Alexandre d'Aphrodise. Commentaire perdu à la Physique d'Aristote (Livres IV–VIII). Les scholies byzantines. Édition, traduction et commentaire by Marwan Rashed

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Most of what survives of Alexander's commentary on Aristotle's *Physics*, as in the case of Alexander's commentary on the *De caelo*, comes from citations that we find in later commentators, particularly, Themistius, Philoponus, and Simplicius. Our current knowledge of Alexander's writing on Aristotle's *Physics* and *De caelo* is, therefore, largely confined to these references in the indirect tradition. However, there exists scholiastic evidence in addition to those sources. In fact, Marwan Rashed has demonstrated that the conspicuous number of scholia listed as marginalia on MS Parisinus suppl. gr. 643 and MS Parisinus 1859 must be related in a more or less immediate way to this greatest among the commentators of the late antiquity; and he now presents in a noteworthy annotated edition the corpus of the scholia on *Phys.* 4–8.

The volume is comprised of a massive introduction divided in two parts, which are further subdivided into a history of the text and a doctrinal introduction. The discussion explores three aspects: the archaeological, the historical, the systemic. In his avant-propos, Rashed first calls our attention to the systemic aspect, that is, to Alexander's attempt to explain Aristotle's *Physics* in an existential sense by showing the certain and central role of form in relation to the concepts of desire (ἔφεcιc) and perfection (τελειότης).

Two manuscripts contain the corpus of scholia explored by Rashed. The first, the codex Parisinus suppl. gr. 643 (S: first half of the 14th century) breaks the text of the *Physics* into two parts: books 1–3 and books 4–8. These latter books, however, as Rashed shows, have their complement in the MS Laurentianus 87.20, which contains books 1–3 copied by the same hand

that copied books 4–8 in Parisinus suppl. gr. 643 (S). Moreover, since in the margin of Laurentianus 87.20 there are no traces of the corpus of scholia that we find in Parisinus suppl. gr. 643, the separation of books 1–3 and 4–8 was certainly very ancient. The other manuscript, Parisinus 1859 (P), dating from *ca* AD 1300, is possibly part of a corpus related to the work of George Pachymeres and has no value for the *constitutio textus* because its marginalia have been revised.

We find a comparison of the scholia on the *Physics* with those on the *De caelo* in MS Laurentianus 87.20, which shows that the scholia derive from an age in which Alexander's commentaries on the *Physics* and a commentary of an Alexandrian author on *De caelo* were still available. The common archetype of MSS Parisinus suppl. gr. 643 (S) and Parisinus 1859 (P) may be older than the first half of the ninth century. *Inter alia*, a mistake in S which is correct in P should confirm this supposition. Additionally, the dislocation of some scholia in respect of their reference *lemmata* confirms the hypothesis that their transliteration should be dated back to the ninth century. So Rashed imagines that the disappearance of Alexander's commentary took place in about the same period (as indicated on other grounds as well).

At the beginning of the second chapter, Rashed considers the arguments for attributing the scholia to Alexander's lost commentary on the *Physics*. Among these, some seem to be conclusive. First of all, Rashed eliminates the hypothesis that the corpus of the scholia is due to a copyist's recasting Simplicius' commentary: he cites Alexander's exhibiting his citations as derived from his own commentary. The scholia are not easily explained as accurate selections from the quotations of Alexander in Simplicius' commentary. One may also consider *inter alia* the fact that in three of seven cases in which the authority of Alexander is expressly cited, it is contrasted with that of other authorities (Aristotle himself, Galen, and anonymous commentators). Note, however, that we find the same thing in the corpus of the scholia on *De caelo* recorded in ms Parisinus Coislinianus 166, where Alexander's interpretation is expressly given when it departs from the views of other commentators. [cf. fr. 29, 47, 121, 122, 339, 371, 435, 539].

We may imagine that the first step between Alexander's commentary and the corpus of the scholia as we have it might be traceable in some commentaries of the Alexandrian school. This would easily explain the oscillation within the corpus of its diction and so forth, an oscillation that can be traced back

at times to Alexander himself and at times to the Alexandrian technical and scholastic lexicon. It is true that there is nothing conclusive in this; still, we can add to Rashed's list some cases which seem to show in their form the presence of Alexandrian material.

In fr. 126, the introductory $\ll d\pi \varepsilon \cos \pi \eta c \varepsilon$ is found only in Philoponus [Wallies 1905, 405.7, 407.24] and Olympiodorus [Busse 1902, 148.11].¹ In fr. 129, «ἀντιπεπονθότως», which glosses «ἀντεςτραμμένως», is typical of the Alexandrian school. The phrase «διὰ τούτου δείκνυςιν» in fr. 136 is in this form also typical of Alexander [Hayduck 1891, 259.24; Wallies 1883, 362.20], as are «ἔδειξε διὰ τοῦ δεῖξαι» [Hayduck 1891, 279.18, 409, 30] in fr.647 and «νῦν δεικνύναι πρόκειται» [Hauduck 1891, 263.20-21] in fr. 648. Moreover, in fr. 296. «μετὰ τὸ δεῖξαι δείκνυςι νῦν» is found only twice in Simplicius but on the second occasion he is quoting the *ipsissima verba* of Alexander Diels 1882-1895, 1009.3-6]. In fr. 297, «δ νοῦς οὕτως», if not a mistake, is found only in Philoponus [Vitelli 1887–1888, 833.21] and in this case one should consider whether the scholium and the *exemplum* were read in Philoponus [Vitelli 1887–1888, 798.14–799.2] (quoted also by Rashed) or whether they are complementary and go back to the same exceptical source. In fr. 231, «ἐπεξηγεῖται» is also in the style of the school of Alexandria, as it is for the interesting «vóncov» in fr. 234 (Philoponus [Wallies 1883, 481.8], Olympiodorus [Stuve 1900, 190, 14]). The phrase «νῦν βούλεται δείξαι» in fr. 316, apart from Olympiodorus, is proper to Philoponus [Wallies 1883, 115.28, 240. 29, 437.4, 441.24; 442.9, 446.13], as is also the locution «ἀπορήcac ἐπιλύεται λέγων» in fr. 517 [Hayduck 1903, 44.18].

However, as in the case of the scholia on *Physics* studied by Rashed, such observations, although standard, will never lead to certainty. On one side, in fact, as we have seen, we can record words, phrases, and introductory locutions that are typical if not exclusive to Philoponus; on the other, we note expressions that can be traced back to Alexander. This suggests the hypothesis that there was a corpus formed in late antiquity, perhaps the result of a selection of material due to Alexander, that was still present in the commentaries on the *Physics* produced in the Alexandrian school. A confirmation of this supposition can be found in a scholium cited by Rashed at 18n45 in which he recognizes Philoponian paternity.

¹ In Simplicius [Diels 1882–1895, 670.24], we have «παρῆκε ζητεῖν».

The general introduction is a sort of fresco and its descriptive and analytic features make any attempt to further summarize its content useless. It would be more advantageous if we concentrated attention on some of the fragments collected by Rashed in the hope of making further progress in our knowledge of Alexander and confirming some of Rashed's positions. In doing so, I will refer to the document which is nearest to the *disiecta membra* on *Physics*, viz. to Alexander's lost commentary on *De caelo*.

The comparison between the contribution of the scholia and what we can gather from Alexander's commentary preserved by Simplicius, Themistius, and Philoponus is also interesting in regards to the section of the corpus which lists doxographical fragments about the void. The incoherent oscillation which, according to the indirect and scholiastic exegetical tradition, Alexander exhibits when he refers respectively to the «χωριστὸν κενόν», the «ἀχώριστον κενόν», and the «παρεσπαρμένον κενόν», prompts Rashed to suggest the emendation 'Πλατωνικούς scribendum', instead of «Πυθαγορείους » in fr. 103.2.

When Rashed hypothesizes «Πλατωνικούς » instead of «Πυθαγορείους », he notes the contradiction that arises from attributing to the Pythagoreans the thesis of the ἀχώριστον κενόν (the not-separate void), since this conflicts with a previous scholium which, in referring to Puthagorean ideas, uses the same terminology to designate the interstitial atomistic void, i.e., the separate void (χωριςτὸν κενόν) [95]. But the interchangeability and complexity of the terminology used by Aristotle and his commentators calls for more caution. For example, in his commentary on the *Physics* [cf. Simplicius: Diels 1882–1895, 648.17–22], Porphyry attributes to Democritus alone the thesis of the ἀχώριστον κενόν, which goes against the reconstruction proposed by Rashed. Evidently Porphyry, as Simplicius elsewhere, reduces a very complex terminological system by dividing it into two: the not separate *void*—probably the equivalent of the παρεςπαρμένον κενόν, which might be understood as the void which breaks continuity in bodies by mixing together with them and is thus called *not separate*—and the *separate void* which is outside the universe may be conceived of as absolutely separate from bodies. But both in the case of the interstitial atomistic void and in the case in which we may think, as Rashed does, of a reference to the Platonists quoted in Simplicius, it should still be possible to refer to the Pythagoreans and the άχώριστον void in the scholium. The passage echoes the quasi-speculative one

in Simplicius' commentary [Diels 1882–1895, 648.17–22], where he refers to Porphyry's exegesis of Democritus. Porphyry describes the ἀχώριστον κενόν as παρεσπαρμένον κενόν, viz. as void not separate from bodies but at the same time as void responsible for their discontinuity. We shall, therefore, have to establish whether Alexander's *usus auctoris* permits interpreting «ἀχώριστον κενόν» in fr. 103 as the void which causes discontinuity in bodies. If the two exegetical tracks both go back to Alexander's commentary, the patent incoherence of one of them could be easily explained by reason of comparison.

When Rashed illustrates how Alexander explains the relation between the first mover and the universe [126–161], we find also the attempt to show how Alexander argues the role of the first mover as attempt to $\tau\epsilon\lambda \kappa \delta \nu$. After having recorded the complex, direct, and indirect tradition of *Meta.* 12.7, 1072b2–3, and having reminded us of the most recent literature on the subject, Rashed recalls the concept of normative ends or final causes. In doing so, he quotes a fragment of Alexander's commentary on *Meta.* 12 (in the Arabic redaction preserved by Ibn Rushd) from which we may infer that Alexander had conceived the final cause of something as an external substance for the things that want to assimilate themselves to it. According to Alexander, the first mover represents the final cause, just as the master does in respect of his slaves and the king or the sire in respect of subjects.

Now, to confirm this and to advance the reconstruction of Alexander's exegetical strategies, it is interesting to quote two other documents not considered by Rashed. There is, in fact, in addition to the fragment preserved by Ibn Rushd, Themistius' paraphrase to *Meta*. 12.7, 1072a30–b1 [Landauer 1902, 19.25–20.37] where we find, together with the vóµoc motif, the Aristotelian examples of the general and of the king to show how the role of the final cause must be conceived as the normative finality of the first unmoved mover. But what we get here from Ibn Rushd and Themistius can be also found in Alexander's so-called *De principiis* [128–129]. Thus, we should no longer doubt the origin of the scholium fr. 836 in Alexander's commentary.²

The question is real and, if the fragment goes back to Alexander, it should be added to the other testimonies of the commentator that are available on

² At 127n234, Rashed, citing also fr. 826, notes the identification of the concepts of αἴτιον τελικόν and αἴτιον ποιητικόν (efficient or productive cause), both predicated of the first unmoved mover, which Alexander may have favored.

the subject. Indeed, we have some documents in which Alexander's position seems to be somewhat uncertain and vacillating. Rashed thinks that the confusion, which Alexander exhibits occasionally, depends on the fact that the first unmoved mover moves ώc ἐρώμενον, i.e., as final cause, while the *primum mobile*, which is moved by the thing it desires, imparts in turn movement to the subsequent spheres. Hence, the first and unmoved mover, which is the thing desired, indirectly covers the role of αἴτιον ποιητικόν. Rashed quotes two passages: Diels 1882–1895, 258.14–25 and 1254.31–35. In the first, which is more relevant for our purpose, Simplicius cites Alexander's commentary and confutes those who charge Alexander with taking the αἴτιον τελικόν as the exclusive role of the first and unmoved mover, by pointing out that, as mover of the *primum mobile* (the πέμπτον côμα), it is also an αἴτιον ποιητικόν. It is perhaps this kind of indirect action on the sublunar world that allows us to consider the first and unmoved mover as an αἴτιον ποιητικόν.

Yet, it seems problematic that Alexander might have thought that the role of the *primum movens* as π omtukóv concerns the existence of the *primum mobile* and of the body of the heavens. There are in fact cases, which are taken into account by Rescigno [2004, 421–436] in which this possibility can be eliminated [cf. esp. Diels 1882–1895, 1362.11–15]. This exegetical crux is closely joined in the commentary tradition with the name of the $\delta i\delta \Delta \kappa \alpha \lambda \alpha c$ of the Alexandrian school, Ammonius, who, according to Simplicius [Diels 1882–1895, 1363.8–10], wrote a book on the subject [cf. Verrycken 1990, 217–219]. So, if fr. 826 becomes somehow puzzling, this may suggest a different background. What Rashed calls Alexander's anodyne thought about the attribution of the role of efficient cause to the first and unmoved mover could simply be explained as the presence of a Neoplatonic component or, less simply, as the hypothesis that Alexander had thought of a sort of efficient but non-energetic role of the *primum movens*.

The length of fr. 826 would actually make it impossible to consider it as a useful element in deciding this question and Rashed's claim about Alexander's vacillation on the subject is not too far from proposals made in recent literature.³ The principle of the persistence of reality, which is closely linked

³ Cf. Bodnár 1997, 110n50 and Sharples 2001, 19–20nn94–96, where the author notes the inconsistency deriving from the comparison of the contrasting views which Simplicius attaches to Alexander.

to the ceaseless motion of the spheres in that this is due to the work of the article relaxion tellix difference and, therefore, as an article π outtrice. This solution, which has also been advanced by Judson [1994] and Matthen [2001], also looks in the direction of a non-energetic and, hence, mediated efficient causality. So the charge of inconsistency in the thought of Alexander on this subject, which derives when certain fragments are juxtaposed, may be dismissed.

To continue consideration of the ontological status of the quinta substantia and, in particular, of the possibility that the $\pi \epsilon \mu \pi \tau \sigma \nu$ côma, because of its ethereal constitution, should somehow not be susceptible to any affection $(\dot{\alpha}\pi\alpha\theta\dot{\epsilon}c)$, let us turn now to fr. 598. The apparent inconsistency of *Phys.* 8.4 255b31 and De caelo 1.3, 270b2-3, the so called inconstantia auctoris, does not arise in this fragment thanks to the specification that circular motion does not cause any real affection in celestial bodies (in this case, because circular motion does not include contrariety nor limits). Alexander, in his commentaries on the De caelo and Meteorologica, justifies circular motion as the only type of affection that is appropriate to a celestial body and can account for its semi-pathetic nature. At Hauduck 1899 18.28–19.2, Alexander argues that movement in general, and not exclusively circular motion, makes the celestial body susceptible to some sort of gualification or modification ($\pi \dot{\alpha} \theta oc$). But Alexander, especially in his *In de caelo*, derives the presence of a minimum set of qualifications in celestial bodies by means of complex demonstrations. The most representative among the fragments of Alexander's In de caelo in which the question is discussed is undoubtedly Heiberg 1894, 442.4-444.15 [Rescigno 2004, fr. 147c]. Here Alexander argues, in strict mode, the relative impassivity of a celestial body despite its circular motion.

Even when Rashed poses the question of the credibility of the scholia 79 and 81, which seem to contain some vestiges of the Aristotelian theory of natural places and, therefore, a probable opening to the principle of like to like ($\delta\mu$ οιον προς $\delta\mu$ οιον), he might have taken into account the ancient literature on this subject, especially as it bears on Alexander's lost commentary on *De caelo*. Compared to fr. 79, Simplicius' commentary on *De caelo* which reports Alexander's position, seems to authorize the principle of like to like when one part is separated from its whole. If this fragment is also traceable to Alexander, one should recall two nearly parallel passages preserved in

Simplicius in which Alexander is credited with the same $\dot{\alpha}\pi\sigma\rho\dot{\alpha}$ but with a different hypothesis within the discussion of the question of natural places.

The first passage refers to the objections that Alexander directs against Xenarchus [cf. Heiberg 1894, 20.10–23. 6].⁴ Xenarchus' thesis was that, when the είδος is fully realized, the simple bodies would be destined to quiescence or to curvilinear motion, which is in apparent disagreement with Aristotelian theory according to which (even after the transition from δύναμις to ἐντέλεγεια and, therefore, even after reaching their natural places) the simple bodies would have the tendency which determined their preceding motion. Hence, we have the argument of Alexander, who proves Xenarchus' thesis untenable: even after the actualization of their εἶδος and the achievement of their natural place, the simple bodies would continue to move according to the defined simple motions ($\delta \pi \lambda \alpha \lambda$ κινήσεις). That is, when something is dislodged from its natural arrangement, namely, when the Earth is moved from its place, the cosmic center ($\tau \delta \kappa \alpha \tau \omega$) which it currently occupies and which determines its full realization (τελειώτης), it, or a part of it, would nevertheless continue to move towards the center and so to show this natural kinetic tendency as proper to it.

Alexander's argument is completed in a second parallel passage in his commentary on *De caelo* that is preserved by Simplicius [Heiberg 1894, 694.10–695.21]. Alexander, following Aristotle's hypothesis at *De caelo* 4.3 310b2–5, imagines that the Earth is dislodged from the place where its εἶδoc is realized into that of fire where it will be held, and that fire is displaced downwards. Now, adds Alexander, if you separate a portion of earth from the whole, you may wonder what kind of movement it would naturally have. If, in fact, as part of it, it is directed to the whole, then a heavy body would not have downwards (τὸ κάτω) as its proper place. Nonetheless, if you bring it down, would not it be truer to say that to move according to nature to its natural place is to move towards what is similar (τὸ ὅμοιον), and so perhaps to decide whether the part seeks to be in contact with the surface of its surroundings or to participate in the rearrangement that the demiurge made? These two possible answers—motion as made to the place where it would go according to nature and motion as made to the residual mass

⁴ Rashed also refers to Xenarchus, i.e., to the thesis that the εἰδοποιία of a body is closely linked to its spatial dislocation.

of earth similar to it—are both incongruous. The first answer violates the principle that the similar moves toward the similar; and the second would no longer respect the physical principle according to which heavy bodies move naturally downward so that the movement depends on the causal efficacy of the external place. In Heiberg 1894, 695.3–6, in fact, a solution seems to be formulated: the δημιουργία, which determines the locomotion of earth, subverts the physical principles related to natural places. Even a supposed fragment of Earth, separated from the whole, would move again towards the whole for the same reason in accordance with which the whole is moved, even though this contravenes the physical condition by virtue of which a fragment of Earth does not lose its nature when an unexpected cause intervenes, viz. an obstacle, or, as in this case, the displacement of the whole Earth. So, it seems to be said, the things dislodged will move again in search of the arrangement allotted by the creator (the $\delta\eta\mu\sigma\rho\gamma\sigma$), even if it should be expected that each body seeks this result not because the natural place has some power but because it is in search of the arrangement which the δημιουργία, ex improviso, assigned it.

There are many scholia characterized by some difficulty, due both to the summary nature which structures the surviving fragments and to the contaminated nature of the reports in Simplicius, where Alexander's evidence is often modified with a Neoplatonic and deviant interpretation. That is the case with fr. 24, where Alexander uses an anti-Platonic argument that represents a real contribution to the theory identifying place and matter. Since the ideas, according to Plato, are not in a place, $\tau \delta \mu \mu \tau \epsilon \pi \tau \delta \tau$, which we must identify with place ($\tau \delta \pi \alpha c$) and matter ($\delta \lambda \eta$), is not the place of the ideas; nor, then, does matter represent the place ($\sigma \delta \delta'$ $\delta \nu$ $\delta \lambda \Delta \sigma \epsilon \eta$ $\tau \delta \pi c$). Fr. 27 is considered difficult by Rashed as well; but even in this case, as the editor shows through a very thorough comparison of the results of the exegetical tradition (Themistius, Philoponus, Simplicius, Averroes), Alexander's presence may be concealed.

Fr. 45 is an example of how the comparison of Simplicius, Philoponus, and the scholium forces us to postulate a common exegetical feature at their base, a feature which could be due to Alexander.

Fr. 67 opens a succession of fragments on *Phys.* 4.5 and deserves attention because Rashed notes the contrast between the interpretation of Themistius and that of Alexander, a contrast which is unique in relation to the later

exegetical tradition and also to Themistius. The scholium explicitly quotes Alexander and this fact represents a way of proceeding that is strange and perhaps different from that found in scholia in which the name of Alexander is mentioned *expressis verbis*⁵ Alexander is engaged in the demonstration that the sphere of the fixed stars is unlike the other spheres because it is not in a place; whereas they, since they are limited by an outer sphere, are located in a place. His argument avoids locating the sphere of the fixed stars by noting that this sphere is not limited. Hence, in response, there is the solution by Themistius that will prevail in the later Arabic exegetical tradition, namely, the argument that the the inner sphere is productive of place in relation to the sphere enclosing it. In the same vein, the disagreement between Themistius and Alexander, who refused to be associated with a line of interpretation that takes the sphere of fixed stars to be in one place by virtue of the fact that its continuous parts constitute the place of each other, can be found also in relation to Themistius' exegesis of De caelo 1.9 279a18-22. We can infer from his paraphrase [Landauer 1902, 55.14–56.3] that Themistius, unlike Alexander, still proposed to resolve the $\dot{\alpha}\pi\sigma\rho\dot{\alpha}$ about the location of the sphere of the fixed stars (the $d\pi\lambda\alpha\nu\eta c$ o $d\rho\alpha\nu\delta c$) by taking this sphere to be a topological reality or place; in other words, that Themistius extends to the De caelo the thesis that the heavens, understood as the outermost of the celestial orbits, scil. the sphere of fixed stars, is in a place because its parts are there.

We can bring in some additional elements to reaffirm the authorship of fr. 70. The fragment has in common with the comment *ad loc*. of Philoponus the distinction between $\varphi o \rho \dot{\alpha}$ and $\pi \epsilon \rho \iota \varphi o \rho \dot{\alpha}$, between $\tau \dot{o} \ \varphi \dot{\epsilon} \rho \epsilon c \theta \alpha \iota$ and $\tau \dot{o} \ \pi \epsilon \rho \iota \varphi \dot{\epsilon} \rho \epsilon c \theta \alpha \iota$. Circular locomotion escapes the topological characteristics of locomotion and is proper to the sphere of fixed stars which is without place. The distinction, it should be added, is used by Alexander for the same purpose, i.e., to distinguish the characteristics of the locomotion of the sphere of fixed stars and the characteristics of the locomotion of other realities. It is again Alexander, quoted by Simplicius [Heiberg 1894, 288.3–5] regarding the location of the sphere of the fixed stars, who distinguishes the use of « $\varphi o \rho \dot{\alpha}$ » as predicated of the motion of bodies which move along a straight

⁵ For example, as in the case of fr. 191, where Alexander is quoted along with Aspasius (undoubtedly still present in Alexander's comment) in opposition to Aristotle. But note what Rashed writes about the explicit citations by Alexander on pages 13–14.

line (transfer) from the use of « $\pi\epsilon\rho\mu\phi\rho\alpha$ » as predicated of the motion of bodies which move along a circle (revolution/rotation) [cf. Diels 1882–1895, 580.12–16].

Fr. 75, on speculative interpretation, is one of the few cases where Rashed returns to a position expressed in the first edition of the scholium. Once it is admitted that the scholium and Simplicius derive from Alexander but independently of one another, the point is to establish which of the two expressions-Simplicius' «τινα καὶ ἀcώματα εἴδη» or the scholium's «νοήματα»-in the scholium better represents Alexander's text. Rashed claims now that in the first expression there is a reference to the first movers as pure forms. which in a sense should be understood inside the totality of the universe; while in the other, such an interpretation is not possible. If this interpretation were to be applied, there might be an interesting relationship between the expressions «ἀcώματα εἴδη» / «νοήματα» specified by Simplicius / the scholium about what that would be outside the universe, and the exegetical tradition on De caelo 1.9 279a18–22, again recorded in Simplicius' commentary Heiberg 1894, 287.19–292.7]. Even in this last case it would be necessary to give some meaning to the word «τάκει». Aristotle would refer to unspecified objects placed beyond the most extreme translation (τὰ ὑπὲρ τὴν ἐξωτάτω φοράν) in opposition to Alexander who invoked the authority of *Phys.* 4.5 212b3–21 and read in the expression a reference to the sphere of the fixed stars, which is not localizable and, therefore, beyond the last translatio. Alexander, however, seems to have been the only one among the commentators on the *De caelo* to favor this hypothesis [cf. Simplicius, Heiberg 1894, 287.19–288.5]. Starting from Themistius, Ammonius, the school of Alexandria, and Simplicius, the word «τάκει» was understood as referring to realities, bodies, or separate substances placed beyond the most extreme orbit of the universe.

It is interesting to note at this point that, while the exegetical tradition concerning *De caelo* [cf. Heiberg 1894, 291.27] characterizes the $\pi p \acute{o} \tau \alpha \epsilon \acute{l} \delta \eta$, the movers of the heavens, as aʿtru ἀκίνητα καὶ νοητά, that is, as something like ἀκίνητα καὶ νοητά, Rashed gives up the first interpretation of fr. 75, according to which Simplicius was passed over in the text of Alexander, since he limits himself to invoking abstract concepts (νοήματα) and tries to reinterpret in a Platonic sense the word «νοήματα» with the locution «ἀcώματα εἶδη». But the contrary might be true: that is, Simplicius' commentary could be closer to the Alexandrian alternative and the «νοήματα» of the scholium could wrongly reproduce Simplicius' «ἀcώματα εἴδη». The inaccuracy could be easily explained starting from the «νοητὰ εἴδη» that we read again in Simplicius' commentary on *De caelo*, if not from the corruption of «νοητά» (in place of «νοητὰ εἴδη»), which suggests the incorporeal nature of the first movers.

In fr. 120, the subversion of the *ordo verborum* in respect of the text of Aristotle must be joined with the $\dot{\alpha}\delta\iota\alpha\phi\rho\rho\dot{\alpha}$ of distance, namely, with the view that no place is more favored than another for the movement or the quiescence of bodies.

Fr. 122, illustrating *Phys.* 4.8 214b31, seems to show the independence of the scholium from Simplicius' commentary. When Aristotle refers to the cosmological hypothesis about Earth's immobility at the center of the universe by virtue of its indifference to moving in any direction, both the scholium and Simplicius remind us of the Platonicus locus that is thought to have inspired him, i.e., Phaedo 108e4-109a6. The scholium, however, does cite this dialogue explicitly, while Simplicius, because of a lapsus memoriae, erroneously and generically cites the *Timaeus*. He clearly has in mind the evidence of Tim. 63d12-a3, which is parallel to Phaedo 108e4-109a6. Rashed argues from this that both the scholium and Simplicius derive their quotations from Alexander's commentary, where the Platonic source was not explicitly cited. The difference lies in the fact that Simplicius supplies something to fill a lacuna that he found in his source, while the scholiast confines himself to copying it. So Simplicius is not the model of P. This means that the scholium cannot ultimately derive from Simplicius. It must be said, however, that Simplicius has been increasingly scrupulous in that passage of his commentary on De caelo [Heiberg 1894, 531.34–532.12] which presents the strongest parallel to this and where Aristotle guotes Anaximander [De caelo 1.13 295b10-12]. Simplicius, however, might well be depending on Alexander's commentary which he quotes just above and where he might have found the Platonic reference. It is curious to note that Simplicius' mistake in his In physics, that is, his citation of the Timaeus instead of the Phaedo, can also be found in Themistius' Paraphrasis of the De caelo [Landauer 1902,131.12–13], where we read the same confusion, this time with Anaxagoras instead of Anaximander. So this strange circumstance almost has four authors: Alexander, Themistius, Simplicius and the exegetical source from which the corpus of the scholia on the *Physics* has been taken.

In fr. 127, in the anti-Stoic argument about interstitial void, Alexander considers the case of an infinite extra-cosmic void, another Stoic notion. This seems to confirm *e contrario* the paternity of fr. 89, where the same notion, in a context in which the atomists are also quoted, indicates a distinction of two categories of Stoic philosophers. For Alexander's knowledge of the Stoic concept of extra-cosmic void in a context related to the denial of the possibility of a vacuum outside the universe, see Alexander's long excursus in his comment to *De caelo* 1.9 279a11–18 as preserved by Simplicius [Heiberg 1894, 284.28–286.27].

In the case of fr. 172, at the beginning of the scholium, the sequence « $\delta \chi \rho \delta v \circ ... \alpha \delta \tau \hat{\eta}$ » offered by Rashed does not seem to correspond to what was to be expected. Apart from the comparison with Aristotle's text and with the commentary of Simplicius, the translation 'le temps lui meme mesure le movement, dans sa quantité et son être, c'est a dire son existence' does not seems completely plausible. But the concept expressed a little later, that time determines the amount of movement and its duration, is better expressed if we correct « $\pi \delta c \eta$ » to « $\pi \delta c \eta$ v».

Fr. 176 is interesting because it shows how Alexandrian orthodoxy derives from an exegetical exercise. In this case, however, Rashed fails to record the parallel passage in Simplicius in its entirety.

Scholium 177 is valuable for two reasons. First, it may offer the most reliable example of how a comment by Alexander was reduced and reformulated by those responsible for the scholium, given that, in this case, our *terminus comparationis*, Simplicius, explicitly declares in his commentary that he is quoting Alexander *ad verbum*. Second, the use of the term «καθυπόστατος» indicates, according to Rashed, that it was in a cell of the Alexandrian school during the seventh and eighth centuries that the corpus of the scholia was probably formed. This conclusion is all the more remarkable if we consider that a similar hypothesis can be formulated for the corpus of the scholia on *De caelo* by comparing the marginalia of ms Parisinus Coislinianus 166 and ms Laurentianus 87.20.

The case of fr. 184 is different. Here Alexander, in establishing an analogy between a mathematical continuum and temporal continuum, brings the concepts $\delta v \alpha \mu u$ and $\epsilon \pi v \sigma \alpha \mu$ closer to each other by leaving unaddressed the questions of how points and instants are in space and time, respectively, and of the nature of space and of time. From a philological perspective, moreover,

the scholium confirms that Alexander read « $\delta\rhooc$ » instead of « $\pi\epsilon\rho\alpha c$ » at *Phys.* 4.13 222a12.

In fr. 218 the correction «κινεῖ» to «κινεῖται» is needed and indisputable.

The attribution to Alexander of the material collected by Rashed would seem to be confirmed even by the references to Empedocles contained in the corpus. In fr. 539, Empedocles is inserted into a list of Greek cosmologists based on a usual simplifying quadripartition. After the distinction between the defenders of an infinity of worlds and the theorizers of a single cosmos, the scholium continues by including Empedocles among the followers of a single sensible world that is generated and corruptible. Now, apart from the problematic hypothesis of an ungenerated but corruptible world, whose inclusion in the series should confirm the Alexandrian paternity of the scholium,⁶ the dislocation of Empedocles from the theorists of a single world to the theorists of a cosmic subdivision into two worlds-even if it did exclude the scholium's derivation from Simplicius-does not confirm its derivation from Alexander. But to lend support to the autonomy of the scholium from Simplicius as maintained by Rashed, it may be added that in one occasion very close to this, namely, in the schematization of the cosmologists on the basis of the created, not generated, corruptible and not corruptible nature of the world. Simplicius explicitly distances himself from the doxographical reconstruction of his model (Alexander) and justifies his disapproval with the same Neoplatonic separation indicated by Rashed. I refer again to Simplicius' commentary on De caelo 1.10, 279b12–17 [cf. Rescigno 2004, fr. 96b] in which his reaction to Alexander's chronological and cyclical interpretation of Empedoclean cosmology is motivated by Alexander's inclusion of Empedocles among those who conceived the nature of the cosmos as periodically generated and corruptible, that is, alongside Heraclitus and the Stoics, as in fr. 539.⁷ Fr. 542, despite the forced interpretation of Aristotle, confirms that Simplicius renounced the chronological interpretation of Empedocles'

⁶ By reason of its exclusion in Simplicius' doxography and of its presence in both the scholia and in Alexander's commentary on *De caelo* [Rescigno 2004, fr. 96] as recorded by Simplicius [Heiberg 1894, 293.11–295.26] and Philoponus [Rabe 1899, 212.16–213.4], where the same alternative is taken into account [cf. Rescigno 2004, 531–554].

⁷ See Rescigno 2004, 533–535 for the other passages quoted.

cosmology. Still, the chronological alternative of Empedoclean cosmology is evident even in fr. 543. The doxographical value of the scholiastic documents on Empedocles is also remarkable in the exceptical tradition of the *De caelo*.

I now take occasion to integrate the lamentable omission of the Greek text of a scholium from MS Laurentianus 87.20, included among the *specimina* in Rescigno 2013:

ήνίκα, φηςίν, ἐν τῷ ςφαίρῷ ἦν ἡ γῆ, τίς αἰτία τοῦ τὴν γῆν μὴ ἄνω μένειν καὶ φέρεςθαι κάτω; οὐ γὰρ διαφέρει αὕτη ἡ γῆ τῆς ἐν τῷ ςφαίρῷ (φαίδρῷ schl.) ταῖς ποιότηςιν· ἀεὶ γὰρ εἰcìν αἱ ποιότητες ἐν τοῖς ςτοιχείοις· αὐτὸς γὰρ ἔφης ὅτι φύςις οὐδέν ἐςτιν, ἀλλὰ μόνον μῖξίς τε διάλλαξίς τε μιγέντων, τουτέςτιν ὅτι ἐν μὲν τῷ ςφαίρῷ ἡνώμενά ἐςτι τὰ cτοιχεῖα, ἐν δὲ τῷ αἰςθετῷ κόςμῷ διακεκριμένα. οὐχ ἕξεις οὖν εἰπεῖν τὴν αἰτίαν δἰ ἡν ἔμενεν τότε ἡ γῆ· τὸ δὲ δεύτερον ἐπιχείρημα λέγει ὅτι οὐχ ὅμοιον τὸ παράδειγμα cou, 'Ἐμπεδόκλεις, τὸ ἐπὶ τοῦ κυάθου καὶ τοῦ οὐρανοῦ· οὐ γὰρ ὥςπερ ὁ κύαθος ἄπτεται τοῦ ὕδατος, οὕτως καὶ ἡ δίνη ἅπτεται τῆς γῆς. [198v]

From his examination of frr. 590, 591, and 594, Rashed derives not only the independence of Alexander from Simplicius' commentary but also confirms the position of the exegete found already in other fragments.

As a proof of the independence of the scholia from Simplicius' commentary, Rashed also takes into account fr. 626. Here Alexander takes up *Phys.* 8.5 257b3–4 and distinguishes two senses of the locution « ε̈ν ο̈ν » as it appears in the phrase « ε̈ν ο̈ν καὶ ἀτομον τῷ εἴδει » ('being one and indivisible in form'). In the first sense, it denotes the αὐτοκίνητον (self-mover); in the second, its motion. Thus, Alexander opposes an interpretation found in Simplicius, *In phys.* which takes both senses to signify the motion of what moves itself [cf. Diels 1882–1895, 1234.23–32]. Since the scholium mentions only the first sense, Rashed concludes that the scholium derives independently from Alexander's commentary.

This claim, however, underestimates selectivity on the part of the author responsible for the arrangement of the scholia. In fact, even if Rashed's contention that the scholia are independent of the scholia from Simplicius' commentary is correct, it does not follow that the author of the scholia, in the sense of the first individual responsible for them, had seen Alexander's comment. The scholium's incompleteness in reporting Alexander's exeges is might indicate that it is an indirect quotation, i.e., a citation of a comment in which Alexander's view was already present either explicitly or implicitly.⁸ In any case, the kinetic principle that no motion can participate at the same time in two different kinds of motion is characteristic of Alexander.

Frr. 651 and 635 represent an interesting example of the penetration of the commentaries of Alexander into Aristotle's text and should be considered within the categories described by Moraux [1954], particularly in the category showing the influence of Alexander's exegesis on the textual tradition of Aristotle.

Fr. 636 is interesting for the use of «καινοπρεπῶc» (said of Alexander's exegesis); for the absurdity which, according to Simplicius, Alexander would have gratuitously posited; and also, as Rashed thinks, for recourse to contemporary discussion with Epicureanism and Stoicism on spatial individuality. Without a mutual movement of the parts in combination with the reflexive one, the risk would be the dispersion of the whole. That the scope of the discussion is as Rashed indicates is confirmed, for example, by a section of the thoroughly anti-Stoic excursus taken from Alexander's commentary on *De caelo* and preserved by Simplicius [Heiberg 1894, 284.28–286.27]. In the same way, Rashed assumes in fr. 662 an anti-Stoic polemic in Alexander's commentary concerning the concept of motion $\kappa\alpha\theta'$ ὁρμήν.

In fr. 640, recourse to the *interpretatio ex Aristotele* cannot demonstrate the independence of the scholium from Simplicius even if Alexander is recognized as its author.

In fr. 662, the first mover is expressly indicated as the cause of existence and movement.

In frr. 680, 681, 683, 789, we note the replacement of the more specific «κυκλοφορητικόν cŵμa» with «αἰθήρ».

In certain fragments, it would be a mistake to translate the periphrastic and differently declined locution «oi $\pi\epsilon\rho$ i tòv...» as denoting a plurality: e.g.,

⁸ As was perhaps the case in fr. 18, where we are in doubt whether Philoponus, whose commentary on *Phys.* 4.2, 209b5 reproduces the scholium *ad litteram*, depends on a lecture by Ammonius on the *Physics* in which Alexander was quoted. If so, the scholium may derive independently from Alexander's commentary or, better, from Ammonius' lectures *via* Philoponus.

| Fr. | Greek Text | Rashed's Translation |
|---------|---------------------------------|---|
| fr. 30 | διὰ τοὺς περὶ Ἀναξαγόραν | en raison des physiciens autour d'Anaxagore |
| fr. 89 | οἱ μὲν περὶ Δημόκριτον | les partisans de Démocrite |
| fr. 122 | οἱ περὶ ἀναξαγόραν καὶ Πλάτωνα | les gens autour d'Anaxagore et de Platon |
| fr. 141 | οἱ περὶ Πλάτωνα (καὶ) Πυθαγώραν | les gens autour de Platon, de Pythagore |
| fr. 783 | οἱ περὶ Δημόκριτον | les partisans de Démocrite |
| fr. 786 | οί περὶ τὸν θεῖον Πλάτωνα | les partisans du divin Platon. |

In all these cases, the context suggests that the singular is to be preferred. Thus, in fr. 30, for instance, 'because of Anaxagoras' is better.

The edition is outstanding for the almost complete absence of typographical errors. The very few that I have found do not affect the intelligibility of the text. Among them, I report the following corrections: 59.10 $\dot{\epsilon}\pi$ (vota, n299 Ce, fr. 323.1 $\dot{\epsilon}$ ($\omega\theta\epsilon\nu$, fr. 338.1 $\dot{\epsilon}\phi$, fr. 441.2: v $\hat{\nu}\nu$, fr. 441 test. 6 $\tau\omega\nu$, and fr. 535 app. 2 $\dot{\eta}$.

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