

SHORTER NOTICES

Identität und Wirklichkeit. By Émile Meyerson. Translated from the third French edition by Kurt Grelling; with Introduction and Notes by Leon Lichtenstein. Leipzig, Akademische Verlagsgesellschaft, 1930. 40+534 pp.

The philosophy of Émile Meyerson has been expounded during the last twenty years, in four large volumes, the first of which has now appeared in its third edition; it is this edition which has formed the basis for the German translation that is before us for review. It contains besides the author's preface and three appendices (on *Leibniz, Newton, and action at a distance*; on *The followers of Copernicus and the principle of inertia*; and on *Herakleitos πάντα ρει*), an introduction to the philosophy of Meyerson by Lichtenstein. This introduction makes clear that the work of Meyerson is of especial interest and significance for mathematicians as well as for those concerned with the sciences. A detailed examination of the bearing of Meyerson's work upon the philosophical foundations of mathematics would doubtless be of great value. It must suffice here to say that his fundamental doctrine refers to the conflict between the nature of the human mind and that of nature outside man, and that his method consists in an historical survey of the manner in which scientific conclusions have been arrived at.

ARNOLD DRESDEN

Das Unendliche in der Mathematik und seine Ausschaltung. By Felix Kaufmann. Leipzig and Vienna, Franz Deuticke, 1930. x+203 pp.

This book advocates nothing less than the elimination of the infinite from mathematics. At first this seems a bit startling (though the idea itself is hardly original), but it soon turns out that the author's viewpoint is not very far from that of Brouwer and the intuitionists, on whom he leans quite heavily.

The author's major interest seems to be in philosophy, but one learns from the preface that he has been interested in the foundations of mathematics for thirteen years, and for six years has taken part in the discussions of the foundations undertaken by a circle of philosophers and mathematicians of Vienna under the leadership of M. Schick and H. Hahn. He acknowledges the cooperation of A. Becker, A. Fraenkel, and K. Menger.

The book itself, apart from its thesis, can be recommended as a pleasant introduction to the foundations of mathematics in the present controversial state of that subject. It contains a good account of the positions of Brouwer, Hilbert, Russell, and Fraenkel. Especially welcome is the clear presentation of the intuitionist case. The chapter headings are: Einleitung; I. Grundtatsachen der Erkenntnis; II. Symbolik und Axiomatik; III. Natürliche Zahl und Menge; IV. Negative Zahlen, Brüche, und irrationale Zahlen; V. Die Mengenlehre; VI. Das Problem der durchgängigen Entscheidbarkeit arithmetischen Fragen; and VII. Die Antinomien.

If we accept Brouwer's view, the only sets which exist are those which are countable and have been effectively well-ordered. The author remarks,