

I have, in the part of the *Philosophy* referred to, discussed the merits and defects of Francis Bacon's *Method*, and I shall have occasion, in the next Book, to speak of his mode of dealing with the positive science of his time. There is room for much more reflection on these subjects, but the references now made may suffice at present.

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## CHAPTER V.

### PROGRESS IN THE MIDDLE AGES.

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#### *Thomas Aquinas.*

AQUINAS wrote (besides the *Summa* mentioned in the text) a Commentary on the Physics of Aristotle: *Commentaria in Aristotelis Libros Physicorum*, Venice, 1492. This work is of course of no scientific value; and the commentary consists of empty permutations of abstract terms, similar to those which constitute the main substance of the text in Aristotle's physical speculations. There is, however, an attempt to give a more technical form to the propositions and their demonstrations. As specimens of these, I may mention that in Book vi. c. 2, we have a demonstration that when bodies move, the time and the magnitude (that is, the space described), are divided similarly; with many like propositions. And in Book viii. we have such propositions as this (c. 10): "Demonstration that a finite mover (*movers*) cannot move any thing in an infinite time." This is illustrated by a diagram in which two hands are represented as engaged in moving a whole sphere, and one hand in moving a hemisphere.

This mode of representing force, in diagrams illustrative of mechanical reasonings, by human hands pushing, pulling, and the like, is still employed in elementary books. Probably this is the first example of such a mode of representation.

#### *Roger Bacon.*

THIS writer, a contemporary of Thomas Aquinas, exhibits to us a kind of knowledge, speculation, and opinion, so different from that of any known person near his time, that he deserves especial notice here;