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H. J. Muller and the Geneva Conference

The Atomic Energy Commission was technically well within its rights in barring H. J. Muller's paper that was prepared for presentation at the Geneva conference (see page 822). It was understood from the beginning that not all papers submitted could be accepted. And there was certainly no obligation to name Muller as an official delegate. Nevertheless, many persons will regret the affair, because devious methods appear to have been used to keep Muller off the program and because his viewpoint, which happens to differ significantly from that of the commission, was apparently not as fully represented at the conference as most geneticists would have wished.

If one adopts the generous view that the AEC officials acted in good faith and that the final outcome was the simple result of ineptness, there still remains the question of whether the decision to bar Muller's paper was a wise one. Many of those who know Muller's international reputation as a competent and responsible expert on the genetic effects of high-energy radiation will believe not. The scientists who attended the panel meeting at Geneva on "Genetic effects of radiation: human implications" expressed themselves wordlessly but eloquently by giving Muller a standing ovation as he sat silent in the audience. No doubt, their reaction is shared by large numbers of scientists in this country—inside the AEC as well as outside.

Although there is widespread agreement among geneticists regarding the qualitative effects of high-energy radiation on hereditary material, much remains to be learned about the quantitative effects, particularly at low dosages and on man. It is also true that there are wide gaps in our knowledge of the direct effects of very low dosages of radiation on man. At a time when large human populations are being exposed to small amounts of radiation in addition to natural background, information on these points becomes extremely important. It makes no difference whether the radiation comes from weapons of war or from the many peacetime uses of atomic energy that can now be foreseen. Research workers in AEC-financed national laboratories and in many other laboratories are trying their best to get this information as quickly as possible. AEC is doing a magnificent job of helping them—through financial support and otherwise.

It is tremendously important at this time that there be free and open discussion of all possible radiation dangers. Only in this way can maximum progress be made in evaluating the dangers and taking necessary steps to reduce or eliminate them. There is no magic formula for arriving at a figure for the so-called "permissible dose." In Handbook 59 of the U.S. National Bureau of Standards, in which this term is defined and its origin reviewed, it is made clear that this dosage—0.3 roentgen units of x-rays per week for whole-body irradiation—should be permitted only for adults exposed in small numbers. For children or large populations, it is recommended that the usual value be divided by 10. With the prospects of a great increase in peacetime use of atomic energy, we cannot too soon know what are reasonable upper limits of radiation where large numbers of persons are involved. Important precedents are being established, and it will become increasingly costly and difficult to modify them if they should prove to be inadequate.

There are therefore compelling practical reasons, to be added to the obvious ones that should apply at all times to all forms of knowledge, for resisting any authoritarian or arbitrary suppression of free and open discussion of the hazards to man of radiation.—GEORGE W. BEADLE