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THE TEXT OF *PHYSICS* VIII 1.250B13 AS A CASE STUDY

Abstract

The contribution is a follow-up to my textual note in *Aristotelica* 3 (2023) on *Physics* VIII 1.250b1. What is at issue is a previously neglected *lectio difficilior* concerning cosmic motion, i.e., εἰ ἦν καὶ ἀεὶ ἔσται, "*if it was* [always] there, it will also always be", vs. ἀεὶ ἦν καὶ ἀεὶ ἔσται, "*it was* there always and it will always be". The theoretical relevance of the reading emerged more clearly in the subsequent debate: it may imply a hypothetical foundation of Aristotle's theory of the eternity of cosmic motion, hence, of the cosmos itself, and hence, of its first unmoved principle. The question is: how can this case study contribute to the evolving research field of Aristotelian textual criticism? I will provide a more comprehensive answer in 'Aristotle's Earliest Extant Manuscripts. New Doubts and Perspectives' forthcoming in *Aristotelica* 6.

Keywords

Aristotle's Theory of the Eternity of the World, Hypothetical Premises in Aristotle's *Physics*, Textual Transmission of Aristotle's Works, Ms. Vindobonensis Phil. gr. 100, Ms. Parisinus gr. 1853

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1. Premises[1]

In *Aristotelica* 3 (2023) pp. 45-60, I provided evidence for a previously neglected *lectio difficilior* at *Phys*. VIII 1.250b13. It is located in the first, long paragraph of the *Physics*, VIII 1.250b11-15, where cosmic motion is at issue. According to the vulgate, Aristotle says about cosmic motion that "it *always* was – and always will be": ἀλλ' ἀεὶ ἦν καὶ ἀεὶ ἔσται. According to the reading in ms. J, Vind. Phil. gr. 100, however, Aristotle asks whether (πότερον) or not cosmic motion has a beginning and an end:

"but *if* it was there, it will always be there too" (ἀλλ' *εἰ* ἦν, καὶ ἀεὶ ἔσται).

Constructed without ἄν, with an indicative protasis and apodosis, J's if-clause only subtly differs from the categorical vulgate: "if it was there, it will always be there too", implies "*if it was* there – and we will see that *it was* there – then it will always be there".

On either reading, that is, whether on a hypothetical or a categorical basis, Aristotle will conclude that cosmic motion is eternal. Parallels in Aristotle's corpus show the importance of the reading. In *Metaphysics Lambda* 6-7, this very argument occurs and has huge cosmological weight. It leads to an ontological argument for the eternity of the cosmos, based on the doctrine of categories and on the primacy of substance over other modes of being, including motion (*Metaph.* Λ 1.1069a22; 6.1071b5-7; 7.1072a21-23): eternal cosmic motion implies the eternity of the cosmos in motion, and this will imply the eternal immobility of its very first mover. But the question arises: is this eternity (or, rather, are all these well-connected eternities) categorically or hypothetically stated by Aristotle?

[1] I am grateful for their comments to various friends and colleagues, especially Marco Ghione, Laura Folli, Jill Kraye, to Simone Astorino, Maria Cristina Dalfino, William Wians, to Pieter Hasper and Rüdiger Arnzen, to Klaus Corcilius and to the members of his Tübingen Seminar, where I delivered this paper on the 14th of Novembre 2024. All errors are my own.

Given the theoretical relevance of a reading best witnessed in J, I concluded in 2023:

> the variant reading of J for *Phys*. 250b13 raises the issue of *assessing the authority of this manuscript in relation to the entire textual history of the Physics and of Aristotle's physical works*.

What I meant can be more clearly spelled out here.

2. Why Reconsider J's Position in the Stemma of Aristotle's Physics?

The manuscript Vind. Phil. gr. 100 (a fragment of which can be seen on every cover of *Aristotelica*) is by one and the same hand J and is regularly corrected, at the time of copying, by one and the same διορθωτής, J^2. J is the earliest manuscript of the *Metaphysics* and of the *corpus physicum*, which precedes even manuscripts of the oldest (9th century) 'philosophical collection' (Rossetto 2014, Ronconi 2008, Irigoin 1957).

With regard to the *Metaphysics*, J is the direct copy of Π, a late ancient manuscript in *scriptio continua*. The non-existence of the *interpositus* γ, a hypothetical *codex deperditus* of the *Metaphysics* in Harlfinger's stemma (1979), is now recognized.[2]

With regard to the *Physics*, Aristotle's treatises are prepared by the same scribe J and corrected by the same διορθωτής J^2.[3] For the *Physics* as well, I had thought, until Hasper's stemma, that J had a good chance of being a copy of a late ancient parchment reference codex in *scriptio continua*.

Is it possible to be more precise? The *scriptio continua* codex could perhaps be dated back to 4th-century Constantinople,[4] comparable, for instance, to ms. B of the Bible, the Vaticanus 1209, which is a reference codex *par excellence* (about 3M characters). A compatible size being given, it may be that the reference exemplar contained most of Aristotle's writings and especially the

[2] See Fazzo (2022) especially p. 58.
[3] An obvious exception is the single 13th-century bifolium, f. 137*r*-138*v*, which replaces the lost sections of Theophr. *Metaph*. 11a2-12a2 and Arist. *Metaphysics* α, 993a30-994a6.
[4] See my recent hypothesis in Fazzo-Folli-Ghione (2023-2024), cf. Themistius, *Oratio* IV 60 a-b with Pascale (2022); Dain (1949) on late ancient reference copies.

corpus theoreticum: the physical works and the *Metaphysics*. One or more similar exemplars, very like each other, could have been available. Various details of this hypothesis will be explored in the future but do not affect my main point here. The question is: how removed is J, as a copyist of the physical works, from the earliest reconstructable exemplar, probably a late ancient codex in *scriptio continua*?

In fact, based on Hasper's stemma of the *Physics* and on my own stemma of the *Metaphysics* (*Aristotelica* 1 (2022) p. 84), J's two main parts differ crucially in their sources and their stemmatic position. The archetype of the *Physics* is removed from J by no less than four lost interposed manuscripts; no less than two lost manuscripts (*deperditi*) are interposed between J and the late ancient sub-archetype γ of its family branch, one of three sub-archetypes (α, β, γ) of the *Physics*. See Hasper's stemma (2021, p. clxxxvii (https://www.degruyter.com/document/doi/10.1515/9783110582086-003/html). If this is, indeed, the case, then it would be necessary to agree with Hasper and Arnzen 2024's final claim (pp. 71-3) that if a good *lectio singularis* was ever found in J's text of the *Physics*, it would have to have happened almost by chance.

According to current scholarly views, this would not be surprising: the *vetustissimus* manuscript J was ignored until Gercke (1892). Even after it was discovered, its appearance did not make a significant impact on critical editions.[5]

3. The Meaning of J's Reading at 250b13 in the Context of Aristotle's Corpus

Especially telling readings can prompt new debates and provide new, i.e., alternative, interpretations of the textual history of Aristotle's works. *Physics* 250b13 seems to be exactly such a case. With regard to this passage, it was initially assumed that J and E^{Phys} differed and that E, more exactly E^{Phys},[6] had

[5] With regard to Aristotle's physical corpus, since 1936 (Ross 1936, Allan 1936) J's authority has consistently been dismissed, in favour of E, that is, ms. Paris. gr. 1853. Fazzo (2012) and Fazzo-Ghione (2022) provide some thoughts about the underlying reasons.

[6] I refer to the primary 10th-century copyist of the physical corpus in manuscript E as E^{Phys}. This differs from E^{Met}, the 10th-century copyist responsible for the *Metaphysics*. The two sections were originally produced as independent volumes but were later brought together (for further details, see *Aristotelica* 6, forthcoming).

the right reading, whereas J's text made no sense (ἀλλ' εἴην *ap*. Ross 1936 *ad loc.*); then J's text was read more carefully but rejected (ἀλλ' εἰ ἦν *ap*. Hasper 2021); and now I argue that J's text might be the most significant ever reading for the textual constitution of *Physics* 250b13. It is possible (see also below the Appendix 'First Reactions from *Aristotelica*'s Readers and Contributors') that this '*if* clause' in *Physics* VIII 1.250b13 can shed unprecedented light on the hypothetical foundation of Aristotle's theory of the eternity of cosmic motion and of the cosmos itself.

Such a hypothetical foundation is not obvious in other Aristotelian writings, where the eternity of the celestial motion seems to be taken for granted. Nevertheless, it is compatible with Aristotle's general line of argument. The case he makes in *Physics* VIII 1 provides the basis for other arguments elsewhere: most importantly, it forms the basis of the theory that establishes the necessity of a prime unmoved mover.

In this way, the hypothetical reading at 250b13 has an impact on the theory of the prime mover as well. It might clarify the previously uncertain meaning of 'necessary' in *Metaphysics Lambda* (6.1071b4; 7.1072b11-13). We can now see that it is precisely focused on the final clause: the prime unmoved mover is what simply *must be* because it cannot be otherwise: τὸ δὲ μὴ ἐνδεχόμενον ἄλλως ἀλλ' ἁπλῶς (7.1072b13, see also 7.1072a19-21).[7] Aristotle's original cosmology thus appears in a different perspective, i.e., as a theory based on hypothetical foundations.

In later contexts, however, the hypothetical component in the argument for the eternity of the cosmos no longer plays any direct role.[8]

We are at the origin of what progressively became Aristotle's alleged path to theology. By the early 3rd century AD, when the corpus was published and annotated in its present form, *Physics* VIII had been read by the

[7] This supports my suggested interpretation in Fazzo (2014) p. 326f.: "la definizione da attivare deve essere la controparte della nozione di contingente: deve indicare ciò che non può essere altrimenti, ma è in modo assoluto".

[8] Alexander of Aphrodisias has two *Quaestiones* concerning 'hypothetical necessity', with some special reference to eternal circular motions (*Quaestio* II 22.71.3-72.8 Bruns, cf. Arist. *GC* II 11.337b25, and *Quaestio* III 5.7.22-89.24 Bruns, cf. *GC* 10.336a21, 11.338a2: the interpretation is interesting and controversial; see Sharples 1994). But these do not seem to have had an impact on the exegetical tradition of the first celestial motion and of the prime unmoved mover.

exegetical tradition as a preliminary step towards *Metaphysics Lambda*. The two books were connected in their interpretation. This is especially visible in Alexander of Aphrodisias's treatise *On the Principles of the Universe*, lost in Greek, but preserved in Arabic and Syriac. Alexander's treatise summarises and puts forward a joint interpretation of the two books *Physics* VIII and *Lambda* and provides the latter with a certain kind of theological interpretation.[9]

The whole *Metaphysics* – centred on *Lambda* as the main book – was then given a theological value. Aristotle's assessment in *Physics* VIII 1 comes to mean categorically that *there is* eternal movement and paves the way to the argument for a prime unmoved mover, which will be shown in *Metaphysics Lambda* to be God.

4. Lectio Difficilior vs. Lectio Facilior

The vulgate categorical reading ἀεὶ ἦν καὶ ἀεὶ ἔσται, or just even ἦν καὶ ἀεὶ ἔσται is a *lectio facilior*, easily superimposed as such on the hypothetical *lectio difficilior*.

The hypothetical formulation has a higher degree of complexity, in at least three respects:

(i) it has a subordinate clause within the second branch of a disjunctive interrogative clause; instead, the *lectio facilior* ἀλλ' ἀεὶ ἦν καὶ ἀεὶ ἔσται makes ἦν the verb of the main clause; that this is an easier reading is apparent from the alternative reading of Hasper's ms. Q, Leid. Voss. Q3 (12th/13rd c., f. 98r l. 28) in which 'if' also disappears, without 'always' (ἀεὶ) taking its place;

(ii) it is made less trivial by the use of καὶ which is adverbial ('also') and not simply conjunctive ('and');

(iii) it arguably (Fazzo 2023) exemplifies Aristotle's so-called philosophical imperfect (which is better discussed with reference to Aristotle's formula τὸ τί ἦν εἶναι, where 'ἦν stands in the middle and conveys eternal identity with oneself', see *Aristotelica* 3 (2023) pp. 47-9). This means that we have to understand ἦν in the sense, not of 'it was', as if it could have changed, but of "it always is and has always been".

[9] Fazzo-Zonta (2014), Fazzo-Zonta (2015), Fazzo (2008).

The categorical reading could arise from the *lectio difficilior* in more than one context, independently, whether identical or similar.[10]

It is not surprising, therefore, that simplifying paraphrases in late ancient exegetical traditions (see below, §7) could also obliterate the original *lectio difficilior*, i.e., the hypothetical reading of J. It also makes sense that Hasper found the *lectio facilior* in most extant Greek manuscripts.[11] However, textual criticism requires manuscripts not to be counted, but to be weighed. J's ἀλλ' εἰ ἦν καὶ ἀεὶ ἔσται, is paralleled in some very early sources, including the *translatio vetus*.[12]

It is also found in $E^{Phys\ pc}$, i.e., in the physical section of manuscript E, *post correctionem*, whereas the categorical reading was there *ante correctionem*, as Hasper and Arnzen now show. Their new finding is of special interest for our research.

5. The Vetus Corrector's Double Step in E^{Phys} at 250b13

A major role is played here by the διορθωτής or *vetus corrector* of E^{Phys}, whom I shall call $E^{Phys\ vc}$, to distinguish him from the plurality of hands at work in the margins of E. $E^{Phys\ vc}$ is the copyist who interpreted the *scriptio continua*, e.g., spelling out words by marking breathings and accents with a subtle *calamus* and fairly clear ink.

In E^{Phys}, at 250b13, Hasper and Arnzen detect a double step activity by $E^{Phys\ vc}$. By virtue of their new finding, it can now be argued that the hypothetical reading underlies E^{Phys} as well as J, independently; and that E^{Phys} has its own editorial agenda, which has some points of contact with the β agenda found in some *Metaphysics* manuscripts, especially Ab, Laur. 87.12. This analogy calls for interpretation.

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[10] The tradition thus offers at least three versions of the easier categorical reading: the vulgate, ms. Q, see here above, and the Arabic tradition – see §6 below.

[11] From the 12th century onwards, the *lectio difficilior* is found only in Hasper's b and w, that is, Par. gr. 1859 and Par. Suppl. gr. 643, both of the 13th century.

[12] A version of this passage in the *translatio vetus* is found in the 13th-century school materials of the ancient University in Vercelli and has been analysed by Roberto Zambiasi (ms. Vercelli, Biblioteca Capitolare 113, late 13th c., siglum Yi in *Aristoteles Latinus* (1990), but not collated so far, f. 45r): "sed si erat, semper erit".

Let us see now what happens at 250b13. As seen in the Hasper and Arnzen (2024) figures at p. 64 (here above), E^{Phys} produces a kind of *scriptio continua* in minuscule handwriting: αλλαει. At first, $E^{Phys\ vc}$ marked the two relevant words as ἀλλ'ἀεί. But he then corrected ἀλλ'ἀεί into ἀλλὰ εἰ by *rasura*, making a bold change to the meaning. This is what Hasper and Arnzen point out:

ἀλλ'ἀεί $E^{Phys\ vc\ ac}$: ἀλλὰ εἰ $E^{Phys\ vc\ pc}$

The διορθωτής $E^{Phys\ vc}$ must have had a very strong reason for changing his mind and erasing the manuscript: he must have checked the main source and found a reading which left him in no doubt. It is not enough to suppose that the reading was introduced by contamination, that is, that the corrector checked J or another manuscript circulating at the time (even if this is possible; see Hasper' stemma, link at §2 p. 84 above), because then the question arises: why did he change the wording of E in favour of that of J? And why did he not use J all the time, as a transliteration exemplar? This would have made his task much easier.[13] The only way to fully explain his *rasura* and change of wording is if he found ΑΛΛΕΙ.

Beforehand, at 250b13, E^{Phys}, the main copyist, alone or together with his source if he was writing from dictation, must have spontaneously introduced the *scriptio plena*, notwithstanding the resulting hiatus: the source had ΑΛΛΕΙ, and he wrote αλλαει. As a 10th-century practice, the *scriptio plena* was possibly meant to be reader-friendly, in a context where a hiatus was not perceived as an unwanted feature to be avoided. But 250b13 is a rare case in which *scriptio plena* created, rather than clarified, ambiguity.

If so, Hasper and Arnzen discovered a detail – the two-step activity of $E^{Phys\ vc}$ – which is telling in a further and more important regard, i.e., *e silentio*. We see that $E^{Phys\ vc}$, revising E^{Phys} in the early 10th century, did not correct other minutiae; he did, for example, not reintroduce ποτε at line 250b11, nor other omitted particles (a very interesting different hand did so later on in the margins). This suggests that the tendency of E^{Phys} to innovate (omitting,

[13] By contrast, if E^{Phys}, unlike E^{Met}, did not have access to J, similarities might be due to a common or very similar source; see in *Aristotelica* 6 (forthcoming) my hypothesis concerning Π and its possible copies π^{J}, π^{E}.

adding, changing) was normal in the context of his agenda, at least to the extent that it did not crucially affect the meaning of the text.

This all supports the hypothesis that the exemplar of E^{Phys} had the hypothetical reading ΑΛΛΕΙ and suggests that E^{Phys}, the first copyist, or his source if he was writing from dictation, innovated by revising that reading: he introduced the hiatus αλλα-ει (as if it were ΑΛΛΑ-ΕΙ), unintentionally making the reading equivocal, i.e. susceptible of a categorical (ἀλλ' ἀεὶ again with elision and without hiatus) rather than hypothetical (ἀλλὰ εἰ) understanding. We must assume that he did so unintentionally, because there is no reason to believe that he aimed to modify the meaning of the text.

The question arises of the extent to which the copyist E revises the text. It is clear that an agenda is at play, as various scholars have noted. A challenging but important issue to investigate is whether, to some degree, E's editorial agenda might make the resulting text, compared to others, the closest to the version that could most easily be reconstructed as the basis of the Arabic tradition through retroversion.

As I have mentioned, however, the current consensus is that E^{Phys} descends from α, a different sub-archetype from J's and perhaps even a different textual archetype from J's. Such a lost late ancient manuscript 'α' would thus be a prime source, in Greek, of manuscript E, in the Graeco-Arabic tradition, of Ψ, according to Arnzen and Hasper's siglum. This α plays the main role in their stemma, as the main source to be reconstructed *via* E and the Arabic translation by Ishaq ibn Hunayn (late 9th to early 10th century).

6. More on the Arabic Sources

Hasper and Arnzen thus systematize two currently held views: the opposition between J and E^{Phys} (since Allen 1936 and Ross 1936), and the connection of E^{Phys} to the Arabic tradition.[14] This latter view is based on the hypothesis of a common source for the Arabic and E, as opposed to J's. This can be seen in Hasper and Arnzen's *stemma codicum* (link at §2 p. 84 above), where E is coupled with the Arabic model and sharply distin-

[14] See Dain (1949) together with Rashed's (2019) reactions.

guished from J's. The passage at 250b13 under investigation calls for interpretation: does it contribute to distinguishing J's source from the source Ψ of the Arabic tradition?

In 2023, I emphasized that the if clause is absent in Ishaq's Arabic version, as is the double occurrence of ἀεί in 250b13. Now that the point is controversial, one must ask which of the two, had it been originally in the text, would have had better reason to be omitted or neglected. I will argue that the former has far better reasons, and these are twofold. On the one hand, in Greek already, this is a lectio difficilior from the linguistic point of view, and also from the semantic point of view, as it provides, on a hypothetical basis, the same factual result as a categorical clause (see above). On the other hand, one must consider the peculiar way the first sentence of Book *Physics* VIII, lines 250b11-15, was translated into Arabic.

In Greek, that first sentence consists of a long independent interrogative clause articulated into two disjunctive branches, introduced by πότερον, the very the first word of the book: (i) "Was cosmic movement born…?" or (ii) "It was not born and will not die, that is, if it was there, it will be there too". Each branch consists of two coordinate clauses. The second branch is further articulated at line b13 as an *apodosis*, coordinated with the principal clause and preceded by a conditional subordinate (the *protasis*). How can all of this be rendered into Arabic?

We have two translations of this sentence, and both follow the same path, which strongly suggests that their genesis is interconnected (I share some of the reasons Haq 1994 gives for regarding the fragmentary one as a trace of an earlier version that Ishaq would have elaborated on. I share them because they fit with the experience one can gather of texts from the Aristotelian tradition available to Jâbir, including their disordered and dispersed state. However, this does not affect our point now, because in either case, the result is the same).

The former main clause, an independent interrogative sentence in Aristotle's Greek, changes in Arabic into a subordinate clause, i.e., an indirect disjunctive question, depending on ليت شعري "I would like to know". Hence the main issue: in any spoken language, it can be difficult to embed a subordinate conditional clause into the second branch of a disjunctive question that is itself subordinate. In Arabic, this becomes even more difficult when

the conditional clause is a real conditional sentence that starts with a past tense and implies a future consequence. Here, therefore, the if clause has reasons to disappear.

By contrast, ἀεί tends to be preserved in Arabic as often as it appears in Greek unless there is a special reason to omit it. For example, in another case, e.g., 254a21-22, where ἀεί occurs four times in just two lines, the Arabic adverb أبدا appears four times. Thus, ἀεί and its repetitions tend to be rendered in a way that is very close to the Greek (see, in this regard, Arnzen's *Glossary*, p. 125).

Accordingly, one understands that the structure of the if clause at 250b13 was likely simplified in the second branch of the interrogative introduced by أو ("or...?").

From a different perspective, however, Hasper and Arnzen (2024) argue that 250b13 helps reconstruct a different Ψ archetype, one which coincides with the vulgate reading ἀεὶ ἦν. In their view, the syntax of the original Greek source Ψ of the Arabic, and not just the Arabic, is certainly different from that of J: it has a double ἀεί, i.e., it reads ἀλλ' ἀεὶ ἦν καὶ ἀεὶ ἔσται. Their claim is that the second ἀεί would only be rendered by the corresponding adverb أبدا ("always," "ever"), while the first ἀεί would be translated by the periphrasis لم تزل ("it does not cease") without أبدا.

They also raise the issue of how often, or rarely, ἀεί is rendered by the negation لم or لا with conjugated forms from زال (z-w-l), i.e., لم يزل or لا يزال.

When Greek-to-Arabic translations are concerned, the main OA data collection is the *Glossarium Graeco-Arabicum* (*GlossGA*), financed by the DFG and later by ERC, and published by the Berlin BBAW. It "contains a sufficiently representative sample of the entire range of Greek vocabulary and syntax". This database provides, as of now (29 November 2024), four records of passages where ἀεί is translated by conjugated forms from زال زال, with لم or لا and with an adverb like دائما, meaning "always" or "ever," but none without the adverb – as is supposed to be the case here at 250b13.

However, Arnzen and Hasper now provide fresh data. They list nine recognizable instances where ἀεί is rendered by لم or لا with conjugated forms from زال, with لم or لا, *without* the adverb دائما or أبدا. This telling datum, however, is open to different interpretations in two senses: first, because if ἀεί

were perceived as the standard meaning of لم تزل, we would expect there to be more instances; and second, because all the quotations from Galen – six out of nine in their list – are occurrences where ἀεί does not mean "always" (e.g., "perpetually," "forever") but instead "every time" or "again and again". We must bear in mind that ἀεί does not always and only mean "always," but also "every time" (Chantraine 1990, p. 42).

The further cited passage from the *Theologia Aristotelis* (which can not always be regarded as a literal translation from the Greek) also seems to convey this meaning, as does the cited passage from Nicomachus of Gerasa, translated by Thabit ibn Qurra. In fact, the latter calls for parallel passages in the same translation of Nicomachus's *Introduction to Arithmetic*, where Thabit ibn Qurra uses لا يزال, not alone but in conjunction with the Arabic adverb دائما ("ever," "always"), so that together they more directly render ἀεί.[15]

This can certainly be developed further, and Arnzen deserves credit for these improvements. However, as things stand, Arnzen's *Glossary* conflicts with the idea that لم تزل, without any adverb such as دائما or أبدا, can be considered an obvious translation of ἀεί at 250b13. It still seems that the categorical reading, in whatever form it assumes – with or without the double ἀεί – is a *lectio facilior*, as I have argued above.

7. What Happens in the Greek Exegetical Tradition?

Commentaries, starting from the 4th century AD, could have influenced the textual transmission, currently using the reading ἀεὶ ἦν with the meaning 'there has always been'. Yet, before the Trinitarian debate of the early Church Fathers, ἀεὶ ἦν is rarely found with this meaning. It seems that this debate sharpened reflections in patristic literature about modes of eternity. The most controversial issue concerned the second Person of the Trinity: was the Son of God created in time, or has he always been there (ἀεὶ ἦν) with

[15] See the link to these cards of *Glossarium Graeco-Arabicum*:
https://glossga.bbaw.de/glossary.php@id=194709.html
https://glossga.bbaw.de/glossary.php@id=194712.html
https://glossga.bbaw.de/glossary.php@id=194715.html
https://glossga.bbaw.de/glossary.php@id=195601.html

the Father? The debate started in the 2nd century,[16] and developed especially in the 4th century, when the councils of Nicaea (325) and Constantinople (381) were held. Themistius, *In Phys.* 209.4, also used ἀεὶ ἦν, a wording current in his day in the existential sense of 'it has always been there', with special reference, in this case, to the eternity of the cosmos.[17] This might partly explain the success of the vulgate *lectio facilior* ἀεὶ ἦν at 250b13.

By contrast, restrictions on the use of commentators for *detecting* ancient variant readings are suggested by Bloch (2003); and these should be endorsed and possibly strengthened in future research. This must be especially stressed in the case of Greek paraphrases, which can normally modify even single words or particles.

8. How Many Stemmata Codicum Can Be Conceived of in a Contaminated Tradition?

Last but not least, my main point is: in Hasper and Arnzen's view, the only explanation for a sound isolated reading in the *Physics* in J is, so to speak, by chance. This is based on Hasper's stemma, which I indirectly challenged in 2023 (see 'Premises' above) but which remains for them the only possible valid one. Their stemma, however, like most stemmata in our time, is full of contaminations. Here a general consideration arises. When Maas (1956) wrote that "Gegen die Kontamination ist kein Kraut gewachsen", this was a paraphrase of "Gegen den Tod ist kein Kraut gewachsen", that is, just as for death, there is no remedy for contamination. Maas thus did not strictly forbid scholars to construct stemmata for contaminated traditions (some are currently in use, see, e.g., Weidemann 2022); but his motto did warn them not to regard their stemma of any contaminated tradition as the only possible one. A contaminated stemma is rarely immune to challenges and alternatives.

The only safe part of a stemma is what concerns the non-contaminated section of the tradition; and this should include, in principle, the earliest witness, or witnesses, where collation, i.e., contamination, is not yet an issue.

[16] See Arius' allged statement about the Son: οὐκ ἀεὶ ἦν, e.g. *ap*. Athanasius, *Epistola ad episcopos Aegypti et Libyae, PG* 25. 564, 21

[17] Fazzo (2023-2024) pp. 317-9.

According to Maas (1956), when constructing stemmata, one must start from the oldest, and most independent, manuscript; then, later manuscripts can be shown to be independent on the basis of separative errors.

True, Maas also said, which Hasper and Arznen seem to be relying on, that the age of a manuscript was not a general proof of its independence: Maas quoted Pasquali's motto *recentiores, non deteriores*. In other words, sometimes later manuscripts (*recentiores*) are more valuable than earlier ones and, at any rate, are not always worse (*deteriores*). It depends on the presence or absence of *errores separativi*.[18]

As far as the *Physics* is concerned, Hasper, in collaboration with Arznen, has boldly paved the way; but I contend that there is still much to do. He lists series of what he calls 'wrong or less preferable readings' in entire branches of manuscript traditions. Are these readings supposed to be errors? In what sense are they proven to be errors? He quotes, but never responds to, Ross (1936). He does not even respond when Ross's evaluation is manifestly wrong, e.g., Ross (1936) p. 688 on 251b4-5, cited as an authority at Arnzen (2021) p. cxx. They dismiss J's later hand reading at 251b4-5 (which is actually ὡς εἶναι – here Ross is right against Hasper) on the grounds that "as Ross remark [...] it does not make sense". In his commentary on that passage, Ross writes: "Bekker's ὡς εἶναι κτλ [as opposed to ὡς ἦν κτλ established by Ross] is unintelligible, and ἦν is confirmed by Met. 1048a6 [...] and by ὡς ἦν δυνάμενα 251b6". See, however the three passages at stake: ὅταν ὑπάρξῃ ὡς ἦν τὸ μὲν κινητικὸν τὸ δὲ κινητόν is preferred by Ross to ὅταν ὑπάρξῃ ὡς εἶναι τὸ μὲν κινητικὸν τὸ δὲ κινητόν. This (*Physics* 1.251b4f.) is paralleled by Ross to *Metaphysics Theta* 5.1048a6: ὅταν ὡς δύνανται τὸ ποιητικὸν καὶ τὸ παθητικὸν πλησιάζωσι ("when the agent and the patient meet in the way in which is appropriate to the potentiality in question"); but this does not match the case.

Ross must have been in a hurry. In fact, ὡς, with a similar meaning here to ὥστε, introduces a consecutive clause, which is correctly constructed with an infinitive form: Bekker's constituted text makes more sense than Ross's.

[18] This is in principle the main focus in standard stemmatic research, as is stressed in Primavesi's contributions (2012) and especially (2020). These *errores separativi* are a reference point no doubt even if the evaluation of E's reading might be still under discussion with regard to *De motu animalium* 6.700b23f.

Nor do Ross's proposed parallels with *Metaphysics* 1048a8 and *Physics* 251b4 help, since ὡς occurs there as a relative adverb of manner and not as a subordinating conjunction. A further parallel, 251b6, is controversial, and I would maintain that J's reading *post correctionem* works better than Ross's constituted text based on E. It thus seems that Ross sought out passages where Bekker's edition could be revised, especially by looking for passages which seemingly prioritized E: E vs cett. (including J).

We are thus left with the impression that Hasper (2021) generally counts the readings rejected by Ross as errors. These must include, in particular, J's supposed errors at 250b13 and 264b4, the first of which I believe is a very solid reading, while the second is a confused passage in the textual tradition which can hardly be regarded as a guiding error. Admittedly from such passages we could imagine, instead of one Π, that two very similar late ancient reference copies π of the *Physics* were in circulation. Whether this holds true or not can be ascertained by envisioning J and E as parallel streams of readings and making a systematic study of the resulting differences.

Hasper and Arznen have given us a huge amount of help; and I understand and fully appreciate Hasper's stemma as the programme for his future edition, largely improved in comparison to Ross's, even if not dramatically different as far as the constituted text is concerned. My ideal future edition will benefit greatly from their impressive and careful collection of data. It remains possible that, based on additional data and a closer scrutiny of the kind of differences between mss. J and E^{Phys}, an underlying agenda will emerge in a number of E's readings which have so far been referred to a different source. If such an agenda is detected, the consensus of the two *vetustissimi* will be given more force than in Hasper's stemma, where it happens solely by contamination. This could open a more linear path to the long sought after goal of reconstructing the lost ancestor of J and E, which might possibly be Aristotle's archetype.

Appendix
First Reactions from Aristotelica's Readers and Contributors

The issues surrounding J's hypothetical reading at *Phys.* VIII 1.250b13 have provoked various responses from *Aristotelica*'s readers and contributors.

Monica Ugaglia writes:

If Aristotle had based his cosmology on a hypothetical syllogism, it would be good, since that would make him a full-fledged scientist. Think about it: the difference is between those scientists who *believe* in the big bang as a physical, true and real fact, and those who say it is a model: at the beginning there is a singularity and, in this way, it works as a kind of reverse machine. Behind every physical theory there is a hypothesis. All our physics is made up of hypothetical syllogisms. This is why, unlike geometry, physics evolves: because hypotheses improve. This is how the capacity of building models to describe what scientists call reality evolves. It is rare that Aristotle spells out his hypothetical foundations. But this happens here: when he says that if there has always been, then there will always be, he provides a physical model. Does this allow for any doubt about Aristotle's cosmology and ultimate world view? If this were so, then Aristotle would have been behaving like a modern scientist. The historical background justifies that Aristotle also uses hypothetical arguments elsewhere. In *De caelo*, Aristotle's thesis is that if the heavens are generated, they must also eventually be corrupted, which is exactly what Presocratic cosmogonies admit, given that they are also tales about the cosmos passing away. Only a literal reading of the *Timaeus* would admit a beginning without an end. *De caelo* is more consistent with a hypothetical interpretation of 250b13.

Laura Folli finds:

The hypothetical character which emerges from J's *lectio difficilior* at *Phys*. VIII 1.250b13, echoes *GC* II 10.337a16-23 (Rashed 2005): Διότι μὲν οὖν ἔστι γένεσις καὶ φθορὰ καὶ διὰ τίν' αἰτίαν, καὶ τί τὸ γενητὸν καὶ φθαρτόν, φανερὸν ἐκ τῶν εἰρημένων. Επεὶ δ' ἀνάγκη εἶναί τι εἰ κίνησις ἔσται, ὥσπερ εἴρηται πρότερον ἐν ἑτέροις, καὶ εἰ ἀεί, ὅτι ἀεί δεῖ τι εἶναι, καὶ εἰ συνεχής, ἓν τὸ αὐτὸ καὶ ἀκίνητον καὶ ἀγένητον καὶ ἀναλλοίωτον, καὶ εἰ πλείους αἱ ἐν κύκλῳ κινήσεις, πλείους μέν, πάσας δὲ πως εἶναι ταύτας ἀνάγκη ὑπὸ μίαν ἀρχήν.
The insistence in this textual passage on the use of the particle εἰ is quite significant. Aristotle in this context invites us to reflect on the need to recognise that there is something that is the cause of the continuous process of generation and corruption of sensible entities. The existence of the movement in this step is presented as hypothetical in order to demonstrate the manner of this necessity: there must be something, eternal, unmoved, not generated, from which the movement's eternity stems. Within a demonstrative path of a hypothetical character emerges the nature of necessity at the origin of the process of becoming.

Maria Varlamova adds:

The 'if' reading of 250b13 is important not only in the context of Aristotle's *Physics* but also of late ancient discussions about the eternity of the world. It is precisely the emphasis on the beginning of the world and its creation out of nothing that is important for Philoponus in his arguments about matter. Because *if* the world has no beginning, *then* it has no end, as is claimed in *Aristotelica* 3; therefore, *if* the world has a beginning, it will have an end. Thus, Philoponus argues that the first underlying subject of all bodies (first matter) was created. He claims that the unformed first matter, as Aristotle defines it, is only an empty name, and that the first subject of all things is matter, determined by three dimensions (an infinite three-dimensional extension), which, since it is determined, can be created.

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