

BOOK REVIEWS

Mathematik als Wissenschaft, Kunst und Macht. By Helmut Hasse. Wiesbaden, Verlag für Angewandte Wissenschaften, 1952, 34 pp. 4.80 DM.

This little book, by a distinguished mathematician, is based on lectures delivered to the mathematical-natural sciences faculty of Hamburg University and to the "Amerikahaus" in Hamburg. It is, therefore, addressed to a general audience, with the object of setting forth the "true nature" of mathematics. The author frankly points out, however, that he speaks only for himself, limiting himself to those aspects of mathematics that first attracted him as a student and subsequently held his loyalty through the years. Written in a lucid and relaxed style, essentially as originally delivered, it is easy to read and most entertaining.

In conformity with its title, the book is divided into three main parts, preceded by a general introduction. Mathematics as "*Wissenschaft*" emphasizes the "spiritual" or intellectual character of mathematics. Here the opportunity is seized to point out that the layman, who considers mathematics as calculation and measurement, misses its true nature entirely. As an intellectual discipline, mathematics (for the author) fulfills the "instinct for knowledge of the truth" in a way not to be found in philosophy or any of the other branches of learning. Apparently it was this that first attracted the author to mathematics.

However, his sustained devotion to mathematics was due more to its nature as an *art*. To the reviewer, this part of the book (to which is devoted 14 pages, in contrast to the combined total of 10 pages for "*Wissenschaft*" and "*Macht*"), is by far the most interesting. Due to his predilection for music, the author stresses the analogies between this art and mathematics, in each of their creative, aesthetic, structural and communicative aspects.¹ Not only is this most certainly deserving of reading by the mathematician as well as the layman, but the former will find much to stimulate discussion.

For example, the striving for extreme formalism is, in the view of the author, one of the "tragedies" to which the modern mathematician is prone. The author decries the process whereby the intuitively conceived mathematical construct passes through various

¹ The mathematician who has done creative work should enjoy the discussion of musical composition given by Paul Hindemith in *How music happens*, Saturday Review of Literature, Dec. 29, 1951, pp. 29-32.