is by no means easy to find, and the question of personnel is likely to be a real difficulty in launching any such scheme. Mr. Martin is right none the less to stress the importance of such qualifications, and particularly in the selection of the director, who besides being well known to, and *persona grata* with, scientific men, must possess first-class organizing ability.

The brief sketch of the activities of the director and of the Bureau which Mr. Martin outlined shows how much might be done, not only to put the relations of science and the Press on a firm footing of understanding and mutual confidence, but also to open up an even richer field than at present in the magazines and periodicals. An essentially similar scheme was outlined by Mr. Ritchie Calder in his plea for an Institute of Scientific Information. He recalled that, at its Dundee meeting in September 1939, the council of the British Association had on its agenda the discussion of a scheme for the establishment of an organization in Great Britain linked up with similar agencies in Europe and the United States to ensure a regular, accurate and up-to-date service of news for the Press, films and radio, on scientific developments.

Mr. Calder did not go into the same detail as Mr. Martin in his proposals, but he stressed, like him, the importance of very careful selection of staff and of establishing links with panels of experts in all branches of science. Upon such personal relations and contacts the success of any such Institute or Bureau must very largely depend, and it is the more important therefore that Mr. Martin's advice to proceed slowly should be heeded. Time will be required for the discovery of staff and for the establishment of the essential relations and organization, which itself may be a matter for experiment, just as the

technique of communication itself merits research, as Mr. Crowther pointed out.

What must be recognized is that these tasks cannot be left to the casual observation or investigation of busy men who are primarily engaged on other work. Exposition and interpretation must be a full-time primary occupation with appropriate status and financial recognition. Furthermore, it is essential that the organization of any form of Press bureau for science should not be undertaken without consideration of scientific and technical publications as a whole.

Granted the wider interest that the War has awakened in science, it may well be held that both Mr. Calder and Mr. Martin are unduly optimistic as to the effect of the War on the mental attitude of the average reader. There is at least this much in Mr. Wells's view that the practicability of using the newspaper to-day as a vehicle of instruction may be open to challenge. Admittedly it is difficult to view some newspapers as other than purveyors of amusement and sensation, but that is not true of all. Are we even to assume that the popular newspaper must always be limited by the deficiencies in ideas and education of the readers for whom it caters, and to exclude the possibility of even any slow advance in this respect?

To adopt that position seems uncomfortably like an admission that the War will be fought in vain, and no world order established worthy of the effort and sacrifice made. Short of such a defeatist attitude, we must utilize the Press as one means of consistent interpretation and exposition to the public of at least the social significance of scientific and technical advances as they are made. We should neglect no means by which the task of making every citizen aware of the place of science in the modern world may be discharged more effectively.

The charge of complacency is easily levelled against both the scientific worker and against the Press. What is required is constructive criticism, goodwill and readiness to co-operate. In this matter of publication, scientific workers have clearly to set their own house in order, and one result of closer attention to that would be more first-class exposition in textbooks and articles in the magazines and periodicals, the elimination of useless jargon and of the grosser overlapping of publication, particularly of abstracting.

It may well be hoped that the Conference will stimulate further consideration of the problem by the professional associations of scientific workers and of journalists themselves. The hope of progress lies largely in the collaboration of such professional bodies on both sides. Some of the opportunities were clearly displayed at the Conference—opportunities which it requires no fresh organization to seize. Organization may enlarge those opportunities, but no new technique will be needed: it can be done only by trained minds devoted as implicitly and sincerely to the exposition of the results of scientific discovery and their application as those devoted to the acquisition of fresh facts and discoveries.

To repeat what was written in these columns many years ago: "The imagination of mankind will

only be fully touched by the achievements of science and man roused to a wider application of scientific method, when innumerable artists of science, great and small, in utter fidelity to truth—to science as to life—have made plain its mysteries in words understood of all". That task rests finally on the shoulders of the expositor. Deriving his authority from his power of comprehending his subject, assessing values, and understanding his public, his scientific training must be supplemented by his ability to interpret facts and values in language understood by the common people. In proportion as he displays the same qualities of mind and unswerving loyalty to truth which his fellow men of science show in the laboratory investigations, the task of exposition will stand out before all in its true greatness, as compared with that of propaganda with which it is too often confounded.

## AUTHORITARIANISM VERSUS INDIVIDUALITY

### The Fear of Freedom

By Dr. Erich Fromm. (International Library of Sociology and Social Reconstruction.) Pp. xi+257. (London: Kegan Paul and Co., Ltd., 1942.) 15s. net.

THAT our world stands in flames and that no one can say with any hope of finality what in fact is happening to us are facts which are present in everyone's mind. Most of the attempts to explain the situation from recent economic and sociological causes are patently insufficient, and Dr. Fromm is wise enough to present his excellent survey with a clear eye on its necessary limitations. His analysis of the individualistic character-structure of modern man, shown in relief against the contained collectivity of the Middle Ages, is an excellent example of the value of the historical method to psychological understanding. The fundamental premises of the Gothic mind were self-evident and unquestioned. Men marched in step with their time. Their fate was laid down and contained in their community. From the Reformation onward this containing envelope was ruptured and the individual began to emerge into a world which no longer shielded him from the deep-rooted sense of his own impotence and powerlessness over and against dangers and forces he could not control. Instead of being integrated and enclosed he felt exposed and alone, and this was projected into the idea of a hostile deity whose arbitrary nature demanded indefinite and intense placatory effort. The Calvinistic conception of God and the world were the inevitable result of this ejection of medieval man from his contained paradise.

Dr. Fromm has excluded the study of myths from his field. It is a pity. Because the evolution of conscious man from the instinctual paradise of Nature, in which primordial unconsciousness enclosed him in a timeless garden, is surely the continuous archetype of every new step towards individual consciousness. But when we ask ourselves what is that force which time and again in history has prised man away from his containing background, and driven him forward upon this age-long experiment of individuation, can we, in fact, answer it in the terms given by the title of this book? Is it, in fact, the fear of freedom which