



"...cupiens mathematicam tractare infra radices metaphysice..." Roger Bacon on Mathematical Abstraction [

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Analítica

In some passages of the *Opus maius* and the *Opus tertium*, Roger Bacon holds that mathematical objects are the immediate and adequate objects of human's intellect: in our sensible life, the intellect develops mostly around quantity itself. We comprehend quantities and bodies by a perception of the intellect, because their forms belong to the intellect, namely, an understanding of mathematical truths is almost innate within us. A natural reaction to these sentences is to deduce a strong Pythagorean or Platonic influence in Roger Bacon's theory of mathematical knowledge. However, Bacon has always followed Aristotle's view according to which numbers and figures have no real existence apart the sensible substances, and universal knowledge comes from sensory experience as well. It appears that Bacon's claim that quantity is the first object of human's intellect comes from an original reading of a passage of Aristotle's *On Memory and Reminiscence*. In this paper, we try to clarify Bacon's views about mathematical abstraction and intellectual perception of mathematical forms in his Parisian questions on Physics and *Liber De causis*, the *Perspectiva*, *Opus maius*, *Opus tertium*, the *Communia mathematica* and the *Geometria speculativa*. We conclude that Bacon considered mathematical abstraction as a mode of perception of the internal structure of the physical world: mathematical abstraction does not mean for Bacon an act of separation of ideal forms from the sensible matter, but a possibility of intuition of the internal structure of the sensible world itself, a faculty which is necessary for human's perception of space and time

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