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The Month in Focus

Control of the Atomic Bomb

THE MAN in the street, weary of war and longing for the good things of peace, and the scientist, increasingly alarmed by the frightful prospect of a still more destructive war, were agreed on one fundamental fact. The atomic bomb must be controlled! But control meant many things.

A recent Gallup poll indicated that to the public control meant keeping for our own use the secrets of the atomic bomb; but to most scientists control implied international cooperation, reached by the difficult means of first, national, then international commissions. The goal of international control of the atomic bomb is a must, for we shall be deceiving ourselves if we think that the possession of such weapons by ourselves or by any small group of nations makes war less probable. On the contrary, it will promote international friction, jealousy and ill will, and an entirely false sense of security. We shall be deceiving ourselves if we think that it will be possible to keep these developments for our own exclusive use. The atomic bomb does not depend on any particular secret "invention" and no discovery was involved that is not generally known. The present bomb is one of several possible and more or less obvious solutions based on knowledge to which every civilized nation has contributed and has access. We have no monopoly on knowledge, and any nation that can afford the effort can do what we have done and will no doubt do so if we insist on withholding information. The fact that it has been done has demonstrated the soundness of the theories and principles involved and anyone who undertakes the development now can do so with complete confidence of success. Furthermore, it is now known which ones of the several possibilities have been most successful so that no time need be wasted in working up blind alleys. It is not impossible that the job could be done in three years or even less if sufficient effort is put into it. To say the least, our bargaining power will be weaker than it is now.

INTERCHANGE OF SCIENTIFIC INFORMATION

We shall be deceiving ourselves if we think that any group of men, whether military or government, can retain a monopoly on this or any other important part of science. The men in whose sweat the atomic bomb was made are free men, and their work was based on the work of other free men before them. They cannot be kept in isolation, working in secret to produce more destructive weapons. They are urgently needed for more important things, for it is not the atomic bomb that is the great asset to civilization, but the men who made it and the science that made it possible, and science does not thrive in concentration camps. Unquestionably, scientists have contributed much toward the winning of the war, but their greatest contributions were not made during the war, they were made during the twenty or more years of peace preceding the war, when we studied and learned the tricks that made the new devices possible and trained the men that produced them and used them so well.

Now that the war is over, it is a matter of the greatest importance that we return to a normal healthy development in scientific research and training, for only in this way can we replenish our depleted stocks of new ideas and manpower. This can be done if we not only permit but encourage free and untrammelled exchange of knowledge and ideas, not only within our own country or within a small group of countries but without reservation between all nations. The values of such interchange are so great that no nation can afford to refuse to cooperate, for refusal would brand such a nation as a menace to society, whether that nation be Russia or the United States. Surely, international relations are complex and difficult, but they are not improved by stockpiling atomic bombs or any other kind of aggressive armament. Neither can they be improved as long as barriers such as now exist between ourselves and the

Russians are permitted to prevent free exchange of knowledge and opinion. We have no reason to believe that Russia has any warlike intentions, nor has Russia reason to think that we have, but in this matter, believing is not enough; we must know and so must they. Mutual promises and assurances are not sufficient; all nations must be willing to submit to whatever control is necessary to insure that no one nation or small group of nations can secretly prepare for aggression and thus menace other nations. This means that the barriers must be broken down at whatever cost. The alternative is war.

A GROUP OPINION

In an open letter to the President and the Congress of the United States of America, members of the faculty of the California Institute of Technology and of the staffs of the Huntington Library and Mt. Wilson Observatory seek to present their conclusions on atomic energy.

An Open Letter to the President and the Congress of the United States of America

WE, the undersigned, address you in our capacity as private citizens concerned about the future of our country and of civilization itself if faced by another war. We have studied and discussed the atomic-energy legislation now before Congress and have formulated such conclusions as we are able to reach for whatever use you and the country at large may wish to make of them.

Almost any sacrifice to bring about international responsibility is justified.

We believe that World War II has demonstrated with fearful clarity the urgency of intelligent, informed, persistent and sacrificial effort by all nations to prevent the occurrence of a still greater catastrophe.

We believe with Niels Bohr that "only international control of every undertaking which might constitute a danger to world security will in the future permit any nation to strive for prosperity and cultural development without constant fear of disaster."

We believe that scientific facts cannot be kept secret for long, and that other nations will discover how to make atomic bombs within a few years. Unless that short time is used to establish international control, an armament race may ensue with results even more disastrous than they have been in the past.

We believe, therefore, that the United States should take the lead in negotiations seeking to establish this international control with its appropriate inspection procedures.

The first step is national control. Immediate action is necessary.

We believe that national control must precede international control. Therefore, a national commission should be set up immediately to execute this control.

We believe that additional functions of this commission should be (1) to advise in the formulation of policies and procedures for international control, and (2) to protect and foster scientific research on atomic energy and its utilization for non-military purposes in

legislation in the hope that their views may be helpful to the President and to the legislators in arriving at a means of control for the atom bomb.

This action has been an outgrowth of a series of weekly seminars which started in early October at C. I. T. Participating in the seminars and stating their views on the problems of the atomic age have been men who understand the full implications of the problem involved. Among the leaders in the discussions were: Dr. Robert A. Millikan, Dr. Charles C. Lauritsen, Dr. Paul S. Epstein, Dean Ernest C. Watson, and Dr. Linus Pauling.

Their close association with the work done in the atomic field and their sincerity in hoping for a solution to control the atomic bomb through international understanding and agreement adds importance to the letter which we are printing in this issue. It merits profound consideration.

order that the achievement of nuclear fission may prove a boon to mankind instead of a menace to civilization.

We believe that this commission must have broad powers. We say this in spite of the fact that the very idea of control and secrecy would be intolerable to all of us if such restrictions were not necessary. We accepted controls during the war as essential to victory; we believe that we must now accept controls as equally essential to peace.

The composition of the Control Commission is of utmost importance.

We believe that the nature of the phenomena attending the release of atomic energy and its exploitation makes it mandatory that the Control Commission be chosen from science as well as from industry and government. Moreover, only a commission on which science is adequately represented can fairly judge the degree to which freedom of scientific research needs to be restricted in the national interest.

We believe, moreover, that the personnel of the commission should represent in knowledge, integrity, and ability the best that is available without regard to political affiliation or official position, and that they should approve international control as an ultimate objective.

We believe that, while the Johnson-May Bill in its present form may require substantial modification, this should not be allowed to prevent prompt and decisive action.

We pledge support to an all-out effort in the cause of international cooperation.

We believe that you, truly representing the desire of the American people, are exerting yourselves to the utmost in the cause of a new world order of international cooperation in which the menace and fear of war will be eliminated. To this end we pledge our support.

We believe that you will not fail us. You will not fail a world which is looking to you for courageous leadership.

November 8, 1945