

Reading Guide: Aristotelian Dynamics II

This week's reading involves Aristotle's dynamics as applied especially to questions about the structure of the cosmos generally. We will see Aristotle reasoning via his dynamics about the divine unmoved movers who, in an important sense, **cause** all change and motion. Here too, Aristotle gives more detail about the structure of the cosmos, shape of the earth, and other fun stuff. Again, please do give yourself a LOT of time to do the primary source reading. I think you'll find the reading very rewarding and interesting, but only if you put the time and effort in.

Note: if you are seeking some more secondary sources to help you understand this material, please let me know. One suggestion: if you are in this position, and haven't yet done the recommended readings from last week, start with those; much of that material discusses this week's topic directly.

Recommended order of reading

1. SEP: "[Aristotle on Causality](#)" (recommended; more supplementary material on Aristotle's four causes, use of explanation, etc. for those of you who might want to dig deeper before reading this week's required material.)
2. PS, 1.8 – Excerpts from Aristotle's *On the Heavens* (required; see reading guide questions below.)
3. PS, 1.5 – Excerpts from Aristotle's *Metaphysics* (required; see reading guide questions below.)

Aristotle's *On the Heavens* (PS 1.8).

1. In the first section of this reading (section 4), Aristotle presents several arguments to the conclusion that the universe must be spherical. See how many different such arguments you can find, and do your best to reconstruct each of them so that you can plainly see how Aristotle is reasoning.
2. You can skim section 5. The important thing about this section is not so much the argument / conclusion that Aristotle is giving (which is extremely opaque!), but rather the modest attitude and intellectual humility that Aristotle displays here.
3. Section 6 argues that the motion of the heavenly sphere is regular and unchanging. Again, Aristotle argues for this in several ways. Most of the arguments will doubtless strike you as very strange once you understand them, but one in particular isn't so strange; it is an argument from observation to the uniform motion of the heavens. Summarize this argument from observation.
4. You can skim sections 8 and 10. You should generally note the conclusions that Aristotle is arguing for in these sections however. First off, that the stars only have motion because they are attached / fixed to moving spheres. Second, that the planets ("stars") are on different systems of spheres which often have the net effect of moving these planets in the reverse direction as the fixed stars. More on this next week when we discuss Ptolemy!
5. Section 13: What are some of the arguments put forth by the Pythagoreans for believing that the earth is **not** at the center of the universe? Also, what is Aristotle's complaint against the Pythagoreans' opinion about the *position* of the earth?
6. Beyond the Pythagorean position, section 13 goes on to summarize "the views held as to the shape, position, and rest or movement of the earth." In general, what you need to do when reading this section is try to develop a clear understanding of the

7. Section 14: Be able to state Aristotle's beliefs and his corresponding arguments for these beliefs regarding each of the following questions (I count at least ten arguments in this section; see how many you can find): (a) where is the earth located? (b) does the earth move? (c) what shape is the earth?

Aristotle's *Metaphysics* (PS 1.5).

1. What is the question that Aristotle emphasizes right at the beginning of the reading and says he will now investigate?
2. Do you best to reconstruct the exact argument given in the second paragraph of this reading, in which Aristotle argues for the conclusion that there must necessarily be one single "unmoved mover" corresponding to each eternal (circular) natural motion.
3. How do we know that there are more unmoved movers (i.e., substances) in existence than there are planets?

NOTE: You can skim the details found in the right hand column of p. 32. Here, Aristotle describes the reasons for believing that it takes fifty-five spheres to produce the motions of the heavenly bodies. We will look more at this sort of thought and strategy for predicting / describing planetary motions when we read from Ptolemy.

4. Why should we believe, according to Aristotle, that all movements are "for the sake of the stars?"
5. What does Aristotle say about the tradition, passed down from his forefathers, of mythology? What part of tradition does he appreciate and what part does he not appreciate?