The Commentaries of Proclus on the First Book of Euclid's Elements of Geometry Translated by Thomas Taylor (London, 1792) Book I, Chapter 14

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CHAP. XIV.

How Dialectic is the Top of the Mathematical Sciences, and what their Conjunction is, according to Plato.

LET us again consider after what manner Plato, in his Republic, calls dialectic the top of the mathematical disciplines; and what their conjunction is, according to the tradition of the author of the Epinomis²⁵. And in order to this we must assert, that as intellect is superior to cogitation, supplying it with supernal principles, and from itself giving perfection to cogitation; in the same manner dialectic also, being the purest part of philosophy, excels in simplicity the mathematical disciplines, to which it is proximate, and with which it is conjoined. Indeed it embraces the complete circle of these sciences, to which it elevates itself various energies, endued with a power of causing perfection, judgment, and intelligence. And these energies consist in resolving, dividing, defining, and demonstrating; but which mathematics itself, receiving assistance and perfection, invents some things by resolution, but others by composition: and some things it explains by division, others by definition: but collects other subjects of its investigation by demonstration; accommodating, indeed, these ways to its subjects, but using each of them for the purpose of beholding its middle enquiries. From whence indeed, both the resolutions, definitions, divisions, and demonstrations which it contains, are peculiar, and adapted to its nature, and revolve according to the mode of mathematical cognition. Not undeservedly, therefore, is dialectic the vertex as it were, and summit of mathematics. Since it perfects all which mathematics contains of intelligence; renders its certainty free from reprehension, preserves the stability of its immoveable essence, and refers what it contains destitute of matter and pure to the simplicity of intellect, and a nature separated from material connections. Besides, it distinguishes the first principles of these sciences, by definitions: exhibits the separations of genera and forms

²⁵From hence it appears, that it is doubtful whether Plato is the author of the dialogue called Epinomis; and I think it may with great propriety be questioned. For though it bears evident marks of high antiquity, and is replete with genuine wisdom, it does not seem to be perfectly after Plato's manner; nor to contain that great depth of thought with which the writings of this philosopher abound. Fabricius (in his Bibliotheca Græca, lib. i. p. 27.) wonders that Suidas should ascribe this work to a philosopher who distributed Plato's laws into twelve books, because it was a usual opinion; from whence it seems, that accurate critic had not attended to the present passage.

contained under the genera themselves: and besides this, teaches the compositions, which from principles, produce things consequent to principles: and the resolutions which rise and mount up to things first, and to principles themselves. But with respect to what remains, proportion itself is not to be considered (as Eratosthenes thought it was) as the conjunction of the mathematical disciplines. Since proportion is said to be, and indeed is one of those things common to the mathematics. But in short, many other things besides proportion regard all the mathematical disciplines, which are essentially inherent in the common nature of the mathematics. But as it appears to me, we should say, that there is one proximate conjunction of these, and of the whole mathematical science, which especially embraces in itself, in a more simple manner, the principles of all sciences; which considers their community and difference; teaches whatever is found in these the same; together with what things are inherent in a many, and what in a few. So that to those who apply learn there is a reversion from many other sciences to this $alone^{26}$. But dialectic is a conjunction of the mathematical disciplines superior to the preceding; which Plato, as I have already observed, calls in his Republic their vertex: for, indeed, it perfects the whole of mathematics, brings it back to intellect by its powers, shews it to be a true science, and causes it to be certain and obnoxious to no reproof. But, intellect obtains the third order between these conjunctions, which comprehends in itself uniformly all the dialectic powers, contracts their variety by its simplicity, their partition by its indivisible knowledge, and their multitude by its occult union. Hence, intellect itself congregates indeed the involutions and deviations of the dialectic paths, into an intelligible essence, but it collects supernally all the progression of mathematical discourses: and it is the best end both of the elevating power of the soul, and of the energy consisting in cognition. And such are the sentiments declared by me on the present enquiry.

²⁶This proximate conjunction of the mathematical sciences, which Proclus considers as subordinate to dialectic, seems to differ from that vertex of science in this, that the former merely embraces the principles of all science, but the latter comprehends the universal genera of being, and speculates the principle of all.