

#### Overview

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UMM in the Physics

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UMM in the Physics Metaphysics XII

- science starts with wonder; seeking explanation
- We have identified *some* explanations of motion: cf. the 4 causes
- But Aristotle thinks there is still something missing what explains the
  possibility of motion altogether. (Cf. Zeno's paradoxes.)

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# Unmoved Mover in the *Physics*

#### Phys. VIII.6

"Since there must always be motion without intermission, there must necessarily be something eternal, whether one or many, that first imparts motion, and this first mover must be unmoved.... Let us suppose, if you will, that in the case of certain things it is possible for them at different times to be and not to be.... And let us further suppose it possible that some principles that are unmoved but capable of imparting motion at one time are and at another time are not. Even so, this cannot be true of all such principles, since there must clearly be something that causes things that move themselves at one time to be and at another not to be.... So the fact that some things become and others perish, and that this is so continuously, cannot be caused by any one of those things that, though they are unmoved, do not always exist; nor again some be caused by some and others by others. The eternity and continuity of the process cannot be caused either by any one of them singly or by the sum of them.

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Metaphysics XII

## The Argument in the *Physics*

- presented as a solution to Zeno's paradox
- assumes that there is motion; insists that we need an explanation for it
- only something actual can initiate a change (e.g., a forest cannot burn unless something/someone actually ignites it); actuality is prior to potentiality
- change = the actualisation of what is potentially F insofar as it is potentially F.
- Thesis: there exist an everlasting unmoved mover which is without parts or magnitude and which is responsible for the motion we observe in the universe.

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# The Argument in the *Physics*

- Something is in motion.
- If something is in motion, it is moved by another.
- Whatever is moved by another, is either moved (i) by something which is itself moved by another; or (ii) by something which is not moved by another.
- If (ii), then there exists an unmoved mover.
- If (i), then either (a) the chain carries on to infinity, or (b) it ends, in which case we arrive at an unmoved mover.
- 1 It is not possible that (a).
- Therefore, if (i), we arrive at an unmoved mover.
- **1** Therefore, if something is in motion, there exists an unmoved mover.
- ... Therefore, there is an unmoved mover.

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# Some Notes about the Argument

- P1: 'to move': transitive vs. intransitive use. UMM1 says something is moved<sub>I</sub>; similarly in UMM9. (The unmoved mover is not in motion at all; the argument does not contradict P2.)
  - Can we move<sub>T</sub> something without actually moving<sub>I</sub>? (Shield's example: a painting can move someone to tears.)
- P2: an application of the definition of change; if there is a change, there must be an actualiser. (No real self-motion.)
- P6: the crucial premise; no infinite regress
  - N.B.: Aristotle *does* think that the universe is infinite in time! (Cf. Meta. 12.6–7; otherwise there would be time before time.)
  - rather: it's about vertical infinities (e.g.: turning your arms  $\rightarrow$  turning your handlebars  $\rightarrow$  turning your bicycle: simultaneous motions, but there is a hierarchy)
  - claim: a vertical chain of movers and motion cannot reach infinitely upwards; unless we reach an actuality bedrock, we will enver find something on which we can turn the potential into the actual.

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#### Open Questions in the *Physics*

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- Plurality of unmoved mover or single unmoved mover?
- How does the UMM move, if it has no magnitude?

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## UMM in the *Metaphysics*

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- UMM is a personal, divine being
- the UMM causes motion insofar as it is an object of love/desire (Meta. 1072b3-4)
- But how does Aristotle get to all this?

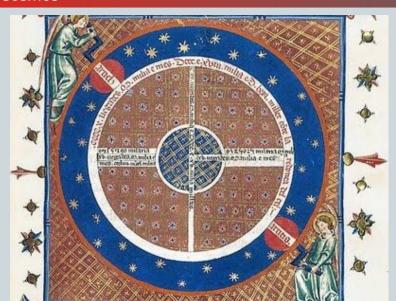
#### The Main Claims of Meta. A

- motion (and time) is eternal
- Since motion is eternal, there must be an eternal mover, whose essence is actuality (actuality is prior to potency!).
- To account for the uniform change in the universe, there must be one principle which acts always alike [god], and one whose actions varies [nature].
- Since the UMM is purely actual, it cannot have matter (as matter is potency).
- The UMM originates motion by being the primary object of desire it moves as a final cause.
- The divine thought must be concerned with the most perfect object, which is itself.
- Everything moves towards the UMM in its own way! cosmic order

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#### The Cosmos



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## Legacy

- The first "cosmological argument"; of great interest in all Abrahamic religious traditions (Avicenna; Maimonides; Aquinas).
- Is this compatible with a classical understanding of "God"? With other claims of classical theism?
- Lots of open questions: how exactly does the UMM move? Are there one or many? How to understand the celestial intelligences?

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