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The Byzantine *Fortuna* of Alexander of Aphrodisias' Commentary on Aristotle's *De sensu et sensibilibus**

Abstract: The purpose of this paper is to trace the reception of Alexander of Aphrodisias' commentary on Aristotle's *De sensu et sensibilibus* in philosophical literature in Greek between the end of Late Antiquity and the fourteenth century. It offers a summary account of the material evidence for the presence of the commentary in the period, as well as more detailed discussions of texts in which its influence is manifest, especially Michael Psellos, *Philosophica minora* 2:8, George Pachymeres, *Philosophia* 8.1–2 and Theodore Metochites, *In De sensu*. The two latter texts are still unedited.

THE ANCIENT *FORTUNA* OF ARISTOTLE'S *PARVA NATURALIA* AND ALEXANDER'S COMMENTARY

The collection of short treatises by Aristotle on actions and affections of the soul commonly referred to as the *Parva naturalia* does not seem to have been on the syllabus of any philosophy schools in Late Antiquity. This goes some way towards explaining why, after Alexander of Aphrodisias' commentary on the first treatise, the *De sensu et sensibilibus*, in the early third century, it took until the early twelfth century for the first Greek commentaries on the rest of the collection to appear¹. These were composed by Michael of Ephesus², not because Byzantine school reform had triggered a sudden demand for study aids relating to the *Parva naturalia*, but rather, it seems, at the behest of an imperial matron who saw fit to fill the gaps in the existing secondary literature on Aristotle. In his funeral oration for Anna Komnene (1083–c. 1153), George Tornikes recalls how the learned princess had encouraged the philosophers of her time, including “the Ephesian”, to write “commentaries on those of Aristotle's works on which none had been written before”³. Tornikes' testimony is largely

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¹ See B. BYDÉN, Introduction: The Study and Reception of Aristotle's *Parva naturalia*, in: *The Parva naturalia in Greek, Arabic and Latin Aristotelianism. Supplementing the Science of the Soul*, ed. B. Bydén – F. Radovic. Cham 2018, 1–50, esp. 12–15. See also I. HADOT, Simplicius, Commentaire sur les *Catégories*. Fasc. 1. Introduction, première partie. Leiden – New York 1990, 85–90. Alexander's commentary was edited by Paul WENDLAND, in: *CAG* III/1. Berlin 1901. When Alexander refers, at *De anima* 69.19–20 (ed. I. BRUNS, *CAG* Suppl. II/1), to “another work” in which the distinction between memory and recollection has already been made, he might have in mind a commentary by himself on the *De memoria et reminiscencia*; and if so, he might have written commentaries on all of the *Parva naturalia* (cf. R. B. TODD, Alexander of Aphrodisias on Stoic Physics. Leiden 1976, 15, n. 71), but there is no other evidence to corroborate this inference.

² Ed. P. WENDLAND, *CAG* XXII/1. Berlin 1903.

³ Τεκμήριον τοῦ ταύτης φιλομαθοῦς τὰ πρὸς αὐτὴν ἐκπεφωνημένα τῶν παρ' ἡμῖν φιλοσόφων πονήματα, ἐφ' οἷς τῶν Ἀριστοτέλους μέχρις ἐκείνης ὑπομνηματισμοὶ μὴ συνεγράφησαν ἐξηγήσεων, ἀλλ' ἐξ ἀκροάσεως ἢ τούτων σαφήνεια διεδίδοδο παντοίως οὐκ ἀσφαλὴ οὐδ' οὕτω φιλότιμος. Λόγων γὰρ ἄσυλον ταμειῶν αἱ βιβλίοι καὶ νοημάτων ἀκαθαίρετα μνημεῖα τὰ γράμματα, ἀκοὴ δὲ τὰ πολλὰ τῆ λήθη καθάπερ κλέπταις σεσύληται. Ἐγὼ δὲ καὶ τοῦ ἐξ Ἐφεσίων ἠκηκόειν σοφοῦ ταύτη τῆς τῶν ὀφθαλμῶν ἀβλεψίας τὴν αἰτίαν προσεπιρρίπτοντος, ὅτι παννύχοις σχολάσειεν ἀϋπνίας ἐπὶ ταῖς τῶν Ἀριστοτελείων, κελουούσης αὐτῆς, ἐξηγήσεων· ὅθεν τὰ ἐλλύχια τοῖς ὀφθαλμοῖς διὰ ξηρασίαν παθήματα. Ἐπὶ τούτοις ἐκείνη, καὶ μῆπω τὰ τῆς ἱατρικῆς ἀκριβοσαμένη—καὶ γὰρ ἀνεβάλετο τέως τὴν ταύτης ἀνάλυσιν· καὶ ταῦτα, φιλοσοφοῦσα καὶ τῆς ψυχῆς ἱατρικὴν φιλοσοφίαν τῆς τῶν σωμάτων προκρίνουσα—, ἀλλ' οὖν κατὰ τὰ ἐκείνης ἐπιστημονικώτατα παραγγέλματα τὰ κατὰ φιλοσοφίαν συνδιετίθετο (Or. 14, ed. J. DARROUZÈS, Georges et Dèmètrios Tornikès, Lettres et Discours. Paris 1970, 283.4–16). The credit for having first called attention to Tornikes' oration and the light it sheds on the date and other circumstances

borne out by the extant output of Michael and his contemporaries, which includes commentaries on Aristotle's *Sophistici elenchi*⁴, *De generatione animalium*⁵, *De partibus animalium*, *De motu animalium* and *De incessu animalium*⁶, *Metaphysics* 7–14⁷, *Nicomachean Ethics* 1, 5–7, 9–10⁸, *Politics*⁹, and *Rhetoric*¹⁰, as well as Pseudo-Aristotle's *De coloribus*¹¹.

The scope of Anna's enterprise explains why Michael's commentaries on the *Parva naturalia* do not cover the *De sensu*, on which Alexander's commentary was still available. Michael himself must have had it on his desk, for the first few lines of the preface to his commentary on the *De memoria et reminiscencia* (1.4–14) are adapted from its preface¹². The copy he used has not survived—nor indeed have any other manuscripts from that time or earlier—but judging from WENDLAND's apparatuses it had disjunctive errors that place it in the α family, closest to Vat. gr. 1028 (*Diktyon* 67659, WENDLAND's V, see below).

The only relatively clear evidence of the use of Alexander's commentary in the first few centuries following its composition is in Themistius' paraphrase of Aristotle's *De anima* (mid-fourth century). At least Robert Todd, in the notes to his translation, asserts quite categorically that "Themistius got the idea of substituting *leptê othonê* for *humên* [at 73.2, paraphrasing 423a3] from Alexander's commentary on the *de Sensu* [23.23–24.2]"¹³, evidently assuming that the same substitution was not to be found, for example, in Alexander's lost commentary on the *De anima*¹³. The latter work is freely

of the early 12th-century commentaries is due to Robert BROWNING, An Unpublished Funeral Oration on Anna Comnena. *Proceedings of the Cambridge Philological Society* 8 (1962) 1–12. For a more recent discussion of the relevant material, see P. FRANKOPAN, The Literary, Cultural and Political Context for the Twelfth-Century Commentary on the *Nicomachean Ethics*, in: *Medieval Greek Commentaries on the Nicomachean Ethics*, ed. C. Barber – D. Jenkins. Leiden – Boston 2009, 45–62.

⁴ By Michael (Ps.-Alexander). Ed. M. WALLIES, *CAG* II/3. Berlin 1898.

⁵ By Michael (Ps.-Philoponus). Ed. M. HAYDUCK, *CAG* XIV/3. Berlin 1903.

⁶ By Michael. Ed. M. HAYDUCK, *CAG* XXII/2. Berlin 1904.

⁷ By Michael (Ps.-Alexander). Ed. M. HAYDUCK, *CAG* I. Berlin 1891. The authentic commentary by Alexander of Aphrodisias covers books 1–5 only, but, as Pantelis GOLITSIS has shown (Who Were the Real Authors of the *Metaphysics* Commentary Ascribed to Alexander and Ps.-Alexander, in: *Aristotle Re-Interpreted. New Findings on Seven Hundred Years of the Ancient Commentators*, ed. R. Sorabji. London 2016, 565–587, esp. 579–583), the pseudo-Alexandrian commentary on book 6 is not by Michael.

⁸ By Michael (5, 9–10), Eustratius of Nicaea (1, 6) and Anonymus (7). Ed. G. HEYLBUT, *CAG* XX. Berlin 1892. For a general discussion of this composite commentary on the *Nicomachean Ethics*, see H. P. F. MERCKEN, The Greek Commentators on Aristotle's *Ethics*, in: *Aristotle Transformed. The Ancient Commentators and Their Influence*, ed. R. Sorabji. London 1990, 407–443. For a discussion of the identity of the author of the commentary on book 7, which may be later than the commentaries commissioned by Anna, see E. FISHER, The Anonymous Commentary on *Nicomachean Ethics* VII: Language, Style and Implications, in: *Medieval Greek Commentaries*, ed. Barber – Jenkins (as in n. 3) 145–161.

⁹ By Michael. Thirty-odd pages of scholia survive, which may or may not be excerpted from a full commentary. Ed. O. IMMISCH, in: *Aristotelis Politica*. Leipzig 1909, 295–329. For Michael's authorship, see *ibid.* xv–xx.

¹⁰ Two commentaries are extant, a longer one, which is anonymous, and a shorter one attributed to Stephanus (perhaps Stephanus Skylitzes, later Metropolitan of Trebizond). Ed. H. RABE, *CAG* XXI/2. Berlin 1896.

¹¹ By Michael. Ed. V. PAPARI, in: *Der Kommentar des Michael von Ephesos zur ps.-aristotelischen Schrift De coloribus/Περὶ χρωμάτων*. Unpublished PhD-thesis, University of Hamburg 2013.

¹² See WENDLAND's apparatus ad 1.5, in: *CAG* XXII/1. Berlin 1903. On Michael's assiduous use of Alexander's *De anima*, see P. MORAUX, *Der Aristotelismus bei den Griechen von Andronikos bis Alexander von Aphrodisias*. Berlin – New York 2001, III 354–355, n. 162 and P. L. DONINI, *Il de anima di Alessandro di Afrodisia e Michele Efesio*. *Rivista di filologia e di istruzione classica* 96 (1968) 316–323. Michele TRIZIO (Eliodoro di Prusa e i commentatori greco-bizantini di Aristotele, in: *Vie per Bisanzio*, ed. A. Rigo – A. Babuin – M. Trizio. Bari 2013, II 803–830, here 812 n. 32) has suggested that Michael's colleague Eustratius of Nicaea borrowed one of his examples of false belief, namely that the moon at perigee shines entirely with its own light, in his commentary on *Nicomachean Ethics* 6, 289.15–17, from Alexander's commentary on the *De sensu*, 11.9–11. For possible traces of Alexander's *De anima* in Eustratius, see M. TRIZIO, Neoplatonic Source-Material in Eustratius of Nicaea's Commentary on Book VI of the *Nicomachean Ethics*, in: *Medieval Greek Commentaries*, ed. Barber – Jenkins (as in n. 3) 71–110, here 107.

¹³ R. B. TODD, *Themistius, On Aristotle's On the Soul*. Ithaca, NY 1996, 178 n. 2.

drawn upon in the three line-by-line commentaries on the *De anima* to have survived, in whole or in substantial part, from Late Antiquity, by John Philoponus (books 1–2 and 3.4–8, based on the lectures of Ammonius, early sixth century), Priscian of Lydia (books 1–3, previously ascribed to Simplicius, early to mid-sixth century) and Pseudo-Philoponus (book 3, perhaps attributable to Stephanus, mid-to-late sixth century)¹⁴, all of whom strongly emphasize Aristotle's Platonic affiliation and duly censure Alexander's interpretations of his views on sensitive matters such as the immortality of the human soul¹⁵. But they never cite Alexander's commentary on the *De sensu*.

Alexander's somewhat dubious reputation as an Aristotelian commentator, especially within the realm of psychology, was part of the Neoplatonic legacy to Byzantium¹⁶. Not that he did not have his admirers—foremost among them, perhaps, Michael of Ephesus¹⁷. But if it is taken into account that not only Alexander's commentary on the *De anima*, but also those on the *Categories*, the *De interpretatione*, the *Analytica posteriora*, the *Physics*, the *De caelo* and the *De generatione et corruptione* must have been lost before the twelfth century¹⁸, and that the students and scholars of Late Antiquity and Early Byzantium showed little interest in its subject matter, it may be put down to fortunate coincidence that there were any manuscripts at all containing Alexander's commentary on the *De sensu* extant in Michael's days. Yet the fact that some but not all currently existing manuscripts share the errors of Michael's copy (see above) reveals that there must have been at least two of them around. Let us now have a brief look at the surviving material evidence for the presence of Alexander's commentary in Byzantium.

THE MATERIAL EVIDENCE FOR ALEXANDER'S COMMENTARY IN BYZANTIUM

Three lists of commentators on Aristotle's works have been preserved from the early Palaiologan period (1261–1351): two very similar ones (Marc. gr. Z 203 [*Diktyon* 69674], f. 230 and Vat. gr. 241 [*Diktyon* 66872], f. 6) and one which is apparently more independent (Hierosol. Patr. Hagiou Taphou 106 [*Diktyon* 35343], ff. 6v–7v)¹⁹. Only the latter mentions any commentary on the *De sensu*, namely

¹⁴ For Philoponus' authorship of the five chapters from the third book of the first commentary, only preserved in Latin translation, see W. CHARLTON, *Philoponus, On Aristotle On the Intellect*. London 1991, 4–6. For Priscian's authorship of the second commentary, see C. STEEL, "Simplicius", *On Aristotle On the Soul* 3.6–13. London 2013, 1–4. For arguments in favour of Stephanus' authorship of the third commentary, see W. CHARLTON, "Philoponus", *On Aristotle On the Soul* 3.1–8. London 2000, 1–12; for a recent attempt to defend Philoponus' authorship of the third commentary, see P. GOLITSIS, *John Philoponus' Commentary on the Third Book of Aristotle's De anima, Wrongly Attributed to Stephanus*, in: *Aristotle Re-Interpreted*, ed. Sorabji (as in n. 7) 393–412. For a new assessment of the evidence concerning Stephanus' identity and date, see M. ROUECHÉ, *A Philosophical Portrait of Stephanus the Philosopher*, in: *Aristotle Re-Interpreted*, ed. Sorabji, 541–563.

¹⁵ On the attitudes of the *De anima* commentators towards Alexander, see H. BLUMENTHAL, *Alexander of Aphrodisias in the Later Greek Commentators on Aristotle's De anima*, in: *Aristoteles, Werk und Wirkung*, ed. J. Wiesner. Berlin – New York 1987, II 90–106. On Simplicius and Alexander, see H. BALTUSSEN, *Philosophy and Exegesis in Simplicius. The Methodology of a Commentator*. London 2008, 107–135.

¹⁶ For a typical evaluation (albeit as late as the 1440s), see George Scholarios (Gennadius II), Ep. 1, 399.20–34 (ed. M. JUGIE – L. PETIT – X. A. SIDERIDÈS, *Œuvres complètes de Georges [Gennadios] Scholarios IV*. Paris 1935). Cf. that of Scholarios' arch-enemy, George Gemistos [Plethon], *De differentiis* (ed. B. BYDÉN, *George Gemistos (Plethon), On Aristotle's Departures from Plato 0–19. Greek Text and English Translation*, in: *The Aristotelian Tradition: Aristotle's Works on Logic and Metaphysics and Their Reception in the Middle Ages*, ed. B. Bydén – C. Thomsen Thörnqvist. Toronto 2017, 267–296), lines 228–231 (= 327.40–328.3 Lagarde), partly echoing Philoponus, *In De an.* 9.39–10.3 (ed. Hayduck, *CAG XV*).

¹⁷ Michael, *In Parva nat.* 135.23–27 (ed. WENDLAND, *CAG XXII/1*); *In De motu an.* 121.1 (ed. HAYDUCK, *CAG XXII/2*).

¹⁸ For the commentary on the *Analytica posteriora*, see P. MORAUX, *Le commentaire d'Alexandre d'Aphrodise aux "Seconds analytiques" d'Aristote (Peripatoi 13)*. Berlin – New York 1979. For the others, see MORAUX, *Der Aristotelismus bei den Griechen III* (as in n. 12).

¹⁹ For the Marcianus, see H. USENER, *Interpreten des Aristoteles*, *Rheinisches Museum für Philologie* N.F. 20 (1865) 133–136; for the Vaticanus, see HAYDUCK in *CAG XVIII/3*, v; for the Hierosolymitanus, see WENDLAND in *CAG III/1*, xvii–xix.

that by one “Alexios”. The fact that a commentary on the *Topics* by “Alexios of Aphrodisias” is also included in the list reinforces the suspicion that the *De sensu* commentary meant is really Alexander’s.

There are half a dozen manuscripts from the twelfth to fourteenth centuries preserving all or substantial parts of Alexander’s commentary, usually as a continuous text. The oldest of these may be Mutinensis 80 (α.R.5.22 [*Diktyon* 43386]) from the late twelfth century, whose text ends at 51.20 WENDLAND. The mid-to-late thirteenth-century Oceanus of the Biblioteca Laurenziana (Laur. Plut. 85,1 [*Diktyon* 16761])²⁰ contains the second book only, that is to say, the commentary on chapters 5–7 of Aristotle’s work in modern editions. The oldest more or less complete witnesses are Vat. gr. 1028 (*Diktyon* 67659, s. XIV/XV) (WENDLAND’S V, text ends at p. 168.12 W) and Marc. gr. Z 230 (*Diktyon* 69701, s. XIV in.) (WENDLAND’S A, complete). Of the two remaining *vetustiores*, Par. gr. 1921 (*Diktyon* 51548, c. 1360) contains no less than three versions of Alexander’s commentary or parts thereof: (1) the latter half of Book 1 (pp. 46.12–87.12 W) as a continuous text (ff. 1r–4v); (2) substantial excerpts, apparently taken from a badly damaged exemplar, in the margins of Aristotle’s text (ff. 142r–145v; 5r–9v); (3) the whole commentary (pp. 1.3–173.12 W) in the margins of Aristotle’s text (ff. 146r–169v)²¹. In Par. gr. 1925 (*Diktyon* 51552, s. XII)²², on the other hand, only the latter half of the commentary is found (from p. 77.10 W).

In addition, as we have already seen in the case of Par. gr. 1921, some manuscripts of Aristotle’s work exhibit marginal scholia. To the best of my knowledge, no systematic study of these has been published, but to the extent that they have been examined, notably by David Bloch²³, they seem to derive for the most part from Alexander’s commentary²⁴. There are not strictly speaking any scholia to the *De sensu* in codex E, the famous Par. gr. 1853 (*Diktyon* 51479)²⁵, but, according to Bloch, more than a few (51, to be exact) are shared by two of E’s fourteenth-century descendants, Par. Suppl. gr. 314 (*Diktyon* 53069) and Vat. Urb. gr. 37 (*Diktyon* 66504)²⁶.

More interesting for our purposes is the fact that three manuscripts in Bloch’s θ-group (part of the β family of witnesses to Aristotle’s *Parva naturalia*, roughly equivalent to Siwek’s families II–V), some of which may date to the eleventh and twelfth centuries, have a number of scholia in common, partly excerpted from Alexander’s commentary. This is true of Vat. gr. 260 (*Diktyon* 66891, dated variously between the eleventh and the thirteenth centuries), Vat. gr. 1026 (*Diktyon* 67657, s. XIII/XIV) and Laur. Plut. 87,20 (*Diktyon* 16837, s. XIV)²⁷. Scholia deriving from Alexander’s commentary are also found in Laur. Plut. 87,4 (*Diktyon* 16821, s. XII) and Vat. gr. 1339 (*Diktyon* 67970, s. XIV)²⁸. In addition, Bloch suspects contamination from Alexander’s commentary in several unre-

²⁰ For the date of the Laurentianus, see B. MONDRAIN, La constitution de corpus d’Aristote et de ses commentateurs aux XIII^e–XIV^e siècles. *Codices manuscripti* 29 (2000) 11–33, here 18–19.

²¹ See WENDLAND in CAG III/1, vii; ix–x; xiv. Cf. J. WIESNER, Zu den Scholien der *Parva naturalia* des Aristoteles, in: Proceedings of the World Congress On Aristotle (Thessaloniki, August 7–14, 1978). Athens 1981, I 233–237, esp. 234–236, who erroneously maintains that there are only two copies of the text in the manuscript.

²² Dating suggested by Lutz Koch in private communication. WENDLAND ascribed Par. gr. 1925 to the 14th century (CAG III/1, vii).

²³ D. BLOCH, Alexander of Aphrodisias as a Textual Witness. The Commentary on the *De sensu*. *CIMAGL* 74 (2003) 21–38; D. BLOCH, The Text of Aristotle’s *De sensu* and *De memoria*. *Revue d’histoire des textes* n.s. 3 (2008) 1–58.

²⁴ However, some of the scholia (including the interlinear ones) on ff. 142r–145v and 5r–9v of Par. gr. 1921 seem not to have been culled from Alexander’s commentary.

²⁵ Although the clarification, by the first hand, of a reference to *Gen. Corr.* at 441b12 in the margin of f. 205v might derive from Alexander (72.26–27).

²⁶ BLOCH, The Text of Aristotle’s *De sensu* (as in n. 23) 15 n. 45.

²⁷ BLOCH, The Text of Aristotle’s *De sensu* 26; 30; 42.

²⁸ BLOCH, The Text of Aristotle’s *De sensu* 44 n. 142; 55.

lated branches of the textual tradition of Aristotle's work, in which case, of course, the commentary must have been accessible to different scribes at different times²⁹.

Finally, mention must be made of William of Moerbeke's translation of Alexander's commentary, probably executed during his sojourn in Thebes in 1260³⁰. Moerbeke's Greek exemplar must have been superior to any of the manuscripts surviving today: Paul Wendland deemed his translation the best witness in the α family (together with the seventeenth-century transcription of a lost manuscript in the margins of a copy of the Aldine edition in the Bibliothèque nationale de France), on the sole testimony of Thurot's edition, itself based on a single manuscript of poor quality³¹. Moerbeke also drew on Alexander's commentary for the preface to his translation of the *De partibus animalium*, which was finished in Thebes on 23 December, 1260³².

THE INFLUENCE OF ALEXANDER'S COMMENTARY ON ORIGINAL BYZANTINE WORKS: (1) FROM MICHAEL PSELLOS TO GEORGE PACHYMERES

Let us now turn to the evidence of an influence of Alexander's commentary on original works from the period after Iconoclasm. Not that the distinction between collections of scholia and original works is always so easy to maintain, a circumstance which is well illustrated by the earliest surviving original work in Greek to be undeniably and heavily indebted to Alexander's commentary. This is found on ff. 408v–409r of the famous miscellany in the Bodleian library, Barocci 131 (*Diktyon* 47418)³³. Among the diverse and sundry items on philosophical subjects contained in this part of the codex is a short essay purporting to provide the answers to two questions asked by an unnamed addressee. Only the first question is relevant to the interests of this paper³⁴. This is the coordination problem that, according to Aristotle in *De sensu* 2 (437a19–22), is bedevilling "certain people": If each sense (organ) is made up of a different element, how can there be five senses and only four elements?

The answer is pieced together from passages in Alexander's commentary, in such a way that it pits against each other, on the one hand, Plato's view in the *Timaeus* (65b–69a), to which the unnamed addressee is said to subscribe, namely that sight consists of fire, hearing of air, taste of water, touch of earth and smell of an intermediate between air and water, and, on the other hand, the view osten-

²⁹ BLOCH, The Text of Aristotle's *De sensu* 18; 19; 20; 31; 36; 54.

³⁰ See the Introduction in Thomae de Aquino Opera omnia, vol. 45/2, *Sentencia libri de sensu et sensato cuius secundus tractatus est de memoria et reminiscencia*. Rome – Paris 1985, ch. 4.1, esp. pp. 92*–94*. Where Moerbeke had found his Greek exemplar is unclear: his translation of Alexander's commentary on the *Meteorology* is dated *apud Niceam, urbem Graecie* on the 24 April, 1260, but scholars have disagreed as to whether the city referred to should be identified as Nicaea in Bithynia, Nike in Thrace or Nikli in Arcadia (ibid.).

³¹ WENDLAND in *CAG* III/1, viii–ix. Cf. H. USENER in *Jenaer Literaturzeitung* 3/34 (1876) 534–539. THUROT's edition of Moerbeke's translation (in: Alexandre d'Aphrodisias, *Commentaire sur le traité d'Aristote De sensu et sensibili* édité avec la vieille traduction latine par Charles Thurot, *Notices et extraits des manuscrits de la Bibliothèque nationale et autres bibliothèques* 25/2 [1875] 5–367) has not yet been superseded, although a critical edition in the series *Aristoteles Latinus* has been announced by C. DI MARTINO, *Le Commentaire du De sensu par Alexandre d'Aphrodise*, in: *Les Parva naturalia d'Aristote. Fortune antique et médiévale*, ed. C. Grellard – P.-M. Morel. Paris 2010, 77–100, here 77 n. 1. Of the four manuscripts preserving Moerbeke's translation, Thurot used only Par. lat. 14714, "qui est nettement le moins bon des quatre témoins", according to W. VANHAMEL, *Biobibliographie de Guillaume de Moerbeke*, in: *Guillaume de Moerbeke. Recueil d'études à l'occasion du 700e anniversaire de sa mort (1286)*, ed. J. Brams – W. Vanhamel. Leuven 1989, 301–383, here 350–352.

³² See A. J. SMET, *Chapitre 1. La traduction de Guillaume de Moerbeke*, in: *Alexandre d'Aphrodisias, Commentaire sur les Météores d'Aristote: Traduction de Guillaume de Moerbeke*, ed. A. J. Smet. Louvain – Paris 1968, xi–xiv. Cf. G. VUILLEMIN-DIEM, *La traduction de la Métaphysique d'Aristote par Guillaume de Moerbeke et son exemplaire grec: Vind. phil. gr. 100 (J)*, in: *Aristoteles, Werk und Wirkung*, ed. J. Wiesner. Berlin – New York 1987, II 434–486, here 483 n. 48.

³³ On which see N. G. WILSON, *A Byzantine Miscellany. MS Barocci 131 Described*. *JÖB* 27 (1978) 157–179.

³⁴ The second, ill-formed, question is "what is the part of the political art?" The answer is culled from Aspasius' commentary on the *Nicomachean Ethics* (6.28–30, ed. HEYLBUT, *CAG* XIX/1): it is the care of each particular citizen.

sibly defended by Aristotle in *De sensu* 2 (438b16–439a5), that sight consists of water, hearing of air, smelling of fire (since odours are supposed to be “smoke-like evaporations”—but, as Aristotle concludes in *De sensu* 5, 443a29–b1, since odours exist in water, they cannot be smoke-like evaporations, which do not) and both touch and taste of earth³⁵. The author of the essay fails to call attention to the explicitly hypothetical character of Aristotle’s argument (438b17–19) or indeed to any of Alexander’s warnings not to take it at face value (38.12–41.6). Some of the passages from Alexander are presented as reports of Aristotle’s views, some even as quotations of his words. The actual source is not mentioned. The Baroccianus is dated in the third quarter of the thirteenth century, but much of its content is evidently older. The collection of philosophical material on ff. 397v–446v has been plausibly connected with the activities of Michael Psellos, the famous historian and polymath in the third quarter of the eleventh century³⁶. This applies to our treatise as well, which was accordingly edited as opusculum 8 of Psellos’ *Philosophica minora*, vol. 2, by Dominic O’MEARA³⁷.

Michael of Ephesus’ dependence on Alexander’s commentary for the preface to his own commentary on the *De memoria et reminiscentia*—as well as a possible echo in Eustratius of Nicaea’s commentary on *Nicomachean Ethics* 6—have been noted above (n. 12).

When it comes to those works from Late Byzantium that discuss the organs and objects of sense perception more independently of Aristotle’s treatise, methodological caveats apply: the relatively expository nature of Alexander’s commentary may make it difficult to establish beyond doubt whether a particular passage is influenced by it or by Aristotle’s treatise. In addition, part of what Alexander says in the few digressions that his commentary does contain is also repeated in other works correctly or otherwise attributed to him, which means that even relatively close matches are not always conclusive proof of the use of his commentary.

All the same, when I started collecting material for this paper I thought I had reason to hope I would find evidence of the use of Alexander’s commentary in a number of early Palaiologan works. To be sure, I had already realized that Nikephoros Blemmydes (1197–1272), that cantankerous grand old man of Late Byzantine philosophy, was drawing on Alexander’s *Meteorology* commentary rather than the *De sensu* one for his brief account of the extramission theory of sight in the *Epitome physica*, ch. 21 (c. 1263)³⁸. But in the *apparatus fontium* of a subsequently published edition of the philosophical works of Nikephoros Choumnos (c. 1250–1327)³⁹, Alexander’s *De sensu* commentary is mentioned a dozen times with reference to passages in the treatise *On the Nutritive and the Perceptive Souls*⁴⁰. Alas, as far as I have been able to ascertain, the only passage for which it is legitimate to

³⁵ Nikephoros Blemmydes, *De anima* 34.30–35.34 (ed. anon. in: Νικηφόρου μοναστοῦ καὶ πρεσβυτέρου τοῦ Βλεμμίδου Ἐπιτομὴ Λογικῆς . . . Leipzig 1784, III 29–48 = 13.3–15.6 Verhelst), who plumps for the Platonic resolution to the coordination problem, adding ἀτμίς, “steam”, as a fifth element “in between air and water”, may possibly have drawn inspiration from the Baroccian text (or, less likely, from Alexander himself), although his discussion here and elsewhere in the work is clearly more indebted to Galen (in this case notably *De instrumento odoratus* 2.10–11). For steam being “a kind of humid exhalation, consisting as it does of air and water, in the process of being changed into water”, see Alexander, *In De sensu* 92.28–93.1 (explicating Aristotle, *De sensu* 5, 443a26–28). In contrast to the Baroccian text and Alexander (41.2–6), Blemmydes thinks that the organs of touch and taste are connected to the brain like all the others (*De anima* 35.10–17 ≈ 14.1–6 Verhelst).

³⁶ I. N. ΠΟΝΤΙΚΟΣ’ argument (Anonymi Miscellanea Philosophica. A Miscellany in the Tradition of Michael Psellos [Cod. Baroccianus Gr. 131]. Athens 1992, xxxix) for reassigning this collection to the twelfth century is unconvincing (cf. J. DUFFY, *Hellenic Philosophy in Byzantium and the Lonely Mission of Michael Psellos*, in: *Byzantine Philosophy and Its Ancient Sources*, ed. K. Ierodiakonou. Oxford 2002, 139–156, here 153).

³⁷ It was re-edited as Anonymi Miscellanea Philosophica 7 by ΠΟΝΤΙΚΟΣ (Anonymi Miscellanea Philosophica 19–22).

³⁸ See B. BYDÉN, *Theodore Metochites’ Stoicheiosis astronomike and the Study of Natural Philosophy and Mathematics in Early Palaiologan Byzantium*. Gothenburg 2003, 203–205. Regarding Blemmydes’ *De anima*, see above n. 35.

³⁹ K. P. ΧΡΕΣΤΟΥ, *Τὸ φιλοσοφικὸ ἔργο τοῦ Νικηφόρου Χοῦμνου*. Thessaloniki 2002.

⁴⁰ The full title is Περὶ τῆς θρεπτικῆς καὶ αἰσθητικῆς ψυχῆς καὶ τῶν κατὰ ταύτας κινήσεων, ἐπεὶ περὶ τῆς λογιστικῆς ἰκανῶς ἔσμεν πρότερον καὶ ἐπισκεψάμενοι καὶ εἰρηκότες.

infer that the source is Alexander's commentary rather than Aristotle's treatise is one where Choumnos argues, as against Aristotle's interpretation of Plato's theory of sight, that all movement comes to pass in time, so if sight involves the movement of something from the eye to the visible object (and assuming, no doubt, that this movement is always of equal speed), the time required for seeing will vary in direct proportion to the distance from the eye to the visible object, whereas in fact we see far and near objects alike instantaneously and simultaneously (113.13–20 CHRESTOU). This is roughly what Alexander also says in his commentary, at 30.1–6⁴¹. All other resemblances that Choumnos' treatise bears to Alexander's commentary but not to Aristotle's treatise seem to be superficial and insignificant⁴².

Similarly, I was encouraged by the results of my own previous studies to expect to find in Alexander's commentary the origin of two of the arguments against an extramission theory of sight (and in favour of an intromission one) deployed in Nikephoros Gregoras' (1293/94–1360/61) second *Solution to Helena Palaiologina* (c. 1357)⁴³. But again, my expectations were dashed. It remains a possibility, but nothing more, that at least one of these arguments (500–501.111–118 Leone) was inspired by either Aristotle's or Alexander's account of the reflections in the eye underlying Democritus' theory of sight.

Let us turn, for safer bets, to the few works of the period especially designed to shed light on Aristotle's doctrines in the *De sensu*. The first of these is George Pachymeres' (1242–after 1307) *Philosophia* 8.1–2 (Berol. Ham. 512 [*Diktyon* 9300], ff. 132r–136r)⁴⁴. This is a compendious account of sense perception and its objects in close dependence on Aristotle. In fact, Pachymeres follows roughly the same cut-and-paste method in this as in other books of the *Philosophia*: his text is about half as long as Aristotle's and half of the sentences it contains are copied from Aristotle's text with no or slight adjustments⁴⁵. I have examined chapter 8.1 (ff. 132r–134r), which corresponds to the first three chapters of Aristotle's treatise. In this there are five details, all of them quite trivial, which are not found in Aristotle but may well originate from Alexander. Most of these also crop up in Theodore Metochites' paraphrase of the *De sensu*, of which I will say more in a little while.

The five details are the following: (P1) When Aristotle says at 436b4–6 that all the “most important functions” of living beings are accompanied or enabled by sense perception, as affections or states of it, as means of defending and safeguarding it or as privations and destructions of it, Pachymeres specifies that sleep is an affection of sense perception; memories and recollections are means of defending and safeguarding—not sense perception, surprisingly, but the animals themselves—whereas instances of forgetfulness are privations and deaths are destructions⁴⁶. This corresponds to Alexander, *In De sensu* 7.25–8.4, except, of course, that the Aphrodisian does not commit Pachymeres' mistake regarding what memories and recollections are supposed to defend and safeguard.

⁴¹ And similarly in *Mantissa* 130.6b–12 (ed. R. W. SHARPLES, Alexander Aphrodisiensis, *De anima libri mantissa* [*Peripatoi* 21]. Berlin – New York 2008).

⁴² For a brief discussion of Choumnos' treatise and its sources, see BYDÉN, Theodore Metochites' *Stoicheiosis astronomike* (as in n. 38) 206–208, and, most recently, R. BETANCOURT, Sight, Touch, and Imagination in Byzantium. Cambridge 2018, 46–50.

⁴³ Cf. BYDÉN, Theodore Metochites' *Stoicheiosis astronomike* 209. Gregoras' text was edited by P. L. M. LEONE, in: Nicephori Gregorae “Antilogia” et “Solutioes quaestionum”. *Byz* 40 (1970) 471–516, esp. 497–502.

⁴⁴ Pantelis GOLITSIS has argued in favour of a date of composition in c. 1307 for the *Philosophia* (La date de composition de la *Philosophia* de Georges Pachymère et quelques précisions sur la vie de l'auteur. *REB* 67 [2009] 209–215).

⁴⁵ On Pachymeres' method in the *Philosophia*, see K. ΟΙΚΟΝΟΜΑΚΟΣ, Γεώργιος Παχυμέρης: Φιλοσοφία, Βιβλίον ένδέκατον, Τά Ηθικά, ήτοι τὰ Νικομάχεια. Athens 2005, 19*–23*, and my review in *JÖB* 58 (2008) 261–263, esp. 262.

⁴⁶ ὅτι δὲ πάντα τὰ λεχθέντα κοινὰ ψυχῆς τε καὶ σώματος οὐκ ἄδηλον· τὰ μὲν γὰρ μετὰ αἰσθήσεως συμβαίνει, τὰ δὲ δι' αἰσθήσεως· ὕπνος δὲ πάθος αἰσθήσεως· μνήμαι δὲ καὶ ἀναμνήσεις φυλακαὶ σωτηρίαὶ ζώων· λήθαι δὲ στερήσεις· θάνατοι δὲ φθοραὶ (f. 132r).

(P2) When Aristotle says at 436b12–15 that touch necessarily belongs to all animals “for the reason stated in the *De anima*”, Pachymeres explains that animals perish unless they maintain their “bodily equilibrium”⁴⁷, a phrase which parallels the remarks of Alexander, *In De sensu* 9.2–5; 9.8–11.

(P3) In presenting two possible alternatives for the elemental make-up of the organ of smell, namely fire, as ostensibly defended by Aristotle at 438b20–27 of our treatise, or air, which is a possibility entertained by Aristotle in *De anima* 3.1 (425a3–7), Pachymeres notes (f. 132v) that air is “transodorant” (δίσομος), a word used by Alexander in his comments on *De sensu* 5 (89.2), but admittedly also by the ancient commentators on the *De anima*⁴⁸.

(P4) Like Alexander (41.21–23), Pachymeres corrects (f. 133r) Aristotle’s use of the word “touch” (ἄφή) in the list of special sense objects at 439a10–12, adding the more appropriate term “tangible object” (ἄπτόν).

(P5) Pachymeres’ summary of the different ways in which Aristotle considers, from 439b18 onward, that the colours other than black and white might come about is strongly reminiscent, in language and content, of what Alexander says at *In De sensu* 52.27–53.2, except that Pachymeres conflates the juxtaposition theory first set out by Aristotle with Aristotle’s own preferred blending theory, even substituting in this context the word κρᾶσις for μίξις (Alexander admits at 55.7–8 that some people say that κρᾶσις comes about through juxtaposition but himself reserves the term exclusively for blending [cf. 65.1])⁴⁹.

One may note, in passing, that Pachymeres seems to have considered what we would call a spiritualist account of the actualization of the sense organs to be opposed to Aristotle’s view, when he writes (in response to the suggestion, in 438b20–27, that the sense of smell consists of fire): “Odour is in actuality fire, since it is a smoke-like evaporation. Therefore the organ of smell, too, is potentially smoke and heat, the end and actuality of which is fire, unless one were to object to the Philosopher that the sense organs do not become what the sense objects are substantially, but cognitively and discriminatively.”⁵⁰

I am not going to say anything about Sophonias’ (alias Ps.-Themistius’) paraphrase of the *Parva naturalia* (CAG V/6), which leaves out not only the *De sensu*, but also the *De longitudine et brevitate vitae*, the *De iuventute et senectute*, the *De vita et morte* and the *De respiratione*. It is heavily dependent on Michael’s commentaries, which probably explains why it omits the *De sensu* (but not, of course, why it omits the last four treatises). Since it does, one might think that when Sophonias claims, in the introduction to his paraphrase of the *De memoria* (1.9–10), to have previously written on sensible objects and sense perception, he should be understood as referring to the relevant parts of his paraphrase of the *De anima*. It is more likely, however, that his claim is simply a result of his con-

⁴⁷ ἀφή τοίνυν καὶ γεῦσις πᾶσι τοῖς ζῴοις ἀκολουθεῖ· ἀφή μὲν διὰ τὴν σωματικὴν συμμετρίαν, ὡς λέλεκται· εἰ γὰρ μὴ σύμμετρος εἴη αὕτη, τὸ ζῷον φθείρεται ... (f. 132r).

⁴⁸ Themistius, *In De an.* 62.32; 69.9 (ed. HEINZE, CAG V/1); Priscian (*olim* Simplicius), *In De an.* 139.2–6 *et alibi* (ed. HAYDUCK, CAG XI); Philoponus, *In De an.* 253.4–5 *et passim* (ed. HAYDUCK, CAG XV).

⁴⁹ ὡς περ δὲ ἐν τῷ ἀέρι τὸ μὲν φῶς, τὸ δὲ σκότος, οὕτω καὶ ἐν τοῖς σώμασι ἐγγίνεταί τὸ λευκὸν καὶ τὸ μέλαν· τὰ δὲ μέσα τούτων ἄλλα καὶ ἄλλα | κατὰ ἀναλογίαν τῆς τῶν ἄκρων κράσεως· καὶ τὸν αὐτὸν τρόπον ἔχει ταῦτα ταῖς συμφωνίαις (f. 133r–v).

⁵⁰ ἡ ὁδμὴ δὲ ἐνεργεῖα πῦρ, ὡς καπνώδης ἀναθυμίασις· ἄρα καὶ τὸ ὀσφραντικὸν δυνάμει καπνὸς καὶ θερμὸν, ὃ δὴ τελειοῦται καὶ ἐνεργεῖα πῦρ γίνεταί, εἰ μὴ γέ τις λέγοι πρὸς τὸν Φιλόσοφον· ἀλλὰ γνωστικῶς τε καὶ κριτικῶς, οὐκ οὐσιωδῶς, τὰ αἰσθητήρια ὅπερ | τὰ αἰσθητὰ γίνονται (ff. 132v–133r). It is worth mentioning that the phrase “γνωστικῶς καὶ κριτικῶς” most likely derives from a passage in Priscian’s (*olim* Simplicius’) commentary on Aristotle’s *De anima* (125.19–23), which was reutilized in the commentary on Aristotle’s *Physics* edited by Linos BENAKIS as the work of Michael Psellos (Michael Psellos Kommentar zur Physik des Aristoteles. Athens 2008, 89.21–90.5) but plausibly reattributed to Pachymeres by Pantelis GOLITSIS (Un commentaire perpétuel de Georges Pachymère à la *Physique* d’Aristote, faussement attribué à Michel Psellos. *BZ* 100 [2007] 637–676). Priscian’s commentary is one of the main sources for Pachymeres’ *Philosophia* 7 (Τὸ περὶ ψυχῆς): cf. especially ch. 3.8, Berol. Ham. 512, 126v–129v, with Priscian’s comments on *De anima* 3.6–8.

scious and consistent employment of a first-person mode of presentation (the conceit that Michael Psellos described as “donning the mask of Aristotle”)⁵¹.

THE INFLUENCE OF ALEXANDER'S COMMENTARY ON ORIGINAL BYZANTINE WORKS: (2) THEODORE METOCHITES

Instead, we should turn to what I like to think of as the *clou* of our story, Theodore Metochites' paraphrase of Aristotle's *De sensu*. In my opinion, the most likely date of publication for Metochites' paraphrases of Aristotle's writings on natural philosophy is around 1312–1313, although a date in 1320–1321 is also possible⁵². These paraphrases cover all the *Parva naturalia*, but in the oldest

⁵¹ For Psellos, see K. IERODIAKONOU, Psellos' Paraphrasis on Aristotle's *De interpretatione*, in: Byzantine Philosophy and Its Ancient Sources, ed. K. Ierodiakonou. Oxford 2002, 157–181, here 165 and n. 31. For Sophonias' adoption of Psellos' conceit, see his *In De anima* 2.28–34, esp. 2.33–34 (ed. HAYDUCK, in CAG XXIII/1). For his consistent employment of it, see B. BYDÉN, Λογοτεχνικές καινοτομίες στα πρώιμα παλαιολόγεια υπομνήματα στο *Περὶ ψυχῆς* του Αριστοτέλη. *Ypomonema ste Philosophia* 4 (2006) 221–251, here 231–232.

⁵² For a careful discussion of the evidence, see M. BORCHERT, Der paraphrastische Kommentar des Theodoros Metochites zu Aristoteles' *De generatione et corruptione*. Handschriftliche Überlieferung, Textkritische Edition und Übersetzung. Unpublished PhD-thesis, Friedrich-Schiller-Universität Jena 2011, xxvii–xxxii. Borchert is inclined towards a date of composition in 1317–1321, but admits that the evidence is inconclusive. My own reasons for preferring the earlier date were stated in BYDÉN, Theodore Metochites' *Stoicheiosis astronomike* (as in n. 38) 35 n. 114. As regards Borchert's arguments in favour of the later date, I would like to say the following. Unfortunately, the address to an unnamed dedicatee in Metochites' proem to the paraphrases (ed. H. J. DROSSAART LULOFS, *Aristotelis de somno et vigilia liber adiectis veteribus translationibus et Theodori Metochitae commentario*. Leiden 1943, 12.26–32) is too obscure in some of its details to allow us to identify the person meant with any confidence, but I agree with BORCHERT (Der paraphrastische Kommentar xxxii) that Nikephoros Choumnos is a likelier candidate than Nikephoros Gregoras. An especially problematic sentence is the one that suggests that the paraphrases will be ... καὶ πλείονος ἀμέλει λόγου, ἢ ὅσα κομιδῇ πλείστα βιωτικῆς εὐκληρίας φθάσανθ' ἡμῶν παρεσκευάσται σοι, τῆς τοῦ ... δεσπότητος ... εὐγενείας καὶ εὐποιίας ... ἐπαρκούσης ... (12.30–32 DROSSAART LULOFS), translated by BORCHERT as "... von größerem Wert als was Dir vor mir alles reichlich an Wohlergehen bereitet wurde, indem die edle Gesinnung und ... Wohltätigkeit des ... Kaisers ... half" (Der paraphrastische Kommentar xxxi n. 79, original italics). As BORCHERT notes (Der paraphrastische Kommentar xxxii), it is difficult to reconcile the suggestion that many valuable things have been prepared for the dedicatee, with the emperor's help, before Metochites' days with the hypothesis that the dedicatee is Gregoras, who arrived in Constantinople as a twenty-year-old, probably in 1313/1314, to be introduced at court only in 1321 (see H.-V. BEYER, Eine Chronologie der Lebensgeschichte des Nikephoros Gregoras. *JÖB* 27 [1978] 127–155). However, while it is certainly not impossible to understand the text as Borchert does, it is worth pointing out (a) that there seem to be no other examples of φθάνω with a genitive of comparison in Metochites' *œuvre*, and (b) that one might expect the dative after the perfect middle-passive παρεσκευάσται to express the agent (as, e.g., in Theodore Metochites, *Logos* 10.18, ed. I. POLEMIS, Θεόδωρος Μετοχίτης, Ἡθικὸς ἢ περὶ παιδείας. Athens 2002, 82.6–8: λόγοι ... ἐσκευασμένοι τοῖς ἀνδράσιν ...; cf. also IDEM, *Semeioseis gnomikai* 1.2.4, ed. K. HULT, Theodore Metochites on Ancient Authors and Philosophy. *Semeioseis gnomikai* 1–26 & 71. Gothenburg 2002, 22.17–18: ὅσα περὶ τὴν τῆς φωνῆς ἄσκησιν ἅπαντα φθάσαντα τοῖς πρὸ ἡμῶν εἴργασται [punctuation modified]). Taking ἡμῶν, then, as a possessive with ὅσα ... πλείστα ... φθάσανθ' (as in, e.g., Nikephoros Choumnos, Epist. 25, ed. J. F. BOISSONADE, *Anecdota Nova*. Paris 1844, 32.6: πάνθ' ὅσα ἡμῶν), one might arrive at the following interpretation: "... indeed, of greater value even than all those very many contributions to my everyday prosperity that you have already made, with the help of the emperor's generosity and benevolence". This interpretation has the additional advantage of making Metochites favourably compare his own intellectual gift to the dedicatee with the dedicatee's former material benefits to him, which seems perfectly in keeping with the sort of one-upmanship commonly practiced between Palaiologan courtiers (not least between Metochites and Choumnos), rather than with the emperor's former material benefits to the dedicatee, which seems an unexpectedly irreverent thing to do. Obviously, it too excludes the possibility of Gregoras' being the dedicatee. If Choumnos is indeed the dedicatee, there is nothing to prevent a date between c. 1310 (when Choumnos returned from his governorship of Salonica) and c. 1315 (when Choumnos started sending essays on natural philosophy to Metochites). — BORCHERT's main argument in favour of the later date is that Metochites, in a passage of his *Stoicheiosis astronomike* (1: 3.101–110, ed. BYDÉN, Theodore Metochites' *Stoicheiosis astronomike*, 453), published in 1316/1317 (see *Stoicheiosis astronomike* 1: 1.513–514 and 1: 1.635–636, ed. BYDÉN, Theodore Metochites' *Stoicheiosis astronomike*, 434 and 438), appears to be referring to the paraphrases as a forthcoming work (Der paraphrastische Kommentar xxix–xxx). But the matter is not so simple. It is true that Metochites uses the optative of wish in speaking of his own contribution to the field of natural philosophy (1: 3.101–106), and it seems reasonable to see this as an indication that he had not yet—or had only

manuscripts, Vat. gr. 303 (*Diktyon* 66934) (V), Par. gr. 1866/1935 (*Diktyon* 51492/51562) and Marc. gr. Z 239 (*Diktyon* 69710), the treatises are not presented in the traditional order. The paraphrase of the *De sensu* is always found at the very end, immediately after the paraphrase of the *Meteorology*, which has been similarly dislocated (it follows after the zoological treatises)⁵³. This is not because Metochites had an unconventional approach to the order of Aristotle's writings. He readily acknowledges, in the first few lines of the *De sensu* paraphrase, that the *De sensu* "ought to be placed in sequence after the *De anima*"⁵⁴. He does not explain why he has in fact strayed from the correct order, but the reason is not too difficult to guess. Metochites needed commentaries to carry out his work. The only Greek commentary on the *De sensu* was still that by Alexander. Presumably, then, this was not available to Metochites at the time when he finished his *De anima* paraphrase⁵⁵. Since he also used Alexander's commentary on the *Meteorology*, the paraphrase of which, as I said, immediately precedes that of the *De sensu* in the manuscripts of Metochites' work, one may venture to surmise that this lack was eventually remedied by a manuscript containing Alexander's commentaries on both the *Meteorology* and the *De sensu*. There are several manuscripts which satisfy this description: an early example is Marc. gr. Z 230 (*Diktyon* 69701)⁵⁶.

The abridgments of Metochites' paraphrases transmitted in Vat. gr. 115 (*Diktyon* 66746), a partial autograph by George Scholarios, do not include the *De sensu* paraphrase⁵⁷. Perhaps it was missing from his exemplar, a likely enough scenario in view of its position at the end of the collection. In support of this hypothesis one may cite the fact that Scholarios' abridgment of the *Meteorology*

recently—*published* any work in the field, but he also clearly states in the aorist indicative that he *has already* received the seeds that he hopes will bear such fruit and that he *has already* done some serious work on the subject (1: 3.106–110). Moreover, even if the paraphrases were still unpublished when this passage was composed, it is not clear what the consequences are, since we do not know when it was composed. It is perfectly possible—perhaps even probable—that Book 1, chapters 2–5 were among the first parts of the *Stoicheiosis* to be written when Metochites set to work in 1312/1313. And even if the paraphrases did remain unpublished in 1316/1317, it is not very likely that Metochites would have been able to expend much labour on them in the intervening years, which he had devoted to mastering such a demanding (and neglected) scientific discipline as mathematical astronomy well enough to write a more than 800-*folio*-pages-long handbook on the subject, besides his daytime duties as minister of finance (λογοθέτης τοῦ γενικοῦ) and personal adviser to the emperor (μεσάζων). We would still have to suppose, then, that the paraphrases were mainly composed in the years before 1312/1313. BORCHERT further argues (Der paraphrastische Kommentar xxx) that the announcement of the *Paraphrases* as a *καινότερα σπουδή* in Metochites' proem (11.16 DROSSAART LULOFS) may imply a comparison with the *Stoicheiosis* as an older work. But in the preceding lines no reference has been made to any previous publications by the author, let alone to the *Stoicheiosis*. In so far as a definite comparison is implied, it must be with the charitable deeds commended by the ancient Pythagoreans, which are mentioned in 11.6–11 DROSSAART LULOFS. It may be noted that in *Poem* 12 (ed. M. CUNNINGHAM – J. FEATHERSTONE – S. GEORGIPOULOU, Theodore Metochites's Poem to Nikephoros Kallistos Xanthopoulos. *Harvard Ukrainian Studies* 7 [1983] 100–116), where Metochites speaks expressly of both the *Stoicheiosis* and the *Paraphrases*, it is the former, not the latter, which is qualified as *καὶν[ή]* (line 267).

⁵³ Vat. gr. 303, ff. 579r–596v; Marc. gr. Z 239, ff. 541v–557r; Par. gr. 1935, ff. 277r–294r.

⁵⁴ Ἰστέον ὅτι τὸ Περὶ αἰσθήσεως καὶ αἰσθητῶν τοῦ Ἀριστοτέλους βιβλίον ἀκολουθῶς ὀφείλει μετὰ τὰ Περὶ ψυχῆς βιβλία τάττεσθαι, καθὼς καὶ ἐν προομίῳ τούτου τοῦ βιβλίου αὐτίκα τοῦτο δηλοποιεῖ ὁ Ἀριστοτέλης (V, f. 579r).

⁵⁵ As was suggested by C. LOHR (Theodorus Metochites, Paraphrasis in Aristotelis Universam Naturalem Philosophiam übersetzt von Gentianus Hervetus. Stuttgart – Bad Cannstatt 1992, x).

⁵⁶ Nikephoros Choumnos reveals in one of his letters (Epist. 76, addressed to Theodora Raoulaina, d. 1300, ed. J. F. BOISSONADE, *Anecdota Nova*. Paris 1844, 91–93) that he had in his possession a poorly executed and unreliable manuscript of Aristotle's *Meteorology* with Alexander's commentary "and some other of Aristotle's works, which there is no need to enumerate" (92.18–19). It could have been this manuscript that Metochites finally laid his hands on.

⁵⁷ For Scholarios' abridgments of Metochites' paraphrases, see most recently J. A. DEMETRACOPOULOS, George Scholarios' Abridgment of the *Parva naturalia*. Its Place in His *Œuvre* and in the History of Byzantine Aristotelianism, in: *The Parva naturalia* in Greek, Latin and Arabic Aristotelianism, ed. Bydén – Radovic (as in n. 1) 233–315, esp. 239–260. See also M. CACOUROS, Ο Γεώργιος Σχολάριος εξηγητής του Αριστοτέλους, εραμιστής του Μετοχίτου καὶ μεταφραστής λατινικῶν ἔργων στο corpus aristotelicum. Athens 2015.

paraphrase stops short after book 4, chap. 1 (at 378b26). What the hypothesis fails to explain is why Scholarios also omitted the paraphrases of *De generatione et corruptione*, *De partibus animalium*, *De incessu animalium* and *De generatione animalium*.

Metochites' method in the *De sensu* paraphrase differs somewhat from that in his earlier paraphrases. Most noticeably, he does not shrink here from reproducing whole phrases, even sentences, of Aristotle's text practically as they stand, whereas, for instance, in his *De anima* paraphrase, his borrowings are almost always carefully rephrased and integrated with the flow of his own prose. Possibly, this is a sign of haste. Such verbatim borrowings from Alexander's commentary are naturally shorter and fewer—Aristotle always being the primary source—but those that do occur leave no doubt that the commentary has been systematically consulted (or perhaps a collection of scholia based on it: for instance, like the one in version 2 of Par. gr. 1921, for which see above).

On the other hand, Metochites continues his established practice of passing over any material of a more digressive nature in his secondary sources. Thus it is not unexpected to find only very little corresponding to Alexander's arguments against the extramission and effluence theories of sight (*In De sensu* 28–31; 56–58). The only passage in which any of these arguments are utilized is the following:

[Aristotle] says [*De sensu* 2, 438a25–b2] that it is unreasonable of some people to believe that light flows out of the eyes and that visible objects are seen by means of this [light]. For how could it extend even as far as the heaven and the stars? For since it is corporeal it will necessarily become attenuated when extended, and indeed more so the more it is extended [cf. Alex. *In De sensu* 28.16–19]. For one can observe that also water, after it has been poured out, if it travels a long distance, gradually peters out and lessens, and it is evident that flames, starting from a wider span, gradually reach a pointed end [cf. Alex. *In De sensu* 29.8–11]⁵⁸.

Similarly, Alexander's account of the transparent (*In De sensu* 43–53), which is one of the few sections of his commentary in which it can be reasonably argued that he departs from Aristotle's intentions⁵⁹, has left little if any mark on Metochites' exposition. It is clear that Metochites has read it (or parts of it), since he avails himself of one of Alexander's explanations (*In De sensu* 49.15–16) as to why colour cannot be the limit of a body, namely that the limit of a body, that is, its surface, is a quantum, whereas colour is a quale⁶⁰. But there are, for instance, no echoes in his paraphrase of Alexander's often repeated catchphrase, that the medium of sight receives the colours without being affected (οὐ παθητικῶς; Alex. *In De sensu* 19.4–6; 42.26–43.1; 47.3–4; 50.16–18; 52.1–2)⁶¹. Nor is the distinction between a narrow and a wide sense of “transparent”, on which Alexander's account partly trades (Alex. *In De sensu* 45.6–17)⁶², anywhere to be found. This may have been because

⁵⁸ Ὅτι ἀλόγως, φησί, δοκοῦσι τινες ὅτι ἐξεῖσι τῶν ὀφθαλμῶν φῶς καὶ διὰ τούτου ὁρᾶται τὰ ὀρατά· πῶς γὰρ ἂν καὶ ἀποτεῖνοιτο μέχρι τοῦ οὐρανοῦ καὶ τῶν ἄστρον; σωματικῶδες γὰρ ὄν ἀνάγκη ἐκτεινόμενον ἐξίτηλον γίνεσθαι, καὶ τοσοῦτο μᾶλλον, ὅσον ἂν ἐκτεῖνοιτο· ὁρᾶν γὰρ ἔστι καὶ ὕδωρ ἀπορρεῦσαν, εἰ μέχρι πολλοῦ προοδεύει, κατ' ὀλίγον λεπυνόμενον καὶ ἐλαττούμενον, καὶ ἡ φλόξ εἰς ὄξυ ἀπὸ εὐρυτέρου κατ' ὀλίγον φαίνεται καταλήγουσα (V, f. 582r).

⁵⁹ For a somewhat more and a somewhat less benevolent assessment of Alexander's account, see K. IERODIAKONOU, Aristotle and Alexander of Aphrodisias on Colour, and P. GREGORIC, Aristotle's Transparency: Comments on Ierodiakonou, “Aristotle and Alexander of Aphrodisias on Colour”, both in: *The Parva naturalia* in Greek, Latin and Arabic Aristotelianism, ed. Bydén – Radovic (as in n. 1) 77–90 and 91–98, respectively.

⁶⁰ ἀλλ' οὐ πέρασ ἀντὸ τοῦ σώματος, ὅτι τὸ μὲν πέρασ ἐστὶν ὑπὸ τὸ ποσόν, ὥσπερ καὶ τὸ σῶμα οὐ πέρασ ἐστὶ, ἐτι δὲ καὶ ἡ ἐπιφάνεια, ὡς δίχα διαστατή, κατὰ μήκος δηλονότι καὶ πλάτος· τὸ δὲ χρῶμα ὑπὸ τὸ ποιόν ἐστι, καὶ διατοῦτο εἴρηται ἐν τῷ πέρατι εἶναι, εἴτουν ἐν τῇ ἐπιφανείᾳ (V, f. 583r).

⁶¹ Thus Metochites will say, e.g., that “it is the movement through the transparent medium between the eye and the visible object that produces vision” (V, f. 582r, cf. Arist. *De sensu* 2, 438b3–5) without further comment.

⁶² For the distinction between a wide sense, according to which any body that “admits light” is “transparent”, and a narrow one, which further requires that things can be seen through it, see IERODIAKONOU, Aristotle and Alexander (as in n. 59) 80.

Metochites deemed Alexander's account to be a distortion of Aristotle's meaning, but it seems more likely that he simply found it too long-winded and difficult to be of any use.

In general, then, it is difficult to say to what extent Alexander's commentary has informed Metochites' understanding of Aristotle, partly owing to Metochites' own paraphrastic method and partly also to the relatively expository nature of the commentary. Instead, the commentary has been used by Metochites mainly for two purposes, namely, (1) to supply words or phrases that can either (a) be added in explication of or (b) substituted for the words or phrases used by Aristotle, and (2) to complement Aristotle's statements, either with (a) additional "background information", (b) clarifications of references, or, on occasion, (c) illustrative examples. In a few cases (3) Metochites has opted to paraphrase Alexander rather than Aristotle. The latter seems to happen mainly when the Aristotelian account is unusually condensed, e.g. the explanation of the "flash phenomenon" at *De sensu* 2, 437a31–b9⁶³ and the criticism of Democritus' theory of vision at 2, 438a7–9⁶⁴. Similarly, his account of the superimposition theory of colour (*De sensu* 3, 440a6–15) integrates some words and phrases from Alexander's account (*In De sensu* 55.15–56.5); and his paraphrase of Aristotle's argument in favour of the (qualified) superiority of hearing over sight as a source of understanding (*De sensu* 1, 437a11–17) owes something to Alexander, *In De sensu* 13.5–21, although Metochites could justifiably be taken to task for not having adequately upheld the distinction between *vocal* sounds and the objects of hearing *per se*⁶⁵.

Except for instances of the first category of borrowings, Metochites has not necessarily copied Alexander to the letter. Since the content of some of the borrowings in the second category is rather too elementary to be considered beyond the capacity of any Aristotelian scholar, the main reason for thinking that each of these (or at any rate most of them) is indeed a borrowing from Alexander's commentary is simply the circumstance that there are other unmistakable borrowings from that commentary in Metochites' paraphrase. Instances of the first category of borrowings seem to be rather evenly spread over the paraphrase. In combination with the fact that all borrowings largely follow the order of the commentary, this seems to suggest that Metochites has worked with both the Aristotelian text and Alexander's commentary constantly in front of him, perhaps in the form of a manuscript with the commentary (or substantial parts of it) in the margins.

Let me give a few examples of the two main categories of borrowings. (1) Among the relatively numerous words and phrases that Metochites shares with Alexander but not with Aristotle one may single out, if only for its wasted potentiality, the abstract quality noun *διαφάνεια* (Alex. *In De sensu* 44.12 et alibi). This might have served a useful purpose in the paraphrase, since it is not always immediately clear, when Aristotle talks about τὸ διαφανές, whether he means the quality or its bearer. Unfortunately, Metochites lets the opportunity slip away the moment he allows (in his paraphrase

Alexander himself insists on treating bodies that are transparent in the narrow sense as being simply *more* transparent than those which are so in the wide sense, apparently in order to connect it with Aristotle's statement in *De sensu* 3, 439a21–25 that transparency is present not only in air and water but also in the other bodies "in greater or lesser degree".

⁶³ καὶ συμβαίνειν ὡσπερ δύο εἶναι τῆνικαῦτα τὸν ὀφθαλμὸν θλιβόμενον τε καὶ κινούμενον διὰ τὸ τάχος τῆς παραγωγῆς ὀρῶντά τε καὶ ὀρώμενον· ὀρώμενον μὲν ἐν τῇ παραγωγῇ, ὀρῶντα δὲ ἐν τῇ εἰς τὴν φύσιν ἡρεμία καὶ ἐπανόδῳ· στίλβει μὲν γὰρ κατὰ φύσιν καὶ ἐν τῷ ἡρεμεῖν, ἀλλ' ἔστιν ὡς ἐν μόνον ὡς ὀρῶν καὶ οὐχ' ὀρᾶται· διὰ δὲ τὸ τάχος, ὡς εἴρηται, τῆς παραγωγῆς καὶ ἐπανόδου αὐθις εἰς τὴν αὐτοῦ χώραν, τί μὲν ὡς ὀρῶν, τί δὲ ὡς ὀρώμενος φαντάζεται καὶ τὴν αὐτοῦ στίλβηδόνα διὰ ταύτην δὴ τὴν αἰτίαν ποιεῖται ὀρατὴν (V, f. 581r). Cf. Alex. *In De sensu* 17.12–23.

⁶⁴ τοῦτο δ' οὐ καλῶς ἐκείνον φησὶν οἶσθαί τε καὶ λέγειν· οὐ γὰρ πέφυκεν αὐτὸ τοῦτ' εἶναι τὸ τὴν ἔμφασιν δέχεσθαι τὸ ὀρᾶν· οὐ γὰρ ἡ ἔμφασις, οὐδ' ἐν ἐκείνῃ, οὐδὲ δι' ἐκείνην, ἐστὶ τὸ ὀρᾶν, ἀλλ' ἐν τῷ ἔχοντι τὴν ὀρατικὴν δυνάμιν ἐστὶν ἡ ἐνέργεια τῆς ὀράσεως (V, f. 581v). Cf. Alex. *In De sensu* 25.1–7.

⁶⁵ ἐπεὶ δὲ αἱ φωναὶ τοῖς λογικοῖς τῶν ζώων σημαντικαὶ νοημάτων εἰσι καὶ ὀνόματα συντιθέασιν, καὶ ἐκ τῶν ὀνομάτων λόγους συντιθέασιν, ἃ δὴ καὶ εἰσὶν ἀκουστά, οὐ καθὸ νοημάτων δηλωτικά, οὐδὲ καθὸ λόγοι ἢ ὀνόματα, ἀλλὰ καθὸ ψόφοι μόνον τοιοῦδε καὶ φωναί, κατὰ συμβεβηκὸς ἄρα μαθήσεώς ἐστιν αἰτία ἡ ἀκοή καὶ διδασκαλίας καὶ ἐπιστήμης νοημάτων (V, f. 580v).

of *De sensu* 3, 439a25–26) the expression “the transparent bodies” to be glossed as “transparency itself”⁶⁶.

(2a) The following are some of the more noteworthy examples of complements to Aristotle's statements in the form of background information likely to have been drawn from Alexander's commentary.

(M1) When Aristotle announces his intention to examine “animals and all things that have life” (*De sensu* 1, 436a2–4), Metochites explains that Aristotle generally prefers to speak also of plants as having life (cf. Alex. *In De sensu* 3.17–22)⁶⁷.

(M2) In attempting to determine which of the four pairs of additional vital functions mentioned by Aristotle at *De sensu* 1, 436a11–15 are common to all things that have life and which are peculiar to certain animals, he notes that youth and old age are in the former category (cf. Alex. *In De sensu* 6.22–23), whereas respiration and expiration belong only to animals with lungs (cf. Alex. *In De sensu* 6.24–25), and certain kinds of fish are considered in the *Historia animalium* to be naturally sleepless (cf. Alex. *In De sensu* 6.20–22)⁶⁸. But he adds, for good measure and without Alexander's support, that of the “most important functions” enumerated by Aristotle at *De sensu* 1, 436a6–10 memory is lacking in many animals and, more curiously, “spiritedness” (θυμός) is lacking in red deer, since these animals have no gall-bladder⁶⁹. The information that red deer have no gall-bladder probably derives from Aristotle (*Hist. an.* 2.15, 506a31–32; *De part. an.* 4.2, 677a29–32), but for the major premise of the argument, that no animal without a gall-bladder is spirited, we must postulate a different source⁷⁰.

(M3) Metochites' division of the “most important functions” of animals into the three categories mentioned by Aristotle at *De sensu* 1, 436b4–6 is partly the same as we have already seen in Pachy-

⁶⁶ καὶ ὡσπερ τῶν ἄλλων σωμάτων ἔστιν ἐξανάγκης ἔσχατόν τι, οὕτω δὴ καὶ τῶν τοιούτων διαφανῶν σωμάτων, εἶπουν αὐτῆς τῆς διαφανείας, ἔστι τι ὡσαύτως ἔσχατον (V, f. 583r). Why Metochites insinuates the distinction between τῶν τοιούτων διαφανῶν σωμάτων, “this kind of transparent bodies”—apparently undetermined bodies, such as air and water—and τῶν ἄλλων σωμάτων, “the other bodies”—apparently determinate ones—is anybody's guess. Both Aristotle and Alexander make it perfectly clear that the two kinds of entity to which the analogy ascribes an extreme are (a) bodies, universally and as such, and (b) their property of being (to some degree) transparent (referred to by Aristotle as ταύτης <τῆς φύσεως>, “this <nature>”, by Alexander precisely as τῆς διαφανείας).

⁶⁷ ἐπεὶ καθόλου βούλεται ὁ Ἀριστοτέλης ὡς ζῶν ἔχοντα καλεῖν καὶ τὰ φυτὰ ... (V, f. 579r).

⁶⁸ τὰ μὲν ἐν πᾶσι θεωρεῖται τοῖς μετέχουσι ζωῆς, οἶον ἡ νεότης καὶ τὸ γῆρας καὶ ἐν ζῴοις καὶ ἐν πᾶσι ἐμψύχοις ἔστι ... καὶ ἡ ἀναπνοὴ καὶ ἡ ἐκπνοὴ μόνων τῶν ἔχόντων πνεύμονα ζῴων εἰσίν· ἔτι δὲ ἐν τῇ Περὶ ζῴων ἱστορίᾳ βούλεται τινὰς τῶν ἰχθύων ὁ Ἀριστοτέλης ἐν τοῖς ἀγρυνουσί διαπαντὸς τάττειν καὶ μηδὲν ὑπνώττειν πεφυκόσιν (V, f. 579v).

⁶⁹ οἶον αἰσθησις μὲν καὶ ἐπιθυμία καὶ ὄρεξις καὶ ἡδονὴ καὶ λύπη πᾶσιν ἐνυπάρχει κοινῶς τοῖς ζῴοις· θυμὸς δὲ καὶ μνήμη τοῖς πλείστοις μὲν ἐνεῖσιν, ἐνίοις δὲ οὐκ ἐνεῖσιν· τὰς γὰρ ἐλάφους ἀχόλους φασὶν εἶναι καὶ πολλὰ τῶν ζῴων ἐκτὸς μνήμης (V, f. 579v).

⁷⁰ Usually the lack of a gall-bladder is supposed to entail longevity: cf. Aristotle, *De part. an.* 4.2, 677a29–35; *An. pr.* 2.23, 68b18–21; *An. post.* 2.17, 99b5–6; and dependent texts. Since it is not only in red deer that Aristotle denies, correctly or otherwise, the existence of a gall-bladder, but also in roe deer, horses, mules, donkeys, seals, certain types of swine, dolphins and camels, not to mention the human inhabitants of a certain area of Chalcis (*De part. an.* 4.2, 676b25–677a4), he would be committed to denying “spiritedness” to these other animals, too, if he thought it were dependent on this physiological detail. On the other hand, red deer are said to have exceptionally bitter intestines (*Hist. an.* 2.15, 506a31–b5; *De part. an.* 4.2, 677a29–35), and might on that account perhaps be thought to possess the physiology required for “spiritedness” nonetheless. — Some link between the production of bile and “spiritedness” is taken for granted by most if not all ancient Greek writers on the subject, but I know of no other example of the former being taken as a necessary condition for the latter. Plotinus argues that *either* bile *or* blood is required to produce anger (*Enn.* 4.4, 28.35–46), which is why trees lack “spiritedness” (ibid. 28.58–60). In Byzantine times, however, John Tzetzes, in a scholion (41) on *Iliad* 1.225 (ed. A. LOLOS, *Der unbekannte Teil der Ilias-Exegesis des Ioannes Tzetzes* [A 97–609]. Königstein 1981), and Thomas Magister, in a scholion on Aristophanes, *Nubes* 354 (ed. W. J. W. KOSTER, *Scholiam in Aristophanem I, Prolegomena de comoedia: Scholia in Acharnenses, Equites, Nubes*, 3.2: *Scholiam recentiora in Nubes*. Groningen 1974, 62), both blame the lack of a gall-bladder for the alleged faintheartedness of red deer, which arguably is the same thing as a lack of “spiritedness”.

meres (P1 above), although Metochites has made more extensive use of Alexander (*In De sensu* 7.19–8.8), and avoids Pachymeres' mistake of understanding memory and recollection here as a means of defending and safeguarding the animals themselves rather than their sense perception⁷¹.

(M4) Metochites' elaboration of Aristotle's brief statement (*De sensu* 1, 437a1–3) of the final cause of sight and hearing in rational animals follows Alexander (*In De sensu* 11.5–23) in locating the starting points of both physical and mathematical knowledge in perceptual experience of particulars⁷².

(M5) Metochites' account of the attempts of earlier thinkers (identified as Plato and the Pythagoreans) to coordinate the five senses with the four elements (cf. Arist. *De sensu* 2, 437a19–26) follows Alexander's rather closely (*In De sensu* 14.18–15.4)⁷³.

(M6) The rationale, according to the account in Plato's *Timaeus* (45b4–d7), called into question by Aristotle at *De sensu* 2, 437b14–23, for the preservation of the visual ray in daylight and its extinction in darkness is correctly stated by Metochites, in much the same terms as by Alexander (*In De sensu* 20.25–21.2), to be, respectively, similarity and dissimilarity⁷⁴.

(M7) The effluences in Empedocles' second theory, mentioned by Aristotle at *De sensu* 2, 438a4–5, are said by Metochites, apparently following Alexander (*In De sensu* 24.5–6), to impinge on the eye and cause vision if they fit the passages in the eye⁷⁵.

(M8) Democritus' theory of vision as “mirroring” (ἔμφασις), criticized by Aristotle at *De sensu* 2, 438a6–12, is identified by Alexander (*In De sensu* 24.18–21) with the Epicurean theory of an effluence from the visible object of a same-shaped image impinging on the eye. Metochites follows Alexander except for omitting to mention Epicurus⁷⁶.

(M9) Metochites attributes the juxtaposition theory of colour set out by Aristotle at *De sensu* 3, 439b19–440a6 to Democritus (V, f. 584r; f. 584v). Modern scholars may not agree that the attribution is correct—or indeed that any attribution is called for⁷⁷ but it rests on the authority of Alexander (*In De sensu* 56.13–15; cf. 59.15–18)⁷⁸.

⁷¹ ταῦτα δὲ τὰ εἰρημένα πάντα ἢ μετὰ αἰσθήσεως συμβαίνει, ὡς ἐγρήγορσις καὶ ἡδονὴ καὶ λύπη καὶ ὑγεία καὶ νόσος, ἢ διὰ αἰσθήσεως, ὡς ἡ νεότης καὶ τὸ γῆρας· τινὰ δὲ καὶ πάθη αἰσθήσεώς εἰσιν, ὡς ὁ ὕπνος· ἔνια δὲ ἕξεις εἰσιν αἰσθήσεως, ἦτοι αἱ ἐνέργειαι αἱ αἰσθητικαί· τινὰ δὲ καὶ φυλακαὶ καὶ σωτηρίαὶ αἰσθήσεως, οἷον αἱ μνήμαι καὶ αἱ ἀναμνήσεις· τινὰ δὲ καὶ τούναντιον, φθοραὶ καὶ στερήσεις αἰσθήσεως, οἷον ὁ θάνατος, αἱ λήθαι (V, f. 579v).

⁷² καὶ γὰρ καὶ ἀπὸ τῶν ἀκουστῶν καὶ ἀπὸ τῶν ὁρατῶν ἐστὶ συλλογίζεσθαι καὶ τὰ πρακτέα [ἐστὶ συλλογίζεσθαι] καὶ τὴν κατάληψιν διὰ συνεχοῦς χρήσεως καὶ ἐμπειρίας τῶν ὄντων· καὶ τῶν φυσικῶν γὰρ καὶ τῶν μαθηματικῶν μάλιστα ἡ ἐπιστήμη ἀπὸ τῶν κατὰ μέρος αἰσθητικῶν ἐμπειριῶν τὰς ἀρχὰς λαμβάνει (V, f. 580r).

⁷³ Ὅτι τινὲς τῶν πρὸ αὐτοῦ, φησὶν—εἰσὶ δὲ οἱ τε Πυθαγόρειοι καὶ Πλάτων αὐτός, ὡς ἐν τῷ Τιμαίῳ δηλοῖ—ἕκαστον τῶν αἰσθητηρίων ἐκάστου τῶν ἀπλῶν καὶ πρώτων στοιχειωδῶν σωμάτων ἐτίθεντο, οἷον πυρὸς μὲν τὴν ὄψιν, ἀέρος δὲ τὴν ἀκοήν, τὴν γεῦσιν δὲ ὕδατος, τὴν ἀφήν δὲ γῆς· περὶ τῆς ὀσφρήσεως δὲ ἐμπτησις οὕσης τῶν αἰσθήσεων οὐκ εὐποροῦντες πέμπτου στοιχείου ἠπόρουσαν ὅ τι χρῆσονται· ἐδόκει δ' ἐνίοις τὸ μεταξὺ τῆς μεταβολῆς ἀπὸ τοῦ ἀέρος εἰς ὕδωρ, ἢ ἀπὸ τοῦ ὕδατος εἰς ἀέρα, τοῦτο προσνέμειν τῇ ὀσφρήσει· οἱ δὲ, καὶ ταύτην πυρὸς ἐτίθεντο (V, f. 580v).

⁷⁴ ἐν τούτοις δὲ φησὶ καὶ ὅπερ ἐν τῷ Τιμαίῳ ὁ Πλάτων λέγει, ὅτι τὸ φῶς τῆς ὄψεως ἐν τῷ σκότει ἐξίον σβέννυται· τῷ μὲν γὰρ φωτὶ μινύμενον σώζεται οἰκείῳ ὄντι καὶ συγγενεῖ, πρὸς δὲ τὸ σκότος ἐπίπτει ὡς εἰς ἀνόμοιον ἀποσβέννυται (V, f. 581r).

⁷⁵ Ὅτι τὸν Ἐμπεδοκλήν φησὶν ὅτε μὲν τὸ ὄραν λέγειν γίνεσθαι τοῦ φωτὸς ἐξιόντος ἀκτινοειδῶς ἐκ τῶν ὀφθαλμῶν (καὶ παρατίθεται ἔπη αὐτοῦ τοῦτο δηλοῦντα), ὅτε δὲ ταῖς ἀπὸ τῶν ὀρωμένων ἀπορροαῖς προσβαλλούσαις τοῖς πόροις τῶν ὀφθαλμῶν, ὅτε καὶ τυχὸν ἐναρμόζειν καὶ συμμέτρως πρὸς αὐτοὺς ἔχειν πεφύκασι, δι' αὐτὸ τοῦτο τὸ ὄραν γίνεσθαι (V, f. 581v).

⁷⁶ ἔλεγε γὰρ ὁ Δημόκριτος εἰδωλά τινα ἀπορρέειν ὁμοίμορφα ἐκάστου τῶν ὁρατῶν καὶ τοῖς ὀφθαλμοῖς ἐπίπτειν (V, f. 581v).

⁷⁷ Katerina IERODIAKONOU argues that the juxtaposition theory is that of Empedocles (Empedocles on Colour and Colour Vision, *Oxford Studies in Ancient Philosophy* 29 [2005] 1–37). Alan TOWEY thinks that Aristotle's motive for describing different theories of the generation of intermediate colours is didactic rather than polemical (but admits that this does not rule out a historical provenance) (Time, Change, and Perception: Studies in the Aristotelianism of Alexander of Aphrodisias. Unpublished PhD thesis, King's College London 1995, 19–21).

⁷⁸ Metochites also considers the superimposition theory to have been propounded by some of Aristotle's predecessors, but refrains in this case from any attempt to identify them (V, f. 584v).

(2b) Apart from the above-mentioned identification of the thinkers discussed by Aristotle at *De sensu* 2, 437a19–26 as Plato and the Pythagoreans, the only other clarification of a reference by Aristotle in *De sensu* 1–3 is of one to the author's own *De anima* (*De sensu* 2, 438b2–3, cf. Alex. *In De sensu* 35.6). As we have seen, additional information is once adduced from the *Historia animalium*; there are also a few cross-references to relevant discussions in the *De anima*⁷⁹. And when Aristotle finishes chapter 3 by deferring discussion of the reason why there are definite and not indefinite species of colours to a later occasion (440b23–25), Metochites spares us the trouble of proceeding to chapter 6 by revealing that it is because the two limits of colour, black and white, are definite and the intermediates between definite limits must themselves be definite, all in perfect accordance with Alexander, *In De sensu* 65.22–66.5.

I have already commented on Metochites' reluctance to include in his paraphrase any Alexandrian material that is not of immediate relevance to the elucidation of Aristotle's text. I have referred in particular to the fact that Alexander's account of the transparent is almost completely elided. In addition, it may sometimes be instructive to note the absence in the paraphrase of smaller details in Alexander's commentary.

For instance, when Metochites mentions Aristotle's cross-reference, at *De sensu* 1, 436b14–15, to the *De anima* for an explanation as to why all animals have touch, he does not tell us in what the explanation consists—whereas Pachymeres, as we have seen (P2 above), follows Alexander (*In De sensu* 9.2–5) in saying that the being of animals depends upon a certain proportion (or “equilibrium”, *συμμετρία*) of constituent primary bodies. It is somewhat out of character for Metochites to forgo an opportunity to clarify an Aristotelian cross-reference, so his embarrassment here may well be an indication that he did not find Alexander's interpretation of *De anima* 3.13 very convincing⁸⁰. In his commentary on *De anima* 3.13 (V, ff. 186v–187v), Metochites refers neither to the proportion of primary bodies nor to the essential necessity for animals to possess sense perception, also mentioned by Alexander (*In De sensu* 9.2–5), which, combined with Aristotle's own remark (*An.* 3.13, 435b2), also omitted by Metochites in this context, that no other sense can exist without touch, supplies the explanation wanted in *De sensu* 1, 436b14–15⁸¹.

It is similarly conspicuous that Metochites' accounts of the juxtaposition and superimposition theories of the generation of colours do not follow Alexander's (*In De sensu* 55.3–7; 63.17–20; 65.4–12) in bracketing these theories as essentially non-realist and in this respect fundamentally different from Aristotle's.

⁷⁹ The statement at *De sensu* 2, 437a31–32 that it is natural for smooth things to glow in the dark but not to emit light is cross-referenced to the *De anima* (2.7) both by Metochites and Alexander (17.5); the expression of agreement with Democritus that the eye is composed of water at *De sensu* 2, 438a5–6 and 438a12–14 is both times erroneously cross-referenced to the *De anima* by Metochites but neither time by Alexander.

⁸⁰ Modern scholars would agree: see TOWEY's notes *ad locos* (A. TOWEY, Alexander of Aphrodisias, On Aristotle *On Sense Perception*. London 2000, 160–161, nn. 48–52). Metochites' text is as follows: καὶ τὴν μὲν ἀφὴν διὰ τὴν αἰτίαν, ἣ, φησὶν, εἴρηται ἐν τοῖς Περὶ ψυχῆς· ἐκεῖσε γὰρ πλατυκώτερον λέγει ὁ Ἀριστοτέλης ὅτι κοινότατον αἰσθητήριον πᾶσι τοῖς ζῴοις ἡ ἀφὴ καὶ τὴν αἰτίαν δι' ἣν ἐξανάγκης ἔχει πάντα τὰ ζῶα ταύτην φησί (V, f. 580r).

⁸¹ Although the phrasing is somewhat ambiguous (δῆλον ... κἀντεῦθεν, ὅτι ... could mean either “it is also clear from the preceding that ...” or “this is also clear from the following, namely that ...”), it seems as though Metochites has envisaged the following alternative explanation. What Aristotle in the sequel (*De an.* 3.13, 435b7–19) describes as a consequence of the necessity for animals to possess the sense of touch, namely that tangible objects are the only perceptible objects that will, if excessively intense, destroy not only the sense organ by which they are perceived but, *ipso facto*, the whole animal, is treated by Metochites, following Themistius (*In De an.* 126.9–12), as a result of the fact that the organ of touch is the only sense organ located not only in some but in nearly every part of the animal's body. Since this is the case, no animal can survive the destruction of the organ of touch. One way of putting this is to say, as Metochites does, that “it is impossible for an animal to exist if deprived of the sense of touch” (στερισκόμενον γὰρ ἀφῆς οὐχ οἶόν τε εἶναι ζῶον, V, f. 187r). After which it is but a small step to concluding that it is impossible for an animal to exist without the sense of touch (ἄνευ ταύτης οὐχ οἶόν τε εἶναι ζῶον, *ibid.*).

Occasionally Metochites even seems to contradict Alexander's exegesis—and indeed any reasonable interpretation of Aristotle's text. A prime example is the reflection added to his paraphrase of Aristotle's remark at *De sensu* 3, 439b3–5 that the colour of an undetermined transparent body such as the sea varies according as it is viewed from close range or from a further distance:

[The sea] presents this variation especially when being viewed either in storm or in calm, since when it is stormy sight approaches it unevenly and disintegrates⁸².

It looks as though Metochites has here lapsed into the extramissionist theory that he himself seems to have preferred⁸³. It is true that in his paraphrase of *De sensu* 2, 438a25–27 it is not (as in Aristotle's text) the general notion that vision comes about by an emission that he dismisses as "irrational", but the more specific one that vision comes about by an emission of *light*⁸⁴. Still, it is inconceivable that Metochites would have taken Aristotle to be, after all, some kind of extramissionist. In his paraphrase of *De anima* 3.12 (V, f. 186v) as well as in that of *De sensu* 2 (V, ff. 581r–582r) he dutifully (albeit to some degree inaccurately) reports Aristotle's arguments against extramissionism, without suggesting that there is any other variety of extramissionism not affected by these arguments and in fact endorsed by Aristotle. In his paraphrase of *Meteorology* 3.2 he explains (following Alexander, *In Meteor.* 141.3–142.2) the extramissionist model resorted to there as a mere instrumental convenience (V, f. 557v). And I know of no other cases where he can be suspected of deliberately foisting un-Aristotelian views into his paraphrase of Aristotle.

I have saved for the last an example of Alexandrian influence which does not fit neatly into any of the three rather humdrum categories discussed above. This is found in a passage where Metochites rather exceptionally steps out of his paraphrast's role and comments on the illocutionary force of Aristotle's sentences. This happens at the end of the paraphrase of *De sensu* 2, where Metochites points out what Michael Psellos failed to note (see above, pp. 97–98), namely that Aristotle's solution to the coordination problem (*De sensu* 2, 438b16–439a5)—especially his arguments in favour of the correlation of smell with fire—is inconsistent with his own view as expressed in the *De anima*. He infers that the solution presented here must be an exercise in plausible reasoning on behalf of his predecessors. This inference is clearly inspired by Alexander, *In De sensu* 39.25–27 (cf. 38.14–16)⁸⁵.

CONCLUSION

It is time to sum up the results of this inquiry into the Greek *fortuna* of Alexander's commentary on Aristotle's *De sensu et sensibilibus*. The evidence of a reception during the first eight centuries after its production is very scanty indeed, consisting of one apparent borrowing in Themistius, *In De anima* and a few suspected interpolations in the Aristotelian text. Scholia on the Aristotelian text excerpted from Alexander's commentary are found in manuscripts dated from the eleventh century onwards. The earliest substantial use of the commentary comes in Michael Psellos, *Philosophica mi-*

⁸² μάλιστα δ' ἂν ἔχη [sic cod.] καὶ τὴν ἐναλλαγὴν, ὅτε ἡ κυμαίνουσα ὁράται ἢ ἡρεμοῦσα τῆς ὄψεως ὅταν κυμαίνῃ ἀνίσως προσπιπτούσης αὐτῇ καὶ θρυπτομένης (V, f. 583v).

⁸³ Two texts in which Metochites seems to accept something like the standard Early Palaiologan extramissionism (based on Galen) are *Semeioseis gnomikai* 42 and 43 (ed. K. HULT, Theodore Metochites on the Human Condition and the Decline of Rome. *Semeioseis gnomikai* 27–60. Gothenburg 2016, 96–103).

⁸⁴ Ὅτι ἀλόγως, φησί, δοκοῦσι τινες ὅτι ἔξῃσι τῶν ὀφθαλμῶν φῶς καὶ διὰ τούτου ὁράται τὰ ὁράτα (V, f. 582r).

⁸⁵ ἔοικε δὲ πιθανῶς χρῆσθαι τῷ λόγῳ καὶ συνηγορεῖν τοῖς πρὸ αὐτοῦ καὶ μάλιστα Πλάτωνι, ἀλλ' οὐ κατὰ τὸ δοκοῦν ἑαυτῷ νῦν λέγειν· αὐτὸς γάρ ἐστιν ὁ Ἀριστοτέλης, ὅστις ἐν τοῖς Περὶ ψυχῆς βιβλίοις ἀποδεικνύει μὴ εἶναι πυρὸς τὴν ὀσφρησιν, μήτε ὄλως ἐκ γῆς εἶναι τι αἰσθητήριον, ἀλλὰ τὸ μεταξὺ τοῦ ὕδατος καὶ ἀέρος εἶναι τῆς ὀσφρήσεως (V, f. 582v).

nora 2:8, with some probability datable to between c. 1045 (when Psellos was appointed ὕπατος τῶν φιλοσόφων) and 1054 (when he was exiled to Bithynia). A thumbnail summary of the contents of the *De sensu* in Michael of Ephesus' commentary on the *De memoria* is based on Alexander's commentary (Michael's activities as an Aristotelian commentator probably took place between 1118, when Anna Komnene was exiled from court, and sometime in the late 1130s or early 1140s, when Anna's attention was increasingly turned towards her historical work). In the early fourteenth century, the influence of Alexander's commentary on George Pachymeres' and Theodore Metochites' paraphrases of the *De sensu* is manifest, as one might expect, but it does not seem to have left much of a mark on less exegetical discussions of the mechanisms of sense perception in the Palaiologan era.

