

**Nicole Oresme. *Questiones in Meteorologica de ultima lectura, recensio parisiensis. Study of the Manuscript Tradition and Critical Edition of Books I-II.10*, edited by Aurora Panzica (Medieval and Early Modern Philosophy and Science, 32). Leiden and Boston: Brill, 2021. ix+290 p. ISBN: 9789004461406. Hardback: € 140.98**

Reviewed by DANIEL A. DI LISCIA  
Ludwig-Maximilians-Universität München  
d.diliscia@lrz.uni-muenchen.de

Nicole Oresme (ca. 1320-1382) is one of the most outstanding mathematicians, philosophers and theologians of the late Middle Ages. In general, his work is nowadays very well-known. Motivated by the pioneering investigations of Pierre Duhem and Anneliese Maier, several generations of scholars have put the best of their efforts forward in finding new manuscript copies of his writings, in translating and interpreting them and, perhaps the more substantial task of all, in editing them. Oresme's monumental work has recently turned again into the focus of attention with the publication of new studies, papers and editions of texts which are by him or, at least, attributed to him. In its variety and complexity, Oresme's work includes commentaries to several Aristotelian works on practical and natural philosophy (logic does not seem to have the focus of Oresme's attention, but, instead, mathematics), in Latin and, not to be dismissed, in French as well. Besides, the transmission of his writings represents a research case in itself: Many of his works are extant in different versions, and while some of them are conveyed in only one manuscript (that seems to be the case for the questions of the *Physics*, as far as we know), others were eagerly copied and widespread.

The present book proposes an edition of a text of great significance for our understanding of late medieval philosophy and science, namely of one set of Oresme's questions commentary on Aristotle's *Meteorologica*. It includes an introduction explaining the various textual problems of Oresme's works on the *Meteorologica* (more on that below, though), as well as a detailed analysis of the manuscript tradition. Let me say before moving over to the details that this is a key contribution to the growing Oresme scholarship that stays in one and the same line of excellence to which the author has already accustomed us and which we hope to see continued in the immediate future (forthcoming titles are announced herein, which are of paramount importance to modern scholarship).

The significance and the quality of this research is evident once the reader makes him/herself aware of the difficulties involved in the assumed task. This requires at once a great background of textual erudition and paleographical preparation, a fine understanding of the natural philosophical matters discussed in the text and – an obvious but difficult condition to be fulfilled – a big deal of exploring spirit regarding some of the main problems within the history of ideas.

First of all, one has to keep in mind the crucial role of the *Meteorologica* linking the more speculative philosophical works of the Aristotelian *libri naturales* to the empirical science of nature. A history of medieval philosophy, sometimes too focused on theory of knowledge and often overly fixed on the speculations connected to metaphysical concepts and their theological implications, has shown only a subordinated interest in exploring this doubtful and unstable realm of the material world. Aristotle's various works on zoology provided the history of biological sciences with a wide ranged number of materials to be studied. In turn, the history of physical sciences – when not focusing on the mathematics of the rainbow and some other particular cases – has honored above all the arguments and topics of the *Physics* and *De caelo*, infinity and continuity, the notions of space and vacuum, the concept of motion, the Aristotelian “dynamics” (just to mention some of the more frequently discussed topics). Yet, we know that Aristotle's *Meteorologica* have assumed an important position in the medieval curriculum of the Faculty of Arts. The text had been translated into Latin in the mid-twelfth century and again in the thirteenth century<sup>1</sup>. The *Auctoritates Aristotelis*, for instance, include a special section for every one of the four books of the *Meteorologica*<sup>2</sup>. Moreover, later on, during the cosmological revolution, the text has been seen as a particularly adequate vehicle to expose and transport own ideas rather than the old ones of the Philosopher. Thus, at the beginning of his voluminous commentary, the Jesuit Niccolò Cabeo (1586-1659) declares himself free of the (grammatical) duty of explaining the text of the *Meteorologica* and even more of defending uncritically any Aristotelian position.<sup>3</sup> Moreover, it seems to me quite evident that we would understand many of those physical ideas Descartes' exposed in *Les Météores* if we take into consideration the background of the late medieval commentary tradition on the Aristotelian *Meteorologica*.

---

<sup>1</sup> Henricus Aristippus translated the book IV (from Greek) and Gerardo de Cremona the books I-III (from Arabic). Both translations were unified into one work, to which the text known as *De mineralibus* (an Avicennian fragment) was appended (see Bernard G. Dod, “Aristoteles latinus”, in *The Cambridge History of Later Medieval Philosophy. From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100-1600*, edited by N. Kretzmann, A. Kenny, J. Pinborg and E. Stump [Cambridge: Cambridge University Press, 1982], 47-79, 47. Michael Scot is credited to have translated the book IV of Averroes' *Commentary* on the *Meteorologica* (Dod, “Aristoteles latinus”, 49). After a century, the text was re-translated by William of Moerbeke and thus incorporated to the “*corpus recentius*” of Aristotle's work (Dod, “Aristoteles latinus”, 51).

<sup>2</sup> Jacqueline Hamesse, *Les Auctoritates Aristotelis. Un florilège médiéval. Étude historique et édition critique* (Louvain and Paris: Peeters, 1974), 171-174.

<sup>3</sup> For, “si supponis omnino verum esse, quod Philosophus dicit, nec in eo laboras, ut ostendas rationum eius momento ad se quemlibet trahere, et in sola dicentis auctoritate conquiescis, non philosopharis, sed fidelis Aristotelicus interpres evadis, nec tua cognitio scientia erit, sed fides, nec enim rationum momento sed dicentis auctoritas, te in sententiam trahit”. Niccolò Cabeo, *In quatuor libros meteorologicorum Aristotelis commeniaria...* (Rome: Typis haeredum Francisci Corbelletti, 1646). An opponent of Galileo regarding the falling bodies and the theory of the tides, Cabeo did not hesitate to contradict empirically also Aristotle in several points, as for instance about the quickness how water freezes. On this point, see Lynn Thorndike, *A History of Magic and Experimental Science*, 8 vols., vol. 7: *The Seventeenth Century. Part 1*. (New York and London: Columbia University Press, 1958), 423.

Comparing to the *Physics*, one could rapidly describe the matters treated in the *Meteorologica* as “more empirical than theoretical”. This is correct as far as Aristotle actually deals here – especially in the books I-III – with concrete observations, phenomena, facts that he considered to be happening in the realm of the world under the Moon’s sphere. Often enough it is about phenomena and processes which take place in the *elementa media*, air and water, like vapor, rain, dew, hail and snow, winds, whirlwinds and the likes; and so one can say without big deviations that it is in general about facts related to “weather”. It is to be emphasized that Aristotle included here also the Milky Way and the comets, objects which he rejected to locate in the supralunar realm. Also lightning and thunder, the halo and the rainbow and even earthquakes are discussed. However, such an enumeration of facts should not lead the reader to think of any kind of “pure empiricism”; this work is for sure *not an encyclopedia* collecting varied information in natural history. The focus of the *Meteorologica* lays clearly on the *attempt to explain* these and other phenomena. Certainly, every explanation requires unavoidably the background of a more general theory, so that we always see Aristotle bringing up principles from his physics and his cosmology.

Aristotle’s *Meteorologica* seems to have been Oresme’s gateway to Aristotelian natural philosophy in general. It is not only that some other texts testified his interest in “meteorological” problems, but also that his first commentary (*prima lectura*) by Oresme on the *Meteorologica* is a very early text (1346). The here edited text is, however, not this one but the *ultima lectura*, a text which is also an early commentary by Oresme, datable in the later 1340s or early 1350s, and represents Oresme’s teaching on this matter at the Arts Faculty, probably short before he became a Great Master of Theology at the College of Navarre.<sup>4</sup> As a matter of fact, this version was considered until now the only one extant commentary by Oresme on the *Meteorologica*. Moreover, besides these two texts, there is still a third one, a literal commentary (a *sententia*) which also predates the *ultima lectura*. The identification of the different redactions and the differentiation with parallel texts by other authors (especially by Themo Iudeus) has given rise to a number of competing theses concerning the composition of the text itself and the various extant copies (the scribes also seem to have played an important role). Panzica explains all these problems and the opinions of Lynn Thorndike, Alexander Birkenmajer and Stephen McCluskey with precision and clarity (7-9).

A substantial part of the book is the comprehensive analysis of the manuscript tradition (10-65). The reader who is not used to work with manuscripts might find this part exhausting and would like to jump over these pages. I do, however, advise her/him to take

---

<sup>4</sup> There are some passages in the text where Oresme refers back to own works previously written (Aurora Panzica, “Nicole Oresme à la Faculté des Arts de Paris: Les Questions sur les Météorologiques”, *AHDLMA* 84 (2017): 7-89, 33. Two of these self-references are contained in the same question I. 8 (*utrum motus celi sit causa ignis in sua spera et etiam aeris superioris*, 156-163) and are conceptually of great significance. In the first one (162, lin. 8), Oresme refers back to his questions on *De caelo* when discussing the notion *impetus* in connection with the acceleration of the falling bodies. In the second one, immediately thereafter (162, lin. 17), Oresme mentions his questions on the *Physics* regarding his ontological examination of the concept of motion.

the needed time and to read them attentively since they contain very useful information. Panzica delivered a detailed analysis of the complete tradition of the text, with manuscript descriptions (including the full catalogue information and specialized bibliography and even considering the material features of the codices, the problems of the pagination, the structure of the fascicles and the details regarding the scribes) of the nineteen (!) codices which convey the text.<sup>5</sup> The scholar who is working on the manuscript tradition of the late medieval natural philosophy will find here a treasure of information possibly connected to her/his own research. Now, considering the manuscript tradition – the text was not printed in the Renaissance – the first striking fact in comparison to other Oresmian texts on natural philosophy is the unusual number of extant copies. The second evident fact is that the great majority of the copies belong to the German-Polish milieu, almost all indeed. There is only one copy in Paris (which is the ms. *P*, to which we will come back immediately) and, despite the extensive research work by Panzica in several European collections, only a partial list of questions in a Vatican manuscript (no other Italian copies!). It is manifest that this text attracted the attention of several *magistri* of Central and Eastern European universities. Thus, we learn that “Oresme’s *Questions* had a great impact on the medieval reception of this Aristotelian text” (5), the *Meteorologica*. Moreover, Oresme’s text, which has been the source for the Parisian commentaries by Albert of Saxony and Themo Iudaeus, was especially praised as a teaching tool at the university of Prague.

Now, the impatient reader may ask, why was the text edited only until the tenth question of the second book, if it is that important? Well, first of all, an edition of Oresme’s *prima lectura* by the author is ready to appear in the near future.<sup>6</sup> Second, and directly relevant to the understanding of this work, is the fact there is a sound, specific reason for this decision, a reason which is very-well connected to the transmission of the text itself. As Panzica plainly explains (65-75) there are two families of copies. One family comprises all copies except the Paris manuscript (BnF, lat. 15156); the other family includes all other eighteen copies (the Central and Eastern family, so to say). Through a further analysis the author has been able not only to show the different under-families within the group of copies, but also – and this is the point – to determine with accuracy the quality of the conveyed text. She concludes that the Paris copy – which by the way was not known to Birkenmajer – has to be used as a basis for the edition since it provides in general the better text, whereas all other copies “contain important errors and omissions which are not shared by *P* and which – states Panzica – I do not think could be ascribed to Oresme” (106). Hence, it cannot be but a good decision to take this manuscript as the basis for the edition

---

<sup>5</sup> There are nineteenth copies in total of the *ultima lectura*. Additionally, as registered in Daniel A. Di Liscia and Aurora Panzica, “The Writings of Nicole Oresme: a Systematic Inventory”, *Traditio* 77 (2022): 235-375, 256, a new copy has been identified in Berlin, SB - Preußischer Kulturbesitz, Fragm. Var. 573A, ff. 1ra-2rb which is only a fragment of book IV and therefore unusable for this edition that stops at II.10 (which is the end of the Paris manuscript).

<sup>6</sup> Aurora Panzica, *Nicole Oresme, Questiones in Meteorologica de prima lectura. Study of the Manuscript Tradition and Critical Edition*, forthcoming in the series *Medieval and Early Modern Philosophy and Science* (Leiden and Boston: Brill, 2023), ca. 450 pp.

and add, if relevant, some variant readings from the other copies when *P* fails to offer a good text. Now, the manuscript *P* “abruptly stops at question II.10 in the middle of a sentence” (*ibid.*) and for this reason the edition of the Latin text must also stop here, which is well understandable.

What makes this text especially interesting for the history of natural philosophy? Oresme’s questions *de ultima lectura* are also from a doctrinal point of view worthy to be studied. One of the most important novelties of this text is perhaps the fact that compared to the other Oresmian writings that were previously known, Oresme uses here astral influence as an explanatory principle for many more phenomena. Thus, for example, in question I.5, the recurrent variation of opinions – and in this context he refers among other things to the theory of great conjunctions. Also the treatment of light, its propagation and its effects is, perhaps even more in connection to the quality of “warm”, especially compelling (I.9). Oresme’s discussion of the problem of the proportionality between the four elements, namely earth, water, air and fire (I.6-7) is much more technical than the other commentaries on *Meteorologica* and constitutes a relevant source to be connected to his reflections in his edited *Questiones de generatione et corruptione*<sup>7</sup>. Studying this text, the reader realizes that Oresme’s critical reception of the Oxford *calculatores* has already begun, since he criticizes here the theory concerning the proportionality of the elementary spheres Bradwardine had proposed in his famous *Tractatus de proportionibus velocitatum in motibus*.

Regarding the nature of the Milky Way, in both commentaries Oresme rejects Aristotle’s atmospheric theory, claiming that the Milky Way is located in the celestial sphere and results from the reflection of the sunlight on parts of the heavenly matter which are less dense than the stars but denser than the orbs. Interestingly, he tries to “rescue” the text of the Aristotle’s *nova translatio* with a philological explanation, supposing that the presence of the atmospheric theory of the Milky Way resulted from a mistake made by the translator or even by a scribe.<sup>8</sup>

Finally, one could also add yet another thematic core to be mentioned, namely the discussion of the geological theory of permutations between seas and continental zones in II.9. Pierre Duhem, who found this theory in Buridan, attributed it to him, but this text by

---

<sup>7</sup> Nicolaus Oresme, *Quaestiones super De generatione et corruptione*, in Veröffentlichungen der Kommission für die Herausgabe ungedruckter Texte aus der mittelalterlichen Geisteswelt 20, edited by S. Caroti (München: Bayerische Akademie der Wissenschaften, 1996).

<sup>8</sup> “Dicendum est ergo quod galaxia est una pars celi; unde ymaginandum est quod alique partes celi sunt densiores et alique rariores, alique medio modo se habentes. Que sunt densiores, lucent et sunt stelle; que vero rariores, non lucent, et sunt ille partes que sunt prope stellas et inter illas. Alique sunt medio modo se habentes, ita quod non sunt ita dense sicut stelle nec sunt ita rare sicut alie partes celi que non lucent. Et sic se habent ille partes celi que sunt interpositestellis ibi existentibus ubi apparet Via lactea [...]. Ad auctoritatem Aristotelis respondetur quod illa non fuit opinio Aristotelis, sed erat interposita eius textui ex vitio scriptoris vel translatoris, quia hodierno tempore facientes scribere aliquos textus, videntes glosam quod eis placet in margine, dicunt suis scriptoribus quod illam glosam apponant textui, et ita potuit accidere textui Aristotelis” (I.19, 219-220).

Oresme reveals instead that it is a theory common to the Parisian milieu of those years, something not yet known.<sup>9</sup>

The book includes an Appendix showing the parallel passages in Aristotle's *Meteorologica*, for each question, a complete and well-ordered bibliography, as well as five indexes (of manuscripts, of sources, of concepts, of ancient names and of modern names). It goes without saying that this additional work makes the book an excellent research tool.

This is a complex and fascinating text, not only regarding the history of its transmission but also regarding its content. The reader who is not a specialist in the matter, could feel helpless with a naked Latin text without additional explanations on the theories discussed. However, Panzica is on the way of providing in the immediate future the needed help. And we are sure it will more than satisfy all the reader's needs and much more besides. In her comprehensive work (now in print), we will find an outstanding presentation of Latin medieval tradition of the *Meteorologica* commentaries, including, of course, a discussion of the Questions by Nicole Oresme here excellently edited.<sup>10</sup>

---

<sup>9</sup> See more in Aurora Panzica, "Les commentaires latins des Météorologiques: d'une climatologie astrologique à une climatologie mécanique" (in the forthcoming *De la Lune à la Terre*, ch. 20.3).

<sup>10</sup> Aurora Panzica, *De la Lune à la Terre: les débats sur le premier livre des Météorologiques d'Aristote au Moyen Âge latin (XIIIe-XVe siècles)*, forthcoming in the series *Studia Artistarum*, (Turnhout: Brepols), ca. 800 pp. I am very grateful to Panzica for having allowed me to enjoy the use of this work before its publication.