

Metaphysics Λ 4-5

Causes and Principles

Aristotle's Problem

- Someone might raise a difficulty as to whether the principles and elements of substances and relatives were different or the same, and similarly with regard to each of the remaining categories. But it is absurd if they are the same for all; for relatives and substances will be *from* the same things (*Met.* Λ 4, 1070a33-36)
- ἀπορήσειε γὰρ ἂν τις πότερον ἕτεροι ἢ αἱ αὐταὶ ἀρχαὶ καὶ στοιχεῖα τῶν οὐσιῶν καὶ τῶν πρὸς τι, καὶ καθ' ἑκάστην δὴ τῶν κατηγοριῶν ὁμοίως. ἀλλ' ἄτοπον εἶ ταῦτ' ἅπαντων· ἐκ τῶν αὐτῶν γὰρ ἔσται τὰ πρὸς τι καὶ αἱ οὐσίαι.

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- The causes and principles are in a way different for different things and in a way, if one were to speak universally and according to analogy, the same for all things (*Met.* Λ 4, 1070a31-3)
- Τὰ δ' αἴτια καὶ αἱ ἀρχαὶ ἄλλα ἄλλων ἔστιν ὥς, ἔστι δ' ὥς, ἂν καθόλου λέγη τις καὶ κατ' ἀναλογία, ταῦτ' ἅπαντων.

Prefatory to Λ 4-5

- Recall our earlier observation that First Philosophy is a science seeking causes (αἰτία) and principles (ἀρχαί):
 - It is evident that this (viz. wisdom, σοφία) is a science (ἐπιστήμη) of certain principles and causes (ἀρχαί and αἰτία). But since this is the science we are seeking, this is what we must consider: of what sorts of principles and causes is wisdom (σοφία) a science (ἐπιστήμη)? (*Met. A 1-2, 982a1-6*)
 - It (wisdom, σοφία) must be a science (ἐπιστήμη) of first principles and causes (πρῶται ἀρχαὶ καὶ αἰτία) (*Met. A 2, 982b9-10*)
 - It is from them and through them [the first principles and first causes] that other things are known; but they are not known through the things under them (*Met. A 2, 982b2-4*).
- This is because to know or understand something is to grasp that thing's causes and principles (*APo. 71b9-16, 71b33-72a5; Top. 141b3-14, Phys. 184a10-23; Met. 1029b3-13*)
- So, if we want to understand all beings, just in so far as they are beings (ὄντα ἢ ὄντα;), we will want to know the principles and causes of all beings, just in so far as they are beings.

Two Possible Impediments

- Categoricalism
 - All beings fall into ten (or, at any rate n , where $n \geq 2$) irreducibly distinct kinds.
 - 'Being is meant in as many ways as the figures of predication [= the categories] (*Met.* Δ 7, 1017a22-24).
- The homonymy of being
 - We need not take the divergence of principles as a direct entailment of categorialism: it requires, in addition, the claim that there is no genus of being (*EE* i 8, 1237b33-35; *APo.* 92b14, *Top.* 121a16, b7-9; cf. *Met.* 998b22).
 - If beings fall into several irreducible kinds, and have no genus over them, then there seems to be no single science of them, and hence, no single cause or principle explaining them all in common.
 - Put slightly more formally: (i) there is an *epistêmê* of Δ only if there is a genus of; there is no genus of being; (iii) hence, there is no science of being—as there would be if, and only if, the principles for Δ were the same for all.
- So, we should presumably avoid seeking principles and causes for the entities in that non-domain.

The Structure of Λ 4-5

- 1070a33-b10: Setting some *aporiae* in the manner of *Met. B*
- 1070b10-21: The principles of some things are different; but, then again, they are the same.
- 1070b22-35: The role of the moving cause in these investigations
- 1070b36-1071a3: Substances exist apart, but other things do not; this explains why the causes of all things are after all (in a way) the same.
- 1071a3-17: Analogical causes apply in different ways in different cases, both with respect to the causes and the modalities
- 1071a17-24: Some causes are universal, some not
- 1071a24-29: Despite these points about universality, the principles of some things are different
- 1071a29-b2: Summary: first of *Met. Λ 4-5* (1071a29-b1), and then, briefly, of *Met. Λ 1-5*, taken as a whole

The Briefest Primer on Analogy

- ‘For analogy is equality of accounts (λόγων), and involves four terms at least’ (ἡ γὰρ ἀναλογία ἰσότης ἐστὶ λόγων, καὶ ἐν τέτταρσιν ἐλαχίστοις (Met. Δ 3, 1131a31-2))
- So, we are looking not for sameness of (= univocity), and not for asymmetric dependence of accounts (= core-dependent homonymy), and not for complete difference of accounts (= homonymy by chance), but rather:
 - a four-term relation of the following form:
 - $a : b :: c : d$
 - So, e.g.:
 - sight : body :: reason : soul
 - spine : fish :: bone : (land) animal (APo. 97b-98a)

Analogy (?) Explicated in the *Topics I* 17

- Likeness should be studied, first, in the case of things belonging to different genera:
 - the formula being $A : B :: C : D$
 - as knowledge stands to the object of knowledge, so is sensation related to the object of sensation;
- and, secondly, 'as A is *in* B , so is C *in* D '
 - as sight is in the eye, so is reason in the soul,
 - and as is a calm in the sea, so is windlessness in the air.

Two types?

- Hesse reads two distinct types of analogy into these remarks:
 - (i) ‘When there are *properties in common* between parts of the members of different species, for example spine and bone share an “osseous nature”.’ (See, e.g. *APo.* ii 14, 98a20; *Met.* Θ 6, 1047a37-b9)
 - (ii) ‘When there is similarity in the *relation* of the parts to the whole in each species, for example cup *is the symbol* of Dionysus as shield is of Ares, and, more typically, hand and claw, scale and feather, wings and fins, and so on, have similar structural positions or functions in relation to their respective organisms.’ (1965, 330) (See *Hist. An.* i 1, 486b17-22; *Met.* Δ 6, 1016b31-1017a2, Δ 9, 1018a13-15; *Poetics* 21, 1457b16-25)

Two Types Again

- Analogy by Proportionality:
 - the formula being $A : B :: C : D$
 - Let us call this *relationally univocal analogy*.
- Analogy by property determinability
 - the formula here being: x is ϕ , y is ψ , where both ϕ and ψ are determinants under a determinable κ (and κ is not a genus)—so, e.g., as calm ($\gamma\alpha\lambda\acute{\eta}\nu\eta$) is in the sea, so windlessness ($\nu\eta\nu\epsilon\mu\acute{\iota}\alpha$) is in the air.
 - Let us call this *muddy analogy*.

A Concern: Trivialization

- Analogy in any sense other than mathematical proportionality 'is merely the fact that some relations have more than one example.' — Robinson (1952, 466)
- So, 'A : B :: C : D' simply asserts the existence of a relation R such that aRb and cRd .
 - Thus: one pint : one quart :: .5 litre : 1 litre
 - The relation here is *being .5 the volume of*
- If this trivialization holds, then we need be concerned that that univocity re-enters in the case of the causes and principles of beings in second-order way.

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A Possible Expansion

- (1) Either the elements (and principles) of substances and relatives (as representative of all the non-substantial categories) are the same or different.
- (2) If they are the same, then substances and relatives will be *from* the same things.
- (3) They are not (cannot be) from the same things.
- (4) *If they are different, then we cannot give a unified scientific treatment of all beings.
- (5) *We can give (we are giving) a unified scientific treatment of all beings.
- (6) So, we have a problem or three

Cf. *Met.* B 4, 4 999b24-100a24 [= the ninth aporia, on the unity of principles], 1000a5-1001a3 [=the tenth aporia, whether the principles of perishable and imperishable beings are the same or different], B 6 1003a3-17 [= the fifteenth aporia, on whether the principles are particular or universal]).

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