

places written less vaguely and ambiguously, the reviewer wants only to suggest that they try to understand the author's words in context and reformulate these for themselves, when possible, in some clearer fashion. Those who are disturbed by the author's way of discussing metaphysical concepts such as those of freedom, purposiveness, and God as guarantor of reality, might perhaps be conciliated by the author's modestly expressed confession in the new preface: "With the years I have grown more hesitant about the metaphysical implication of science."

At the end of the fourth appendix, speaking of the scientific progress during the past twenty years, the author recalls that interest in the continuous aspect of nature was still dominant in 1926 and then remarks: "In the last two decades, however, discontinuous and combinatorial structures underlying the natural phenomena have become of increasing significance. Here a deeper layer seems to come to light, for the description of which our ordinary language is woefully inadequate. The preceding Appendices bear witness to this changed outlook. However, we could not do much more than assemble relevant material; the philosophical penetration remains largely a task for the future."

In the remaining portions of the book, mathematicians will likely find it delightful to read what Weyl has to say about "creative definitions," the axiomatic method, irrational numbers, complete induction, invariant relations, Riemannian geometry, relativity, Gödel's and Gentzen's results on the structure of mathematics, and combinatorics. All those interested in the philosophy and methodology of natural science will no doubt enjoy reading his scattered observations on a variety of subjects such as: Kant's transcendental idealism, causality, classification, matter, probability, truth, confirmation, objectivity, the division into a priori and a posteriori, the formation of scientific theories, the hierarchy of structures from quantum mechanics to chemistry and even the laws of heredity, mutation and quantum jump, a biological principle of indeterminacy, main structures of the physical world, perseverance versus adjustment, cosmogony, geology, phylogenetics, etc., etc. Although perhaps few readers could hope to comprehend all the details in this amazing book, the reviewer is of the opinion that those interested in the philosophy of mathematics and natural science will certainly find this a highly rewarding book for careful study in toto or in part.

Hao Wang
Harvard University

Peace Potential

CONSTRUCTIVE USES OF ATOMIC ENERGY. Edited by S. C. Rothmann. 258 pp. Harper and Brothers, New York, 1949. \$3.00.

The papers in this source book, as the editor points out, have been compiled from the outside looking in, that is, from the point of view of the layman seeking an insight into atomic energy rather than from the standpoint of the scientist looking out, and occasionally down, on the reader. In most of the chapters this very worthwhile aim is accomplished. Compiled by S. C. Rothmann, a research engineer on the staff of the Accident Prevention Department,

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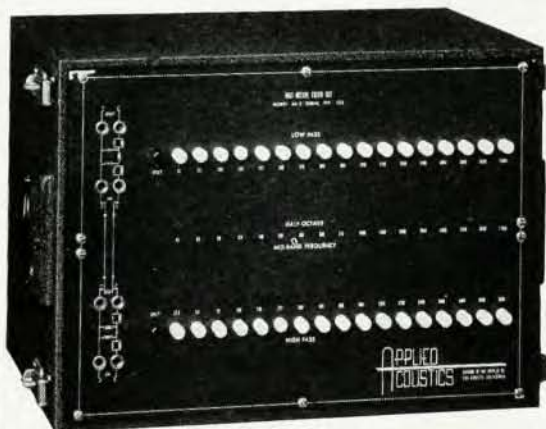
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Paul C. Aebersold
U. S. Atomic Energy Commission

Books Received

TABLE OF SINES AND COSINES TO FIFTEEN DECIMAL PLACES AT HUNDREDTHS OF A DEGREE. Compiled by the National Bureau of Standards. 95 pp. Government Printing Office, Washington, D. C., 1949. \$0.40.

MEDICAL X-RAY PROTECTION UP TO TWO MILLION VOLTS. Handbook 41. 43 pp. Published by National Bureau of Standards. For Sale, Superintendent of Documents, Washington 25, D. C. \$0.15.

STANDARD SAMPLES ISSUED OR IN PREPARATION BY THE NATIONAL BUREAU OF STANDARDS. Supplement to Circular 398. Publications Section, National Bureau of Standards, Washington 25, D. C. No charge.

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