

The Commentaries of Proclus on the First  
Book of Euclid's Elements of Geometry  
Translated by Thomas Taylor  
(London, 1792)  
Book II, Chapter 9

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[Thomas Taylor, *The Philosophical and Mathematical Commentaries of Proclus*, Vol. 1, pp. 111–113 (1792).]

## CHAP. IX.

### *Concerning the Design of the first Book,—its Division,—and a previous Admonition to the Reader.*

BUT, after these considerations, when we have determined the design of the first book, and have exhibited its division, we shall enter upon the treatise of the definitions. The design, then, of this book, is to deliver the principles of the contemplation of right lines. For though a circle, and its consideration, is more excellent than the essence and knowledge of right lines, yet the doctrine concerning these is more adapted to us, who are hastening to transfer our cogitation from more imperfect and sensible natures, to such as are intelligible. For, indeed, right lined figures are proper to sensibles, but a circle to intelligibles. Because that which is simple, uniform, and definite, is proper to the nature of the things which are: but that which is various, and which increases indefinitely from the number of its containing sides, regards the fluctuating essence of sensible particulars. Hence, in this book, the first and most principal of right lined figures are delivered; I mean the triangle and the parallelogram. For in these, as under their proper genus, the causes of the elements are contained: viz. the isosceles and scalene, and those which are formed from these, the equilateral triangle, and the quadrangle, from which the four figures of the elements are composed. We shall find, therefore, as well the origin of the equilateral triangle as of the quadrangle; of the last, indeed, upon, but of the first from a given right line. [<sup>58</sup>An equilateral triangle, therefore, is the proximate cause of the three elements, fire, air, and water: but a quadrangle is annexed to earth. And lastly, the design of the first book is adapted to the whole treatise, and confers to the universal knowledge of the mundane elements. Besides, it instructs learners in the science concerning right-lined figures; since it rightly invents, and accurately collects, the first principles of these.

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<sup>58</sup>That part of this work enclosed within the brackets, is wanting in the original; which I have restored from the excellent version of Barocius. The philosophical reader, therefore, of the original, who may not have Barocius in his possession, will, I hope, be pleased, to see so great a vacancy supplied; especially as it contains the beginning of the commentary on the definition of a point.

[DRW—See note in Friedlein's edition of Proclus's *Commentaries* (p. 82, 23): "23 usque ad p. 86, 17 προσεχὲς . . . τετραγὼν διαστάν id est quattuor in codice *M* paginarum contextum om. *B*<sub>3</sub> et *G*, nec *C* quidquam de hac re annotavit."]

But this book is divided into three greatest parts, of which the first declares the origin and properties of triangles, as well according to angles, as also to sides. Besides, it makes mutual comparisons of these, and beholds every one by itself. For receiving one triangle, sometimes it considers the angles from the sides; but sometimes the sides from the angles: and this according to equality and inequality. And supposing two triangles, it discovers the same property again, by various methods. But the second part combines the contemplation of parallelograms, describing their properties and generations. And the third part shews the communication of triangles and parallelograms, both in symptoms and mutual comparisons. For it shews that triangles and parallelograms, both in symptoms and mutual comparisons. For it shews that triangles and parallelograms constituted on the same and on equal bases, are affected with the same passions; and by complication, when both stand on one base: and again, after what manner a parallelogram may be made equal to a triangle; and lastly, concerning the proportion which in right angled triangles, the square made from the side subtending, has to the squares containing the right angle. And such is the division of the first Book.

But, previous to our enquiry into each of these parts, we think it requisite to admonish the reader, that he must not require of us, those small assumptions, and cases, and whatever else there may be of that kind, which has been divulged by our predecessors. For we are satiated with these, and shall, therefore, but rarely adopt them in our discourse. But whatever has a more difficult contemplation, and regards universal philosophy, of this we shall make a particular relation: imitating the Pythagoreans, with whom this ænigma was common, “a <sup>59</sup>figure and a step: but not a figure and three oboli.” shewing by this, that it is requisite to pursue that philosophy which ascends every theorem by a step, and raises the soul on high; but does not suffer it to remain among sensibles, to fill up the use attendant on mortals, and, consulting for this, to neglect the elevation which rises from hence to an intelligible essence.

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<sup>59</sup>I do not find this ænigma among the Pythagoric symbols which are extant; so that it is probably no where mentioned but in the present work. And I am sorry to add, that a *figure and three oboli*, is too much the general cry of the present times.