

The Need for a World Federation

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THE need for a World Federation of existing national organizations of scientific workers, and for its extension to countries where such organizations do not yet exist, has been increasingly felt because in the work of the separate organizations more and more tasks were encountered which could be carried out by, and only by, such a World Federation. The nature of these tasks can be seen to arise from the imperfect and confused state of contemporary science and of its application to human welfare. Science is very unevenly developed throughout the world today. In many ways the present distribution of scientific effort is almost inversely proportional to the needs of the different peoples of the world for the benefits of science. The highest concentration of science today is to be found in the industrial states of Europe and North-East America. It is there that the material standard of living and the level of democratic culture is also the highest. The people of the rest of the world, and particularly those of the old civilisations of India and China, have a far lower standard of nutrition and health and education, and are only beginning to achieve effective self-government. Their needs are far the greatest, and can be met only by rapid development of science and its planned application to urgent problems in these countries.

But science in Europe, owing to the ravages of fascism and war, is itself by no means yet in a flourishing state. It will require the highest degree of mutual assistance between scientists all over the world to overcome the consequent loss of men, equipment and experience; and these deficiencies are by no means the only ones, for in the countries that have been relatively untouched by the war, science, as Professor Joliot has pointed out in his Introduction, has to face the dangers implicit in militarisation and industrial monopoly, with its concomitant evils of national and industrial secrecy. In every country the more socially conscious and responsible scientists are fighting to secure the fullest use of science, and to protect science against the dangers that threaten its growth and its use. This has been the *raison d'être* for organizations of scientific workers of the most diverse kinds, from the old-established British Association of Scientific Workers to the Federation of American Scientists, created after Hiroshima, to deal with the social and political implications of the utilisation of atomic energy.

The value, however, of each national organization can only be fully realized if they are able to give each other mutual support, and the effectiveness of the Federation will be the measure, both of the need for such support and the capacity that the scientists in different countries have of working together for common ends. Some of these ends are of an extremely general and long-term nature. Others are particular to the circumstances of the times and to the conditions in particular countries.

The first and most general aim of the Federation is to provide a permanent basis for mutual interchange of information of proved value to the constituent national bodies, through which each can be spurred forward to greater and more effective efforts by the examples of others. As this interchange develops and we get to know each other better we will move steadily

towards one world scientific community, all scientists freely co-ordinating towards accepted common goals.

More concrete and equally general will be the function of the Federation to provide for mutual assistance and support of its component organizations. Here those countries with powerful and well-established associations of scientific workers can do much to win recognition for similar associations in other countries. They can not only do so by the force of scientific public opinion, but also, now, through the organizations of the United Nations. The associations can together far more effectively than separately wage war against the restriction, misdirection and waste of science—some of the most potent factors in holding back and endangering our modern civilization. We will need to push together for the spread of science all over the world, particularly in the backward countries, and to see that this science is not something merely imported from abroad, but takes strong root in native culture, so as to provide a basis for the greatest contribution to science from the people of the whole world.

One aspect of this which we are agreed is essential to the success of our aims is the general raising of the status of science and of scientific workers throughout the world. We need, in the interests of science itself and still more in the interests of humanity, to see that the social and economic position of scientific workers is such that it enables them to work efficiently and give of their best. In many parts of the world this will mean a struggle for the most elementary prerequisites, such as civil liberties and employment at adequate salaries, but generally we aim at establishing a scientific workers' charter embodying the requirements of adequate conditions for work and freedom of publication and movement, which we hope will furnish a world standard in the light of which the position of scientific workers in any country can be judged. Once this charter is drawn up it will be the business of the Federation to fight resolutely until its benefits are secured, in principle and in practice.

Our constitution* also requires us to see that the voice of science is effectively heard in questions of national and international policy. We consider that unless they press this claim scientists are in fact morally responsible for the misuses to which their discoveries are put. The example of the Federation of American Scientists in calling attention to the implications of the atom bomb is one which needs to be followed in a co-ordinated manner by scientists throughout the world. We recognise that today the short and long term effects of scientific advances cannot be appreciated without a far fuller understanding on the part of the scientists of the political and social environment in which they work, and on the part of the people at large, of the scientific and technical aspects of the new developments. This double recognition involves us in a campaign of both popular and self-education, and here the existence of the Federation, which can draw together the experience of many countries, should prove invaluable. We must expose the oft-repeated and pessimistic fallacy that man's moral development has not reached the level competent to deal with the new powers that science has put in his hands. It is, we can demonstrate, by the effective integration of social and physical science and by their application to urgent human problems, and only in this way, that the moral as well as the physical advance of science can be simultaneously realized.

The more particular and urgent problems that the Federation will have to face in the immediate future are those of the application of science to the needs of an impoverished and insecure world, in the aftermath of a war which has increased many fold the miseries produced by an already bankrupt social organization. The actual application of science to such questions as health, nutrition and agricultural and industrial production, are, of course, already in the hands of organizations in the United Nations, such as the Food and Agricultural organizations and the Economic and Social Council; but it would be a fatal optimism as the experience of

Unrra has already shown, to assume that this in itself will secure effective action in-time. The value of our Federation will be in mobilizing at first scientific and then public opinion behind these organisations, and at the same time offering them all available technical and scientific assistance through our members. In this task of reconstruction the part that the workers at large will play will be a predominant one. Until recently the scientist has had little to do with the detailed carrying out of the ultimate application of science in the workshop and in the field. Experience of the war, particularly in operational research, has shown us how much is to be gained by learning from as well as helping in this task. The British Association of Scientific Workers has already had much experience of assisting the organized workers in Britain to formulate a joint productive policy in which science can be used for more effective and at the same time more humane productive methods. In this the scientific worker has found a practical means of taking part in the common effort of humanity.

The world would not find it so hard to cope with the problems of production if at the same time it were not harassed by the fear of still another war. This is already diverting a large part of economic and a still larger part of scientific effort to purely destructive purposes, but in addition it is tending to destroy the very possibility of science, which is of its essence international and open, by the imposition of military and economic secrecy and by the consequent loss of the political liberty and rights of the scientists themselves. Some of the basic needs of science, such as publication and travel, are already abrogated. Beginning with nuclear physics and bacteriology, whole fields of science are threatened with purely military control, equally fatal to international understanding and the progress of the sciences themselves. This danger is being met country by country, but it is here that mutual support is most clearly called for, and this in itself will justify, even necessitate, the existence of a World Federation.

In this respect the whole purpose, however, of such a Federation would be lost if it were not effectively world-wide. To limit our membership to this or that group of nations would be from the outset effectively if unintentionally to ally ourselves with the forces of war and destruction. We have in science a common human ground of belief, to which our fellow workers in all countries subscribe. The culture that we represent is a world-wide one, and it will be part of our task to prevent the dangerous tendencies, which attempt to divide the world of thought into opposing camps, and to lay particular emphasis on this or that aspect of our common cultural inheritance. This was the method used by the Nazis to delude a large part of the world while they prepared to destroy or enslave it. But lack of division does not mean uniformity. Differences of opinion, especially on philosophical and ethical points not yet fully integrated into our scientific appreciation of the world, are bound to persist. The Federation does not and could not attempt to impose any common creed, but it does confidently expect the active support of all those scientific workers who desire that the increase of knowledge should go forward hand in hand with an increase in human welfare and democratic government. In this task we will not be alone, but we trust the Federation will be able to work effectively with organizations and individuals who, in their different walks of life, have the same general aims.