
Interpreting Aristotle's Posterior Analytics in Late Antiquity and Beyond edited by Frans A. J. de Haas, Mariska Leunissen, and Marije Martijn

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Recent years have seen the publication of a number of collective volumes studying the fate of particular Aristotelian works through the centuries. The present volume is a welcome addition to the bibliography. Its 10 essays are arranged in three parts:

- (1) Concept Formation in *Posterior Analytics* II 19,
- (2) Metaphysics as a Science, and
- (3) Demonstration, Definition and Causation.

Inevitably, the quality of such a collective work is not even all the way through but on the whole it is very satisfactory, and the concentration on three important topics gives some coherence to the volume. The title's promise of information about the fate of *An. post.* in Late Antiquity is fulfilled by most of the constituent essays, whereas there is precious little about the 'Beyond' except for one essay about Eustratius of Nicaea and one about Roger Bacon plus some that discuss pseudo-Philoponus on *An. post.* 2 (whom the authors wrongly tend to identify with Philoponus himself; see more about this below). The editors' introduction contains some sweeping statements about the way *An. post.* was treated in the Middle Ages. At least as regards the Latin world, it is hardly true that 'either the commentaries had an external aim, primarily the defense of theology as a science, or the commentators selected a fairly limited number of themes useful to the areas of philosophy of their interest', as we read on page xix. Given the considerable number of unpublished and barely studied commentaries from the medieval arts faculties, the claim about narrow interests on the commentators' part is extremely hazardous. And

as regards theology, the main upshot of the debate in the 13th century about whether theology could be an Aristotelian *scientia* was exactly that it cannot, because its axioms are non-evident.

Part 1 starts with a paper by Richard Sorabji, who—lucid as always—first outlines his own, very interesting, interpretation of 2.19 (main point: *νοῦς* is ‘spotting’) and then succinctly presents various interpretations of the chapter by Greek commentators, most of whom could not accept Aristotle’s rejection of innate rational principles (*λόγοι*).

There follows a paper by Christoph Helmig about Proclus’ objections to Aristotle’s theory of concept formation. The critique is found principally in a longish passage in book 4 of Proclus’ commentary on the *Parmenides*, in which Aristotle is not mentioned; but, as Helmig makes clear, the main thrust of the passage is to rebut the thesis of *An. post.* 2.19 that concepts have their origin in sense-perception and are arrived at by the inductive process which the Neoplatonists called ‘collection’. In the course of his argumentation, Proclus not only inveighs against such latter-born concepts but also introduces a good variant of latter-born concepts and a good variant of collection, in which latter-born concepts come about when the soul collects common features of sensible things guided by the innate *λόγοι*. Sensible things, thus, are not the origin of such concepts but just the occasion for forming them.

I find Helmig’s argumentation persuasive, much more persuasive than Proclus’, which, as Helmig repeatedly points out, can only sway someone who has already accepted a number of Neoplatonic principles. I have two small queries. On page 32, Proclus is made to say that ‘the universal in the many is of lesser account than every individual’. The sense must be ‘the universal in the many is less than each of them’ because, as Proclus explains, each singular thing possesses accidental properties over and above its universal nature. Towards the end of the paper, having distinguished between the processes of abstraction and collection, and having claimed that Proclus identified Aristotle’s mode of deriving a concept with collection, Helmig nevertheless in the next paragraph [64] speaks as if such an Aristotelian concept was the result of abstraction.

Katerina Ierodiakonou analyzes Eustratius’ comments on *An. post.* 2.19. She finds a discrepancy between the commentator’s initial

five-page paraphrase-cum-excursus and the remaining 10-page more detailed commentary, although the latter repeats much that was already said in the former. The discrepancy is real but her attempt [58] to put the blame on an editor, who, she proposes, may have mixed up two sets of marginal annotation, is farfetched. Apparently, she is thinking of Hayduck, who did the edition in *Commentaria in Aristotelem Graeca* [Hayduck 1907]. But if anything of the sort happened, it must have happened in late Byzantine times. The first printed edition, by Paulus Manutius, from 1534 had the same text as Hayduck's edition.¹

More interesting is Ierodiakonou's speculation about what might have motivated Eustratius to defend a couple of views that were not at all, or not clearly, Aristotle's. According to Eustratius, in one passage at least, where he contrasts his own view with both Plato's and Aristotle's, humans do possess full knowledge of the first principles at birth, although this knowledge is obscured by bodily impulses. Ierodiakonou suggests that this may reflect the Christian thought that humans, being made in God's image, are fundamentally perfect. She does not mention original sin; but, if she is right about her main point, the obscuration should probably be attributed to original sin. Eustratius also shows some eagerness to make physics a science in spite of the instability of sublunar physical phenomena. Ierodiakonou suggests that this may have a link to the Christian notion of nature as God's creation and the study of nature as a means to find a way to God. Both points are, she admits, speculative without solid textual support, but they are worth keeping in mind.

The last paper of part 1 is by Pia A. Antolic-Piper, who, after an initial sketch of the introduction of the *Posterior Analytics* in medieval western schools, analyzes how young Roger Bacon in his two sets of questions on the *Metaphysics* (ca 1237–1247) understands the acquisition and status of the principles of knowledge/science, and how his discussion of the issue depends on his reading of the *Posterior Analytics*. Two main conclusions are that for Bacon,

¹ This appears from Hayduck's preface, according to which Manutius' edition agrees so much with his own main ms., Ven. Marc. 257, that it must have been based on that ms. Moreover, Andreas Gratiolus' Latin translation from 1542, which is based on Manutius' edition, matches Hayduck's text perfectly. See Gratiolus 2001.

- (a) there is no innate knowledge, only innate facilities,
- (b) *intellectus* is a state and not an activity or process, the processes leading to it being sensation, induction, and *experimentum*.

Unfortunately, the questions on the *Metaphysics* are not very informative about how Bacon imagined those processes; but it is interesting to notice how small a role is allotted to abstraction as opposed to induction, and how he concentrates on universal propositions rather than universal concepts as the principles of knowledge. He is influenced by Robert Grosseteste's commentary (which comes as no surprise) but does not follow him in all matters.

Antolic-Piper's paper is somewhat difficult to read, in part because the English does not flow naturally. In footnote 9, she mentions some early commentaries on the *An. post.* and among them one by Nicholas of Paris. To the best of my knowledge, there is no such work.

Part 2 of the book starts with a lucid investigation by Maddalena Bonelli of the neck-breaking attempt by Alexander of Aphrodisias to make Aristotelian metaphysics a science in the sense of the *Posterior Analytics*. The attempt involves, among other acrobatics, taking being as a sort of genus of everything. On the whole, I find Bonelli's interpretation of Alexander convincing, including her discussion of how Alexander thought one can use the most general axioms in syllogistic deductions, axioms such as the Euclidian 'Those that are equal to the same are equal to each other'. She fails, however, to point out that for all Alexander's efforts, even he did not manage to produce an Aristotelian categorical syllogism with the axiom of equality as its major premiss.

There follows a brief paper by Angela Longo about Syrianus' use of *An. post.* in his commentary on the *Metaphysics*. Syrianus' unwillingness to harmonize Plato and Aristotle is well known. Longo concentrates on his attempt to show that Aristotle's rejection of hypostatized mathematical objects in the *Metaphysics* is inconsistent with the theory of science of the *An. post.*, with which Syrianus seems to have had no query.

The first essay of part 3 is by Mira Tuominen. She examines Alexander's and Philoponus' comments on *An. prior* 1.27–30—which together with ch. 31 were traditionally designated «Περὶ εὐπορίας προτάσεων» ('How to get a Good Supply of Premisses')—plus Alexander on *Topics* 1.2, with a view to ferreting out the commentators'

views about how to apply Aristotelian syllogistics in scientific practice. Tuominen's explanation of what happens in *An. prior.* 1.27–30 is illuminating but the result of her inquiry is unsurprising: the commentators did not see a problem in the application of syllogistics to the sciences and thought that the teachings of the *Prior Analytics* could be used to construct both dialectical and demonstrative syllogisms. Moreover, Alexander is fairly explicit that the good that dialectic does for science is not to establish scientific premisses but simply to sharpen the mind of its practitioner.

The last three papers are devoted to problems in *An. post.* 2.1–10, 11, and 12, respectively. This is one of the most forbidding parts of the whole *corpus Aristotelicum* and the papers are also very demanding of their readers. As might be expected, their solutions of the severe problems of exegesis lack the quality of obvious correctness but the papers offer good food for thought.

Owen Goldin deals with 2.1–10. He juxtaposes two lines of interpretation, his own, which he tries to show was also Alexander of Aphrodisias', and another followed by pseudo-Philoponus and, he claims, also by Western scholastic exegetes. Alexander's interpretation has to be pieced together from the (more or less certain) fragments of his commentary on *An. post.* 2 and his extant commentary on the *Topics*, and Goldin has to admit that not all the elements of his preferred explanation are actually attested in what can now be glimpsed of Alexander's commentary.

According to Goldin's preferred interpretation, Aristotle is tackling the problem of how to explain anything worth explaining with a tool-box containing just definitional first principles and syllogisms. The commentators who saw this, he says on pp. 155f.,

took Aristotle's view to be that when we explain a state of affairs, we often understand it as a case in which the nominal definition of an attribute is inherent in some basic subject of the sciences. The inherence of this nominal definition, in turn, can be syllogistically proven on the basis of definitional first principles.

The alternative interpretation takes the text to 'offer an account of how a syllogism can serve to identify conceptually distinct aspects of a single reality' [156], as we may see in pseudo-Philoponus who introduces the distinction between a formal and a material definition.

A slip: in a paraphrase of Alexander, *Top.* 17.3ff. on page 175 we read ‘with the supposition (κείμενος) that...’. The paraphrase is passable, but the apparent information that a supposition is called a κείμενος is not. What the text has is a genitive absolute, the subject of which is a nominalized sentence treated as a neuter noun and the predicate «κειμένου»: ‘it being posited that...’. On page 178, something has gone terribly wrong with a sentence. I cannot make head nor tail of:

From this passage, Philoponus(?) learns that there are two different sorts of definitional accounts that the play a role in demonstration of the existence of that kind are definitions of a sort.

An otherwise reasonably transparent part of Goldin’s difficult paper suddenly is plunged into obscurity.

A paper by Mariska Leunissen deals with Aristotle’s remarks about final causes as middle terms in *An. post.* 2.11. She convincingly shows the untenability of pseudo-Philoponus’ interpretation, according to which Aristotle tells his reader to disregard the example that is actually found in the text and construct other syllogisms instead. She also makes a good case for taking a vital «μεταλαμβάνειν» to mean ‘substitute’; but I am not at all convinced of the rest of her interpretation, which hinges, in particular, on a distinction between «αἰτίᾳ» and «αἴτιᾳ». Unfortunately, she treats pseudo-Philoponus as if he were John Philoponus and thus puts the text in a wrong historical setting.

The final essay, by Inna Kupreeva, takes up the question raised in *An. post.* 2.12 whether a temporally antecedent cause can necessitate an effect. This leads to a close examination of another relevant text, *De generatione et corruptione* 2.11, and of Alexander of Aphrodisias and Philoponus’ interpretations of it. We are also offered a tour of Aristotelian views on time, beginning and ceasing, as well as cyclical causation. All in all, a very stimulating essay.

On page 223, there is an apparent slip. A passage from Alexander in R. Sharples’ translation contains the phrase ‘does not even come to be the same’, ‘not even’ rendering «μηδέ». But further down on the same page, this is quoted as ‘never coming to be the same’, as though the text had ‘not ever’.

The book contains a moderate amount of misspellings and typing errors. Most of them, though a nuisance, are really innocuous, like ‘than’ for ‘then’ in T16 on page 192 or ‘dealed’ for ‘dealt’ on page 217. Occasionally, sinister forces have been at large and produced nonsense, as in the passage on page 178 quoted above. Remarkably, Greek words usually come out right, whether printed in Greek characters or transliterated.²

The original Greek of texts quoted in the articles is sometimes, but not consistently, printed in the footnotes. It would have made the book easier to use if one could always compare the translation with the original.

All but one of the essays are in English. A couple of those written by non-native speakers of the language could have benefited from some more robust editorial intervention, which could also have rectified the claim on page 126 that Kroll, the editor of Syrianus [1902], refers in one place to ‘*An. post. I* 7, 75b15 Ross.’ Ross has nothing to do here. The style of reference is, of course, the standard one to Bekker’s edition of Aristotle [1831].

A note about the Greek commentaries

Both in the introduction and in some of the essays, there is some confusion about the Greek commentaries on Aristotle’s *Analytica posteriora* that are still extant, those that were available in the 12th century, and James of Venice’s Latin translation of a Greek commentary that became known in the West as Alexander’s. Let me try to sketch the situation.

Probably the most influential of all the ancient commentaries was the one by Alexander of Aphrodisias (*ca* AD 200). Paul Moraux in 1979 made a case for its having survived in its entirety (covering both books of *An. post.*) until the early 12th century when, apparently, Eustratius of Nicaea had access to it. Moraux’s argumentation does not, however, suffice to exclude the possibility that what Eustratius really saw were extracts rather than the complete text.

² Exceptions: page 63 ‘metexein’ for ‘metechein’, page 90 ‘di’ auto’ for ‘di’ hauto’, page 119 «γενέσις» for «γένεσις», and page 147n 27 «ὅδος» for «όδός».

The oldest surviving Greek companion to the whole of *An. post.* is Themistius' paraphrase (Commentaria in Aristotelem Graeca 5.1) from the fourth century AD. The next may be from the early 13th century and it may have Leo Magentinus for its author, but it is not certain that the commentaries on books 1 and 2 that I tentatively attribute to this author really form a unity [see below]. An unedited commentary by George Pachymeres, which I have not seen, was probably produced in the early 1290s.³ Generally, we must treat commentaries on books 1 and 2 separately.

The only surviving ancient commentary on *An. post.* 1 is one ascribed to John Philoponus (6th century), the authenticity of which there is no reason to doubt. It was edited by M. Wallies in Commentaria in Aristotelem Graeca 13.3. If Philoponus ever commented on book 2, which he probably did, the work almost certainly did not survive until the renewed interest in the *Organon* in the early 12th century. His commentary on book 1, by contrast, was to become the standard Byzantine commentary on that book and there is no indication that the busy Aristotelians of the early 12th century felt a need to supplant it with a product of their own.

In fact, the earliest Byzantine commentary on *An. post.* 1 seems to be an anonymous one that may be the work of the 13th-century scholar Leo Magentinus. An interpolated version of this work was produced in the late 13th century and is found in several mss. An extract from the interpolated version has been printed in Commentaria in Aristotelem Graeca 21.1:viix–viii.⁴

Another commentary on *An. post.* 1 was produced by John Pediasimus, probably in the 1270s. It remains to be seen, however, to which degree it really deserves the title of ‘commentary’ rather than ‘collection of scholia’. The extant edition of a selection of scholia only contains unsatisfactory information about the constitution of the work.⁵

³ See Golitsis 2007. According to Golitsis a commentary on the whole of the *Organon*, hence also on *An. post.* 1–2, is contained in two mss.

⁴ I intend in a future article to show that all or most of the manuscripts of pseudo-Philoponus on *An. post.* 2 as well as those of the interpolated Leo(?) on *An. post.* 1 derive from ms. Vat. gr. 244, which mainly contains comments by Leo Magentinus, many of them with secondary interpolations.

⁵ See De Falco 1926 and 1928; cf. Praechter 1927.

We have two eponymous Byzantine commentaries on *An. post.* 2, one by the early 12th-century scholar Eustratius (*Commentaria in Aristotelem Graeca* 21.1), and another, unedited, by his near-contemporary Theodorus Prodromus [see [Cacouros 1992](#)], plus two anonymous ones. In addition, there is an unedited paraphrase by John Chortasmenos from the early 15th century (which I have not seen) [see [Cacouros 1994](#)].

The anonymous commentaries on book 2 were both edited by Wallies in *Commentaria in Aristotelem Graeca* 13.3 together with Philoponus on *An. post.* 1. By far the most interesting of them is the one styled ‘Anonymi in analyticorum posteriorum librum alterum commentarium’. It actually does not quite deserve the name of commentary as it fails to comment on parts of the text and misses a proem. Moraux in 1979 showed beyond reasonable doubt that it consists to a high degree, perhaps even exclusively, of excerpts from Alexander of Aphrodisias’ lost commentary. Actually, many of its constituent scholia start with «ὅτι», which in Byzantine texts is a standard way of introducing an excerpt (Moraux failed to grasp this point, which only supports his conclusion). There is at present no way to date this collection of excerpts—Moraux argued that the extant collection is even an abbreviated version of an ‘original’ one.

The other anonymous commentary on *An. post.* 2 is in *Commentaria in Aristotelem Graeca* 13.3 adorned with John Philoponus’ name. This is doubtless due to pressure from the general editor, Hermann Diels, who repeatedly forced Maximilian Wallies, an excellent scholar, to leave untenable attributions found in the Aldine editions untouched. Wallies had fully realized that there is every reason to reject the attribution, which, to the best of his knowledge, was supported by only one late manuscript and the Aldine edition. Few people nowadays read Wallies’ Latin preface to the volume and some of those who do so underestimate the force of his argumentation, as does Goldin in the volume under review [156], while Ierodiakonou and Leunissen act as if the attribution to Philoponus were assured. Wallies was no one’s fool; and unless you have access to information that he did not have, you had better not challenge his judgement.

On stylistic grounds, I am inclined to date pseudo-Philoponus on *An. post.* 2 to the 13th century. The author is probably Leo Magentinus, at least one of whose mannerisms the text shares. Leo was fond

of using «ἢ γοῦν» ('i.e.' to introduce explanations of words or clauses, sometimes stuffing several «ἢ γοῦν»-clauses into the same sentence [see Ebbesen 1981, 1.306–310, 2.285ff]). In Philoponus' commentary on book 1 there are just three examples of «ἢ γοῦν» in 333 pages. In pseudo-Philoponus on book 2, there are about 200 instances on just the first 45 pages! I know of no copy of the text with an attribution to Leo: but in a couple of manuscripts, a mixture of scholia by Pediasimus and pseudo-Philoponus is said to be by Pediasimus and Leo; and in one of them, Cardinal Bessarion has marked the excerpts from pseudo-Philoponus as being by Leo.⁶ I believe that Bessarion knew what he was doing. The chances that Leo incorporated material from a lost commentary by the genuine Philoponus are minimal, though the possibility cannot be completely discarded—there just is no reason to believe so.

What the available data suggest is that in the 12th century, apart from Themistius' paraphrase, the only unabridged ancient commentary available in Byzantium was Philoponus' on book 1, while there were also some extracts from Alexander's on both books. Hence, the production of four new ones on book 2 and, as far as we can see, of none on book 1. From various sources the authors could pick up fragments of lost commentaries but the books themselves were no longer to be found. As for James of Venice's translation of a Greek commentary into Latin, there can be no doubt that it existed, although it has been found in no extant manuscript. The evidence is best for book 1, and there several quotations that match Philoponus' phrasing to the word. Some evidence for book 2 is more difficult to interpret and some references, unknown to which book, make no perfect fit with any Greek text available in print, though they do presuppose a Greek source. The Latins generally attribute the work to Alexander but there is little reason to take that attribution seriously, as do the editors of the volume under review, who speak of 'James of Venice's translation of the Aristotelian text and of a commentary, probably Alexander's, or possibly that by Philoponus' [xviii].⁷ The transla-

⁶ See Cacourous 1994–1995, which fails to draw the conclusion that pseudo-Philoponus is really Leo.

⁷ The editors seem to depend on Longeway 2005, where one finds:

The commentary of Alexander of Aphrodisias (or the commentary of Philoponus, which is close to Alexander) was translated by James

tion seems to have been transmitted together with that of Michael of Ephesus' commentary on the *Sophistical Refutations*, which originally bore the correct ascription to Efesius but later on got attributed to Alexander, perhaps through a confusion of Efesius with Afrodisius.

In footnote 42 on page xviii, the editors claim that there is only one fragment of the translated commentary on *An. post.* and refer to a paper of mine from 1977. This paper deals with the only fragment known so far of James of Venice's own commentary on *An. post.* In fact, there are several fragments of the translated Greek commentary, though not a whole lot, as I have shown in several publications and most recently in a revised collection of the fragments from 2008. The work seems, however, to have had a very limited circulation; and as of 2011, there is no basis in actual scholarship for John Longeway's claim [see 364n7] to the effect that while the work itself quickly dropped out of circulation, much of its content was preserved in marginal glosses. Some of its content, yes, but not much of its content.

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