The Commentaries of Proclus on the First Book of Euclid's Elements of Geometry Translated by Thomas Taylor (London, 1792) Book II, Chapter 5

Transcribed by David R. Wilkins

August 2020

[Thomas Taylor, The Philosophical and Mathematical Commentaries of Proclus, Vol. 1, pp. 102–103 (1792).]

CHAP. V.

What Mathematical Volumes Euclid composed.

THERE are, therefore, many other mathematical volumes of this man, full of admirable diligence, and skilful consideration: for such are his Optics⁴⁸, and Catoptrics: and such also, are his elementary institutions, which conduce to the atteinment of music⁴⁹; and his book concerning divisions⁵⁰. But his geometrical institution of the Elements is especially admirable, on account of its order and election of those theorems and problems, which are distributed through the Elements. For he does not assume all which might be said, but that only which could be delivered in an elementary order. Besides this, he exhibits modes of syllogisms of every kind; some, indeed, receiving credibility from causes, but others proceeding from certain signs; but all of them invincible and sure, and accommodated to science. But, besides these, he employs all the dialectic ways, dividing, indeed, in the inventions of forms; but defining in essential reasons: and again, demonstrating in the progressions from principles to things sought, but resolving in the reversions from things sought to principles. Besides this, we may view in his geometrical elements, the various species of conversions, as well of such as are simple as of such as are more composite. And again, what wholes may be converted with wholes: what wholes with parts; and on the other hand, what as parts with parts⁵¹. Besides this, we must say, that in the continuation of inventions, the dispositions and order of things preceding and following, and in the power with which he treats every particular, he is not deceived, as if falling from science, and carried to its contrary, falsehood and ignorance. But because we may imaging many things as adhering to truth, and which are consequent to principles producing science, which nevertheless tend to that error

⁴⁸It may be doubted whether the optics and catoptrics, ascribed to Euclid in the editions of his works are genuine: for Savil, and Dr. Gregory, think them scarcely worth so great a man.

⁴⁹There are two excellent editions of this work, one by Meibomius, in his collection of ancient authors on harmony; and the other by Dr. Gregory, in his collection of Euclid's works.

⁵⁰This work is most probably lost. See Dr. Gregory's Euclid.

⁵¹All this is shewn by Proclus in the following Commentaries; and is surely most admirable and worthy the investigation of every liberal mind; but I am afraid modern mathematicians very little regard such knowledge, because it cannot be applied to practical and mechanical purposes.

which flows from the principles, and which deceives ruder minds, he has also delivered methods of the perspicacious prudence belonging to these. From the possession of which, we may exercise those in the invention of fallacies, who undertake this inspection, and may preserve ourselves from all deception. And this book, by which he procures us this preparation, is inscribed $\pi\sigma\varepsilon\upsilon\delta\alpha\varphi$ (o ς , or, concerning fallacies⁵². Because he enumerates in order their various modes, and in each exercises our cogitation with various theorems. And he compares truth with falsehood, and adapts the confutation of deception to experience itself. This book, therefore, contains a purgative and exercising power. But the institution of his elementary, skilful contemplation of geometrical concerns, possesses an invincible and perfect narration.

⁵²This work is unfortunately lost.