

Sean Coughlin, David Leith, Orly Lewis (eds), *The Concept of Pneuma After Aristotle*, (2020), Berlin: Topoi, pp. 434. ISBN: 9783982067049.

As the title suggests, this book maps the history of the concept of *pneuma* in the post-Aristotelian tradition. Each contribution provides an in-depth analysis of one particular theory among several that were advanced on *pneuma* in more than ten centuries after Aristotle. A quick glimpse at the table of contents suffices to appreciate the wide-ranging character of the collection. The book opens with Aristotle's immediate successors (Gregoric, Repici, Meeusen) and closes with the late Byzantine theory on *pneuma* of John Zacharias Aktouarios (Bouras-Vallianatos), passing through the medical tradition from Diocles of Carystus up to and including Galen (Lewis & Leith, Leith, Coughlin & Lewis, Singer, Rocca, Trompeter), the Stoics (Tieleman, Hensley), and Proclus (Bohle).

The journey of *pneuma* throughout antiquity is quite exceptional and the present volume succeeds very well in bringing this out for the selected period. Occurring in a variety of contexts, *pneuma* is an admittedly fleeting, and at times ambiguous, concept. Air, both inside and outside of the body, is a topic of interest in Greek culture at large.¹ *Pneuma's* meanings range over a wide variety of domains: it can mean blast or wind, or more properly the *breath* of wind, but also flatulence, as the air produced by the abdomen, next to the idea of some sort of breath that infuses life, as well as the spirit of God in later religious and philosophical contexts.² In medical texts, it most commonly amounts to the *breath*, which in turn can be interpreted simply as inspired air or as some kind of refined air that undergoes a process of qualitative change once it enters the body. This brief, and by no means exhaustive, outline already points to some of the difficulties the editors of this volume had to face.

To keep such a variety of accounts altogether, the editors adopted a 'bottom-up approach' (p. 9), leaving room for each scholar to investigate the authors and their theories in their own specificity. This results in a mosaic of theories, which, although linked to one another by reference to the same concept, interpret and deploy it in different ways. Thus, committing to ontological theses which state plain identity or continuity between the many instances of *pneuma* would deliver an overly simplistic picture.

In the Introduction, the editors also illustrate the reason to concentrate on the post-Aristotelian tradition: Aristotle is identified as a watershed. Not only did he include *pneuma* at some critical junctions

in his biological works, but his ideas, often far from crystal clear, have also exerted a great deal of influence over the subsequent tradition. As is well known, *pneuma* is employed by Aristotle to explain several phenomena concerning animal life, chiefly reproduction, sense-perception and locomotion. At GA 5.789b9–13, Aristotle claims that *pneuma* is suitable for a variety of jobs and does not exhaust its explanatory power in one single task. He characterises *pneuma* as connate, distinguishing this kind of innate ‘breath’ from the more familiar breath we experience in respiration. However, considering the tension between some of Aristotle’s statements on *pneuma*, scholars have given much thought to the possibility of reconstructing a coherent and overarching pneumatic theory.³

All this considered, it is not at all surprising that Aristotle’s successors came up with disparate solutions. Gregoric and Meeusen provide examples of this in their analysis of the pneumatic theories developed in the treatises *De Spiritu* and *Natural Problems*, respectively.

Gregoric illustrates how, working within an Aristotelian framework, the author of *De Spiritu* fashions his views to make them compatible with other traditions. This is achieved using a peculiar argumentative strategy. Considering the occurrences of the word soul (*psyche*) and kindred terms, Gregoric detects several competing conceptions of the soul in the treatise: at times the author leans towards the Aristotelian well-known and problematic conception of the soul as the form of the body; at other times he hints at the Stoic corporeal position; he also speaks of the soul as the by-product of the blend of the elements, implying what Gregoric calls the “Pythagorean” *harmonia*-conception of soul’ (p. 28); finally, he leaves open the possibility for a Platonic view of the soul. Drawing upon this oscillatory attitude, Gregoric concludes that the author is not compelled to espouse any view at the expense of the others, as they all fit in with his account of *pneuma*. This compatibility, Gregoric submits, would have been considered a strong suit of the author’s account of *pneuma*, making his theory acceptable in the eye of many and also explaining why ‘he consistently hedges his statements about soul’ (p. 31). What does this theory of *pneuma* consist of? Between *pneuma* and the soul lies a privileged relationship determined by *pneuma*’s qualitative features, such as its fineness and purity. *Pneuma* has its source in outside air but gets refined once it passes through the system of *artēriai*.⁴ Gregoric also assumes that there is a connate *pneuma*, a sort of exquisitely refined *pneuma*, as one of the elements constituting the bodily parts. Thus, inspired air passes through *artēriai* and becomes (vital) *pneuma*, which contributes to

vital activities (respiration, pulsation, digestion), but also supplies the body with connate, or psychic, *pneuma*, which in turn accounts for psychic activities (locomotion and sensation), insofar as it is one of the components of *neura* and *artēriai*. The distinction between vital and psychic activities and the link with two kinds of *pneuma* would anticipate, in Gregoric's view, the doctrines of the Alexandrian doctors and, later on, that of Galen. If this is likely for Erasistratus of Ceos, it seems hasty to attribute this distinction to Herophilus of Chalcedon as well. The testimonies for Herophilus do not seem to support the assumption that two kinds of *pneuma* perform two different activities.⁵ His solution is much more economical: there are three systems of vessels – arteries, veins, and nerves – responsible for different functions in the body – pulsation and nourishment the first two, locomotion and sensation the latter; these functions, in turn, depend on the kind of substance floating inside each vessel – *pneuma* in the nerves, blood in the veins, and *pneuma* (perhaps in combination with blood) in the arteries.⁶

Meeusen focuses on the reception of Aristotle's doctrines by his immediate successors. To investigate the concept of *pneuma*, he looks at the section of *Natural Problems* related to sexual intercourse as a well-defined and circumscribed body of sources (*Pr.* 4). According to Meeusen, *Natural Problems* 'display a dynamic appropriation and reuse of traditional Aristotelian theories and concepts (including the ones about *pneuma*). It is tempting to hypothesize that this was done with an eye to reopening Aristotle's texts for debate in the Lyceum where, presumably, Aristotelian dogma was not yet fully formed' (p. 68). Meeusen looks at the way *pneuma* relates to melancholy and other residues and finally turns to Aristotle's causal theory. In the case of melancholics, the author of *Natural Problems* largely draws upon Aristotle's scattered insights – and Meeusen provides parallel references to Aristotle's works: *pneuma* is linked with sexual desire and licentiousness, is discharged with the semen; *pneuma*'s presence in the body makes people lustful and in constant need of expelling that in excess (through sexual intercourse). The author, Meeusen argues, pledges to mend the hot-cold dichotomy, attributed by Aristotle to the melancholic state, without dismissing Aristotle's take completely. How? 'S/he explains melancholic disorders in terms of a person's natural constitution rather than as a disease (*pace* Aristotle) and interprets the changeable character of the melancholic – and more precisely its positive/"manic" and negative/"depressive" manifestations – in terms of the fluctuating degree of heat and coldness

in the body respectively (*Pr.* 30.1, 954a12–14) (p. 73). As further proof of this, Meeusen mentions *Pr.* 30.I, 955a39–40 where we read that ‘all melancholic people are extraordinary, not owing to disease but owing to nature.’ However, Aristotle’s position is not so clear-cut. That melancholy is a *pathos pneumatōde* (*Insomn.* 3, 461a24–25), next to fever and drunkenness, is not decisive to establish whether melancholy is a disease or a natural disposition. *Pathos* can have a neutral sense and does not necessarily concern the semantic sphere of *nosos*, which means more aptly ‘disease.’ Also, commenting on the passage in *Insomn.*, van der Eijk has argued that *pathē* is there used more in connection with fever and drunkenness rather than with melancholy.⁷ Next to this, there is another passage, which Meeusen does not refer to, where Aristotle does not seem to take melancholy as a pathological state but rather juxtaposes it with the nature of loquacious people:

people whose nature is garrulous, as it were, and melancholic (*lalos hē physis esti kai melancholikē*) see all sorts of sights. Because of the variety of their emotions, they have chance visions that resemble the truth; they are like steady gamblers, who *must* sometimes be lucky. (*De divinatione per somnum* 2, 463b17ff; tr. Ross modified)⁸

The author of *Natural Problems*, then, at least in the case of melancholics, seems to follow in Aristotle’s footsteps rather than to solve such tensions as the hot-cold dichotomy.

Turning now to Galen, Singer’s article aims to address three questions: ‘(1) what precisely is pneuma? (2) why is pneuma used in certain kinds of physical and physiological explanation? (3) where does the concept come from?’ (p. 239). The first sections are dedicated to reconstructing Galen’s theory of *pneuma*, articulating the difference between psychic and vital *pneuma*, the sort of refining processes they both go through, and their respective functions within the body. Considering vital *pneuma*, Singer underlines Galen’s indebtedness to the Alexandrian anatomists, Herophilus and Erasistratus, much more than to other philosophical traditions. Given this, Singer acknowledges in a concluding footnote that question (2) remains unanswered. As a provisional, admittedly speculative, explanation, Singer claims that ‘the power of, and recent developments in, pneumatic technology provided a vital analogy,’ and thus hands over the problem back to the Alexandrian anatomists (n. 56 p. 277). The interaction between mechanics and philosophy is certainly a complex issue.⁹ However, as Berryman notes, ‘some devices explicitly imitate organisms: a bird or a horse that “drinks” by means of an internal siphon, birds built around

whistling pipes (...). Particularly when these effects are dressed up with animal images and props to create a narrative context, *the result can be a charming and even rather compelling imitation of animate reactions*.¹⁰ So, the problem of the explanatory power of *pneuma* is not solved by comparison with artificial models, as these imitate what is observed in living things and perhaps make more visible what is hard to grasp in animate beings. Moreover, going back to Aristotle's *MA*, *pneuma* is precisely the element that mechanical devices are missing. In *MA* 7, the examples of the *automata* and the little cart serve the purpose of showing the mechanical facet of the phenomenon of animal locomotion, but Aristotle clearly draws a demarcating line between the animal and the mechanic case (cf. *MA* 7, 701b2–16). Although for the Alexandrian doctors *pneuma* is not anymore connate and has its source in outside air, it is thanks to *pneuma* that animals – as it is for Aristotle – perform the activities that make them what they are, namely living beings distinct from mere artefacts.

While this also applies to the book in its entirety, special methodological finesse is displayed in the central articles of the collection (Lewis & Leith, Leith, Tieleman, Hensley, Coughlin & Lewis), showing the painstaking but rewarding endeavour of working on fragmentary and indirect evidence. Particularly interesting is the novel approach to the testimonies of the Pneumatic School proposed by Coughlin & Lewis. They aim to investigate the Pneumatists' stance on *pneuma* by appealing only to 'fragments and testimonies in which Pneumatists are explicitly mentioned (...), [to fragments and testimonies] of physicians explicitly called "Pneumatist" by our sources (...), of the school's anonymous adherents, usually designated by phrases like "followers of X", where the context makes clear that "followers of X" is synonymous with "Pneumatists"' (p. 205). This allows refining the Pneumatists' relation to other medical and philosophical traditions – chiefly with Stoicism – and avoiding the pitfalls of circularity of which Wellman's traditional approach is liable.

All in all, any reader will benefit from reading this volume if she wants to focus on a specific author of the post-Aristotelian tradition. Also when read in its entirety, the book brilliantly explores the intersections between philosophy and medicine by following the complex unfolding of the concept of *pneuma* after Aristotle.

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Notes

1. Anthoine Thivel, 'Air, Pneuma, and Breathing from Homer to Hippocrates,' in *Hippocrates in Context*, ed. Philip J. van der Eijk (Leiden: Brill, 2005), 239–249; Geoffrey E. R. Lloyd, 'Pneuma Between Body and Soul,' *Journal of the Royal Anthropological Institute* 13 (2007): 135–146.
2. For the meanings of *pneuma* see LSJ. However, a glance at the entry of any Greek dictionary for *pneuma* will prove the same point.
3. Gerard Verbeke, 'Doctrine du pneuma et entéléchisme chez Aristote.' In *Aristotle on Mind and the Senses. Proceedings of the Seventh Symposium Aristotelicum*, eds. Geoffrey E. R. Lloyd & Gwilym E.L. Owen (Cambridge: Cambridge University Press, 1978), 191–214; Martha C. Nussbaum, *Aristotle's De Motu Animalium. Text with Translation, Commentary and Interpretive Essays* (Princeton, NJ: Princeton University Press, 1978); Gad Freudenthal, *Aristotle's Theory of Material Substance. Heat and Pneuma, Form and Soul* (Oxford: Clarendon Press, 1995); Abraham P. Bos & Rein Ferwerda, *Aristotle on the Life-Bearing Spirit (De Spiritu). A Discussion with Plato and His Predecessors on Pneuma as the Instrumental Body of the Soul* (Leiden and Boston: Brill, 2008); Klaus Corcilius & Pavel Gregoric, 'Aristotle's Model of Animal Motion,' *Phronesis* 58, no. 1 (2013): 52–97; Oliver Primavesi & Christof Rapp (eds.), *Aristotle: De Motu Animalium. Proceedings of the XIXth Symposium Aristotelicum* (Oxford: Oxford University Press, 2020).
4. These ducts are responsible for the distribution of air in the body. For a thorough description of the system of *artēriai* and what anatomical structure they pick out see Pavel Gregoric, Orly Lewis, Martin Kuhar, 'The Substance of *De Spiritu*,' *Early Science and Medicine* 20 (2015): 101–124.
5. See Heinrich von Staden, *Herophilus. The Art of Medicine in Early Alexandria* (Cambridge: Cambridge University Press, 1989), 253–259, and Lewis & Leith and Leith in the same volume.
6. von Staden, *Herophilus*, 262–267.
7. Philip J. van der Eijk, 'Aristoteles über die Melancholie,' *Mnemosyne* 43 (1990): 33–72.
8. William D. Ross (ed.), *Aristotle. Parva naturalia* (Oxford: Clarendon Press, 1955).
9. Sylvia Berryman, *The Mechanical Hypothesis in Ancient Greek Natural Philosophy* (Cambridge: Cambridge University Press, 2009).
10. *Ibid.*, 164, my emphasis.