

## PREFATORY NOTE

THIS book derives from a series of lectures delivered by the author on the history of the exact sciences and technology. In it, attention is directed less to individual aspects of technology than to its problems in general. Historical details have therefore been omitted, and an effort has been made, by extensive use of contemporary documents, to reveal the forces which guided the development of technical advance in this or that direction. These formative influences may come from within technology itself or from outside. The book reveals how those influences which determine the intellectual climate of a period have their effect on technology and, on the other hand, how technology influences culture in general.

The documents which are quoted begin with Graeco-Roman times. Although, in many respects, it would have been desirable to include the technological activities of the pre-Greek cultures, the author decided they must be omitted except for a few indications considering that the trickle of written original matter from these epochs is very thin and that only those who understand ancient oriental languages are in a position to draw an unbiased picture of their technological development.

Quotations from foreign writers are given in English. Where classical translations into English exist already, these have been employed (whether contemporary with the original writer or not); but otherwise writers have been translated into modern English, whatever their period. To show important technical developments more clearly, a number of contemporary illustrations have been reproduced.

The quotations are drawn from a wide circle of sources. Alongside the statements of technologists are writings by philosophers, churchmen, naturalists, national economists, statesmen and poets. This must clearly indicate what varied spiritual forces have influenced technological development.

The author's main object is to contribute towards a wide popular understanding of technological history. In recent times especially, a number of notable works on this subject have appeared, but this book may claim something of a special character. It aims, as has already been emphasized, at relating historical problems to technological history derived from original sources.

A special word of thanks is due to Mr F. W. Kent of University College, London, for his invaluable help in the translation, especially of passages containing technical descriptions. The author has contributed some new material to the translation which was not in the original.

D. W. S.