

Cambridge University Press
978-0-521-18347-5 - Euclid in Greek
Thomas L. Heath
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EUCLID IN GREEK

BOOK I

WITH INTRODUCTION
AND NOTES

BY

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CAMBRIDGE
AT THE UNIVERSITY PRESS

1920

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CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore,
São Paulo, Delhi, Dubai, Tokyo, Mexico City

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by
Cambridge University Press, New York

www.cambridge.org
Information on this title: www.cambridge.org/9780521183475

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First published 1920
First paperback edition 2010

A catalogue record for this publication is available from the British Library

ISBN 978-0-521-18347-5 Paperback

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P R E F A C E

IN these days when Greek is supposed to be on its trial and Euclid happily defunct, it may well seem a wildly reactionary proceeding to suggest to teachers a combination of the two, a piling (so it might be thought) of one inutility on another. But, first, we must bear in mind that it is only compulsory Greek that is threatened: when that is gone, the study of Greek will be no whit less necessary to a complete education. Generation after generation of men and women will still have to go to school to the Greeks for the things in which they are our masters; and for this purpose they must continue to learn Greek. Again, Euclid can never at any time be more than apparently in abeyance; he is immortal. Elementary geometry will also continue to form part of a complete education; and elementary geometry *is* Euclid, however much the editors of text-books may try to obscure the fact.

But I am not here concerned to argue the case of Euclid against other text-books of geometry. The aim of this book is to maintain an opinion which I have long held that, if the study of Greek and Euclid be combined by reading at least part of Euclid in the original, the two elements will help each other enormously. In the first place, boys

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learning Greek in the higher Forms in schools will generally have some knowledge of elementary geometry. Even if this is read in some text-book other than Euclid, all the technical terms and phrases will be the same, and in any proposition of Euclid that may be taken up the course of the proof will be easily divined, almost by simple inspection. Hence, in translating the Greek, the student will really be translating something quite familiar. Now every one knows that, when beginning the study of a foreign language, it is quite a good plan to read familiar chapters of the Bible in a translation into the particular tongue. The advantage to the student of Greek of reading in Greek the familiar propositions of Euclid's first book will hardly be less. Secondly, from the point of view of learning geometry, much advantage will be gained by having, as it were, to spell out the Greek. The beginner in geometry needs to learn a good many things by heart, especially technical terms, many of which, being reflections of the Greek, will be the better understood if the Greek forms are known. How can any person who has only had such words as *theorem*, *problem*, *isosceles*, *parallelepiped* explained to him in English apart from their derivation get any such clear idea of their significance as the person who knows them as *θεώρημα*, *πρόβλημα*, *ισοσκελές*, *παρλληλεπίπεδον*? Again, persons with no particular aptitude for mathematics find a difficulty in memorising the course of the proofs and avoiding confusion

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between propositions which are nearly allied, e.g. as converses. I cannot but think that the formality and deliberation of Euclid's exposition, involving a certain amount of repetition of stereotyped phrases or steps, combined with the necessity of translating the Greek word for word wherever they occur, would be a very effective way of impressing the technique and the whole content on the mind of the learner.

A last consideration is this. I remember well (it was in the days long ago when most people were under the impression that Books VII—X of Euclid were lost in Greek) the thrill of pleasure I felt when I first took up the Greek text of Euclid, then not too easy to get hold of, for there was no Teubner text as there is now, and one had to look in College libraries for copies, which in any case were not too convenient to handle. I cannot but think that at all events the studious boys in the higher Forms of schools who have already got a fair grasp of Greek and know the amount of geometry corresponding to the first book of Euclid would be really interested to see the actual language in which the old Alexandrian taught the youth and pupils of maturer age in his own day, and so to put themselves in the place of their fellow-students of twenty-two centuries ago. It is in the confident belief that there will be many senior boys at school and students at the Universities, to say nothing of students of riper years, who will in this way come to read Euclid with more

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zest and more profit that I offer them this little book.

It is desirable to add a word with regard to the notes. I am convinced that there is no subject which, if properly presented, is better calculated than the fundamentals of geometry to make the schoolboy (or the grown man) *think*. This is the object of the notes; and, if it is attained, it is worth while, whatever the schoolboy's after career may be.

T. L. H.

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