

# BOOK REVIEWS

Selection of books for review is based on the editors' opinions regarding possible reader interest and on the availability of the book to the editors. Occasional selections may include books on topics somewhat peripheral to the subject matter ordinarily considered acceptable.



## DIALOGUE OR DIE

*Title* Unless Peace Comes  
*Editor* Nigel Calder  
*Publisher* Viking Press, Inc., 1968  
*Pages* 243  
*Price* \$5.75; \$1.95 paperback  
*Reviewer* W. A. Higinbotham

Science and engineering have played an ever more active role in warfare in recent times. To coordinate this effort the National Academy of Science was established during the Civil War and the NRC during World War I. In the Second World War, the whole scientific community was involved in developing weapons and counter weapons. Although the impetus for involvement has not since then been so compelling, a substantial fraction of the technical community is still involved in defense work. Not only has nuclear power come of age, but nuclear weapons and delivery vehicles have gone through four or five generations of "improvement" without increasing the security of any nation or the world as a whole.

The contributors to this volume believe that arms control, rather than arms development, offers the better chance for survival and, to illuminate this belief, they try to visualize what lies ahead on the present course.

Sir John Cocroft and David Inglis discuss the present dilemma with regard to nuclear weapons, the destabilizing and dangerous implications of anti-ballistic missiles, multiple individually-guided reentry vehicles, and fractional orbital bombs. However, the essential point of this collection is that nuclear missiles are not the only possibilities

by which increased understanding in many fields may be exploited for military purposes. A widely recognized field is that of chemical and biological warfare, on which the US spends at least \$300 million a year. This subject is treated thoughtfully by Profs. Fetizon and Magat of the Faculté des Sciences, Orsay and Prof. Heden of the Karolinska Institute, Stockholm. While unquestionably very potent, there are tactical as well as humanitarian questions, so far, which tend to inhibit their use, but the tactical situation may change.

Any collection of essays must be uneven in content and effect. I found the chapters on automatic and on psychological warfare unconvincing and weak. On the other hand new (at least to me) thoughts on weaponeering are suggested by William Nierenberg for employment in the deep oceans, and by Gordon MacDonald for exploiting meteorology.

Perhaps most thought provoking, for those who don't often participate in the decision-making process, are the chapters by Andrew Stratton of England and Harvey Wheeler of the US, both of whom have been exposed to this process. "Diplomacy is already one of the chief victims of computerized thermonuclear warfare," states the latter, a frightening thought if true. This, perhaps, is the basic problem. It is too much for any one person to comprehend the technical situation and possibilities, much less to understand all the political and human factors which relate to conflict and to conflict resolution and which are intertwined with the arms race.

This little volume is a useful look at the present and the future, especially for the technically oriented. It is dispassionate and factual in the approved scientific manner and good basic material for the engineer or scientist who would contribute

responsibly to the dialogue on which survival must depend.

*William A. Higinbotham came to Brookhaven National Laboratory in 1948 and for 20 years was in charge of the Instrumentation Division. Last year, he transferred to the Nuclear Engineering Department where he and Herbert Kouts head BNL's safeguards work. His AB (1932) is from Williams College, which also awarded him an honorary DSc degree in 1963. His intense activity and interests (which range from square dance calling to participation in official discussions on arms control) are illustrated by the fact that one week after we asked him to review this book our reply post card was returned with the notation in discouragingly large letters: "I can't possibly." Yet a month later, when we phoned to find out why the book hadn't been returned, his secretary informed us that he began reading it, couldn't quit, and would write the review after all.*

## WHERE RESEARCH IS NEEDED

*Title* Radiation and the Control of Immune Response  
*Publisher* United Nations Educational, Scientific and Cultural Organization, 1968  
*Pages* 126  
*Price* \$2.50  
*Reviewer* William R. Bibb

The use of ionizing radiation in industry, biological sciences, and