

The Use of Aristotle's Biology in Nemesius' *On Human Nature*

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Towards the end of the fourth century CE Nemesius, bishop of Emesa in Syria, composed his treatise *On Human Nature* (Περὶ φύσεως ἀνθρώπου). The nature of the soul and its relation to the body are central to Nemesius' treatment. In developing his argument, he draws not only on Christian authors but on a variety of pagan philosophers such as Plato, Aristotle, the Stoics and the great physician-cum-philosopher Galen of Pergamum. This paper examines Nemesius' references to Aristotle's biology in particular, focusing on a few passages in the light of Aristotle's *Generation of Animals and History of Animals* as well as the doxographic tradition. The themes in question are: the status of the intellect, the scale of nature and the respective roles of the male and female in reproduction. Central questions are: Exactly which impact did Aristotle make on his thinking? Was it mediated or direct? Why does Nemesius cite Aristotle and how? Long used as a source for earlier works now lost, Nemesius' work may provide intriguing glimpses of the intellectual culture of his time. This paper is designed to contribute to this new approach to his work.

Introduction

In early Christian literature the author of *On Human Nature* (or *On the Nature of Man*, Περὶ φύσεως ἀνθρώπου) is something of a mystery guest. The majority of our principal MSS identify the author as the otherwise unknown Nemesius, bishop of Emesa (present-day Homs in Syria). The untenable ascription to Gregory of Nyssa, which was in vogue for some time in the Middle Ages, clearly answered a felt need to provide with a better-known and authoritative author a work that impressed many through its learning, scope and execution and was translated into Latin, Georgian, Armenian, Syriac and Arabic. As it is, we have to extract our information about its author and context in so far as possible from the work itself. Nemesius' references to ecclesiastics indicate that he must have written his work at the end of the fourth or perhaps the beginning of the fifth

century CE (say roughly between 380 and 410).¹ It is quite unlike anything else we have from this period: an anthropological handbook², a comprehensive account of the human being and his place in the cosmos.

Written from a Christian perspective, but addressing itself to pagans as well as Christians,³ it engages with Greek philosophy and medicine and selectively appropriates ideas from them. This is also illustrated by Nemesius' use of Aristotle, whom he does not treat as a misguided or indeed dangerous pagan but rather as an interlocutor.⁴ His account of human autonomy is based in large part on the earlier parts of Aristotle's *Nicomachean Ethics* book 3 (§§ 29-34). This and many other passages certainly point to considerable knowledge of philosophical literature and some level of formal education. The author's familiarity with Greek medicine and in particular the work of Galen is no less striking, although it is unnecessary to assume that he was a professional doctor: many educated persons took a keen interest in medicine and were knowledgeable about it.⁵ The pagan culture shown by our author has actually made his Christianity seem rather superficial and typical of a recent convert who, in Telfer's memorable words, 'had not had time to develop a taste for theological hatred.'⁶

¹ See Sharples and Van der Eijk, *Nemesius on the Nature of Man* (Liverpool: Liverpool University Press, 2008), 2.

² Some *mss.* add to the title λόγος κεφαλαιώδης, a 'summary account.'

³ § 42, p. 120.21-23; 2, p.38.7-9 Morani; cf. also n.29 and text thereto.

⁴ See Karamanolis, "Early Christian Philosophers on Aristotle", in *Brill's Companion to the Reception of Aristotle in Antiquity*, ed. A. Falcon (Leiden: Brill, 2016) for early Christian responses to Aristotle, with a brief discussion of Nemesius, whom Karamanolis sees as setting himself in dialogue with pagan philosophy and science including Aristotle. Nemesius' attitude towards Aristotle is similar to that taken earlier by Clement of Alexandria and Origen. Most early Christian responses to Aristotle, however, were dismissive, focusing criticism on a few recurrent themes such as his position on God and providence, the nature of the soul and happiness. An excellent introduction to Nemesius' project is provided by Motta, "Nemesius of Emesa", in *The Cambridge History of Philosophy in Late Antiquity*, ed. L.P. Gerson (Cambridge: Cambridge University Press, 2009), 509-519; cf. also Telfer, "The Birth of Christian Anthropology", *JTS* 13 (1962): 347-54. More comprehensive studies are Siclari, *L'antropologia di Nemesio di Emesa* (Padua: La Garangola, 1974), Verbeke and Moncho, eds., *Némésius d'Émèse, De natura hominis, traduction de Burgundio de Pise. Corpus Latinum commentariorum in Aristotelem Graecorum, Suppl. I.* (Leiden: Brill, 1975), Kallis, *Der Mensch im Kosmos: das Weltbild Nemesios' von Emesa*, Münsterische Beiträge zur Theologie 43 (Münster: Aschendorff, 1978), Morani, *Nemesio di Emesa. La natura dell' uomo* (Salerno: Grafiche Moriniello, 1982); cf. Wallace-Hadrill, *The Greek Patristic View of Nature* (Manchester: Manchester University Press, 1968).

⁵ Cf. Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 3. Cf. Boudon and Pouderon, eds., *Les Pères de l'Église face à la science médicale de leur temps* (Paris: Duchesne, 2005).

⁶ Telfer, *Cyril of Jerusalem and Nemesius of Emesa* (London: SCM Press, 1955), 210. Telfer discusses the suggestion made by the 17th century church historian Le Nain de Tillemont that our

Even if an idea like this must remain speculative, it is inspired by real features of the work as it has come down to us. Its title places it in a long tradition starting from Hippocrates' work of the same title and continued by a long line of philosophers writing on human nature from a psychological and biological perspective in particular.⁷ In both contexts we find him using Aristotelian doctrines and works. His use of Aristotle's *De anima* has already attracted some attention, not least because of its relevance to the author's ideas on the human soul in relation to the body, which the author uses as a model for the incarnation of Christ. In what follows, this paper will focus on other passages where we find more strictly biological (or zoological), including embryological and spermatological, ideas. In terms of the Aristotelian corpus this means that the paper will be addressed in particular to *Generation of Animals* and *History of Animals* and, to a lesser extent given its small role, *Part of Animals*⁸, the presence of which need not be doubted, although Nemesius gives us no titles, only Aristotle's name, and often not even his name but just an allusion or echo. The 1987 Teubner edition by Moreno Morani includes an apparatus of parallels with Aristotle (and other sources) that provides a good (though by no means the sole) basis for further study of Nemesius' engagement with Aristotle. The paper will not take it for granted that Nemesius' use of Aristotle is always unmediated or excludes other influences and sources.⁹ We have to reckon with

author is identical with the pagan governor named Nemesius who governed Cappadocia for a short while between 383 and 389 CE. This governor is on record as having engaged in philosophical discussions with Gregory of Nazianzus; see Gallay, ed., *Saint Grégoire de Nazianze. Lettres*, vol. 2 (Paris: Les Belles Lettres, 1967), 198-201; cf. also the poem dedicated to this Nemesius in the second book of his poetry, viz. nr. 1071 (= nr. VII of the poems to others) in *PG* vol. 37, pp. 1551-1554. It then becomes tempting to speculate that this Nemesius was converted and reworked an anthropological treatise he had written during his pagan period into a Christian work but did not succeed in turning it into a thoroughly Christian work. Nemesius' identity with the Roman governor of the same name must remain uncertain, however: see Telfer, *Cyril of Jerusalem and Nemesius of Emesa*, 208-210; cf. also Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 2.

⁷ Apart from Hippocrates, treatises with the title *Περὶ φύσεως ἀνθρώπου* are attested for Democritus, Diogenes of Apollonia, the sophist Prodicus, Strato the Peripatetic, Zeno the Stoic and, from late antiquity, Vindicianus; on this tradition see further Van der Eijk, "Galen on the Nature of Human Beings," in *Philosophical Themes in Galen*, eds. Adamson, Hansberger & Wilberding (London: BICS, 2014), 89-90 (although, *pace* Van der Eijk, I am not convinced that this tradition paid no attention to the human *psyche*: it was discussed in Zeno's treatise (alternatively entitled *On Desire*) and so it may have been in others, insofar as the defective evidence permits us to see.

⁸ On reflections of *Parts of Animals* see esp. *infra* § 4.

⁹ Cf. the scholarly debate on Aristotle in patristic literature: Festugière, "Aristote dans la littérature grecque chrétienne jusqu'à Théodoret", in Id., *L'idéal religieux des Grecs et l'Évangile* (Paris, 1932), 221-263, Runia, "Festugière Revisited. Aristotle in the Greek Patres", in *Vigiliae*

intermediate accounts and in particular the presence of doxographic literature. Since the 19th century it is an established fact that Nemesius reflects the so-called *Placita* tradition as reconstructed by Hermann Diels (1879) and, more recently, Mansfeld and Runia (1997), (2009), (2020). This is further borne out by the impressive number of parallels that have been found and presented by Nemesius' most recent editor, Morani.

Given our focus on Aristotle's biological works, it is worth pointing out that I do not intend to discuss Nemesius' rejection of Aristotle's hylomorphist theory of the soul as the form of the body (*De an.* 2.2), which, in line with later Peripatetic accounts, he interprets in terms of its quality (Aristotle had originally intended 'form' in the sense of substance). Given his Christian outlook Nemesius opted for a position close to the Platonist one, viz. that of the soul as a separate, incorporeal substance. At the same time, Nemesius explained the body-soul relationship by the Aristotelian and Galenic idea of the soul using the body as its instrument. In the case of Aristotle we shall see Nemesius making creative use of Aristotelian ideas from the biological works as well.¹⁰

1. The Intellect: Inside or Out

Our first case comes from the very beginning of the treatise (§ 1, pp.1.3-2.1 Morani). Having said that many eminent men have taken the view that man is constructed of an intellective soul and a body, Nemesius raises the issue of the relationship between the intellect and the soul: did the intellect make the soul intellective coming from outside, as one thing to another, or does the soul possess intellect of itself and from its own nature?

Christianae 43.1 (1989): 1-34; Karamanolis, 'Early Christian Philosophers on Aristotle'; cf. also, on Origen in particular, Scott, "Pseudo-Aristotle's *Historia Animalium* 9 in Origen," *The Harvard Theological Review* 85 (1992): 235-239, Limone, "Origen's Explicit References to Aristotle and the Peripateticians", *Vigiliae Christianae* 72.4 (2018): 390-404. Schrenk, ed., *Aristotle in Late Antiquity*, (Catholic University of America Press, 1994) has nothing on Nemesius and Lilla, 'Aristotelianism', in A. di Berardino *et alii*, eds., *Encyclopedia of Early Christianity*, 3 Vol. 1 (Downer Grove Il. IVP Academic, 2014): 228-235 very little. I have not been able to consult Streck, "Aristotelische und neuplatonische Elemente in der Anthropologie des Nemesius von Emesa", *Studia Patristica* 34 (2001): 559-564. On later ancient Peripatetic philosophy see Gottschalk, "Aristotelian philosophy in the Roman world", *ANRW II*, 36.2 (1987): 1079-1174, and Sharples, *Peripatetic Philosophy 200 BC to AD 200* (Cambridge: Cambridge University Press, 2010).

¹⁰ For Nemesius' argument on the substance of the soul see the long second chapter of *Nat. hom.* ch. 2 and on the union of body and soul the third, with the excellent comments by Sharples and Van der Eijk. In addition to their comments see on the idea of the body as the soul's instrument in Aristotle and Galen e.g. Arist. *EN* 1161a34, Gal. *UP* III. 2 K.

He then introduces a doxographic schema with Aristotle as one of the authorities who address the issue:

Some, Plotinus among them, have held the doctrine that the soul is one thing and the intellect another and maintain that man is composed of three things, body, soul and intellect. Apollinaris, who became bishop of Laodicea,¹¹ followed them. [...] But some did not set the intellect apart from the soul but believe that the intellect is the ruling part of its being.¹² Aristotle is of the opinion that while the potential intellect is part of the composition of man, intellect that is in actuality comes to us from outside, not as something that contributes to man's being and existence, but as contributing to the advancement of knowledge of natural things and of contemplation. Thus he affirms that few men and at any rate those who have philosophized possess intellect that is in actuality at all (1, pp.1.9-2.1 Morani; translation Sharples and Van der Eijk, modified).¹³

Nemesius goes on to note that Plato falls out of this classification because he appeared not to have considered the human being a composite of soul and body but rather a soul using the body as an instrument and turning away from it for the sake of cultivating its true self and the life of virtue (1, p.2.1-8 Morani). But all of them take the soul to be superior to the body (1, p.2.9-10). This broad consensus leads Nemesius to his view that we are intermediate creatures, sitting on the boundary between the perceptible and intelligible realms. This place within the order of things is one of autonomy and responsibility and so involves a moral appeal (p.2.15-p.3.3 Morani).¹⁴

Among those who focus on the relation between the soul and the intellect, Aristotle represents a compromise position between those who separate the two (a group including Plotinus and Apollinaris) and those who see the intellect as a function of the

¹¹ Apollinaris (315-392 CE), bishop of Laodicea in Syria, held that the intellect or spirit is divine and was condemned accordingly: see further Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 35 n.185.

¹² As Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 36 n.186 submit, the Stoics may be meant, in view of the recorded doctrine and the term 'ruling part': cf. ps.Plut. *Plac.* 4.21.1 (*SVF* 2.836). Yet there is a more precise parallel at Stob. *Ecl.* I 49 [41] 7 Wachsmuth, saying that Parmenides, Empedocles and Democritus take the *soul and the intellect* to be the same (italics mine); see further *infra*, n. 21 with text thereto.

¹³ ὧν ἐστὶ καὶ Πλωτῖνος, ἄλλην εἶναι τὴν ψυχὴν καὶ ἄλλον τὸν νοῦν δογματίσαντες, ἐκ τριῶν τὸν ἄνθρωπον συνεστάναι βούλονται, σώματος καὶ ψυχῆς καὶ νοῦ. οἷς ἠκολούθησε καὶ Ἀπολινάριος ὁ τῆς Λαοδικείας γενόμενος ἐπίσκοπος· [...] τινὲς δὲ οὐ διέστειλαν ἀπὸ τῆς ψυχῆς τὸν νοῦν, ἀλλὰ τῆς οὐσίας αὐτῆς ἡγεμονικὸν εἶναι τὸ νοερόν· ἄριστοτέλης δὲ τὸν μὲν δυνάμει νοῦν συγκατεσκευάσθαι τῷ ἀνθρώπῳ, τὸν δὲ ἐνεργείᾳ θύραθεν ἡμῖν ἐπεισιέναι δοξάζει, οὐκ εἰς τὸ εἶναι καὶ τὴν ὕπαρξιν τοῦ ἀνθρώπου συντελοῦντα, ἀλλ' εἰς προκοπὴν τῆς τῶν φυσικῶν γνώσεως καὶ θεωρίας συμβαλλόμενον· κομιδῇ γοῦν ὀλίγους τῶν ἀνθρώπων καὶ μόνους τοὺς φιλοσοφῆσαντας τὸν ἐνεργείᾳ νοῦν ἔχειν διαβεβαιοῦται.

¹⁴ See further *infra*, § 2.

soul itself.¹⁵ Aristotle differentiates between a potential and internal intellect on the one hand and an active and external intellect on the other, reconciling the two opposing camps in a sense. Further, Nemesius combines here statements from various works into one Aristotelian position. The phrase about the intellect entering from outside echoes *Generation of Animals* 2.3: 736b 24.¹⁶ But the distinction between the active and the potential intellect comes from *On the Soul* 3.5: 430a10-25, i.e. the seminal but notoriously controversial passage on the active intellect. For our purposes it is not necessary to enter into the long-standing problem of its interpretation (which goes back to Aristotle's pupil Theophrastus). It suffices to note that Nemesius uses this distinction to make a point about how to lead our lives: the active intellect is not necessary for human existence as such.¹⁷ But it makes progress in knowledge of the physical world and contemplation thereof possible. Nemesius' phrasing on this last point is Aristotelian too, echoing the final book of the *Nicomachean Ethics* with its praise of the theoretical intellect contemplating eternal truths as the crowning human and indeed godlike activity (*EN* 10.7-9). Nemesius then links the active intellect to the theoretical intellect and so arrives at his statement that only a few persons who have philosophized possess the active intellect. This, clearly, is not what Aristotle says or implies at *De an.* 3.5 or any other passages where he speaks about the intellect (e.g. *ibid.* 2.2, 413b24-27; *GA* 2.3, 736b29-39). Nemesius gives this particular twist to Aristotle's position to prepare for his call for a philosophical life based on a realization of the human being's place in the cosmos, as we saw him also doing with respect to Plato.

It may have been Nemesius himself who synthesized Aristotle's ideas on the intellect in this particular way. This is also suggested by the presence in this passage of relatively recent authorities such as Plotinus and Apollinaris. But it is worth noting that the issue as such appears to have been traditional.¹⁸ One doxographic source associates

¹⁵ See *infra*, n. 34.

¹⁶ For the intellect from outside see also *GA* 2.6: 744b22; *Resp.* 472a23.

¹⁷ Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 36 n.188 comment that it is far from clear that Aristotle would deny that the active intellect makes man's "being and existence" complete. But *συντελοῦντα* is better translated as 'contribute to': Nemesius says it is not necessary for living or existing as such, relating the active intellect to philosophical activity, which is un-Aristotelian. That the study of nature is a crowning kind of activity is again Aristotelian.

¹⁸ On the relation of the passage from Nemesius (p. 1.3-2.1) and the *Placita* cf. also Mansfeld, "Doxography and Dialectic. The *Sitz im Leben* of the *Placita*", *ANRW* II, 36.4 (1990): 3092n.138, who suggests that Nemesius' doxographic source may have included a chapter on the origin of

the intellect entering from outside with no less than five authorities but, strikingly, not Aristotle: “Pythagoras Anaxagoras Plato Xenocrates Cleanthes¹⁹ [hold] that mind (νοῦς) enters into the body from outside (θύραθεν)”: Stob. *Ecl. Phys.* I 48.7 (περὶ νοῦ), p. 317.15–16.1.²⁰ In addition, another lemma from Stobaeus (*Ecl.* 1 49 [41] 7 Wachsmuth) is clearly concerned with the relation between the soul and the intellect, saying that Parmenides, Empedocles and Democritus consider them to be the same.²¹

In sum, Nemesius uses traditional issues and positions but enriches this doxographic material with additions, tweaks and updates of his own. In this particular case we can also see how and why he does so, namely with a view to driving home a few general and fundamental points he wishes to make about our place in the cosmos and the virtuous life that should follow from it. The classification and discussion of different options serve the purpose of creating a broad intellectual basis for this project rather than engaging in refutation and polemics; hence his reconciliatory attitude towards Aristotle and other pagan authorities. It also suits his aim of persuading the unconverted among his readership.²²

the intellect; cf. also Mansfeld and Runia, *Aëtiana. The Method and Intellectual Context of a Doxographer. Volume One: The Sources* (Leiden: Brill, 1997), 293; for more evidence concerning this issue see Mansfeld and Runia, *Aëtiana V. An Edition of the Reconstructed text of the Placita with a Commentary and a Collection of Related Texts*. 4 vols. *Philosophia antiqua* 153 (Leiden: Brill, 2020): 1528-1529, 1532-1536.

¹⁹ *SVF* 1 Cleanthes 523 (cf. Von Arnim’s note: qui hoc de Cleanthe dixit philosophum male intellexisse videtur)

²⁰ Printed by Diels in his reconstruction of the Aëtian *Placita* as 4.5.11 in Diels, *Doxographi Graeci*. (Berlin: Reimer, De Gruyter and Cambridge University Press, 1879 with later repr.), 392, i.e. in the chapter on the seat of the soul’s ruling part (τὸ ἡγεμονικόν). This is certainly incorrect: see Mansfeld and Runia (2020), *Aëtiana V. An Edition of the Reconstructed text of the Placita with a Commentary and a Collection of Related Texts*, 1526-1527 who present the lemmas on the intellect from Stobaeus and a few other witnesses in a separate chapter of their reconstructed Aëtius (4.7a). On the question how and why Cleanthes the Stoic and the others were saddled with Aristotle’s idea see further Tieleman, “The Spirit of Stoicism,” in *The Holy Spirit, Inspiration, and the Cultures of Antiquity. Multidisciplinary Perspectives*, eds. J. Frey and J.R. Levison (Berlin: De Gruyter, 2014), 44-45 n.18.

²¹ Printed by Diels as ‘Aëtius’ 4.5.12 and by Mansfeld and Runia, *Aëtiana V. An Edition of the Reconstructed text of the Placita with a Commentary and a Collection of Related Texts*, as 4.7a2 (see prev. n.).

²² See *supra*, n.3 with text thereto.

2. *The Scale of Nature*

In the introduction (§ 1) Nemesius is concerned to determine the place of human beings in the greater whole of the cosmos. Here he introduces his view of humans as intermediate beings: we have things in common with non-rational animals and even with inanimate things but at the same time we participate in the thinking of rational beings (pp. 2.13-15, 24-3.3 Morani). This, he explains, is but an instantiation of a wider principle, viz. the Creator links together the different natures through small differences, so that the creation displays unity and coherence (p.3.3-5, 25 Morani). Here he echoes Aristotle's conviction that Nature does not make jumps, in particular as expounded at *History of Animals* 8.1: 588b4-22 (cf. *ibid.* 5.15: 548a5).²³ Nemesius, then, enriches his account by transferring an Aristotelian idea about how nature works to the Creator.²⁴ He fleshes this out by presenting a scale of nature, moving from stones to magnetic stones, which display the power of attracting iron as if they wish to make it their food (p.3.17-22 Morani).²⁵

²³ Nature proceeds little by little from things lifeless to animal life in such a way that it is impossible to determine the exact line of demarcation, nor on which side thereof an intermediate form should lie. Thus, next after lifeless things comes the plant, and of plants one will differ from another as to its amount of apparent vitality; and, in a word, the whole genus of plants, whilst it is devoid of life as compared with an animal, is endowed with life as compared with other corporeal entities. Indeed [...] there is observed in plants a continuous scale of ascent towards the animal. So in the sea there are certain objects concerning which one would be at a loss to determine whether they be animal or vegetable. For instance, certain of these objects are fairly rooted, and in several cases perish if detached; thus the pinna is rooted to a particular spot, and the razor-shell cannot survive withdrawal from its burrow. Indeed, broadly speaking, the entire genus of testaceans have a resemblance to vegetables, if they be contrasted with such animals as are capable of progression. In regard to sensibility, some animals give no indication whatsoever of it, whilst other indicate it but indistinctly. Further the substance of some of these intermediate creatures is flesh-like, as in the case of the so-called ascidians and the sea-anemones; but the sponge is in every respect like a vegetable. And so throughout the entire animal scale there is a graduated differentiation in amount of vitality and in capacity for motion (transl. d'Arcy Thompson).

²⁴ The appellation used by Nemesius, literally 'craftsman' (δημιουργός, p.3, 3, 5 *et passim*) goes back, of course, to Plato's *Timaeus*. Its creation story was often interpreted literally, i.e. as an actual one-time event rather than in the sense of a *creatio continua*, in line with the Christian account from *Genesis* 1. Aristotle, by contrast, took the cosmos to be eternal and so without a beginning: see e.g. *Cael.* I.3:270a12-270b31; cf. ps. *Plac.* 2.4.4, 2.5.1.

²⁵ Here Nemesius may be inspired by Galenic passages on the power of the magnetic stone such as *Loc. Aff.* VIII. 66 K. *Ther. Pis.* XIV. 225, SMT XI. 612 K. Yet Galen merely illustrates the attractive power of organs in living beings by reference to that of the magnetic stone. But cf. Alexander of Aphrodisias, *Quaestio* 2.23, who says that it is the iron which *desires for* something in the magnet, thus reversing the viewpoint taken by Nemesius.

Since the nutritive power is that characterizing plants, Nemesius starts discussing the difference between them and animals:

Then again, subsequently, the Creator, as He moved on from plants to animals, did not at once proceed to a nature that changes its place and is sensitive but took care to proceed gradually and carefully in this direction. He constructed the bivalves and the corals like sensitive trees, for He rooted them in the sea like plants and put shells around them like wood and made them stationary like plants; but He endowed them with the sense of touch, the sense common to all animals, so that they are associated with plants by having roots and being stationary. The sponge at any rate, as Aristotle tells us, although growing on rocks, both contracts and defends itself when it senses something approaching. For such reasons the wise men of old were accustomed to call all such things zoophytes.²⁶ Again he linked to bivalves and the like the generation of animals that change their place but are incapable of going far, but move to and from the same place. Most of the animals with shells and worms (lit. earth's guts)²⁷ are like this (1, pp. 3.23-4.9 Morani; transl. Sharples and Van der Eijk).²⁸

In this passage Nemesius uses the biological expertise of Aristotle to drive home his point about the structure of Creation. Apparently, he considers it perfectly legitimate to cite Aristotle as a scientific authority within a Christian framework. This is also a matter of rhetorical strategy, for it will only lend more force to his message in the eyes of the non-Christians to whom he also addresses himself: they are not persuaded by biblical authority but, as he notes, need to be approached with arguments.²⁹ The created world displays a layered structure without big gaps between the species of living beings. Thus, sponges are plantlike in that they lack the faculty of locomotion, being attached to rocks, but are like other animals in being sentient and resistant to threats. This point reflects a specific passage on sponges (and similarly non-mobile creatures) from the Aristotelian *History of Animals*, 5,16: 548a21-549a12 and especially 548b10-15 (cf. also ch. 15 on testaceans).

²⁶ This is inaccurate. As Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 39 n.202 following Telfer, *Cyril of Jerusalem and Nemesius of Emesa*, 233 n.5 point out, the term 'zoophyte' is not found before the second century CE.

²⁷ Cf. Arist. *HA* 6.16: 570a15; cf. *GA* 3.11:762b26.

²⁸ εἶτα πάλιν ἐξῆς ἀπὸ τῶν φυτῶν ἐπὶ τὰ ζῷα μειῶν, οὐκ ἀθρώως ἐπὶ τὴν μεταβατικὴν καὶ αἰσθητικὴν ὄρμησε φύσιν. ἀλλ' ἐκ τοῦ κατ' ὀλίγον ἐπὶ ταύτην ἐμμελῶς προῆλθεν· τὰς γὰρ πίννας καὶ τὰς ἀκαλήφας ὥσπερ αἰσθητικὰ δένδρα κατεσκεύασεν· ἐρρίζωσε μὲν γὰρ αὐτὰς ἐν τῇ θαλάσῃ δίκην φυτῶν καὶ ὥσπερ ξύλα τὰ ὄστρακα περιέθηκε καὶ ἔστησεν ὡς φυτὰ, αἴσθησιν δὲ αὐταῖς ἐνέδωκε τὴν ἀπτικὴν, τὴν κοινὴν πάντων ζῴων αἴσθησιν, ὡς κοινωνεῖν τοῖς μὲν φυτοῖς κατὰ τὸ ἐρρίζωσθαι καὶ ἐστάναι, τοῖς δὲ ζῴοις κατὰ τὴν ἀφήν· τὸν γοῦν σπόγγον, καίτοι προσπεφυκότα ταῖς πέτραις, καὶ συστέλλεσθαι καὶ ἀμύνεσθαι, ὅταν προσιόντος αἴσθηταί τις, Ἀριστοτέλης ἰστόρησεν. διὸ τὰ τοιαῦτα πάντα ζῴοφοντα καλεῖν ἔθος ἔχουσιν οἱ παλαιοὶ τῶν σοφῶν. πάλιν δὲ ταῖς πίνναις καὶ τοῖς τοιοῦτοις συνῆγε τὴν τῶν μεταβατικῶν μὲν ζῴων γένεσιν, μακρὰν δὲ προελθεῖν μὴ δυναμένων, ἀλλ' αὐτόθεν αὐτοῦ που κινουμένων· τοιαῦτα δὲ ἐστὶ τὰ πλείστα τῶν ὄστρακοδέρμων καὶ τὰ καλούμενα γῆς ἔντερα.

²⁹ See 2, 38.7-9, 42, 120.21-23 Morani.

Here Aristotle argues that sponges are sensitive, being aware of and resisting attempts to pluck them, or clinging more strongly to their rocks when the weather turns windy and boisterous (cf. *ibid.* 549a8: sponges are agreed to be sentient). Here he does not say that they are plantlike, but he does so at 8.1: 588b20 (sponges, being intermediate creatures, are quite similar to plants: see above n.23).³⁰ What Nemesius omits is that Aristotle describes the behavior of sponges with a certain proviso: he makes it clear that he reports what he has been told by others (sponge-divers?) and that in spite of the apparent reliability of the report the people of Torone doubt its truth. That sponges and bivalves have an intermediate status between plants and animals is left implicit in the Aristotelian text. In sum, Nemesius brings together different elements from different parts of the Aristotelian text and adds touches of his own. Other sources of inspiration may be involved as well, in addition, to be sure, to Nemesius' own stamp: as Sharples and Van der Eijk correctly note, the idea that humans are also related to inanimate nature by their having certain insentient body parts such as bones (1, p.3.7-11) can be paralleled not from Aristotle but from Stoic accounts of the scale of nature, with its cohesive, physical and psychical levels corresponding to different degrees of subtlety of the all-pervasive *pneuma*.³¹

Galen, *On the Doctrines of Hippocrates and Plato* 5.6.38 p. 334.4-8 De Lacy (F 33 E.-K.) presents, on behalf of the Stoic Posidonius, a similar scale in terms of the Platonic tripartite psychology. Here certain non-mobile animals that are governed by desire alone are said to grow attached, like plants, to rocks.³² Nemesius uses this work of Galen's elsewhere and so may have also been influenced by this passage when he wrote on the scale of nature himself. But in fact there are more and closer points of contact between Nemesius' account and *History of Animals* where the scale of nature is

³⁰ Pace Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 39 n. 201, who say that Aristotle 8.1: 588b20 takes a 'different view' on the status of sponges as compared to what he says in book 5. In the context he makes it clear that he sees them as intermediate in line with the earlier passage.

³¹ See the evidence collected as *SVF* 2.439-462. *SVF* 2.458, cited by Sharples and Van der Eijk, *Nemesius on the Nature of Man*, n.196, is a particularly clear passage from Philo of Alexandria, *Allegory of the Laws* 2.22-23.

³² Jaeger, *Nemesius von Emesa*, (Berlin: Weidmann, 1914), 104 n.2 and Telfer, *Cyril of Jerusalem and Nemesius of Emesa*, 233 n.3 believe that this Galenic passage lies behind Nemesius scale of nature and in particular the observation on stationary animals. Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 39 n. 202 reject this on the grounds that the tripartition of the soul is lacking from Nemesius.

concerned. When he turns to the soul in § 2 (pp.36.13-37.20 Morani) he returns to the theme of graduality, pointing out that animals display a ‘natural’ (so not strictly rational) intelligence and skills and arts analogous to ours, echoing the same first chapter of book 8 of Aristotle’s work that lies behind the passage from § 1 we have just quoted (in particular Aristotle’s observations at HA 8.1: 588a22-588b1).

3. *Women, Semen and Blood*

In Nemesius’ account of the generative and seminal faculty or power (§ 25) we find the following passage:

Women have all the same parts as men, but inside not outside. Aristotle and Democritus maintain that female sperm contributes nothing to the generation of offspring. For they maintain that what is emitted by women is sweat of the relevant part rather than seed. But Galen finding fault with Aristotle says women have seed and the mixture of both seeds produces the embryo; that is indeed why intercourse is called mixture. Yet they do not have perfect seed like a man’s but it is still uncooked and rather watery. Being like this the woman’s seed becomes nourishment of that of the man. From it a portion of the fetal membrane round the horns³³ of the womb is solidified and also the so-called sausage-like membrane which is a receptacle for the residues from the embryo (transl. Sharples and Van der Eijk, slightly modified) (25, pp. 86.19-87.7 Morani).³⁴

This is largely based on Galen, *On Semen* and the relevant part of *On the Functionality of Parts* (book 14, chs. 9-14). Here however we do not just get a summary or conflation of Galenic passages but a little doxography which invites comparison with the *Placita* tradition and in particular what is found in one of its extant witnesses, ps.Plutarch, *Plac.* at 5.5, the chapter entitled “Whether women too emit semen” (εἰ καὶ αἱ θήλειαι προΐενται σπέρμα, echoing Arist. *GA* 1.19: 728a32). Its first lemma gives the affirmative view, held

³³ These “horns” are in Galen probably to be identified with the Fallopian tubes but some caution is needed since their description may be based on animal rather than human anatomy: see *On the Dissection of the Uterus* 3.1-3, p. 38.2 Nickel (II. 890 K.) with Nickels note *ad loc.* *On Semen* 2.1.5, p. 144.14-15 De Lacy (IV. 594 K.), *On the Functionality of Parts* 14.11, vol. 2, p.323.18-22 Helmreich. See further Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 156 n. 794.

³⁴ Ἀριστοτέλης μὲν οὖν καὶ Δημόκριτος οὐδὲν βούλονται συντελεῖν τὸ τῆς γυναικὸς σπέρμα πρὸς γένεσιν τέκνων· τὸ γὰρ προιέμενον ἐκ τῶν γυναικῶν ἰδρῶτα τοῦ μορίου μᾶλλον ἢ γονὴν εἶναι βούλονται. Γαληνὸς δὲ καταγινώσκων Ἀριστοτέλους λέγει σπερμαίνειν μὲν τὰς γυναῖκας καὶ τὴν μῖξιν ἀμφοτέρων τῶν σπερμάτων ποιεῖν τὸ κύημα· διὸ καὶ τὴν συνουσίαν μῖξιν λέγεσθαι· οὐ μὴν τελείαν γονὴν ὡς τὴν τοῦ ἀνδρός, ἀλλ’ ἔτι ἄπεπτον καὶ ὑγροτέραν· τοιαύτη δὲ οὕσα τῆς γυναικὸς ἢ γονὴ τροφή γίνεται τῆς τοῦ ἀνδρός. ἐξ αὐτῆς δὲ καὶ μέρος τι τοῦ χορίου τοῦ περὶ τὰς κεραίας τῆς μήτρας συμπήγνυται καὶ ὁ καλούμενος ἀλαντοειδῆς δοχεῖον ὧν τῶν περιττωμάτων τοῦ ἐμβρύου.

by Democritus alongside Pythagoras and Epicurus, and the second Aristotles' view³⁵, denying semen to women. The third and last lemma gives the view of the Presocratic thinker Hippon, which constitutes a compromise between the first and the second—a schema fairly common in the *Placita*: women do have semen but it contributes nothing to procreation.³⁶

When we compare this chapter in the *Placita* with the corresponding passage in Nemesius, we find that Nemesius aligns Democritus with Aristotle as denying that there is female semen, which is the view opposite to the one given to Democritus in the *Placita*.³⁷ Although the precise relation of Nemesius to the *Placita* tradition is no longer ascertainable³⁸, there can be no doubt that he made use of it and he may be taken to reflect it here too: the characterization of the liquid secreted by females as a kind of sweat can also be paralleled from the *Placita* chapter.³⁹ That he includes Democritus in the camp of

³⁵ On Aristotle's presence in the *Placita* see Mansfeld, "Aristotle in the Aëtian *Placita*," in Falcon, ed., *Brill's Companion to the Reception of Aristotle in Antiquity*, (Leiden: Brill, 2016), 299-318.

³⁶ The way of arranging the doctrinal material that is typical of the *Placita* tradition is by division or classification, i.e. the method of diaeresis, which goes back to Aristotle and Plato. Within the diaeretic schemes one comes across compromise positions, i.e. tenets combining elements from different options. On diaeresis see further Mansfeld and Runia, *Aëtiana Vol. II. The Method and Intellectual Context of a Doxographer. The Compendium, Part One* (Leiden: Brill, 2009), 3-16 (= Part One, 1: 'Strategies of presentation'). Christian authors could use such schemes to demonstrate the prevalent disagreement among pagans (thereby following in the footsteps of the earlier Sceptics) or put them to a more constructive use such as Nemesius does here, viz. that of ordering a discussion by setting out the available options and choose one of them as the true or most preferable one. Nemesius lays down the correct Christian position in the soul (§ 2, p.37-38.10 Morani) on the basis of a diaeresis of definitions of the soul demonstrating the disagreement (διαφωνεῖται) 'among all ancients': § 2, 16.12-17.38.9 Morani, with pp. 16.12-17.15 corresponding to ps.Plut. *Plac.* 4.2-3. See Mansfeld and Runia, *Aëtiana. The Method and Intellectual Context of a Doxographer. Volume One: The Sources*, 207-208; Mansfeld, "Doxography and Dialectic. The *Sitz im Leben* of the *Placita*", 3076-3077. How far the diaeretic mode of presentation involved the distortion of the original positions is another matter.

³⁷ As noted by Diels, *Doxographi Graeci*, ad Democr. 68 A 143 DK.

³⁸ Diels, *Doxographi Graeci*, 49-50 even took Nemesius to have drawn directly on the lost source Aëtius, a source, then, fuller than extant specimens such as ps.Plutarch's *Placita*.

³⁹ (1) Πυθαγόρας Ἐπίκουρος Δημόκριτος καὶ τὸ θῆλυ προῖεσθαι σπέρμα· ἔχει γὰρ παραστάτας ἀπεστραμμένους· διὰ τοῦτο καὶ ὄρεξιν ἔχει περὶ τὰς χρήσεις. (2) Ἀριστοτέλης καὶ Ζήνων ὕλην μὲν ὑγρὰν προῖεσθαι οἰοῦναι ἀπὸ τῆς συγγυμνασίας ἰδρωτάς, οὐ μὴν σπέρμα πεπτικόν. (3) Ἴππων προῖεσθαι μὲν σπέρμα τὰς θηλείας οὐχ ἥκιστα τῶν ἀρρένων, μὴ μέντοι εἰς ζωογονίαν τοῦτο συμβάλλεσθαι διὰ τὸ ἐκτὸς πίπτειν τῆς ὑστέρας· ὅθεν ἐνίας προῖεσθαι πολλακίς δίχα τῶν ἀνδρῶν σπέρμα, καὶ μάλιστα τὰς χηρευούσας, καὶ εἶναι τὰ μὲν ὅστ᾽ ἀπὸ τοῦ ἀρρενος τὰς δὲ σάρκας παρὰ τῆς θηλείας.

those who deny that women have semen may be due to a simple confusion of the name-labels belonging with the options.⁴⁰

The passage in Nemesius, then, shows him using, in an independent and creative way, a relevant chapter from the *Placita* tradition: the position labelled here with the name of the rather obscure old-timer Hippo he replaces with that of a more recent authority, Galen, who had corrected Aristotle, thus vindicating the general thesis, with which Nemesius opens this section.⁴¹ Why he addresses this subject in the first place is not difficult to see. The question of the female contribution to conception had become a standard issue after Aristotle had rejected earlier Hippocratic accounts according to which both parents contribute to their offspring on an equal basis. Aristotle had devoted a separate chapter of *Generation of Animals* to showing that the female contributes no semen during coition (1.20; cf. also the previous chapter and *GA* 1.19.727a28-29, echoed by Nemesius).⁴² Thus it became one of the issues included in the physiological part of the *Placita*. The mistake with Democritus' name may suggest that Nemesius is working on the basis of his memory. But his use of the *Placita* section does not exclude his using the relevant statement from Aristotle's original exposition also. He plays off Aristotle against Galen, another authority, whose work he knows well and whose position he presents not only as correct but well-argued.

Here it becomes clear that Galen indicated the superiority of the male semen over the female one so that he really represents a kind of compromise position: women do contribute seed of their own but it plays a subordinate role. Seen in this light, Galen's view functions in a way similar to the position ascribed to Hippon. Further, Nemesius does not produce any scriptural or at any rate Christian support for the thesis of the

⁴⁰ Mansfeld and Runia, *Aëtiana. The Method and Intellectual Context of a Doxographer. Volume One: The Sources*, 207–208, too suggest that Nemesius may have confused the name-labels concerned.

⁴¹ That female animals have semen and testicles is established by Galen, against Aristotle and the medical scientist Athenaeus of Attaleia, in his *On Semen (Sem.)* book 2, ch. 1, pp.144.4-160.23 De Lacy (IV. 593-610 Kühn) and ch. 4, pp.172.1-178.15 (IV. 620-625 Kühn). The point cited by Nemesius about female semen being wetter than and inferior to male semen is made by Galen at *Sem.* 2.4.24, pp.176.13-14 De Lacy (IV. 624 Kühn). Cf. also the refutation of Aristotle's theory at Galen, *Sem.* 1.5.8-28, pp.80.19-84.14 De Lacy (IV. 529–33 Kühn)

⁴² For a recent rereading of this passage and the interpretation of the male role in Aristotle's reproductive system more generally, see Connell, *Aristotle on Female Animals: A Study of the Generation of Animals* (Cambridge: Cambridge University Press, 2016), part 3. For the Hippocratic view that women have semen of their own see Hp. *De nat. pueri* 1: VII. 486.1-3 L. cf. *Genit.* 6 (VII.478 L.)

(internal) anatomical correspondence between the two sexes. In fact, the female emission of semen is mentioned in Hebrews 11:11, which itself appears to reflect an insight from Greek embryology.⁴³ It may be noted that the first half of Methodius of Olympus' dialogue *Symposium* (usually dated to c. 290 CE) shows the female interlocutors attributing an active, formative role to the mother (it is not the father but God who in a later stage provides the soul to the embryo), anchoring their disquisitions in medical theorems on the substance and origin of semen—issues also familiar from the *Placita* tradition (see ps. Plut. *Plac.* 5.3, 4).⁴⁴

Nemesius pays on the whole little attention to the difference between man and woman. His view that they have corresponding anatomies should not be taken to imply that he sees them as in principle equal. His point about the superiority of male seed, which he takes over from Galen, immediately suppresses such a reading. To explain the relation of the soul to its bodily instruments he uses the example of the sexual act, giving the woman the part of the 'matter', i.e. the passive recipient of the action in question, in a way that recalls Aristotelian passages (5, p.55.5-6 Morani; cf. Arist. *GA* 1.2: 716a6-8, 1.19: 727b31-33, 1.20: 729a11 and elsewhere).⁴⁵ Likewise women appear in an example in his discussion of moral responsibility (40, pp. 115.27-116.2 Morani). Here Nemesius quotes Matthew 5:28, Jesus' statement that desiring another man's wife amounts to committing adultery "in one's heart." This is meant to illustrate the idea that moral choice preceding action (in this case intercourse) is already liable to moral judgement. But once again the female part is an entirely passive one and the perspective is male.

It may be instructive to compare another passage concerned with the body and semen from § 4, the section dedicated to the body:

⁴³ Van der Horst, "Sarah's Seminal Emission: Hebrews 11:11 in the Light of Ancient Embryology", in Van der Horst, *Hellenism – Judaism – Christianity: Essays on Their Interaction* (Kampen: Kok Pharos, 1994), 203-224. References in the New Testament to other aspects of human procreation are considered against the backdrop of ancient Greek medicine by Weissenrieder, "What does σωθήσεται δὲ διὰ τεκνογονίας 'to be saved by childbearing' mean (1 Timothy 2:15)? Insights from Ancient Medical and Philosophical Texts", *Early Christianity* 5 (3) (2014): 313-336 and Pope, "Luke's Seminal Annunciation: An Embryological Reading of Mary's Conception", *JBL* 138,4 (2019): 791-807.

⁴⁴ For a full discussion see Laval Norman, "Becoming Female: Marrowy Semen and the Formative Mother in Methodius of Olympus' *Symposium*," *Journal of Early Christian Studies* 27.2 (2019): 185-209.

⁴⁵ On active and passive factors in Aristotle's account of the generation of living substances see Freeland, "Aristotle on Bodies, Matter and Potentiality", in A. Gotthelf & J.G. Lennox, eds. *Philosophical Issues in Aristotle's Biology* (Cambridge: Cambridge University Press, 1987): 399-404.

Aristotle holds that the bodies of animals come to be directly from the blood alone; for he thinks it is directly from this that all the parts of the animal are nourished and grow, and sperm has its origin in blood (4, p. 45.7-10 Morani).⁴⁶

At the beginning of this section Nemesius had already introduced the four humors (blood, phlegm, black and yellow bile) as the constituents of the bodies of animals that have blood (there is only one more fundamental level, viz. that of the physical elements). This was the Hippocratic view, especially as influentially promoted by Galen on the basis of the Hippocratic *On Human Nature*, chs. 1-15, i.e. the part attributed by Galen to Hippocrates himself (*HNH* Prooem. 7.15-9.11 Mewaldt [XV. 9-13 K.]). Having given Aristotle's position in the above quotation Nemesius argues that it is difficult to explain body parts so different in structure as flesh and bone⁴⁷ on the assumption of one humor only. The Hippocratic view, then, is to be preferred, or so it is implied. But somewhat surprisingly he goes on to point out that the four humors are often found in the blood⁴⁸, concluding that "the gentlemen appear somehow to be in agreement with one another" (p.45.17-18 Morani). We have seen other examples of Nemesius striking a compromise where Aristotle was involved. Here too then he is not dismissed but reconciled to the strictly speaking preferable position.

Aristotle's emphasis upon the blood as the basic material of generation is well attested. Nemesius may be thinking of specific passages.⁴⁹ But the confrontation between Aristotle and Hippocrates staged here recalls discussions from works of Galen with which Nemesius was familiar.⁵⁰ But Galen himself took part in traditional issues as laid out in

⁴⁶ Ἀριστοτέλης δὲ ἐξ αἵματος μόνου βούλεται γίνεσθαι τὰ σώματα τῶν ζῴων· ἐκ τούτου γὰρ καὶ τρέφεσθαι προσεχῶς καὶ αὐξεσθαι πάντα τὰ τοῦ ζῴου μόρια, καὶ τὸ σπέρμα δὲ τὴν γένεσιν ἐξ αἵματος ἔχειν. Omitting with D προσεχῶς before ἐξ αἵματος. On the central role of the blood in Aristotle's theory see Freeland, "Aristotle on Bodies, Matter and Potentiality," 398-404.

⁴⁷ Nemesius seems to use the order elements-humours-homoeomerous (or uniform) parts (e.g. flesh, bone)-organs. This reflects Galen's position (which Galen himself traces back to Hippocrates): Gal. *Hipp. Elem.* 10.3-6, p. 136.18-140.13 De Lacy (I. 492-493 K.), *PHP* 8.4.20-21, p. 502.16-25 De Lacy (V. 676 K.), *HNH* I.19, p.32.14-25, I.38, p.48.10-25 Mewaldt. On the Galenic background see further Skard, "Nemesiosstudien: 3. Nemesios und die Elementenlehre des Galenos," *Symbolae Osloenses* 18 (1938): 31-41 with Sharples and Van der Eijk, *Nemesius on the Nature of Man*, 87 n.417.

⁴⁸ I.e. visible blood or blood in the ordinary sense of the word really is a compound of the four humours including blood in a stricter sense: this is Galen's view; see Gal. *PHP* 8.4.4. p. 498.26-28 De Lacy (V. 672 K.), *Hipp. Elem.* 11.1, p.140.15-18 De Lacy (I. 494 K.), 11.16-19, pp. 144.16-146.7 De Lacy (I. 498 K.), 19.9, p.150.15-16 De Lacy (I. 503 K.); *At. Bil.* 4, p.78.24-29 De Boer (V. 119 K.); *Plen.* 10.19-22, p. 160.9-23 Otte (VII. 566-567 K.).

⁴⁹ Arist. *GA* 1.19: 726b2-5, 726b9-10, 2.4: 740a21; *PA* 2.3: 650a34-b13; 3.5: 668a9-13.

⁵⁰ Gal. *Hipp. Elem.* 14.1, p. 154.11-20 De Lacy.

the *Placita* tradition, too.⁵¹ At any rate, the question of the basic constituents of the body or that of the composition of the semen can again be paralleled from the *Placita* tradition.⁵²

4. *Leftovers: Parts of Animals and Some Other Issues*

Another of the biological or zoological works needs to be considered here: *On the Parts of Animals*, one of the favorite works of another source used by Nemesius, Galen. A few putative references to, or reflections of, this work are found in the chapters devoted to the senses (chs. 7-11).⁵³ The view expressed by Aristotle, *On the Parts of Animals* 2.10: 656b26-31 that vision sees along a straight line whereas smell and hearing perceive from all directions (though without Aristotle's reference to the corresponding positions of the sense organs in the head of animals) is found at the beginning of the chapter on taste (ch. 9, p. p.66.1-5 Morani; cf. 7, p.59.18-19 M. on vision going in a straight line).⁵⁴ Just below, at p.66.6 M., Morani detects an echo of *HA* 1.11: 492b27, saying that the tongue is the organ perceiving flavors. Nemesius says that taste is concerned with flavors. This hardly counts as a significant parallel, but p.66.10-12 M. lists the different 'taste-qualities,' such as sweetness, bitterness and several others, in a way that appears to reflect *De an.* 2.10: 422b10-15, which enhances the Aristotelian impression conveyed by this passage as a whole. The very combination of Aristotelian treatises echoed here may suggest that Nemesius is working here from memory and reflect his readings from Aristotelian works. In passages such as this we do not have the division between the doctrines of different schools characteristic of the *Placita* tradition. But we cannot exclude another kind of intermediate source. A similar case is ch. 1, p. 9-10 referring to the uniquely human capacity of laughing, which is also to be found in *PA* 3.10: 673a8, 20 and may have started

⁵¹ Cf. Tieleman, "Galen and Doxography", in Mansfeld & Runia, eds., *Aëtiana IV: Papers of the Melbourne Colloquium on Ancient Doxography* (Leiden: Brill,2018): 452-471.

⁵² See for the issue of which constituents bodies are composed of ps.Plut. *Plac.* 5.22 ('of which elements animals are composed': only Empedocles' view); Stobaeus does not have anything here. On the nature and substance of semen see *ibid.* 5.3 and 4 (The question whether women emit semen is 5.5).

⁵³ Nemesius' agenda in this part of this work (and elsewhere) can be roughly paralleled from the *Placita* tradition; cf. Aëtius 4.10, 13, 16-18.

⁵⁴ Just below, at p.66.6 M., Morani detects an echo of *HA* 492b27, saying that the tongue is the organ perceiving flavours. Nemesius says that taste is concerned with flavours. This is hardly a significant parallel but at

its career there but had become a common motif⁵⁵ and so cannot be used as evidence for Nemesius' direct engagement with this work. The same caution should apply to such references as to Aristotle's 'physical works' in connection with the division of the soul into five parts (*De an.* 2.3: 414a31) as opposed to the two parts distinguished by Aristotle in the 'ethical works' (a reference in fact to *EN* 1.13) (ch. 15, p.72.12-21 M.), which does not in itself constitute evidence of Nemesius having read these Aristotelian works and summarized them in this particular way but is part of a complicated doxographic schema involving also different Stoic views (*ibid.* p.4-21). As such, it invites comparison with doxographic schemas from other authors such as Porphyry and Tertullian. Aristotle's using to different divisions depending on context again represents a kind of intermediate or compromise position.⁵⁶

Conclusion

Aristotelian ideas play a prominent part in Nemesius' work. The present inquiry has focused on the biological works but (as a glance at Morani's *Index locorum* makes clear) the selection could easily be extended to cover treatises such as *On the Soul* and the *Nicomachean Ethics*, both of which were of immediate relevance to Nemesius' purpose in writing his own treatise. But we also come across reflections of works such as the *Meteorology* and some of the so-called *Parva Naturalia*. When we limit ourselves to the biological works in the stricter sense, i.e. the works taken to contain Aristotle's biology, it has become clear that he uses them in connection with various themes. As we have seen, he combines Aristotle's reference to the external intellect from *Generation of Animals* 2.3: 736b24 with that in *On the Soul* 3.5 and the characterization of the theoretical intellect as the crowning human faculty (*EN* 10.7-9) to make the point that we need to cultivate a philosophical life of virtue, limiting, in an un-Aristotelian way, the active intellect to philosophical activity. He uses *History of Animals* 8.1: 588b4-22 to argue the unity and coherence of Creation: there are no gaps but gradual differences

⁵⁵ See e.g. Porphyry. *Isag.* 20.

⁵⁶ For the two different divisions in the two different contexts (ethical, physical) cf. Porphyry fr. 253 Smith (= Stob. *Ecl.* I 49.25a, p. 350.19-25 Wachsmuth). For a discussion of this and other witnesses to the doxographic tradition concerned with the structure (or division) of the soul see T. Tieleman, *Chrysippus On Affections. Reconstruction and Interpretation* (Leiden: Brill 2003) 61–88.

between living beings. In the hierarchy of beings humans occupy an intermediate position between rational and non-rational (including inanimate), between immortal and mortal, nature. But he also uses Aristotle (*Generation of Animals* 1.20; cf. 19) for his discussion of human reproduction and in particular the respective roles of male and female, a traditional issue, not just in ancient medicine but also natural philosophy.

The attitude taken by Nemesius to Aristotle is similar to that of Clement and Origen in that he not only criticizes Aristotelian doctrines, but also appropriates some of them, in part or with a twist. In fact, as we have seen in section 3, even where he corrects Aristotle, with the help Galen, he seems to be concerned to keep Aristotle as much as possible on board. His classifications of different and indeed opposing doctrines often serve the purpose not of eliminating some of them but of forging a broad coalition in favour of some of his main points (see especially section 1). It was moreover possible for him to use Aristotle's biology to teach his readers about the structure of Creation (section 2). Among the few things we know about the context in which his work was composed is that Nemesius envisaged a mixed audience of unconverted as well as Christian readers. To persuade the former category it made sense to address the familiar repertory of philosophical issues and show how a Christian answer could be developed, one that included the work of prominent philosophers and scientists such as Aristotle.

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