The Commentaries of Proclus on the First Book of Euclid's Elements of Geometry Translated by Thomas Taylor (London, 1792) Proposition 31

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[Thomas Taylor, The Philosophical and Mathematical Commentaries of Proclus, Vol. 2, pp. 161–162 (1792).]

PROPOSITION XXXI. PROBLEM X.

Through a given point to draw a right line parallel to a given right line.

It is requisite that we should not only learn the essential accidents of parallels, in the discourses of the elementary institutor, but also that we should relate their origin, and know how one right line becomes parallel to another: for origin every where renders the essence of subjects more known to us. And this the institutor of the Elements effects by the present problem. For having received a point and a right line, he draws through that point a line parallel to a right line. But we ought to pre-assume as necessary, that the point should entirely be placed external to the right line: for we must not place it in the right line, because it is said, through a given point; since no other, besides the given line, can be that which is drawn parallel through the point. Since, therefore, the point and the right line is divided, it indicates that the point is to be received external to the right line, which he manifests in a perpendicular by addition, commanding, upon a given infinite right line, and from a given point which is not in it, to let fall a perpendicular. One thing, therefore, which is common to both these problems, is, the external position of the point: but the other, that from the same point two perpendiculars cannot be let fall to the same right line, and that through the same point, two lines cannot be drawn parallel to the same right line. Hence the institutor of the Elements commands in the singular number to draw a right line, in the former problem, a perpendicular, but in the present a parallel. And, that indeed, has been shewn, but this is manifest, from what is previously demonstrated. For if through the same point two parallels are drawn to the same right line, they would be parallel to each other, and coincide in the given point, which is impossible. But it is requisite to observe the difference of these two propositions, from a given point, and through a given point. for sometimes the point is the beginning of the right line which is drawn, and on this account the deduction is made from it: but sometimes the point is in the drawn right line, and on this account the drawing is made through the point. For the particle *through*, was not asserted, because the right line cuts a given point, but because it coincides with it, and terminates its own interval, in respect of that right line, by the distance of the point and the right line. Since as much as the given point is distant from the given right line, so much also is the interval of the parallel between itself and the right line.