

RECOLLECTION AND POSTERIOR ANALYTICS II, 19*

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The last chapter¹ of the *Posterior Analytics* has caused some difficulty even to sympathetic readers of the Stagirite. They identify the second part of the following statement, which is the second *aporia*, as referring to the Platonic doctrine of Recollection²—“whether we develop cognitive capacities which we did not possess before or have always possessed these capacities unaware.” (*An. Post.* II, 19, 99b25-26)³ The only evidence presented for this view is the “parallel” text in the *Metaphysics* A 9, 993a1-4: “Again, if scientific knowledge happened to be innate, it would be astounding how we could be unaware of our possessing the most excellent of the sciences.” I shall show in the course of my argumentation that the view of the commentators is false. Furthermore, I shall prove that the true source of the *aporia* is Aristotle’s doctrine of mind (νοῦς) as it is presented in *De Anima* III, 5⁴ and the *Generation of Animals* B 3, 736b28.

1.

One of the unusual features of the last chapter of the *Posterior Analytics*, as others have noted, is that it takes up the question of “archai” (*An. Post.*, II, 19, 99b17—περὶ δὲ τῶν ἀρχῶν). This subject as Weisheipl points out in his commentary is usually reserved by Aristotle for an introductory *logos*, for example in his treatment of the *Physics*, *Metaphysics*, and *de Anima*.⁵ There in order to focus the mind of his hearers on the principles of the science, he surveys the opinions of previous thinkers. The Aristotelian view of the indemonstrable character of principles demands this approach.⁶ Thus such a section falls under the scope of Aristotle’s notion of dialectic that is quite different than Plato’s. An integral part of the dialectical approach to the principles is the use of *aporiai*. But more of these *aporiai* later.

This apparently unusual feature then, of ending the *Posterior Analytics* with a section concerned with “principles” (*archai*) is based on viewing the *Analytics* as a demonstrative science. Is there any foundation for this view in the text of Aristotle?

Aristotle does apply the term ἐπιστημὴ to the *Analytics* at *Metaphysics* K 1, 1059b15-19:

In general, one might raise the question as to what kind of science should discuss the difficulties (*aporiai*) about matter in the mathematical sciences. For it belongs neither to physics, because the whole inquiry of the physicist is about things which have in themselves a principle of motion and rest, nor yet to the science which is concerned with demonstration and scientific knowledge, for this science inquires into just this genus. (p.177, Apostle, trans.)

But in this context, which is aporetic, Aristotle seems to be canvassing the various possibilities. He is by no means exhaustive with regard to the types of sciences that would state the *aporia* (διαπορῆσαι) concerning mathematical matter. The fact that urges caution in the matter is that later on in the same *logos* (K 1, 1054ff.), he speaks of the ἐπιστήμη of weaving, shoemaking, building, etc., which in his technical vocabulary are called *technai* as in the Socratic tradition. This suggests that a more general notion of ἐπιστήμη is being used in this section, not the more restricted one, which means demonstrated conclusions (ἐπιστημὴ ἀποδεικτική, *An. Post.* I 2, 71b20). The translation “science” tends to be overly determined since the Greek text leaves the ἐπιστημὴ as understood in the phrase: οὐδὲ μὴν τῆς σκοπούσης περὶ ἀποδείξεώς τε καὶ ἐπιστήμης.

The only other textual source to my knowledge for denominating the *Analytics* a science in the strict sense is in the *Rhetoric* I, iv, 1359b10:

For what we have said before is true: that Rhetoric is composed of analytical science and of that branch of political science, which is concerned with Ethics.

The precise sense of the phrase “τῆς ἀναλυτικῆς ἐπιστήμης” is not clear, as the Loeb translator J.H. Freese indicates in a note (p. 40 n. a): “The analytical science is Dialectic, incorrectly regarded as a branch of Analytics, which properly implies scientific demonstration.” Cf. *Rhetoric* I, 1, 13 55a5ff.: “Now it is the function of Dialectic as a whole, or of one of its parts, to consider every kind of syllogism in a similar manner, etc. ...” Freese does not seem to be aware of the fact that it is a common practice of Aristotle to use terms in wide and strict senses without indication except that of context. The Peripatetic tradition, of course, has considered the *Analytics* as an *organon* or instrument of science. There is, I think, no reason to belabor the fact that Dialectic is not a science for Aristotle.

It is clear, then, that the *Analytics* although not a science in the strict sense is designated by that term in certain texts that we have just considered. Perhaps it could fit the description of “science” given by Aristotle in other places. It would seem to fit the description of ἐπιστημὴ given at *Met.* A 1, 993b20-21. Thus it would be a *technē* or practical science aiming at action (the making of syllogisms). As Aristotle describes it: “it is in the making of syllogism that this knowledge is necessary”⁷. Therefore we ought not to expect to find this *logos* at the beginning of the *Analytics*⁸ as it would be if the *Analytics* were a science in the strict sense. As Professor McKeon has put it:

...the path from sense perception to science is delineated at the end of the examination of demonstration because demonstration departs initially from principles that cannot be demonstrated; it is repeated at the beginning of the examination of the nature of things because things are known ultimately from first principles and causes.

Although we understand the place of this section in the structure of the *Analytics*, the precise meaning of the subject matter is opaque. Its meaning can only be found by considering the meaning of ἀρχαί with respect to ἐπιστήμη.

2.

The *Metaph.* Δ I, 1013a1-4 has as its first meaning of *arche*:

Also, it (*arche*) means that from which each thing would best be generated; e.g., in learning, sometimes we should not begin from what is first and the principle of a thing, but from what one would learn most easily.⁹

Thus, in general, Aristotle says, that,

It is common to all principles (*archai*), then to be the first from which a thing either exists, or is generated, or is known, etc. (*Metaph.* Δ I, 1013a17-20)¹⁰

It would seem, then, that *arche* is an equivocal term whose meaning must be determined from context but its root signification is “a beginning of some kind”. If we examine citations internal to the

Analytically, the equivocal nature of the term becomes clearer.

There are many references that involve the technical expression, “begging the principle” (*petitio principii*), in which *arche* is identified with the ‘premise’ of an ‘argument’ (*sylogismus*). Thus a premise may be an *arche*, the beginning of an argument.¹¹ Of course, depending on the kind of argument—dialectical or apodeictic—the notion of *arche*, as a premise is further and differently delineated, although always with some kind of connection to the root meaning. Thus a demonstrative or apodeictic syllogism is described:

By demonstration (apodeixis) I mean a syllogism which produces scientific knowledge, in other words, one which enables us to know by the mere fact that we grasp it. (*An. Post.*, I 2, 71b18-19).

We can venture, quite safely, to predict that its *arche* will be different, as indeed, we do find it so described:

Now if knowledge (τοῦ ἐπίστασθαι) is such as we have assumed, demonstrative knowledge (ἐπιστήμη) must proceed from premises which are true, primary, immediate, better known than, prior to, and causative of the conclusion. (*An. Post.*, I 2, 71b20ff.)

Now it is precisely this description, which is found at the beginning of chapter 19 of Book II of the *Posterior Analytics*. At line 17 it is generically contained in the equivocal notion of *arche* (περὶ δὲ τῶν ἀρχῶν); at line 21 we find substituted the more specific description (τὰς πρώτας ἀρχὰς τὰς ἀμέσους) and finally, the elliptical repeat (τῶν δ’ ἀμέσων) at line 22. Thus at line 21, the subject matter is not the *arche* of this or that *episteme* but of *episteme* in general. But at line 17 the subject matter of the chapter is left purposefully unspecific. We shall see why, in our future considerations.

At this point, since we have seen that *episteme* is being used to mean demonstrated conclusions in general (that is, not specific to a certain science) we are now in a position to move on the issue of the identity of the *arche* within the context of the *Analytically*. Accordingly, the *arche epistemes* is the universal.¹² But as many have correctly objected, the *arche epistemes* in the strict sense (demonstrated knowledge) is a premise. Consult line 21 of the text above *An. Post.*, 99b21. Are these position necessarily opposed? Is there anything in the *Analytically*, which would support the partial identity of the universal and the premise? This is simply asking if the notion of *arche epistemes* is an equivocal term.

The answer to the question is to be found through some general points of Aristotle’s doctrine. In order for there to be demonstration, there must be things predicated (predicates) and subjects of predication (*ousiai*). In other words, scientific discourse is made up of propositions and propositions are made up of subjects and predicates (primary and secondary *ousiai*), that is, concrete sensibles, species and genera. Since singular terms *as such* do not enter into scientific discourse, the whole of such discourse is composed of universals, either as subjects or predicates. The clinching text of this set of statements is *An. Post.*, I 19, 81b10, namely, that every syllogism is effected by means of three terms (*horoi*)¹³ and these are the *archai*. Further he tells us that propositions are demonstrated by the addition internally of terms (*horoi*)¹⁴. Thus it should be clear both on general doctrinal grounds¹⁵ and on the evidence of the texts of the *Analytically* that the consideration of a ‘part’ of a proposition (the universal) whether as subject or predicate for the whole (proposition), called *synecdoche*, is quite in keeping with the language and thought of Aristotle.¹⁶ Therefore in accordance with this line of reasoning, the subject of chapter 19 is the *archai* (note the plural) of demonstrated conclusions in general, that is, the universal. This conclusion is, of course, in keeping with the content of the chapter, its immediate context, since as mentioned above and noticed by all, the subject of half of the chapter is the origin¹⁷ of the universal.

3.

The problem would be solved at this point were it not for the appearance in the text of two other candidates for the title of *arche epistemes* in addition to the *universal*. As mentioned in the text they are (1) *epagoge*¹⁸ and (2) *nous*.¹⁹ Let us take them in turn.

There is a line of text which ends by stating that *nous* is the *arche epistemes*. In the beginning of the *Posterior Analytics* I 1, 71b16ff. Aristotle states elliptically that there is another kind of knowledge (*tou epistasthai*) in addition to conclusions of demonstrative syllogisms. At 72a5ff. at the end of a discussion concerning whether or not all knowledge is demonstrable, Aristotle says, “Indeed, we hold not only that scientific knowledge is possible but that there is a first principle of knowledge by which we recognize the limits (*horoi*).” And finally, at 88b36 Aristotle tells us that “*nous* is the starting-point of demonstrated conclusions (*arche epistemes*).

Finally we have one other candidate for the title of *arche epistemes* given at 81a36-b9. There Aristotle asserts that *epagoge* is an *arche epistemes*. His reasoning is that demonstration develops from universals and *epagoge* is from singulars (*kath'ekaston*). It is impossible to grasp universals except through *epagoge*. But we cannot use *epagoge* if we lack sensation because it is sensation that apprehends the singular. Aristotle then concludes that it is impossible to gain *episteme* of them (singulars = *to kath'ekaston*) since they cannot be apprehended from universals without *epagoge* nor through *epagoge* without sensation. *Epagoge* as explained in the *Topics* 105a13 is the process from singulars to universals.

Again at *Topics* 108b10 in reference to inductive argument (ἐπατικούς λόγους) Aristotle maintains that “it is by *epagoge* from singulars (τῆ καθ' ἕκαστα ἐπὶ τῶν ὁμοίων ἐπαγωγῆ).”

Thus we have three *arche epistemes*, all possible subjects for our chapter 19. Like all homonymous terms (*archai*) we must look for the focal point of the differences, that which then unites them. Although it is true to say that there are three different *archai*: (1) *nous*, (2) *epagoge*, (3) the *universal*. It is clear that they are all intimately related to *episteme* in general.²⁰

Nous is the power (*dunamis* or *hexis*) of immediates and involves the metaphysical notions of potency and act. *Epagoge* is the *conditio sine qua non* for the arousal of the universal which is grounded in sensation. Finally the universal or secondary *ousia* in the epistemology is used as a noun but metaphysically used as an adverb. Such are the conclusions of our investigation of the phrase—περὶ δὲ τῶν ἀρχῶν.

4.

Now let us turn to the remainder of the opening transitional paragraph of chapter 19. Two questions are asked which divide the chapter: (1) πῶς τε γίνονται γνώριμοι (“how do we obtain knowledge of first principles?”) and (2) καὶ τίς ἡ γνωρίζουσα ἔξις²¹ (“what sort of settled disposition or capacity is it that secures this knowledge?”) The response to (1) takes up lines 99b22-100b5, and the solution to (2) the remainder of the chapter, lines 100b5-17). Approximately 36 lines or 66% for question one and 12 lines or 33% for question two in the Bekker edition. Thus quite a large percentage of the chapter is concerned with the answer to question one (how do we obtain knowledge of the first principles?).²²

The next issue is hermeneutical. Many scholars do not pay attention to the structure of the aporias which structure the rest of the chapter either as a statement or as a solution to the statement of the aporias. This is a major fault of such interpretations as we shall see. So before the inquiry proper, Aristotle indicates that he will clarify the issues by setting out the preliminary *aporias*.²³ It is clear that the aporias are grounded in the intellect of the *hearers*, not Aristotle and hence are pedagogical in nature.

Before considering the major issue of this essay, a few words about Aristotle's use of *aporias* may be helpful. For those who are unfamiliar with its importance in understanding Aristotle's philosophical method, *aporia* is an Aristotelian *homonymous* term.²⁴ Its root meaning is "a lack of passage" and is primarily a description of the state of the *hearer's intellect*.²⁵ In a second but related meaning, *aporia* is also descriptive of *conceptions* when they are contrary to each other. In a third signification, *aporia* may refer to *things* as causing the *aporia* in the intellect of the hearer. So *aporia* can refer to a state of the intellect, of conceptions in the intellect and in things.

Aporia is synonymous with 'wonder',²⁶ in its function of generating inquiry, but it is more explicit. When one is in an *aporematic* state, one is led to inquire and thus resolve or dissolve the *aporia*. Aristotle at *Metaphysics* B 1, 99533-b4 has given us the reasons for drawing up the *aporia*. The primary purpose is to indicate the knots binding the intellect and preventing it from going forward toward the truth. The secondary aim is to show the direction in which one must proceed and thus to be aware when the goal has been achieved. Finally, it enables one to judge contending arguments better.²⁷

It is important then to examine closely the construction as well as the background of an *aporia*. This examination will reveal the knots binding the intellect of the hearer not the reader. Thus in a general way the solution of the *aporia* will be revealed in its very construction and we will be as modern readers in a better position to both understand and evaluate Aristotle's teaching on the subject in question.

The first issue to be taken up in our reading is the question of deciding (1) how many *aporias* are there at *An. Post.* 99b22-26 and secondly (2) under what question of the two at 99b18-19 do they belong? Aristotle has mentioned that the *aporias* are aimed at clarifying the meaning of those questions that we have singled out above (έντεϋθεν ἔσται δῆλον προαπορήσασι πρῶτον) thus the solution of these difficulties is not unimportant.

Aporias are usually identifiable in Greek by the interrogative pair that introduces them, in this case, πότερον ... ἢ. The construction of the sentence is somewhat tenuous, that is, the *aporias* are merely linked loosely by a successive καὶ (ands) thus we have:

- 99b22 — καὶ πότερον ἢ αὐτή ἐστὶν ἢ οὐχ ἢ αὐτή ...
 23 — καὶ πότερον ἐπιστήμη ἑκατέρου ἢ οὐ
 24 — ἢ τοῦ μὲν ἐπιμήμη τοῦ δ' ἕτερόν τι γένος
 25 — καὶ πότερον οὐκ ἐνοῦσαι αἱ ἕξεις ἐγγίνονται
 26 — ἢ ἐνοῦσαι λελήθασιν.

Lines 22-24 seem to be concerned with one topic whereas lines 25-26 seem to be concerned with a related but different topic. Lines 22-24 are concerned with the *gnosis* of immediates, whereas lines 25-26 are dealing with the status of *hexeis* (plural). Thus we have two *aporias* (1) lines 22-24 and (2) lines 25-26. There is a slight difficulty with respect to the text of lines 22-24. The ἢ (line 24 of the Bekker edition) seems to be used in a way that is not an alternative to the previous question (πότερον ἐπιστήμη ἑκατέρου ἢ οὐ) but substitutes another question which is more specific and intended to anticipate the answer to the first.²⁸ Therefore the alternatives seem to be that *gnosis* of immediates²⁹ is either *episteme*³⁰ or of some other kind (of knowledge).

The second difficulty involves the relation of the question to the statement of the *aporias*. It is time to look closely at the structure of the question—*aporia*—solution.

A. The Question

πῶς τε γίνονται γνώριμοι; (how do we come to recognize them?)

The Aporia A.

καὶ πότερον οὐκ ἐνοῦσαι αἱ ἕξεις ἐγγίνονται ἢ ἐνοῦσαι λελήθασιν; (and whether the settled dispositions are not present in us and develop or are present in us unnoticed?)

The Solution

δῆλον δὲ ὅτι ἡμῖν πρῶτα ἐπαγωγή, γνωρίζειν. (it is clear that the firsts must be recognized through *epagoge*)

B. *The Question*

καὶ τίς ἡ γνωρίζουσα ἕξις; (what sort of settled dispositions are they by which we recognize them?)

The Aporia B.

καὶ πότερον ἡ αὐτὴ ἐστὶν ἢ οὐχ ἡ αὐτὴ ...καὶ πότερον ἐπιστήμη ἐκατέρου ἢ οὐ ἢ τοῦ μὲν ἐπιστήμη τοῦ δ' ἕτερόν τι γένος; (and whether it is the same or not the same ... that is, whether there is *episteme* of each or not, or more clearly, *episteme* of one and some other kind of the other?)

The Solution

Νοῦς ἄν εἴη ἐπιστήμης ἀρχή (*Nous* is the principle of scientific knowledge).

In trying to understand an *aporia*, it is important to determine the background of the contrary conceptions, which constitute the structure of the *aporia*. In other words, we must determine what is the cause of the difficulty in the intellect of the hearers of Aristotle's classroom *logoi*.

Aporia A above centers around the notion of *hexeis*—"whether the settled dispositions develop not being present in us or being present in us are unnoticed?" Aristotle is using *hexis* in its technical sense (Bonitz, *Index*, p. 260b-261a esp. 260b57-58 where he states that *hexis* means "an habitual state that is acquired"), thus the statement of the *aporia* would envisage this general sort of situation—some elements within Aristotle's teaching are causing the difficulty.

6.

Before continuing in this vein let us consider the Platonic doctrine of Recollection as a possible background. It is usually the only one advanced. Thus if we can show that it is not the one Aristotle had in mind, our own view will be supported. In accordance with the structure of the chapter, the first question to ask of the doctrine of Recollection is—would it illuminate the "how" questions? If Recollection were a process it would appear as a possible difficulty for the hearers. But Recollection does not tell us *how we know* but *when we knew*. The question of "*initial learning*" is left untouched by the doctrine of Recollection.³¹ As Plato explains it in the *Meno* and then more precisely in the *Phaedo* the soul and Forms in some prior *state of being* cannot be described as involved in any process, 'learning' or otherwise, since they are both within the realm of being, still under the spell of Parmenides' notion of being, thus motionless in Plato's exposition. The process of re-acquiring knowledge of the Forms for Plato is Dialectic not Recollection. The doctrine of Recollection involves the composite of body and soul not the soul alone.

Another ground for rejecting Recollection as a background against which Aristotle is formulating his answer is the fact that Plato regards the cognition of Forms as scientific knowledge. Therefore Recollection even if it were involved would be understood as a “process for acquiring scientific knowledge”. But Aristotle is concerned in the *Posterior Analytics* II, 19 with the *archai epistemes* not *episteme* (scientific knowledge). Again, the notion of a source of the knowledge of the Forms (an *arche epistemes*) would lead inevitably to the notion of the Good, for a Platonically trained hearer. Especially as presented in the central books of the *Republic*. But Aristotle’s hearers would not think of Recollection. Thus the question would have to be interpreted from the perspective of Platonically trained hearers as “how do we come to recognize the Form of the Good?” The process would be Dialectic as presented in the *Republic*. But Aristotle’s pupils at this point are well aware of the homonymous nature of the *archai of episteme*.³² Finally, and I find this most telling, in the *Metaphysics* A, 993a1-2, it is clear that Aristotle is dealing with Plato’s single science of all things (Dialectic) and in that place the term “*sumphuton*” clearly indicates that it is an *innate* scientific knowledge which is in question. The text reads— “Again, if scientific knowledge happened to be innate it would be astounding how we could be unaware.”

In the text of the *Analytics*, on the contrary, the term is “*enousia*”, the contrast is between “being present in and develops” and “being present in unnoticed.” Thus the subjects of both sections are different; in the *Analytics*, the *arche epistemes*, in the *Metaphysics*, *episteme* (scientific knowledge). The subject is described in the *Metaphysics* as being “innate” (*sumphuton*) whereas in the *Analytics* the contrast is not between a *hexis* that is *present in* and one that is *not present in* but between a *hexis* present and developing in some determined way, that is, by going from unnoticed to noticed or unawareness to awareness.

How does Aristotle view Plato’s theory of Recollection? Well at *Prior Analytics* II 21, 67a21-26 he takes up the issue and it may be instructive to consider the text of his discussion.

Similarly with the logos in the *Meno* that learning is recollection. For in a no way do we have prior knowledge of the singular (*to kath’ekaston*) but at the same time as we are in the process of epagoge, we have *episteme* of the singular (*to kata meros*), just as if remembering. For some things we see directly; for example, if we understand “triangle” we also grasp “two right angles”, similarly too in other cases.³³

The example involves some presuppositions—(1) knowing through demonstration at some prior time that “two right angles” is a per se universal *attribute* of the subject “triangle”; (2) the relation between *epagoge* and the universal and the singular.³⁴

What the example envisages then is that in the approach (*epagoge*) to the universal triangle, which starts from “this concrete figure”, we at the same time have direct knowledge of the parts of the notion of triangle. The parts, of course, are of the definition, which belongs per se and directly to the subject. This direct grasp, which is “knowledge of the part” (*episteme to kata meros*), that is, part of the definition is what Aristotle says *resembles* Recollection. In Aristotle’s presentation of Recollection the “process” is not from the singulars to the Form. Aristotle is not directly comparing the movement of *epagoge* to Recollection, but rather he is comparing Recollection to the temporally concomitant immediate knowledge in *epagoge* of the per se attribute of “two right angles” which the presence of the notion of “triangle” arouses. In other words, it is as though the presence of “triangle” in the process of epagoge ‘moves’ one to remember “two right angles”. The whole process is reminiscent of the opening lines of the *Metaphysics* concerned with how the universal becomes known by numerous repetitions of the sensations involved until the universal forms are aroused in the soul. Some confusion is generated by the rejection of Recollection at line 22, which is based on Aristotle’s denial that there is any prior ‘knowledge’ of the singular. But the singular (*to kath’ekaston*) turns out to be a universal as is clear

from the example. Owens has pointed out the identification of the singular (to kath'ekaston) and the universal (to katholou) because of the identification of the *form* as *eidos* or *to katholou*. This prior description of the singular as actual sense thing and the singular (*tode ti*) as a universal fits in nicely with Aristotle's constant description of the Platonic Form as potential and as a concept (*pathemates te psuches*) in the *De Interpretatione*. What appears as a kind of Recollection concomitantly with the epagogic process is the result of a kind of association of ideas, which is dependent on the unity of the definition although it may be said to have parts. One of the conditions for this direct recall is the process of *epagoge*, which starts from the singular given in sensation and somehow arouses the universal. But the condition for *epagoge* is sensation as well as memory as Aristotle explains at *An. Post.* I 18, 81a38-b9:

It is evident also that if any sense-power has been lost, some knowledge must be irrevocably lost with it; since we learn either by induction or by demonstration. Now demonstration proceeds from universals and induction from singulars (τὸ κατὰ μέρος); but it is impossible to gain a view of universals except through induction (δι' ἐπαγωγῆς ...; and *we cannot employ induction if we lack sensation*, because it is sensation that apprehends the singulars (το καθ' ἕκαστον). It is impossible to gain scientific knowledge of them, since they can neither be apprehended from universals without induction nor through induction apart from sensation. (my emphasis)

In no case is Aristotle speaking about knowledge, i.e., scientific knowledge of the singular (consult also *Metaphysics Z* 2, 10, 1036a2-5).

Therefore Aristotle denies the existence of learning as Recollection because there is no prior knowledge of the singular sensible thing. Thus for him the origin of knowledge both scientific and non-scientific is sensation. Recollection as presented here denies that origin but let us note that Recollection as presented in the text goes from universal to universal ('triangle' to 'two right angles'). This, of course, is not Plato's doctrine but the closest thing in Aristotle's doctrine of knowledge to it. In other places, Aristotle continually stresses the origin in sensible things of the doctrine of Forms (*Met.* A 9, 990b1). There is no properly cognitive causality involving the senses in either Plato or Aristotle. For both the senses function as *conditio sine qua non*. In fact, Aristotle does not permit any innate origin for Platonic knowledge of the Forms.³⁴ In conclusion we have eliminated the possibility that the background for the aporias of *Posterior Analytics* II, 19 is Plato's theory of Recollection. Now we must face the issue in accordance with the only other possibility according to the suggestions of the text itself.

7.

As I have indicated above, the key term *hexeis* places the possibility squarely in the realm of Aristotelian doctrine as involving contrary concepts. It would seem that what we have in the *Posterior Analytics* II, 19 is a misunderstanding of an important Aristotelian teaching which is being clarified. In fact one, which would easily lend itself to being misunderstood by Platonically trained hearers.

When we ask the question that naturally arises in the circumstances: where in Aristotle's corpus is there anything like the doctrine implicit in *aporia B.* above, the term *hexeis* [ἕξεις] is surely an indicator. *Nous* is referred to as an *hexis* in the *Analytics* at *An. Post.* 89a4-89b9. Where is *nous* ever referred to by this term in conjunction with "being unaware" (λανθάνειν)? At *de Anima* III, 5, 430a10-

15 the “*nous to panta poiein*” is described as a kind of *hexis* and as not remembering.³⁵ Keep in mind that “making” or “*poiein*” for Aristotle involves moving causality as a *conditio sine qua non* and formal causality, the only difference between a “moving cause” and a “formal cause” being the matter of each. No agency is involved whatsoever, either in the realm of becoming or the realm of being since the form is self-energizing. As applied to knowledge the proper condition is sensation, the form is mind in soul. When sensation takes place, knowing universally ensues. The former is actual and the latter is potential. So it seems plausible that the combination of the “*nous to panta poiein*” as a kind of *hexis* (an *acquired* settled disposition) and that it fails to remember (“is unaware”) fits Aristotle’s indications as to the background of the aporetic state of the hearers. He puts it quite succinctly in the phrase: “that we possess these capacities unaware” (ἐνοῦσαι λελήθασιν).

We find unwitting confirmation for viewing “*nous to panta poiein*” in precisely this way from a modern Aristotelian commentator and translator, Sir W. D. Ross. In his volume entitled *Aristotle* (5th edition), p.147 in relation to *de Anima* III, 5 he writes: “Does the transition from potential to actual knowledge imply that there is something in us that actually knows already, some element cut-off from our ordinary consciousness so that we are not aware of this pre-existing knowledge, but which is nevertheless in some sort of communication with the ordinary consciousness or passive reason and lead this on to knowledge?” (my emphasis). The coincidence of the misunderstanding of the hearers and a modern commentator against which Aristotle is trying to clear up is marvelous for our purposes.

The other part of Aporia A. above is also clearly applicable to *nous* as described in the *Generation of Animals* B 3, 736b27-28: “*Nous* come to the composite from the outside.” Thus it may quite accurately be described in the terms of the aporia as “not present in us but develops” (οὐκ ἐνοῦσαι ... ἐγγίνονται).

It is clear then what background is obstructing the passage towards the truth with respect to the question: “how do we become familiar with the immediates, the firsts, the principles of episteme?” Aristotle’s hearers are tied up by a misunderstanding of his doctrine of *nous* as found in the *de Anima* III, 5 and the *Generation of Animals* B 3, 736b27-28. They have been trying to put together all these disparate elements into a coherent whole without success.

8.

The central question from which we started is whether Aristotle’s references in *Posterior Analytics* II, 19 to the “principles of science” (*arche epistemes*) that are “innate” but “unnoticed” do in fact point—as is commonly thought—to the Platonic doctrine of Recollection or to some other source. The argument of the paper was two-pronged: one negative—Aristotle is not describing his hearers as impeded by the Platonic theory of Recollection—the other positive—he is describing his own extremely different doctrine of mind or *nous*. Negatively, I have argued that the Platonic Recollection theory because it is not concerned with the “how” of knowing, is irrelevant to the present problem and thus not intended by Aristotle. Dialectic rather than Recollection would be the Platonic counterpart of the subject under discussion in the last chapter of the *Analytics*. It is the element of Plato’s doctrine that we would expect Aristotle to cite if he were going to cite anything from Plato. Furthermore that the so-called parallel passage in the *Metaphysics* does indeed concern innate knowledge but it is innate scientific knowledge not as in the *Analytics* an “innate” grasp of “first principles”. Thus the passage in the *Metaphysics* sheds no light on the statement of the *aporia* in II, 19. Positively, I showed that the two elements of the *aporia* fit the teaching of Aristotle on *nous* as found in both the *de Anima* III, 5 430a10-15 and the *Generation of Animals* B 3, 736b27-28. As the argument unfolded many statements were made about the universal especially that it is to be considered adverbially in dealing with the activity of *nous* and that it is a potency in this case. The understanding of “moving causality,” as a necessary but

not sufficient condition for grasping the universal, needs to be completed by the necessary and sufficient condition of nous as self-actualized form but that is a consideration for another paper. It is an appendix, a “reportatio” of Fr. Owens lectures on the Aquinas’ metaphysics also to be found on Professor Spade’s website.

ENDNOTES

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1. The editorial designations such as book, chapter, and paragraph should not be interpreted in such a way as to lose sight of the fact that we are in a precarious position with regard to the literary structure or form of the Aristotelian corpus. There is little that has not been subject to searching criticism and analysis. What has emerged is a general recognition of the proximity of the corpus to classroom use. What is at issue is also clouded by our ignorance of the 4th century BC publishing techniques. The work of Werner Jaeger although attacked by other is monumental in this area. Cf. Merlan, P. "‘Metaphysics’ and ‘Being qua Being’", *Monist* v. 52, n.2, p.177., n.8.

2. O'Connor, D. J. *Aquinas and Natural Law* (New York: St. Martin's Press, 1968) p. 11 "The Aristotelian account of how we come to know self-evident principles is given in the last chapter of the *Posterior Analytics*, and Aquinas accepts this account. It is, however, very obscure, and the question of how we come to know self-evident principles is confusedly mixed up with the question of how we come to know general concepts." The assumption of O'Connor is that it involves a process which neglects the distinction between *kinesis* and *energeia*, *kinesis* being process and *energeia* being immediate as Plato Mamo points out in an article entitled "Energeia and Kinesis in *Metaphysics* 8, 6" *Apeiron*, v. 4. #2 (August 1970), pp. 24-34 passim. Nuyens, R. *L'Évolution del Psychologie d'Aristote* (Louvain-Paris: Vrin, 1948), pp. 114-15 mistakenly identifies both texts, the *Posterior Analytics* II. 19, and *Metaphysics* A 9, 993a1-4 as concerned with a rejection of Plato's doctrine of Recollection. "A cette même période nous assignerons les Second Analitiques en raison de la concordance frappante des critiques formulées de part et d'autre contre la théorie della réminiscence."

3. *An. Post* II, 19, 99b25-26: καὶ πρότερον οὐκ ἐνοῦσαι αἱ ἕξεις ἐγγίνονται ἢ ἐνοῦσαι λελήθασιν.

4. Lee, H. D. P., "Geometrical Method and Aristotle's Account of First Principles" *Classical Quarterly* v. 29, 1935 pp. 113-124, on the contrary dismisses without any argumentation any relation between the *De Anima* III, 5 and the subject of how we acquire firsts. On p. 119 he says: "(1) *Nous*. I am here, of course, solely concerned with *nous* as the means or faculty by which we apprehend first principles; its place in Aristotle's psychology, the problem of *nous poietikos* and *nous pathetikos*, are, for the purposes of the present argument irrelevant." Emphasis added.

5. Weisheipl, O.P., J. Athanasius, *Aristotelian Methodology: A Commentary on the Posterior Analytics of Aristotle*. The reader can find the commentary on the website of Professor Paul Vincent Spade (<http://pvspade.com>). Cf. also *Met.* A 3, 983a24-99a27; *Phys.* A 2, 184b15-192b4; *de An.* A2, 403b20-411b30.

6. McKeon, R. "Aristotle's Conception of the Development and the Nature of Scientific Method" *JHI* v. 8 n.1 January 1947 p.27: "...the path from sense-perception to science is delineated at the end of the examination of demonstration because demonstration departs initially from principles that cannot be demonstrated; it is repeated at the beginning of the examination of the nature of things, because things are and are known ultimately from first principles and causes." Cf. *Top.*, 12, 101a34-b4; also Owens, J.

The Doctrine of Being in the Aristotelian Metaphysics, 3rd ed. (Pontifical Institute of Mediaeval Studies, 1978) pp.206-207 hereinafter DOBAM.

7. *An. Post.*, A 27, 43a22-24: οὐ γὰρ μόνον ἴσως δεῖ τὴν γένεσιν θεωρεῖν τῶν συλλογισμῶν ἀλλὰ καὶ τὴν δύναμιν ἔχειν τοῦ ποεῖν.

8. Cf. *Nic. Eth.* I 4, 1095a30-35: "μὴ λανθανέτω δ' ἡμᾶς ὅτι διαρέουσιν οἱ ἀπὸ τῶν ἀρχῶν λόγοι καὶ οἱ ἐπὶ τὰς ἀρχάς. εὖ γὰρ καὶ Πλάτων ἠπόρει τοῦτο καὶ ἐζήτει πότερον ἀπὸ τῶν ἀρχῶν ἢ ἐπὶ τὰς ἀρχάς ἐστὶν ἡ ὁδός ...

9. Cf. *Metaph.* Δ 1013a1-4: ἡ δὲ ὅθεν ἂν κάλλιστα γένοιτο ἕκαστον οἶον καὶ μαθήσευς οὐκ ἀπὸ τοῦ πρώτου καὶ τῆς τοῦ πράγματος ἀρχῆς ἐνίστε ἀρκτέον ἀλλ' ὅθεν ῥᾶστ' ἂν μάθοι.

10. Cf. *Metaph.* Δ 1013a17-20: πασῶν μὲν οὖν κοινὸν τῶν ἀρχῶν τὸ πρῶτον εἶναι ὅθεν ἢ ἔστιν ἢ γίγνεται ἢ γινώσκειται· τούτων δὲ αἱ μὲν ἐνυπάρχουσαί εἰσιν αἱ δὲ ἐκτός.

11. The assuming 'that-p when the question being debated is '?-p'. So here the *arche* is the original issue or the original point at issue, i.e., the thesis, which the respondent has undertaken to uphold before the disputation begins.

12. Socrates and Plato agree with Aristotle that scientific knowledge is of the universal and it is common place in Aristotle. Cf. *Phys.* II, 5, 417b22-23; *Met.* B 6, 1003a14-15; K 1, 1059b26-1060b20. Aristotle's reason is given at *An. Post.* I, 2, 77a7-8: "If there were no universal, there would be no middle term and no demonstration." Cf. *Topics* VIII, 14, 164a10-11.

13. Kapp, E.. *Greek Foundations of Traditional Logic*, (N.Y.: A.M.A.Press Inc., 1957) pp.28-30, esp. p.29 "A syllogistic *horos* is not necessarily one word and what is limited (determined)—*horos* means limit—is in this case the proposition, not, of course, its two limits (terms) themselves."

14. *An. Post* I 22, 84a36: "it is by adding a term internally, and not externally, that a proposition is demonstrated." Note the identification of the "universal" terms with the proposition.

15. Owens, J. *DOBAM* p. 240, n.107 see also above note 12, above.

16. Cf. Ross, W.D., *Aristotle* p.54: "The *Posterior Analytics* are for the most part occupied with demonstration, which presupposes the knowledge of first premises not themselves known by demonstration. At the end of the book Aristotle comes to the question how these are known." Ross mentions on the following page (p.55) one point that remains obscure: "What exactly are the 'first things' which are thus known by intuitive reason?" He thinks that the 'first things' must be the categories but these seem inappropriate. Finally, he concludes that "'first things' must be axioms, definitions, 'hypotheses'". Tredennick, the Loeb series translator (p.254, n. b) indicates an awareness of the same difficulty and in general his solution of the problem is in agreement with Ross i.e., (first principles) the immediate premises upon which all demonstration depends described in 72a14. These include both the axioms or general principles of reasoning (whether common to all categories or proper to a particular category) and the special principles of single sciences, viz., definitions and assumptions. (Cf. 76a21-77a4, and see Heath, *Mathematics in Aristotle*, pp.50-55). What Aristotle goes on to describe is the formation of universal concepts rather than the grasping of universal propositions, and it is not until 100b3 that he (rather casually) indicates that the processes are parallel. Cf. Robinson, R. *Plato Earlier Dialectic*, p.37 is critical of Aristotle and at p.175 bottom claims that Aristotle uses "slovenly arguments for proving intuition." See also n.2 above. On the contrary chapter 27 of the first book of the *Prior Analytics* states that *logoi* (arguments) and inquiries precisely concern 'things which are intermediate between the ultimate categories and singulars,' for they both are predicated of other things and have other things predicated of them." (43a40-45). The aforementioned is a clear description of *secondary ousiai* operating in mental scientific space. Thus universals or secondary *ousiai* are at issue

here, which can operate as either subjects or predicates in scientific discourse. At chapter 31 (87b28-35) Aristotle states that sensation concerns the here and now whereas demonstrations are universal and universals cannot be perceived by the senses. Therefore the universal and its possession is necessary for the acquisition of scientific knowledge. Finally at chapter 28 Book One of the *Prior Analytics* 44a36-38: “Thus it is evident that in the proving of every proposition (*kath’ hekaston*) we must consider the foregoing relations of subject and predicate; for it is by these that all syllogisms are determined.” (διὰ τούτον γὰρ ἅπαντες οἱ συλλογισμοί)

17. What I am translating as “origin” or “causes” or “principles” is sometimes translated as the “grasp” or “acquisition” of the universal. The notion must be carefully understood because it lends itself to the reification of the universal, treating it as though it were a noun when it clearly is used adverbially (a prepositional phrase) e.g., knowing universally within an epistemological framework, of course, within a logical framework it is used as a noun (to *kath’ olou*). Some other caveats, Aristotle is not dealing with the “coming into being” of the universal i.e., how the mind (*nous*) thinks since that is taken up in *de Anima* III, 5. Nor is Aristotle concerned with justifying the starting points of the special sciences. As Marjorie Grene pointed out in *A Portrait of Aristotle*, p. 176. Cf. Owens, J. *DOBAM*, p.228, n.64: “Aristotle does not conceive the other sciences as ‘borrowing these first principles from the Primary Philosophy’ since they all have their own proper genus which yields their own principles. In particular there is no trace in him of the view apparently held by Plato, that metaphysics can prove the principles of the special sciences. Each science starts with principles that are unprovable except in those cases where they are subalternate to higher ones. Cf. W. D. Ross, *Aristotle’s Metaphysics* v. I, p.252.

18. Cf. Randall, J. *Aristotle*, pp.42-46 for an presentation of a supposed Aristotelian view of *epagoge*, esp., p.43: “This process of learning (*archai*) Aristotle called “*epagoge*”, induction. The Schoolmen, to distinguish it from another process Aristotle called *epagage*, and which we call “complete enumeration” for instance, finding what all the planets possess in common by considering each of them in turn called it “abstraction” and held that we arrive at *archai* by a process of abstraction. This was unfortunate, for the process Aristotle had in mind has nothing to do with the process of logical abstraction, or stripping away the particular instances from the universal. It means seeing not only the particular instances, but seeing also the intelligible structure of the particulars that is implicit in the various that’s.” When dealing with *nous*, there are no processes, only immediacy through contact with the sensed thing. *Epagoge* serves as a *conditio sine qua non* or moving cause which removes that which prohibits or inhibits (the absence of sense objects as actualized in the sense powers) and thus allows the universal to be manifested itself since *the soul is a self-actualizing form as all forms are in Aristotle*. Moving causality is not “agency” or “efficiency” despite the long tradition of calling it so.

19. In the *Nicomachean Ethics* Z 3, 1139b28ff. ἡ μὲν δὴ ἐπιστημὴ ἀρχῆς ἐστὶ καὶ τοῦ καθόλου ὁ δὲ συλλογισμὸς ἐκ τῶν καθόλου. εἰσὶν ἄρα ἀρχαὶ ἐξ ὧν ὁ συλλογισμὸς ὧν οὐκ ἐστὶ συλλογισμὸς ἐπαγωγὴ ἄρα.

20. The question as stated in the text reads—τίς ἡ νωρίζουσα ἕξις ἐντεῦθεν ἔσται δῆλον? There is a variant reading of ἐστὶ in the critical apparatus which seems to indicate a desire on the part of some to treat the question as meaning “what is the nature of the capacity that secures this knowledge?” But the question is concerned with a class (Symth-Messing, *Greek Grammar* (Cambridge: Harvard University Press, 1963), p. 310 #1265—τίς asks a question concerning a class, τί concerning the nature of a thing: εἰπέ τις ἡ τέχνη—say of what sort is the art?” Thus the translation should run “what sort of capacity discovers ...?” The answer to the question bears out this interpretation since Aristotle at 100b5 lists the kinds of capacities in an entirely empirical manner and then eliminates all but one, *nous*, and declares that it is the one in question.

21. Owens, J. *DOBAM*, p. 161, n.19: “No distinction seems to be meant here (*Metaphysics*) between ‘principle’ and ‘cause’. Cf. H. Bonitz, *Arist. Metaph.* II, 59. The instances of the two are the same (I 1013a16-17). The two always accompany each other, whether or not they are explained by the same notion (2, 1003b23-25). The instances of the equivocal ‘principle’ are listed at 1, 1012b34-1013a23, and its definition given at 1013a17-19. Its general meaning offers no difficulty. It is a ‘beginning’ of some kind. Its philosophical use seems to date back to Anaximander, Cf. Werner Jaeger, *The Theology of the Early Greek Philosophers*, pp. 24-28. Also Apostle, H. G., *Aristotle’s Metaphysics*, p. 73 #7. *Met. Δ* 1,1013a17: “The term ‘a cause’ has as many senses as the term ‘a principle’; for all causes are principles.” *Commentary*, p. 296 #5: “He does not mean that ‘a cause’ and ‘a principle’ have the same meaning, but that the two terms have the same denotation; that is, what is a cause is a principle and conversely.”

22. Owens, J. *DOBAM*, p. 217, n. 26 and 33; A 2,982b12-21. “Ζήτησις is used by both Plato (cf. F. Ast, *Lex. Plat.* I, 251; II, 4) and Aristotle (cf. Bonitz, *Ind. Arist.* 85a16-b24; 309a40) in close association with “*aporia*”. Alexander (*In Metaph.* pp. 15.30-16.1) points to a distinction between “wonder” and “inquiry”. Wonder is the first stage, inquiry is the second, arising from the initial wonder. Also, ‘the ‘drawing up’ of the *aporia* seems to precede the inquiry proper.”

23. Cf. Owens, J. *DOBAM* pp. 107-36 for an exhaustive and clear understanding of this central doctrine.

24. Cf. Aubenque, P. *Aristote et les Problème de Méthode* (Paris: Beatrice-Nauwelaerts, 1961), pp. 3-20. Aubenque never seems to advert to the fact that *aporia* is a pedagogical device in most cases (cf. Book Beta of the *Metaphysics*) and whose structure must be analyzed from the perspective of the hearers.

25. *Ibid.* pp. 216-17 esp. n.26. “This state seems to coincide with the initial attitude of ‘wonder’ described in Book A with the help of the ‘*aporia*’ terms. To be in a state of ‘wonder’ and in a state of ‘*aporia*’ were there regarded as synonymous. *Aporia* seems merely a more explicit notion of the initial ‘wonder’.”

26. *Ibid.* pp.218-19 esp. n. 37 for an explanation of the vocabulary and purposes of the Aristotelian *aporia*.

27. Cf. Smyth, *Greek Grammar*, p. 649, #2860.

28. Cf. *Posterior Analytics*, 99b25: “γνώσις τῶν ἀμέσων” are called ἐξεις cf. 89a4-89b9. There δοξάζειν and ἐπίστασθαι are both called ἔξεις (89b3) but notice νοῦς is among the ἔξεις. τὰ δὲ λοιπὰ refers to ἔξεις (89b3).

29. By ‘science’ I am translating what Aristotle called ἐπιστήμη, I prefer the longer expression, ‘demonstrated conclusions’, since it keeps in mind the relation always present in Aristotle’s mind between the syllogism and science that results from the conjoined activity of *nous*, *dianoia*, and *epagoge*.

30. Cf. Klein, J. *A Commentary of Plato’s Meno*, p. 166, n.4. “Whenever learning is identified with recollection, or remembering, the problem of *initial* learning is held in suspense, unless the first beholding of the εἶδη on the part of the souls, as described in the *Phaedrus*, be taken as indicating initial learning”. Klein does not realize that there is no ‘*initial* learning’ if by that he means a process since there is no motion or process in the early theory of forms. For Plato it is the soul which is the “knower” and it is the composite that is a “learner”. The former is in the realm of being (forms) and the latter in the realm of becoming. The realm of being marches in step with Parmenides “signposts of truth”.

31. *Supra*, note 6.

32. Consult Owens, J. DOBAM, pp. 107-131 for a discussion of “equivocals”.

33. *An. Post.* 67a21-26. Cf. Klein, J. *op.cit.*, p.111: “Aristotle explicitly mentions that mathematical objects (τὰ παθήματα), because of the ordered sequence (τάξεις τις) which leads to their being grasped, are especially fitted for being recollected and remembered (εὐμνημόνεθτα) 452a3-4. Also pp. 117-8 section b.

34. Owens, J. *op. cit.*, p.203, esp. n. 148: “(Even Plato, as Aristotle makes clear in his critique of the Ideas, actually proceeded from sensible things to the Forms...” [pp. 148-49, 990b5-7; M 4, 1079a1-3. Aristotle does not allow any innate origin for Platonic knowledge. Cf. A 9, 993a1-2].”

35. *De Anima* III 5, 430a10-25: Ἐπεὶ δ' ἐν ἀπάσῃ τῇ φύσει ἐστὶ τὸ μὲν ὕλη ἐκάστῳ γένει (τοῦτο δὲ ὅ πάντα δυνάμει ἐκεῖνα), ἕτερον δὲ τὸ αἴτιον καὶ ποιητικόν, τῷ ποιεῖν πάντα, οἷον ἡ τέχνη πρὸς τὴν ὕλην πέπονθεν, ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπάρχειν ταύτας τὰς διαφοράς. καὶ ἔστιν ὁ μὲν τοιοῦτος νοῦς τῷ πάντα γίνεσθαι, ὁ δὲ τῷ πάντα ποιεῖν. ὡς ἕξεις τις, οἷον τὸ φῶς. τρόπον γὰρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὄντα χρώματα ἐνεργεῖα χρώματα. καὶ οὗτος ὁ νοῦς χωριστὸς καὶ ἀπαθὴς καὶ ἀμιγής, τῇ οὐσίᾳ ὧν ἐνεργεῖα. αἰεὶ γὰρ τιμιώτερον τὸ ποιοῦν τοῦ πάσχοντος καὶ ἡ ἀρχὴ τῆς ὕλης. τὸ δ' αὐτὸ ἐστὶν ἢ κατ' ἐνεργεῖαν ἐπιστήμη τῷ πράγματι. ἢ δὲ κατὰ δυνάμιν χρόνῳ προτέρα ἐν τῷ ἐνί, ὅλως δὲ οὐδὲ χρόνῳ, ἀλλ' οὐχ ὅτε δ' οὐ νοεῖ. χωρισθεὶς δ' ἐστὶ μόνον τοῦθ' ὅπερ ἐστὶ, ὅτι τοῦτο μόνον ἀθάνατον καὶ αἰδῖον (οὐ μνημονεύομεν δέ, ὅτι τοῦτο μὲν ἀπαθές, ὁ δὲ παθητικὸς νοῦς φθαρτός). καὶ ἄνευ τούτου οὐθὲν νοεῖ.