

Scot C. Bontrager (HX8336)

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## Time and Motion in Questions 8 & 10

Zeno's paradoxes have been lurking around the dark shadow's of philosophy since they were first articulated. Aquinas proposes a solution to the problem of the one and the many through looking at time and motion and indivisible things. In (1 8.2r2) Aquinas states that there are two kinds of indivisibles: (1) "the terminus of a continuum;" and (2) "something outside the whole genus of the continuous." It is the first kind of indivisible with which I am concerned in this short evaluation. The issue at stake is his statement that, "an indivisible moment of action or motion, because it has a determinate order in the motion or action, cannot be in multiple parts of time." If I understand the claim being made, the flight of an arrow, to use Zeno's example, would be one continuous motion, not divisible in time. It may persist in time, but the flight cannot be broken into particles of moments.

In (I 10.1r1) Aquinas claims that, "in every motion there is succession, and one part is after another, it is through enumeration the before and after in motion that we apprehend time, which is motion other than the number of the before and after in motion." That is, time is measured in units of motion (e.g. the stars, days, heartbeats). Each motion is subdivided into parts (days into hours, hours into minutes).

Time is apprehended through the observation of motion, which in themselves are whole and indivisible. Yet, the motion of the sun is divisible into periods of hours. Is this claim

contradictory or is Thomas's claim that the motion of the sun is itself indivisible in-and-of-itself (*per se*) but can be conceptually divided relative to other motions (heartbeats)? The solution seems to be contained implicitly in (I 10.1r3) where Thomas says that, "Eternity is said to be altogether not because it has parts, but because there is nothing lacking in it." In the same way, any continuum is altogether, not because it cannot conceptually be divided, but because it is, for example, all of one motion.

The solution to Zeno's paradox of the arrow in flight never reaching its target since it would need to pass through an infinite number of half-way points seems to be solvable by evaluating the flight not as a transition of an infinite, but as the progression along a continuum.

Why, then, does Aquinas need to frame time in the way of it being apprehended of as "before and after" instead of simply by allowing time to be the progression along a continuum? This seems to be a generalization of his thought that would be entirely congruous with his claims about continuums. Maybe this is addressed in another question.