

ROBERT GROSSETESTE'S TRANSLATION  
OF SIMPLICIUS'S COMMENTARY  
ON ARISTOTLE'S *DE CAELO*:  
TRACKING DOWN A SECOND MANUSCRIPT  
AND THE GREEK MODEL

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Reconstructing how Robert Grosseteste translated Aristotle's *De caelo* and the commentary on the same treatise by the late-antique philosopher Simplicius into Latin is comparable to assembling a jigsaw puzzle for which half of the pieces are lost from the box. The work starts from a very sketchy overview, then progresses to some smaller details, and in the end the conclusions about the incomplete overall image remain largely tentative. Just imagine the excitement when a few missing pieces are found hidden under the rug and previously empty areas of the picture can be filled in.

In this article, I intend to present the pieces that were laid out by various scholars over the last century. Not many elements are available: an incomplete manuscript of the Latin translation of Aristotle's *De caelo* divided into lemmata and interspersed with Simplicius's commentary, a manuscript of Aristotle's text alone in a different translation but with variants taken from Grosseteste's version in its margins, and some rare references retrieved from another manuscript and from the Latin commentary tradition.

As my own contribution towards the eventual completion of the puzzle, my metaphorical pieces recovered from under the rug, I will describe new evidence in the form of previously unnoticed leaves from a second Latin manuscript of the commentary. The discovery will make a revision of commonly held opinions about the dissemination and the reception of Grosseteste's translation of Aristotle's *De caelo* and of Simplicius's commentary unavoidable. In addition, I will bring together observations about Grosseteste's Greek model that were published earlier and corroborate a neglected hypothesis with compelling new evidence.

I. *Chronicle of the Reconstruction*

The first indications that Grosseteste translated Aristotle's *De caelo* were announced by Ezio Franceschini in 1933.<sup>1</sup> Using the information that he received from Georges Lacombe, who at the time was preparing the manuscript catalogues for the *Aristoteles Latinus* project, Franceschini described the nature and content of the marginal notes in MS Città del Vaticano, Biblioteca apostolica Vaticana, Vat. lat. 2088 (henceforth: *Vt*). It was thought to contain William of Moerbeke's Greek-Latin translation of *De caelo*, usually called the *translatio nova* to distinguish it from the two older Arabic-Latin versions of the same text, one by Gerard of Cremona, the other of Averroes's commentary including Aristotle's text by Michael Scot. Several marginal notes in *Vt* are identified as variant readings originating from a *translatio d(omi)ni lincoln(iensis)*: little imagination was needed to postulate a hypothetical translation by Robert Grosseteste as their source. After the first chapter of the third book, the same hand wrote in the margin of fol. 21r: *huc usque d. R.*, which is the last annotation in the manuscript. Again the conclusion is obvious: *d(ominus) R(obertus)* produced an alternative translation of Aristotle's *De caelo*, which was left unfinished shortly after the beginning of book III (299a12).

The information published by Franceschini helped D. J. Allan to understand the peculiar situation that he found in MS Oxford, Balliol College, 99 (henceforth: *B*). On fol. 189r–319r, *B* contains a Latin text of Simplicius's commentary on *De caelo*.<sup>2</sup> Since the manuscript ends with a colophon that mentions William of Moerbeke as the translator, there seemed to be no obvious reason to doubt that attribution. Yet, two features of *B* struck Allan as odd. First, it is divided into two separate codicological units, each written by a different scribe. Some leaves are left blank after the end of book I, and a new copyist starts book II on a fresh quire. Secondly, throughout the manuscript there are marked differences in the way in which the lemmata of Aristotle's text are presented: some just give the first and last words of a paragraph separated by *usque illuc*, while in other sections the lemmata quote the relevant Aristotelian passages in full.

On the basis of a comparison between the marginal annotations in *Vt* and the lemmata of book II and of the first chapter of book III in *B*, Allan was able to prove

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<sup>1</sup> EZIO FRANCESCHINI, « Roberto Grossatesta, vescovo di Lincoln, e le sue traduzioni latine », *Atti del Reale Istituto Veneto di scienze, lettere ed arti*, 93/2 (1933–34), p. 1–138, in particular p. 57–60. The article is reprinted in EZIO FRANCESCHINI, *Scritti di filologia latina medieval*. Antenore, Padova 1976, p. 409–544.

<sup>2</sup> DONALD JAMES ALLAN, « Medieval Versions of Aristotle, *De Caelo*, and of the Commentary of Simplicius », *Mediaeval and Renaissance Studies*, 2 (1950), 82–120. Most recent description of the manuscript in RODNEY M. THOMSON, *Catalogue of Medieval Manuscripts of Latin Commentaries on Aristotle in British Libraries*, vol. I: Oxford, Brepols, Turnhout 2011, p. 211.

that they were all translated by Robert Grosseteste. Book I in *B*, which forms a separate codicological unit, is transmitted in the version by William of Moerbeke, as are the remainder of book III and the complete book IV. Allan could thus confirm what Franceschini had already concluded from the study of *Vt*: Robert Grosseteste's translation of *De caelo* did not stretch beyond the first chapter of book III. As far as book I is concerned, *B* gives no conclusive indications whether Grosseteste translated that as well.

Allan also observed that a marginal note in *Vt* gives a clear and obvious reference to Simplicius's commentary in the same version that is preserved in book II and the first chapter of book III of *B*. It makes it likely that Grosseteste is not only the translator of the lemmata, but also of the commentary.

Finally, Allan highlighted two clues in favour of the possibility that Robert translated at least some part of the text or the commentary of book I. First, *Vt* contains on fol. 6r a marginal annotation which its scribe introduces as if it is a variant translation of the Aristotelian text *in translacione d(omi)ni Lincoln*. In reality, it is a quotation from the commentary by Simplicius on the relevant passage in a Latin version that differs from the one by William of Moerbeke. The evident conclusion is that the quote originates from Grosseteste's elusive translation of Simplicius's commentary on book I. Furthermore, a note in MS Cambridge, Fitzwilliam Museum, McClean 155 (*Fö*) elaborates on a difficulty of Greek terminology by comparing it with an *alia translatio*.

Although the evidence brought together by Allan might be considered circumstantial, it leads to the very likely conclusion that Grosseteste's translation of both the Aristotelian text and of Simplicius's commentary started with book I and went on through the beginning of book III. We can only guess at the reasons why he did not complete the work.

A quarter of a century later, Fernand Bossier was able to confirm Allan's observations on several points in greater detail.<sup>3</sup> He determined the exact nature of the different methods of citation in the lemmata of *B*: the shortened ones mirrored what William of Moerbeke had found in his Greek model, while Robert Grosseteste translated Aristotle's text *in extenso*. Other initially shortened lemmata in William's text had been eventually completed in the model of *B* by some unidentified scribe who had a different manuscript of William's translation of Aristotle's *De caelo*. Bossier also furthered Lorenzo Minio-Paluello's discovery by proving that *Vt* preserves traces of Grosseteste's text not only in the marginal annotations, but that the text itself contains a contaminated version of

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<sup>3</sup> FERNAND BOSSIER, « Filologisch-historische navorsingen over de middeleeuwse en humanistische Latijnse vertalingen van de commentaren van Simplicius », vol. II: « De commentaar *In De caelo* », PhD diss., KU Leuven 1975, p. 22.001–22.048.

Moerbeke's translation mixed with elements from another version.<sup>4</sup> Since it was possible to compare these elements from book II with the translation of the lemmata in *B*, and since their characteristics turned out to be completely similar in the preceding part of the text, Bossier put it beyond doubt that Grosseteste translated *De caelo* from the start of book I through the first chapter of book III.

## II. Reception of Grosseteste's Translation

What can be more naturally expected from a translation that only partially survives in a single manuscript than that its impact on the medieval scholarly community was rather limited? That initial assumption is confirmed by the observation that virtually all relevant evidence has a more or less explicit link with Britain, where Grosseteste's translation was produced. First and foremost, manuscript *B*, the presumed *codex unicus*, was written by two British scribes and donated to Balliol College by Robert Clothale, a student of the more famous philosopher Simon of Faversham. The hand that wrote the annotations taken from Grosseteste's translation in *Vt* is identified as English. Only *Fö*, which contains a few potential references to Grosseteste's version, is thought to be of Parisian origin and was bought by British collectors in modern times.<sup>5</sup>

Since the translation apparently circulated in one preserved and a very limited number of hypothetical and lost copies, it is only normal that few users of Grosseteste's Simplicius have so far been identified. Negative results are reported for the philosophical works of Walter Burley and Roger Bacon, who do use the translations of *De caelo* and of Simplicius's commentary, albeit in Moerbeke's Latin. Allan claimed that Grosseteste did not have his own translation at hand but rather the *translatio vetus* by Gerard of Cremona when he cited *De caelo*. Against this view, Cecilia Panti's recently argued that Grosseteste used all Latin versions of *De caelo*, including his own translation of Simplicius's commentary, in some of his philosophical and theological works.<sup>6</sup>

A clear favourite to have known and used Grosseteste's translation must be Simon of Faversham. His student Robert Clothale owned manuscript *B*, the only extant copy of Grosseteste's version. In one of the few commentaries on Aristotle's natural philosophy by Simon of Faversham that has received modern scholarly attention, Michael Stenskjær Christensen found an explicit reference to

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<sup>4</sup> LORENZO MINIO-PALUELLO, « Guglielmo di Moerbeke traduttore della *Poetica* di Aristotele (1278) », *Rivista di Filosofia Neo-Scolastica*, 39 (1947), p. 1–17, reference on p. 5, n. 1. The article is reprinted in LORENZO MINIO-PALUELLO, *Opuscula. The Latin Aristotle*, Hakkert, Amsterdam 1972, p. 40–56.

<sup>5</sup> RODNEY M. THOMSON, *Catalogue of Medieval Manuscripts of Latin Commentaries on Aristotle in British Libraries*, vol. II: Cambridge, Brepols, Turnhout 2013, p. 36–37.

<sup>6</sup> CECILIA PANTI, « Il *De caelo* nel medioevo: le citazioni e la *translatio* di Roberto Grossatesta », *Fogli di Filosofia*, 12 (2019), p. 67–107.

book I of Simplicius's commentary. Although Simon's phrasing remains too far from Simplicius's actual terminology to clearly identify its source, Christensen assumes that Simon came to know the commentary during his stay as a professor at the Paris university in the 1270's and 1280's, when William's translation had probably just arrived there. Christensen adds: « Unfortunately we have no texts on *De caelo* ascribed to Simon, but it might be gleaned from his questions to the *Physics* or *Meteologica* (*sic!*) which translation he used. These texts have yet to be published and analyzed properly. »<sup>7</sup>

For the moment, the only indisputably documented references to Grosseteste's translation of Simplicius's commentary are found in the work of the thirteenth-century Franciscan poet Walter of Wimborne.<sup>8</sup> Little is known about his biography, but Walter may have lived and worked too early to have had access to William's complete translation, which was finished in 1271.<sup>9</sup> Still, the fact that this British author knew Grosseteste's rare translation conveniently confirms the logical assumption that it circulated in « an academic circle in which the late Bishop of Lincoln's literary remains, including *disiecta membra*, were readily accessible ».<sup>10</sup>

### III. Fragments of a Second Manuscript

These studies based on the available data led scholars to the *communis opinio* that Grosseteste's translations both of *De caelo* and of the commentary by Simplicius had a very limited circulation. It was thought to have been only known in academic and mainly Franciscan circles in Britain where the intellectual heritage of the renowned philosopher and translator was particularly treasured. My surprise was accordingly great to find the remains of a second manuscript of his translation with a provenance that can be unmistakably traced to a library in continental Europe.

The discovery of the new witness came as the result of my online visit to the virtually reconstructed library of the Clairvaux abbey, which was situated in the French Aube department about 200 kms east of Paris.<sup>11</sup> The Cistercian monastery was founded by Bernard of Clairvaux in the 12th century and abolished at the end of the 18th century in the wake of the French revolution. Its properties were then

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<sup>7</sup> MICHAEL S. CHRISTENSEN, « Simon of Faversham *Quaestiones super De motu animalium*. A Partial Edition and Doctrinal Study », *Cahiers de l'Institut du Moyen-Âge grec et latin*, 84 (2015), p. 93–128, quoted text on p. 95.

<sup>8</sup> DAVID TOWNSEND, « Robert Grosseteste and Walter of Wimborne », *Medium Ævum*, 55 (1986), p. 113–117.

<sup>9</sup> ANNA KIRKWOOD, « The *Tractatus moralis super quatuor elementa* of Walter of Wimborne », *The Journal of Medieval Latin*, 3 (1993), p. 64–77, see p. 77.

<sup>10</sup> TOWNSEND, « Robert Grosseteste », p. 116.

<sup>11</sup> <<https://www.bibliotheque-virtuelle-clairvaux.com>> (Accessed January 2022).

confiscated as « bien national » and the library books were dispersed. Most manuscripts were transferred to the Bibliothèque municipale in Troyes (now called Médiathèque Jacques-Chirac), but the list of partner institutions on the website of the library's virtual reconstruction illustrates the books' subsequent wide dispersal.

The direct incentive to look at a first fragment came from the library's printed catalogue. It records the presence of a vertically inserted leaf at the back of MS Troyes, Bibliothèque municipale, 1869 (henceforth: T1). Fol. Brv and a pastedown glued to the inside of the rear cover were taken from a thirteenth-century manuscript. They are described as probably containing a commentary on Aristotle's *De caelo* or *De generatione et corruptione*. That tentative identification was suggested by Charles Lohr in a letter from 1985.<sup>12</sup> In addition, the cataloguers dutifully recorded a few lines from the start and the end of the fragment, in which Alexander (of Aphrodisias) is mentioned.

When I entered these lines into the Aristoteles Latinus Database (<http://clt.brepolis.net/ald/>), the result was unexpected: the text on the fragment is identical with a passage from book II (H. 399–402)<sup>13</sup> of Simplicius's commentary on *De caelo* (Charles Lohr's identification was right in that respect), more precisely in the Latin version of Robert Grosseteste.

Since the manuscript itself, which contains commentaries on the Bible, dates from the 13th century, and a contemporary ex-libris attests its presence in the library of the Clairvaux abbey at that time, it is almost certain that the binding was produced in or for the same monastery. If that hypothesis is correct, it could not be excluded that more waste from the same Simplicius manuscript was recycled to reinforce or protect other bindings from the same origin. As I stated before, any supplementary information on Grosseteste's Simplicius translation must be considered extremely valuable. I therefore decided to search the available images of all manuscripts in the virtual Clairvaux library (1119 items) for further leaves recycled from the same vanished volume.

The result was both disappointing and encouraging. Just one more manuscript produced additional material from the lost Simplicius codex. MS Troyes, Bibliothèque municipale, 2000 (henceforth: T2), another thirteenth-century volume of Bible commentaries, preserves another leaf (fol. 250rv and a pastedown glued to the inside of the rear cover) from the same commentary (H.

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<sup>12</sup> ANDRÉ VERNET, JEAN-PAUL BOUHOT, JEAN-FRANÇOIS GENEST, *La bibliothèque de l'abbaye de Clairvaux du XII<sup>e</sup> au XVIII<sup>e</sup> siècle*, t. II, pt. 1: *Les manuscrits conservés. Manuscrits bibliques, patristiques et théologiques*, CNRS, Paris 1997, p. 436.

<sup>13</sup> The abbreviation H. followed by page (and line) numbers refers to the Greek edition by IOHANNES LUDOVICUS HEIBERG, *Simplicii in Aristotelis De caelo commentaria*, Reimer, Berolini 1894 (*Commentaria in Aristotelem Graeca*, 7).

384–388). In this case, the cataloguers merely indicated its nature as « fragmenta », and they failed to signal the connection with *T1*.<sup>14</sup>

As far as the method of re-use is concerned, the similar location of the fragments is conspicuous: in the two codices the original pages are cut and tilted vertically to be used as endleaf and as pastedown to protect the back cover. Strikingly, the flyleaves at the beginning of the two codices come from different discarded manuscripts. The cover of *T1* is described as consisting of wooden boards covered with parchment and dating from the 14th century, while *T2* has wooden boards that were covered with white leather in the 13th century.<sup>15</sup> There are traces of clasps visible on the two manuscripts. Although the bindings are not dissimilar, there are some technical reasons to date them to different periods (see the physical descriptions below). It seems therefore likely that the manuscript waste was inserted early in the history of the two codices, but probably not at the moment of binding itself.

It is difficult to adequately reconstruct the original characteristics of the manuscript from which the leaves were taken. The text is written in two columns of a *littera textualis currens*. The exclusive use of the high *s* at the end of words points to a date in the second half of the 13th century. The hand is typified by a great variation in letter forms, particularly visible in the *a*'s and the Tironian note for *et*.<sup>16</sup> The two columns are preserved for the greatest part in *T1*, while in *T2*, which is a considerably smaller codex, the binder cut away the best part of one column (see the physical descriptions below). However, since the latter manuscript also partially preserves a margin (fol. 250r), its layout holds an interesting surprise in the form of a single marginal note that clearly belongs to the original layout of the manuscript (see next paragraphs).

Scribes of commentary volumes followed a standard practice in formatting their pages. The lemmata from the original text were graphically distinguished from the (usually longer) commentary sections by using a slightly more spaced letter type and by separating the different content types by an open line.<sup>17</sup> The

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<sup>14</sup> VERNET, BOUHOT, GENEST, *La bibliothèque*, p. 230.

<sup>15</sup> DOMINIQUE GROSSEDIER DE MATONS, PHILIPPE HOFFMANN, *Inventaire sommaire des reliures anciennes (manuscrits et incunables) de la bibliothèque municipale de Troyes*, s.l., s.d., p. 54 and 58, date each of the two bindings one century earlier, but that conclusion cannot really be aligned with the palaeographical analysis of the manuscripts.

<sup>16</sup> Information kindly provided by Professor Erik Kwakkel in a private mail (28 January 2022).

<sup>17</sup> The Clairvaux manuscript is not the only Latin Simplicius manuscript to have succumbed to a binder's knife. Over the last years, fragments of two manuscripts containing William of Moerbeke's translation of Simplicius's commentary on the *Catégories* came to my attention that are not listed in the edition (ADRIAAN PATTIN, *Simplicius. Commentaire sur les Catégories d'Aristote. Traduction de Guillaume de Moerbeke*, vol. I, Publications universitaires de Louvain – Béatrice Nauwelaerts, Louvain – Paris 1971; vol. II, Brill, Leiden 1975). Both fragments are still *in situ* in their original bindings. The first is found in MS Göttingen, Benediktinerstift, Cod. 154 (rot) / 162 (schwarz), a manuscript with a miscellaneous (mainly religious) content from the first half of

previously unique witness for Grosseteste's translation of Simplicius's commentary, manuscript *B*, presents the text in that format. It was precisely the divergent range of the contents of the lemmata in book II compared to those in the other books that led Allan to recognize it as different from Moerbeke's translation. Additionally, in *B* every section of lemma or commentary is indicated by initials alternating in red and blue.

The Clairvaux manuscript was far more discrete in this respect. The lemmata have the same layout as the commentary text, no open lines separate the sections, and only occasionally room is left for initials of two lines high (*T1*, fol. Br; *T2*, fol. 250r), which were not executed. In the second instance, the scribe has indicated the letter to be filled in for the benefit of the rubricator, but the space remained open (in *T1*, only the open space is visible since the margin was trimmed off). In order to visualize where the transitions between text and commentary lie, the scribe turned to an unusual form of signposting. In the margin of fol. 250r in *T2*, the abbreviations *ar(istoteles)* and *simplici(us)* can be seen, which indicate where either a text or a commentary section starts. The letters are drawn with a finer pen than the text itself, the same pen that wrote the letters indicating the planned initials, which clearly shows that the two types of indication were added by the same scribe. In all likelihood, more of those indications were present in the margins, but unfortunately the few other marginal surfaces that are still visible do not provide confirmation for that hypothesis.

The extremely fragmentary preservation of the manuscript from which *T1* and *T2* are the only extant remains obviously encourages to have guesses about its original composition. There is no evidence to conclude whether that manuscript of Grosseteste's version was more complete than *B*. On the basis of the leaves that were preserved, which must have been relatively close to each other in the manuscript and may have come from the same quire, it cannot be

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the fifteenth century. The Simplicius fragment is a bifolio that forms the front pastedown and flyleaf. It dates from the second half of the 14th century. Its text coincides with 455.92-458.70 and 422.62-433.57 ed. PATTIN. For a catalogue description and further bibliography, see <<https://manuscripta.at/?ID=36865>> (accessed June 2022). The other fragment was used as binding waste in a printed 1546 Lyons edition of Artemidorus (Cleveland, Case Western Reserve University, Kelvin Smith Library Special Collections, BF 1080.A7; <<https://catalog.case.edu/record=b1339572>>, accessed June 2022). On the basis of photographs of the fragments, I was able to identify the text passages as 152.49-53;154.13-16;156.92-157.98;159.60-64 ed. PATTIN. A preserved lemma of Aristotelian text is differentiated from the commentary by the use of larger characters. The lemma opens with an initial in red and blue. I am grateful to Eric Johnson and William Claspy for reaching out to me about this fragment and for providing the images. From a quantitative perspective, these two fragments significantly change our view on the Latin transmission of Simplicius's commentary on the *Categories*. Pattin cites twelve extant witnesses of the translation. The loss of at least two others sheds a different light on what we know about medieval preservation and – particularly – loss.

decided how the situation in the original manuscript related to the condition of *B*. Its lack of rubrication can point to an unfinished state, but that would hardly have been a sufficient reason to discard the manuscript since many medieval manuscripts survive without finished initials. And if the deficiency of the manuscript offended its owner, why did he even bother to have a copy made of what was visibly an incomplete commentary?

#### IV. *Critical Value of the Text of T1 and T2*

If any given text was previously only known from a *codex unicus* and a second witness is identified, however fragmentary it may be, it immediately raises the question which information the new discovery can yield to increase our knowledge of the tradition's hypothetical archetype and ultimately of the translator's own copy.

In the case of Grosseteste's Latin Simplicius, the find not only brings new evidence for the text of the translation, but it also adds uncertainty and confusion regarding the original layout of the commentary. For as long as *B* was the only witness, it seemed perfectly natural to suppose that its arrangement represented how Grosseteste intended to organize his translation, segmented in clearly distinguishable sections of commentary and text. With the more sober and less spacious, and accordingly less expensive layout of the newly identified manuscript, we are faced with the problem to decide which scribe introduced the innovation and changed the layout as he found it in his model. On the basis of the now available evidence, we cannot determine whether Grosseteste prioritized a clear and spacious overview or a less expensive and therefore more cramped execution.

As far as the text is concerned, progress towards a more correct text constitution is likely to be made if we take into consideration what is called « la qualité médiocre du seul témoin », i.e. *B* (see my transcriptions below).<sup>18</sup> The fragments *T1* and *T2* preserve six single words and four longer passages that are missing from *B*. The fragments also have the right readings for numerous small mistakes that are found in *B*, most of which were already corrected by Fernand Bossier in his unpublished transcription (see n. 35). Just once a variant in *T2* is consistent with a different reading in the Greek tradition, but the omission of *igitur* in a combination with *quidem* could easily have occurred independently in the Latin tradition, especially since *T1* and *T2* leave out one or more words in about ten instances where the text of *B* clearly agrees with the Greek original. From these observations we can conclude that the fragments *T1* and *T2* originate

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<sup>18</sup> FERNAND BOSSIER, « Traductions latines et influences du commentaire *In De caelo* en occident (XIIIe–XIVe s.) », in ILSETRAUT HADOT (ed.), *Simplicius, sa vie, son œuvre, sa survie*, De Gruyter, Berlin – New York 1987, p. 289–325, quotation on p. 290.

from a manuscript that was rather carelessly copied, just like *B*, and that *B* certainly was not its model.

Whether *B* and the original manuscript from which *T1* and *T2* were removed were copied from a common intermediate model, is difficult to establish. A few errors can easily be explained as reading mistakes based on typically palaeographical features, in particular « *dexter autem* » (H. 384.34; *dexteram BT2*) and « *quem* » (H. 400.10; *quoniam BT1*). However, in a few other cases where Bossier made changes to the Latin version based on a comparison with the Greek text, *T1* or *T2* support *B*'s apparent mistakes, especially Bossier's deletion of the apparently superfluous « *utique* » in an Aristotelian lemma (285b2) and the addition of « *quoniam* » (H. 400.29) that seems necessary in the sentence on the basis of the Greek text. These small mistakes possibly point to the use of a common intermediate model by both *B* and *T1/T2*. Yet the same evidence could just as well indicate that the errors were already present in the translator's copy. The reduplication of « *utique* » may have been caused by uncertainty about its correct position, especially if the translator had initially forgotten to translate it and later added it between the lines or in the margin. As for the « *quoniam* » supplemented by Bossier, the Greek ὅτι apparently warrants that it is needed, but its absence might be due to the inadvertence of the translator or to an accident in the Greek or Latin tradition.

#### V. Value of *T1* and *T2* for the Reception of Grosseteste's Translation

As a result of their limited extent and their less than exceptional quality, the preserved fragments from the Clairvaux manuscript scarcely increase our knowledge of the text of Grosseteste's Latin translations of *De caelo* and of Simplicius's commentary on the treatise. The fragments' indisputable importance rather lies in the awareness that at least one other manuscript circulated during the thirteenth century and, as a consequence, that the interest in the translation went beyond the British, Franciscan, and academic circle that was previously thought to have held the exclusivity (see n. 10). This new evidence proves that the translation had arrived on the continent only decades after Grosseteste had completed it. Admittedly, as far as we can judge, its spread stopped with this single copy, which was not granted a long life on the shelves, and the leaves were recycled in the centuries after the original manuscript was made.

It is tempting to speculate which course the Latin text followed after leaving the translator's desk and Oxford, and who facilitated its distribution. The Cistercian monastery of Clairvaux in the north-east of France was not very likely considered such a bustling centre of learning that it formed the translation's intended destination. As often happened, a monk may have copied it during his academic studies in Paris and brought it with him to his monastery's library after

his return from the capital. The scribe who wrote the manuscript definitely shows no insular influences in his handwriting.<sup>19</sup> Yet, contact between Britain and Paris was frequent with students and teachers going back and forth. One of those English professors in Paris was mentioned earlier in this article: Simon of Faversham was the teacher of Robert Clothale, the early owner of manuscript *B*. In that capacity, Simon must have known about the existence of Grosseteste's translation. He might have travelled to Paris in the early 1270's with a copy of Grosseteste's Simplicius in his book trunk, which then became the model of our lost Clairvaux manuscript.

This hypothesis is perfectly consistent with the evidence, but at the same time totally unprovable. Moreover, it results in an unhealthy form of circularity, which turns Simon of Faversham into the pivotal figure in the spread of Grosseteste's translation on the mere basis of his professional interest in Aristotelian science and of his presence in Oxford and Paris in about the right timeframe. If the account were correct, Simon would have first brought Grosseteste's Latin version of Simplicius's commentary on *De caelo* to Paris, only to return with Moerbeke's translation of the same text to Oxford, where the latter translation eclipsed book I of the former in the only extant substantial witness *B*. If a story is too good to be true, it usually is not true at all. Ironically, Simon of Faversham is known to have written commentaries on several Aristotelian treatises, but *De caelo* seems not to be among them.

Whatever the background of the lost Clairvaux manuscript was, and however few new readings the preserved fragments *T1* and *T2* yield for the constitution of the translation's text, their discovery is of major importance to correctly understand the reception of Grosseteste's Simplicius translation. The find demonstrates that its influence went further than the limited circle of the Franciscan's closest pupils in Britain and that it is very well possible that additional evidence for its use lies waiting to be found in libraries on the European continent.

#### VI. Grosseteste's Greek Model

Scholars agree that *B*, which is the only manuscript to transmit the whole of book II of the Aristotelian lemmata and of Simplicius's commentary, is a rather carelessly executed copy. Yet, Grosseteste's Latin is of great importance for the *recensio* of the Greek text since it was based on a lost manuscript (henceforth:  $\Sigma$ ), allegedly of a different family from the ones that Heiberg examined for his edition. Moreover, most Greek manuscripts lack several sections of book II, some

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<sup>19</sup> Kindly confirmed by Professor Erik Kwakkel in a private mail (28 January 2022).

even more than half of the entire text – all supplementary information on those passages must be considered extremely valuable.

It is therefore all the more surprising that a promising hypothesis regarding Grosseteste's Greek manuscript still remains to be investigated fully. In her 1988 article about the Greek studies of Robert Grosseteste, Carlotta Dionisotti points to the important role played by the scribe John Serbopoulos in the transmission of the Greek commentaries on the Aristotelian *Ethics* that were translated by Grosseteste. The only two surviving Greek manuscripts were both copied by Serbopoulos in the last decade of the 15th century. Dionisotti concludes that if we « chase John Serbopoulos, we may find direct copies of Grosseteste's books even where the originals are lost. »<sup>20</sup> Her first suggestion to start the search party is Simplicius's commentary on *De caelo*. Serbopoulos's copy of that text is MS Oxford, Corpus Christi College 109 (henceforth as in Heiberg's edition: *e*). Dionisotti could not confirm that the manuscript was copied on the basis of Grosseteste's Greek model  $\Sigma$ , but she states: « a few sample checks that I have made suggest that it at least belongs to the same family. »<sup>21</sup>

However likely the identification clearly is, I have found no suggestion that the issue was further investigated either by Dionisotti or by anyone else. As a result, a conspicuous feature of Grosseteste's Latin Simplicius text in the form in which *B* transmits it remains unexplained. The unique Latin witness omits the first paragraph of book II, an overview of the subject matter treated in book I (the missing part is virtually identical with the text on page 365 of Heiberg's edition). The divergent opening made it necessary for the translator to change a demonstrative pronoun ταῦτα to a generalizing relative pronoun *Que* (*in primo libro ... demonstravit*) since the preceding summary to which it points was missing in Latin.<sup>22</sup>

As Allan logically analysed, there are three possible reasons for the omission: (1) the choice of the translator not to translate the section, (2) an incomplete model (missing book I and the beginning of book II) on the desk of a Latin scribe, or (3) an incomplete Greek manuscript in the hands of the translator.<sup>23</sup> If hypothesis (3) is the correct one and  $\Sigma$  is to blame for the missing section at the beginning of book II, we might foster some hope of finding an explanation or a confirmation in *e*.

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<sup>20</sup> ANNA CARLOTTA DIONISOTTI, « On the Greek Studies of Robert Grosseteste », in ANNA CARLOTTA DIONISOTTI, ANTHONY GRAFTON, JILL KRAYE (eds.), *The Uses of Greek and Latin. Historical Essays*, Warburg Institute, London 1988, p. 19–39, quotation on p. 30.

<sup>21</sup> DIONISOTTI, « On the Greek Studies », p. 38.

<sup>22</sup> ALLAN, « Medieval Versions », p. 108.

<sup>23</sup> ALLAN, « Medieval Versions », p. 109.

According to Allen, « all the surviving Greek manuscripts are defective at the end of Book I ».<sup>24</sup> The missing text (H. 361–364) was supplemented by Heiberg from William of Moerbeke's Latin translation. As far as the end of book I is concerned, *e* is no exception to the general rule: it lacks the same section as the other Greek manuscripts. Yet the situation is divergent for book II. Like in *B*, the first page of text is absent (H. 365), but in addition *e* also misses the next page (H. 366): the text of book II starts with the words οὐδὲ ἦν, ὅτε οὐκ ἦν (H. 367.1).<sup>25</sup> Although the missing parts at the beginning of book II do not perfectly coincide in *B* and in *e*, it is easy to imagine how events may have occurred. When Grosseteste used  $\Sigma$  in the 13th century as the model for his translation, he skipped the first page because it was corrupted in some way and therefore unreadable. Two and a half centuries later, the initial corruption had become worse and Serbopoulos started the copy of  $\Sigma$  further in book II where he was able to decipher its text. That hypothesis finds a corroboration in Bossier's analysis of the first pages of translated commentary in *B* (through H. 387). He concludes that the clumsy phrasing of the Latin text there probably results from a strictly literal translation or the *ad sensum* conjectural reconstruction of what Grosseteste could discern with difficulty on the heavily damaged pages of  $\Sigma$ .<sup>26</sup> The exact nature of what may have caused the damage to the beginning of book II in  $\Sigma$  remains unexplained.

Since all indirect evidence seems to confirm that the Latin translation by Robert Grosseteste and the Greek manuscript *e* were both based on the same lost model  $\Sigma$ , the obvious next step is to compare textual elements in both witnesses in search for significant similarities or differences. For if *e* can be shown to be a copy of  $\Sigma$ , its value for the textual transmission of Simplicius's commentary on *De caelo* would have to be reassessed, since in book II where Grosseteste's Latin is extant it would constitute a supplementary witness for that particular branch of the text tradition, and in the other books of the commentary it would be its only source.

Unfortunately, Heiberg is very reticent on *e*, which he wrongly dates to the 16th century. He claims that it is a descendant of MS Modena, Biblioteca Estense Universitaria, III E 8, with MS Napoli, Biblioteca Nazionale, III D 10 as a possible intermediary, but the few readings that he reports (from the beginning and the end of the commentary and therefore useless for a comparison with Grosseteste's Latin) do not confirm that claim at all.<sup>27</sup>

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<sup>24</sup> ALLAN, « Medieval Versions », p. 109; Allan's emphasis.

<sup>25</sup> NIGEL WILSON, *A Descriptive Catalogue of the Greek Manuscripts of Corpus Christi College Oxford*, Brewer, Cambridge 2011, p. 22.

<sup>26</sup> BOSSIER, *Filologisch-historische Navorsingen*, p. 22.036–22.038.

<sup>27</sup> HEIBERG, *Simplicii in Aristotelis De caelo*, p. xv–xvi, and JOHAN LUDVIG HEIBERG, « Handschriftliches zum Commentar des Simplicius zu Aristoteles de caelo », *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin* (1892), p. 59–76, especially p. 62, about *e* « habe

Subsequently, I turned to direct evidence and examined the text of *e* on fol. 156r–157r, which coincides with H. 367.1–370.12.<sup>28</sup> Although I collated only this limited section of the manuscript, it provides sufficient evidence to confirm that Dionisotti's suggestion was correct and that *e* was copied from  $\Sigma$ , the lost manuscript that Robert Grosseteste used as the model for his Simplicius translation.

First, several readings in which *e* deviates from the text printed by Heiberg have an equivalent in Grosseteste's Latin. Although the variants are mostly minor, their quantity seems to confirm that there exists a link between the two witnesses. The transpositions at 368.27 and 370.5 carry particular weight, since it is not very likely that a scribe and a translator will decide independently from each other to change the word order in precisely the same passages (even if in the latter instance the Greek singular becomes a Latin plural – the sloppy scribe of *B* might be the one to blame for that mistake).

367.9 οὐ] οὐτε *e* : neque *B*

367.24 καί<sup>4</sup>] *om. e* : *om. B*

368. 9 οὐρανοῦ] οὐρανίου *e* : celestem *B*

368.10 τὸν] + ἐπ' *e* : quod in *B*

368.27 φησί, πιστὸν] *transp. e* : credible ait *B*

369.26 οὖν] *om. e* : *om. B*

370.5 ἔχουσιν ὑπόληψιν] *transp. e* : suspiciones habent *B*

Admittedly, in some significant passages Grosseteste follows the text of Heiberg's edition against the reading of *e*. In those cases, the scribe of *e*, John Serbopoulos, probably made a mistake or he was no longer able to decipher a particular word in  $\Sigma$  that Grosseteste had clearly read two centuries earlier.

367.6 ἀεὶ] ἔτα *e* : semper *B*

368.30 ἀληθές] ἀγαθὸν *e* : verum *B*

369.10 τοῦ κόσμου] τοῦ ὅλου κόσμου *e* : mundo *B*

369.20 οὐκ] οὐδέ *e* : non *B*

The most convincing evidence, though, is provided to a considerable number of blank spaces left by Serbopoulos in his Greek copy. Several of them occur in exactly those passages where Bossier noticed semantic choices in Latin that were

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ich wenig Material, Torstrik hielt ihn für eine Copie von 1 <= MS Oxford, New College, 246, PB >; dann müsste er jedenfalls durchcorrigiert sein ».

<sup>28</sup> I am grateful to the library staff of Corpus Christi College, Oxford, and in particular to Harriet Patrick, for their assistance: they kindly sent me photographs without costs and within a day after receiving my email in which I enquired for information about the manuscript.

difficult to explain. He conjectured that Grosseteste either very literally translated what he thought to read in his Greek model or that he tried to supplement missing or unreadable words according to his understanding of the content. The blanks in *e* confirm the latter hypothesis: Serbopoulos's open spaces and Grosseteste's incomprehensible Latin were two different approaches to deal with the same difficulty, i.e. the presence of unreadable words in  $\Sigma$ .

- 367.18 ἀληθές] *om. in lac. e* : transponens *B*  
 367.25 ἀπὸ τοῦ διόπερ, καλῶς] *lac. + αὐτὸ e* : de celo propter bene *B*  
 367.26 σώματος, καίτοι κατὰ] *om. in lac. e* : corpore et propter *B*  
 367.27 μεταβαίνειν δοκοῦντος] *μετα + lac. e* : transcendere quod omne *B*  
 367.28 αἰῶνος, τουτέστι] *om. in lac. e* : seculi *B*  
 368.17 μετ' οὐρανοῦ] *με + lac. e* : mensura *B*  
 368.20 ὃν ὁ] *om. in lac. e* : quod fecit *B*

In contrast, several gaps in *e* are correctly translated into Latin. It suggests that the corruption in  $\Sigma$  was not so bad at the time when Robert used it, or that the translator in those passages successfully conjectured the content of what was missing.

- 367.13 τὸν κόσμον] *om. in lac. e* : mundum *B*  
 367.22 ἐκείνου] *om. in lac. e* : illo *B*  
 368.2 ἔχων] *ἐ + lac. e* : habens *B*

This limited survey may have clinched the identification of manuscript  $\Sigma$  that Grosseteste used for his translation of Simplicius's commentary on *De caelo*. More than two centuries after the translation was completed it was still in England, where John Serbopoulos copied it. Its condition probably worsened over time, which explains why Grosseteste was able to translate some words correctly where Serbopoulos left a blank in his copy.

Although we have now tracked down Grosseteste's Simplicius copy, an important issue remains open. While Grosseteste translated the complete text of Aristotle's *De caelo* in the lemmata between the commentary sections, the Aristotelian lemmata in *e* are abbreviated with the usual formula ἕως τοῦ separating the opening words of the section from the final sentence. Leaving aside the very unlikely possibility that Serbopoulos brought the formal aspects of the lemmata in line with other manuscripts of the commentary that he hypothetically saw before coming to England, the shortened Aristotelian text in *e* must mirror the situation found in  $\Sigma$ . Consequently, Grosseteste also had a Greek copy of *De caelo* in front of him. The layout found in *B* (and partially in *T1* and *T2*) in which lemmata of the philosopher's text alternate with commentary sections

was therefore conceived by the translator and not reproduced from an existing Greek manuscript. The conclusion must be that the quest for Grosseteste's model for Aristotle's *De caelo* remains open.

### VII. *Conclusions*

The discovery of fragments from an unknown manuscript of Simplicius's commentary on *De caelo* in the Latin translation by Robert Grosseteste changes some previously held opinions about the distribution of the work. It proves that at least one copy of the translation left the British isles and arrived on the continent, possibly after a passage in the academic circles in Paris. It is not unlikely that some indirect testimonies of the translation can still be traced in unpublished commentaries or other scholarly works from the late-thirteenth or fourteenth centuries.

A limited probe into a Greek manuscript of Simplicius's commentary produced in England in the late 15th century persuasively confirms the suggestion already published by Carlotta Dionisotti in 1988. The manuscript was copied from the model used by the translator in the 13th century, which was afterwards lost. That conclusion significantly upgrades the value of the manuscript for the transmission of Simplicius's commentary. For the eventual edition of Grosseteste's translation of book II and the first chapter of book III, the comparative apparatus has to rely chiefly on the readings preserved in *e*. As for the edition of the Greek text of all four books, *e* preserves the readings of a lost early manuscript. While Heiberg considered it an apograph of an extant manuscript from the 13th or 14th century and therefore only documented a few unimportant variants, the significance of *e* has to be re-evaluated on the basis of a full collation of the complete commentary.<sup>29</sup>

### *Postscript*

After the completion of this article, I had the opportunity to discuss its content with Thomas Falmagne (National Library of Luxemburg and Goethe-Universität Frankfurt am Main), to whom I am very grateful for his help. Dr. Falmagne has

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<sup>29</sup> I partly collected the information used in this article during a visit at the Médiathèque Jacques-Chirac in Troyes on 21-23 September 2022. I am extremely grateful to Émeline Pipelier, custodian of the patrimonial department, and to the library staff for their hospitality and their helpfulness. The research for this article was carried out as part of my postdoctoral fellowship project *Mind Your Words! The Role of Medieval Translations in the History of Concepts*, funded by the Research Foundation – Flanders (12W5722N).

done extensive research into the history of the Troyes library and its fragments.<sup>30</sup> We came to the somewhat paradoxical conclusion that the two bindings appear to be distant in time, but that the incorporation of the fragments must have happened during the binding process, since in the two manuscripts the threads that hold the quires together also pass through the parchment of the fragments. As a result, it remains difficult to pronounce an irrefutable judgement on the exact period when the Simplicius manuscript was discarded and recycled.

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<sup>30</sup> THOMAS FALMAGNE, « Documenter la philologie romane par des manuscrits: le choix de fragments utiles par le bibliothécaire troyen Auguste Harmand au milieu du XIXe siècle », in MARIE-GENEVIÈVE GROSSEL, JEAN-PIERRE MARTIN, LUDOVIC NYS, MURIEL OTT, FRANÇOIS SUARD (eds.), *Mélanges de langue, d'histoire et de littérature offerts à Jean-Charles Herbin*, t. I, Presses Universitaire de Valenciennes, Valenciennes 2019, p. 253–284.

*Appendix*

I. PHYSICAL DESCRIPTIONS OF THE HOST VOLUMES AND BINDINGS

**Troyes, Bibliothèque municipale, MS 1869<sup>31</sup>**

Parchment manuscript from the 13th century, A + 235 + B folios (early-modern numbering), 175 x 124 mm. Binding from the 14th century, wooden boards covered in white leather with an early-modern content label pasted on the spine. The manuscript contains Gregory the Great's *Expositio on the Song of Songs*, lavishly executed with many brightly coloured illuminations, which are protected by variously coloured pieces of cloth sewn onto the parchment.

The front pastedown of the manuscript was taken from a thirteenth-century religious manuscript. On its upper left, a nineteenth-century label is pasted over the text. In the unidentified text of the remaining part, the name of Augustine can be read. There are traces of bookworm and the curling edge reveals part of the verso and of another strip from the same manuscript. The inside of the spine is lined with a strip of parchment from an unidentified manuscript with writing different from the other fragments that were used in the binding.

The back flyleaf (numbered in modern pencil with a Roman numeral « III », but indicated by the letter « B » in the catalogue) and pastedown are produced from a leaf, tilted and trimmed to fit the size of the cover. There are traces of bookworm. One column of text is completely preserved, the other one for the largest part. The last verso is glued to the cover and remains invisible.

**Troyes, Bibliothèque municipale, MS 2000<sup>32</sup>**

Parchment manuscript from the 13th century, A + 250 folios (modern pencil numbering), 138 x 103 mm. Binding from the 13th century, covers in white leather with an early-modern content label pasted on the spine. The gatherings are glued unto the spine, which makes it likely that the binding was produced at an earlier date than the one covering MS 1869. The manuscript contains various biblical study tools and commentaries.

Both the front and the back flyleaves are pages of which one part is glued as pastedown to the inside covers. The front leaf was originally empty. On the recto of the second leaf (fol. Ar) the rhyming prayer « Summe summi tu Patris unice », wrongly attributed to Bernard of Clairvaux, is copied in a thirteenth-century hand. The verso (fol. Av) contains five lines of typical school and grammar content: two lines of verbs in the first person singular (« Construo, sacro, cano,

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<sup>31</sup> VERNET, BOUHOT, GENEST, *La bibliothèque*, p. 435–436.

<sup>32</sup> VERNET, BOUHOT, GENEST, *La bibliothèque*, p. 228–230.

privo, voco, corrigo, viso, fleubothomus [*sic!*] / condo, meo, capio, do, vendo, laos mo [?] »), then a line taken from Eberhard of Béthune's *Graecismus*, IX, 46 (« Ille sororius est, cuicumque soror mea nubuit »),<sup>33</sup> finally two verse lines of equivocal terminology as in Conrad de Mure's *Novus Graecismus*, II, 598–599 (« Glos, glossis lignum vetus est de nocte serenum / flos est glos glotis – glos gloris femina fratris »).<sup>34</sup> Tony Hunt notes that a similar « passage is frequently encountered in works dealing with *equivoca* ». <sup>35</sup> Even if Eberhard or Conrad may not be the direct sources for these *probationes pennae*, it seems likely that the cataloguers' decision to date these very commonly used lines (on the basis of the script?) to the end of the twelfth century is too early. The shelfmark d.36. refers to the 1472 catalogue of the library of the Clairvaux Abbey.

The leaf that consists of fol. 250 (modern pencil numbering horizontally between the two columns) and the pastedown glued to the back cover is tilted and trimmed to fit the size of the cover. As a result, only one of the two columns on each page can still be (vertically) read, the other is very partially preserved. The verso of the second half cannot be inspected.

### Hypothetical physical appearance of *T*

The original manuscript from which *T1* and *T2* were recycled was written in two columns with ca. 50 lines of slightly varying width (between 70 and 76 mm) and a height of ca. 260 mm. The columns are separated by margins of 11/13 mm. The outside margins are 20 mm, the top and bottom margins as they are preserved measure 18 and 28 mm respectively. These measurements suggest that the leaves of the original manuscript were ca. 310 mm high and 205 mm wide.

## II. TRANSCRIPTIONS

Below follows the transcription of the readable passages of the fragments *T1* and *T2*. They are logically ordered according to Heiberg's Greek edition (abbreviation H. followed by page and line numbers). The Latin text is based on the typescript edition prepared by Fernand Bossier, which is a transcription of *B* with corrections resulting from the comparison with the Greek text of Heiberg's edition.<sup>36</sup> When it is impossible to decide between two variants, the reading of *B*

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<sup>33</sup> JOHANNES WROBEL, *Eberhardi Bethuniensis Graecismus*. Corpus grammaticorum medii aevi, vol. I, Koebner, Uratislaviae 1887, p. 56.

<sup>34</sup> ALEXANDRU N. CIZEK, *Konrad von Mure. Novus Graecismus*, Fink, Paderborn 2009, p. 135.

<sup>35</sup> TONY HUNT, *Teaching and Learning Latin in Thirteenth-Century England*, Boydell and Brewer, Woodbridge 1991, vol. I, p. 140.

<sup>36</sup> FERNAND BOSSIER, *Aristoteles. Over de hemel, de hemellichamen en de aarde. Het tweede boek van "De Caelo" met de commentaren van Simplicius in de latijnse vertaling van R. Grosseteste*, unpublished

and Bossier is retained in the text. Passages in italics indicate that text is missing in *T1* or *T2*: those (partial) words only rely on *B* and Bossier. As far as spelling is concerned, I have opted for the medieval orthography of the manuscripts instead of classicizing adaptations that are customary in the editions of the *Corpus Latinum Commentariorum in Aristotelem Graecorum*. The autopsy of the fragments made it possible to transcribe several lines of text more than what is visible on the digital images.

### Latin manuscripts

*B* = Oxford, Balliol College, 99

*T1* = Troyes, Bibliothèque municipale, MS 1869

*T2* = Troyes, Bibliothèque municipale, MS 2000

Greek manuscript

*F* = Venezia, Biblioteca Marciana, gr. 228 (15th century)

*T2* fol. 250va

(H. 384.23) *differentiis*,<sup>37</sup> duas solas isti assumebant dextrum et sinistrum, quatuor derelinquentes<sup>38</sup> et sursum et deorsum et ante et retro; secundo, quoniam principales dereliquerunt et sursum et deorsum; hoc<sup>39</sup> autem per plura ostendit conamina: primum quidem, quoniam et in hiis<sup>40</sup> differentie manifeste sunt non minus quam a dextro ad sinistrum, vel verum quidem et adhuc magis naturalis<sup>41</sup> in hiis quam dextrum et sinistrum, velut dextera manus et sinistra et pedes similiter nichil<sup>42</sup> ad invicem secundum figuras differentes<sup>43</sup> potentia solum<sup>44</sup> differunt; manus quidem enim dextera sinistra fortior,<sup>45</sup> pedum autem sinister quidem ad firmari<sup>46</sup> magis aptus, dexter autem<sup>47</sup> ad incipere motum, et humerorum<sup>48</sup> similiter sinister<sup>49</sup> quidem ad gravia ferre, dexter autem<sup>50</sup> ad

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typoscript, Leuven s.d. Bossier's transcription is accessible in the *Aristoteles Latinus Database*, <[www.brepolis.net](http://www.brepolis.net)> (accessed January 2022).

<sup>37</sup> *differentias B : corr. Bossier*

<sup>38</sup> *relinquentes T2*

<sup>39</sup> *hec T2*

<sup>40</sup> *+ spere T2*

<sup>41</sup> *naturalius T2 : et naturalius susp. Bossier*

<sup>42</sup> *vel T2*

<sup>43</sup> *differentes secundum figuras T2*

<sup>44</sup> *sola B*

<sup>45</sup> *fortior sinistra T2*

<sup>46</sup> *+ quidem T2*

<sup>47</sup> *dexter autem] dexteram B : corr. Bossier*

<sup>48</sup> *humororum T2*

<sup>49</sup> *sinister om. B : add. Bossier*

moveri, quamvis secundum figuram nichil ad invicem differentia; caput autem a pedibus et rami a radicibus et totaliter que sursum ab hiis que deorsum et (H. 385) anteriora a posterioribus non potentia solum, sed et figura distincta sunt. Et hoc<sup>51</sup> igitur incusat Pythagoricis,<sup>52</sup> quoniam sex principiorum duo sola isti assumpserunt<sup>53</sup> magis differentia et principaliora derelinquentes, et secundo, quoniam communiora et universaliora derelinquebant, siquidem sursum quidem et deorsum omnibus animatis insunt similiter et animalibus et plantis, dextrum autem et sinistrum non existit<sup>54</sup> in plantis; et tertio, quoniam<sup>55</sup> prima natura derelinquentes posteriora assumebant; prius enim longitudo latitudine, siquidem linea superficie prior natura et (H. 385.9)

T2 Pastedown a

(H. 385.9) principiformior ut et signum linea, et siquidem ad longitudinem augmentatio prior fit<sup>56</sup> animalibus ea que in latum, et si cointerimit *quidem linea*, non cointerimitur<sup>57</sup> autem. *Si igitur longitudo latitudine prior*<sup>58</sup> natura, priorum<sup>59</sup> autem natura et principia priora, longitudinis ergo principia, hoc est<sup>60</sup> sursum et deorsum, hiis que latitudinis principiis, dextero<sup>61</sup> et sinistro, priora sunt natura. Multotiens autem priore dicto, vel positione ut in preiacentibus, vel ordine ut prohemia enarrationibus, vel potentia et honore ut princeps hiis qui<sup>62</sup> sub principatu, vel natura ut cointerimens<sup>63</sup> quidem, non cointeremptum<sup>64</sup> autem, vel tempore et generatione, ut pater filio, sursum, ait, dextero<sup>65</sup> secundum *generationem utique* erit prius, quia in longitudinem augmentatio, ut dictum est,<sup>66</sup> prior fit<sup>67</sup> animalibus ea que in latitudinem. Si igitur prior longitudo fit<sup>68</sup>

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<sup>50</sup> dexter autem *Bossier* : dexteram BT2

<sup>51</sup> hec T2

<sup>52</sup> pitagoricis B : pictagoricis T2

<sup>53</sup> assupserunt T2

<sup>54</sup> non existit *om.* T2

<sup>55</sup> + in B

<sup>56</sup> + in T2

<sup>57</sup> convertuntur B : *corr. Bossier*

<sup>58</sup> sic B : prius *Bossier*, sed prior *maluit*

<sup>59</sup> prior T2

<sup>60</sup> hoc est *iter.* B

<sup>61</sup> dextro T2

<sup>62</sup> que T2

<sup>63</sup> conterimens T2 : continens T2<sup>ac</sup>

<sup>64</sup> conteremptum T2

<sup>65</sup> + *utique* T2

<sup>66</sup> ut dictum est *om.* T2

<sup>67</sup> sit T2

<sup>68</sup> sit T2

latitudine, est autem longitudinis quidem<sup>69</sup> principium sursum, latitudinis autem dextrum,<sup>70</sup> et principium prioris prius utique erit secundum generationem. Quarto autem cum hiis, si sursum quidem est unde motus qui secundum augmentationem specificatur,<sup>71</sup> dextrum<sup>72</sup> autem a quo motus incipit,<sup>73</sup> et quod in ante in quod procedit ipse, principalior<sup>74</sup> autem et substantialior qui secundum augmentationem motus animali eo qui secundum locum, manifestum quoniam et sursum principaliorem potentiam principii utique habeat ad alias differentias; inconvenienter igitur dextrum et sinistrum assumentes, et sursum et deorsum derelinquebant. Sic quidem igitur *preparavit Aristoteles principialiores* (H. 385.30)

T2 fol. 250vb

(H. 385.32) *sursum dextero et eo quod ante ostendere, sed alterum solum; si enim altera proposita, altera et<sup>75</sup> secundum ipsa dicta principia. Tertio autem ipsis<sup>76</sup> accusat vel secundo, si quis ut [cum]<sup>77</sup> unum omnia prima accipiat principaliora derelinqui per ipsa dicens preparari, tertium autem igitur ipsis* (H. 386) *vel secundum inducit, quod communiter in omnibus existere hec principia existimabant illud quod secundum dextrum et sinistrum, quamvis quidem in inanimatis<sup>78</sup> non existentia secundum naturam; etsi enim dicantur et in illis, secundum eam que ad nos relationem dicuntur, ut dictum est prius. In omnibus autem ipsos dextrum et sinistrum dicere, assumpsit ex decem<sup>79</sup> coelementationibus, quas omnia omnium principia dicebant, unum quod secundum dextrum et sinistrum accipere, quia non ut in celo proprie hec speculabantur. Que igitur Pythagoricorum intentio et quo bene illis dicentibus Aristoteles ad apparens contradixit sermone? Pythagorici<sup>80</sup> quidem igitur<sup>81</sup> in duas coelementationes omnes contrapositiones reducentes, hanc quidem deteriolem, hanc autem meliorem, id est boni et mali, et<sup>82</sup> decadi symbolice ut omni numero complentes utramque, unamquamque contrapositionem decem sic assumebant ut omnes sui ipsius cognatas demonstraverunt. Et localium igitur habitudinum dextrum et sinistrum assumebant, simul quidem quoniam bonum et malum ostensa*

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<sup>69</sup> quidem om. T2

<sup>70</sup> dexterum T2

<sup>71</sup> specificantur B : corr. Bossier

<sup>72</sup> dexterum T2

<sup>73</sup> incipit motus T2

<sup>74</sup> principalio B

<sup>75</sup> et altera B

<sup>76</sup> ipsius T2

<sup>77</sup> del. Bossier

<sup>78</sup> animatis T2

<sup>79</sup> .x. B

<sup>80</sup> pitagorici B : piccagorici T2

<sup>81</sup> om. T2 : om. F

<sup>82</sup> om. T2

*sunt hec; dextram igitur naturam dicimus et dextram fortunam bonas ostendentes et sinistras contrarias; simul* (H. 386.17)

T2 Pastedown b

(H. 386.20) *sursum et ante et bonum vocabant, sinistrum autem et deorsum et retro et<sup>83</sup> malum dicebant, ut ipse Aristoteles ystorizavit in Pitagoricorum complacentium congregatione. Tota quidem igitur predictorum intentio dicta est, in hiis autem que secundum partem, cum dicat hiis quidem tales partes, dico autem velut et dextrum et sinistrum, in dictione autem et ante et retro et sursum et deorsum, que ut cognita per ipsa dicta futura pertransivit. Cum autem dicat has autem<sup>84</sup> distantias rationabile existere corporibus perfectis, non longitudinem dicit et latitudinem et profunditatem; hec enim omni corpori<sup>85</sup> existunt; sed tres contrapositiones, sursum deorsum, ante retro, dextrum et sinistrum. Perfecta autem corpora dicit, quecumque non solum vitam habent nutritivam et augmentativam, quemadmodum plante, neque sensum cum hiis solum, quemadmodum ζωοφυτα<sup>86</sup> sed et appetitum et secundum locum transmutationem, ut perfecta animalia; propter quod et induxit est autem sursum quidem longitudinis principium et que deinceps. Instare autem oportet et dictioni dicenti inanimatorum enim in nullo videmus unde principium motus et Alexandri enarrationi dicentis principium autem motus dicat utique potentiam motivam. Habent quidem enim et inanimata principium quoddam motus, siquidem sunt naturalia corpora, sed non movens principium habent neque motivam potentiam habent in se ipsis; extra enim est quod* (H. 387.10)

T2 fol. 250ra

(H. 387.13) *quidem natura movet celum,<sup>87</sup> qualiter autem anima, non dicendum, ut Alexander dixit, quoniam idem est illic et anima et natura; qualiter enim utique erit idem, siquidem natura quidem potentia passiva eius quod moveri est in subiecto existens moto, anima autem exterius movens? Non ergo idem dicendum animam et naturam in celo, eundem quidem motum secundum ambo moveri, sed secundum quidem animam ut moventem exterius, secundum autem naturam ut principium eius quod moveri inexistens. Cum autem de inanimatis dicat hec quidem enim totaliter non moventur,<sup>88</sup> hec autem moventur quidem, sed non undique similiter, non moveri quidem dicit proprium locum assumptia iam, in quo manent<sup>89</sup> ulterius, non undique*

<sup>83</sup> *add. T2 supra lin.*

<sup>84</sup> *+ ratio[...] T2*

<sup>85</sup> *corpori omni B*

<sup>86</sup> *ζωοφυτα Bossier : zorophita B : ztophyca T*

<sup>87</sup> *celum om. B*

<sup>88</sup> *movetur B : corr. Bossier*

<sup>89</sup> *movent T2*

*autem moveri, hoc est non secundum sex distantias, sed vel sursum solum, ut ignis, vel deorsum, ut terra. Sed ad ea que deinceps eundum.*

(285a27–31) *Nobis autem quia determinatum est prius quoniam in habentibus principium motus tales potentie insunt, celum autem animatum et habet motus principium, manifestum quoniam et sursum habet et deorsum et dextrum et sinistrum.*

*Causans Pythagoricos ut principaliora principia (H. 387.28) [...]ta non communia [...] communia*<sup>90</sup> (H. 387.29)

T2 fol. 250rb

(H. 388.21) *in ipso hoc libro de celestibus sed nos ut de corporibus solis ipsis et monadibus*<sup>91</sup> *intelligimus ordinem quidem habentibus, inanimatis autem omnino; oportet autem ut participantibus opinari actu*<sup>92</sup> *et vita; operari enim*<sup>93</sup> *rationalis anime est et secundum ipsum.*

(285a31–b8) *Non oportet enim dubitare propter speriformem esse figuram*<sup>94</sup> *omnis, qualiter erit ipsius hoc quidem dextrum hoc autem sinistrum, similiter quidem existentibus partibus omnibus et motis*<sup>95</sup> *secundum omne tempus, sed intelligere quemadmodum utique si quis utique,*<sup>96</sup> *in quibus habet dextrum ad sinistrum differentiam et*<sup>97</sup> *figuris,*<sup>98</sup> *deinde circumponat speram; habebit quidem enim potentiam differentem, videbitur autem non,*<sup>99</sup> *propter similitudinem figure. Secundum eundem utique modum et de*<sup>100</sup> *principio eius quod moveri; et enim si numquam incepit, tamen habere necessarium principium, unde utique incepit,*<sup>101</sup> *si incepit motum moveri, et si stet, moveatur utique rursus.*

*Postquam*<sup>102</sup> *demonstravit oportere et in celo querere talia principia duas latas adversus rationem hanc instantias et ponit et dissolvit hanc quidem communem*

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<sup>90</sup> non coram communia B : *crucem desperationis add. Bossier*

<sup>91</sup> *manadibus T2*

<sup>92</sup> *astu T2*

<sup>93</sup> *autem T2*

<sup>94</sup> *figuram esse T2*

<sup>95</sup> *motibus T2*

<sup>96</sup> *utique del. Bossier*

<sup>97</sup> *ad T2*

<sup>98</sup> *figuras T2<sup>ac</sup>*

<sup>99</sup> *vero B*

<sup>100</sup> *dei T2*

<sup>101</sup> *iterare coepit sententiam sed expunxit T2*

<sup>102</sup> *+ utique T2*

ad omnes has contrapositiones hanc a similitudine celi partium. Qualiter enim speriforme existens celum et similium<sup>103</sup> partium dextrum habet et sinistrum vel sursum et deorsum<sup>104</sup> vel ante et retro et figuris hiis differre debentibus? Ipse autem dextrum solum et sinistrum *nominavit* ab hiis, existimo, et alia ostendens quia dextrum (H. 389.1)

T1 Pastedown a

(H. 398.14) lativum, unam<sup>105</sup> et absolutam motum motionem; celum autem nunc mundum dicit; et respondet, quoniam necesse<sup>106</sup> manere quid corporis lati circulo quod in medio. Circulo enim principaliter motum et non motum habet aliquid omnino in medio,<sup>107</sup> circa quod manens<sup>108</sup> movebitur; etenim universaliter, si debeat quid moveri secundum locum, necesse manere aliquod corpus, a quo<sup>109</sup> movebitur vel circa quod, ut ostensum est in eo quod De motu animalium. Si enim dicat quis, quoniam circa centrum<sup>110</sup> ipsius movebitur, impossibilia videbitur dicere; centrum enim incorporeus<sup>111</sup> terminus existens non possibile manere motis hiis, quorum terminus est; non enim secundum se ipsum substitit centrum; non manente autem<sup>112</sup> centro, neque utique omne in eodem circumferetur. Alexander autem et hanc dicens enarrationem totum corpus celi *mundum* dici<sup>113</sup> existimantem, prehonorat tamen totum corpus celi circulo lativum audire, quare huius in medio manere quid, circa quod movebitur. Et quidem aliquod *manens* et in aliorum animalium motu ipsius aliqua erit<sup>114</sup> moti<sup>115</sup> pars, et quidem et ipse Aristoteles nunc dixit, quoniam necesse corporis quid<sup>116</sup> lati manere super medium; terra autem mundi pars quedam<sup>117</sup> est, non quidem celi. Et huic et ipse instans dixit huius autem nullam possibile manere partem, huius<sup>118</sup> dicens circulo lativi, sed non mundi, de quo prima dicta sunt. Et preparat per plura, quoniam *non est celi* pars terra, et quidem moti circulo pars esse vult

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<sup>103</sup> si nullum B : corr. Bossier

<sup>104</sup> vel sursum et deorsum om. T2

<sup>105</sup> unum B : corr. Bossier

<sup>106</sup> + est T1

<sup>107</sup> Circulo – medio om. T1

<sup>108</sup> movens T1

<sup>109</sup> ad quod T1<sup>ac</sup>

<sup>110</sup> susp. Bossier : centra B

<sup>111</sup> in corpore T1

<sup>112</sup> enim B

<sup>113</sup> diei B

<sup>114</sup> erit aliqua T1

<sup>115</sup> motu T1

<sup>116</sup> quidem T1

<sup>117</sup> + pars B

<sup>118</sup> autem – huius om. T1

*hoc quidem* in medio. Sed et Nicholaus (H. 399) Peripateticus<sup>119</sup> *circumloquens* hic dicta in hiis que De Aristotelis philosophia sic posuit dictionem: propter quid igitur non totus mundus talis? Quoniam necesse manere quid circa medium (H. 399.3)

T1 fol. Bva

(H. 399.4) in medio esse. Sed et ipse Alexander bene Aristoteli consequitur ostendenti manens super medium partem quandam non esse circulo lativi; nichil enim huius manere possibile neque alicubi; omnino enim ipsi motus sempiternus existit; neque adhuc magis in medio. Si enim mansit in medio secundum naturam, et ferebatur utique ad hoc secundum naturam; in quo enim quid manet secundum naturam, et fertur in hoc secundum naturam;<sup>120</sup> et erat ipsi secundum naturam motus ipse; unus autem<sup>121</sup> qui secundum naturam unicuique simplicium, huic autem circularis motus secundum naturam, siquidem sempiternus; non ergo qui ad medium; neque ergo in medio mansio neque toti neque parti ipsius secundum naturam, sed neque preter naturam.<sup>122</sup> Hoc quidem enim circulo lativum sempiternum habet motum, quod autem preter naturam non sempiternum; posterius enim est eo quod secundum naturam quod preter naturam, quia extasis est quod preter naturam eius quod secundum naturam in generatione, quod autem extrastans ab aliquo et preterstans posterius<sup>123</sup> est eo, a quo extrastat.<sup>124</sup> Et totaliter, si in<sup>125</sup> generatione quod preter naturam, ubi<sup>126</sup> neque quod secundum naturam sempiternum est, qualiter utique erit quod preter naturam sempiternum?<sup>127</sup> Etsi enim sit semper quod preter naturam in generatione quemadmodum et quod secundum naturam, sed aliud et aliud et non idem semper, quemadmodum celum secundum naturam idem numero semper. Necesse igitur quod in medio nichil ens sempiterni corporis non sempiternum esse, sed corruptibile et grave et mansivum et (H. 399.23)

T1 Pastedown b

(H. 399.24) propter hoc et frigidum et siccum; corruptibilia enim passivis hiis qualitatibus<sup>128</sup> formificantur;<sup>129</sup> grave autem et frigidum et siccum est terra. Et

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<sup>119</sup> Perypateticus T1

<sup>120</sup> in quo – naturam om. T1

<sup>121</sup> aut T1

<sup>122</sup> sed – naturam om. B

<sup>123</sup> + autem T1

<sup>124</sup> existit T1<sup>ac</sup>

<sup>125</sup> neque T1, add. in T1 supra lin.

<sup>126</sup> ibi T1<sup>ac</sup>

<sup>127</sup> + est T1

<sup>128</sup> hiis qualitatibus passivis T1

quoniam terra in medio, et iam quidem ostendit eius *quod* grave medium locum ostendens<sup>130</sup> proprium, terra autem tale, ostendet autem<sup>131</sup> in fine huius libri. Sed si terra est, *necesse, ait*, et ignem esse; contrariorum enim si alterum *natura*, necesse et alterum *esse* natura; contrariorum enim eadem materia ad ambo similiter *apta nata*. Si igitur et secundum operativas contrarias<sup>132</sup> qualitates formificantur seu<sup>133</sup> specificantur ignis et terra, hic quidem secundum caliditatem, *hec* autem secundum frigiditatem, et adhuc magis locales motus, *siquidem* hoc quidem ad quod circulariter, *hoc* autem ad medium movetur,<sup>134</sup> naturalibus autem corporibus *substantiale*<sup>135</sup> maxime *moveri* secundum naturam, quorum naturalium corporum motus contrarii, horum<sup>136</sup> *nature* contrarie; quare, etsi (H. 400) aqua secundum *ambas* qualitates contraponitur *igni*, frigida existens et humida, terra autem secundum frigidum *solum*, nichil admirabile,<sup>137</sup> si amplius facta est terre ad ignem *contrarietas*; crassius enim terre graviorem ipsam faciens *longius secundum* locum disposuit. Etsi enim siccum utrumque dicatur *et ignis* et terra, alia omnino *utriusque* siccitatis<sup>138</sup> species; *hec* manens enim *levis*<sup>139</sup> et facile mobilis est<sup>140</sup> et subtilis, *hec* autem<sup>141</sup> *gravis* et *crassa* et *mortificata*.<sup>142</sup> Ostendens *autem* ex ea que secundum *contrarietatem* contrapositione, quoniam, si est terra, necesse et ignem, idem *ostendit* ex ea que secundum *privationem* et habitum contrapositione. Si enim est *privatio*, necesse preexistere habitum, quem<sup>143</sup> ipse secundum naturam *vocavit*; *privationem* autem nunc dicit deterius in<sup>144</sup> contrariorum<sup>145</sup> *natura* (H. 400.12)

T1 fol. Bvb

(H. 400.13) Sic autem et quies et grave, quibus terra specificatur, secundum *privationem* dicuntur motus et levitatis, quibus specificatur ignis.<sup>146</sup> Si igitur *est*

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<sup>129</sup> fornicantur T1

<sup>130</sup> antecedens T1

<sup>131</sup> + et T1

<sup>132</sup> om. B

<sup>133</sup> sive T1

<sup>134</sup> movetur ad medium modo T1

<sup>135</sup> substantie T1

<sup>136</sup> harum T1

<sup>137</sup> admirabilem B

<sup>138</sup> siccitas B

<sup>139</sup> levius T1

<sup>140</sup> om. T1

<sup>141</sup> om. B

<sup>142</sup> mortificativa T1

<sup>143</sup> scr. Bossier : quoniam BT1

<sup>144</sup> om. B

<sup>145</sup> + ex T1

<sup>146</sup> om. B

terra privatio existens, necesse et ignem esse, *habitus habentem rationem, et manifestum, quoniam et prius necesse natura esse ignem, siquidem habitus prior privatione et affirmatio negatione. Ipse autem manifeste ostendit, secundum quandam maxime contrarietatem et privationem terre ad ignem assumpsit, quoniam secundum frigidum et grave et<sup>147</sup> quiescere. Ignis enim semper movetur; etenim et deorsum existens ad sursum movetur semper et sursum existens divino corpori simul circumfertur. Et totaliter elementorum hec quidem factiva magis speciei habere rationem<sup>148</sup> et habitus dixit, hec autem passibilia privationis et materie. Si autem sunt extrema terra et ignis, necesse et media esse et aquam et aera, quia utrumque horum<sup>149</sup> secundum ambas<sup>150</sup> sui ipsius qualitates e contrario habet ad utrumque illorum; terra quidem enim frigida et sicca existens e contrario habet ad aera calidum existentem et humidum, ignis autem calidus et siccus existens e contrario habet ad aquam frigidam existentem et humidam; contraria autem et motibus sunt hec ad illa; dictum est autem,<sup>151</sup> contrariorum, si sit alterum, et alterum, quia eadem contrariorum materia. Potest autem, ait Alexander bene, existimo, dicens, non intermedia nunc sola extremis<sup>152</sup> contraria dicere, sed de omnibus dictum esse;<sup>153</sup> quod enim utique accipias, invenies ipsum contrarie habens ad reliqua tria; si autem omnia contrarietatem habent quandam natura ad invicem, omnia necesse esse et veritate. Deinde duo ad duo comparavit; non (H. 400.35)*

T1 fol. Bra

(H. 401.14) (286a31b9) *sequentibus* manifestius. Nunc autem tantum est<sup>154</sup> manifestum, *propter* quam causam plura circularia sunt corpora, quoniam necesse generationem esse, generationem autem, siquidem et ignis, hic autem et alia, siquidem et terra, hanc autem quoniam necesse manere aliquid semper, siquidem moveri *aliquid* semper.

Ostendens, quoniam necesse quatuor esse corpora contrarietatem habentia ad invicem, manifestum, ait, quoniam necesse<sup>155</sup> hiis existentibus generationem esse et corruptionem. Si enim contraria sunt quatuor ista, contraria autem<sup>156</sup> non sunt sempiterna, quia generantur ex ad invicem et corrumpuntur in ad invicem,<sup>157</sup>

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<sup>147</sup> om. T1

<sup>148</sup> pationem T1

<sup>149</sup> eorum T1

<sup>150</sup> ambro T1

<sup>151</sup> + quoniam Bossier

<sup>152</sup> existentis T1

<sup>153</sup> susp. Bossier : est B

<sup>154</sup> manifestius – est om. B : suppl. Bossier

<sup>155</sup> om. T1

<sup>156</sup> om. T1

<sup>157</sup> et – invicem om. T1

necesse generationem esse et corruptionem. Quoniam<sup>158</sup> autem generabilia et corruptibilia sunt hec, et ex motibus ipsorum ostendit; quorum enim secundum naturam motus non sunt sempiterni, hec neque ipsa utique erunt sempiterna, ut unoquoque naturalium corporum esse in proprio motu habente, propter quod et divini corporis vitam sempiternum<sup>159</sup> motum dixit. Quatuor autem corpora mobilia entia et in recta mota non habent motus sempiternos; ostensum est enim in<sup>160</sup> octavo Physici auditus neque unus motus in recta potens sempiternus esse. Quoniam autem sempiterna vita motus est sempiternus non simpliciter omnium,<sup>161</sup> sed corpora habentium et mobilium, ostendit<sup>162</sup> in hiis dicens horum autem est motus; ut siquidem non erant<sup>163</sup> mobilia, non necessarium erat ipsa corruptibilia omnino esse, *etsi* (H. 401.31)

T1 fol. Brb

(H. 402.21) similis<sup>164</sup> utique erat eorum que hic semper constitutio; una enim utique erat et simplex semper hiis que hic infecta<sup>165</sup> passio. Ut enim immanifestas celestium in ea que hic derelinquam<sup>166</sup> factiones, solis et lune, sic manifeste vertentes que sub luna, semper utique heedem erant; uno enim existente aplanis motu et sole<sup>167</sup> et luna in aplane fixis et cum illa motis neque hyemis et estatis<sup>168</sup> et<sup>169</sup> intermediarum versionum erat utique differentia neque eius que secundum diem commutationis, eandem viam semper sole cum aplane<sup>170</sup> pertranseunte;<sup>171</sup> si enim in Cancro contigit<sup>172</sup> fixus, semper estiva utique erat<sup>173</sup> constitutio apud nos, si autem in Capricorno, semper hyemalis, et non utique erat<sup>174</sup> generatio et corruptio, sed neque differentes lune illuminationes. Si autem quis solem ipsum secundum se ipsum<sup>175</sup> in hoc per media zodia motum supponat et lunam in

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<sup>158</sup> Quia T1<sup>ac</sup>

<sup>159</sup> sempiternam T1<sup>ac</sup>

<sup>160</sup> om. B

<sup>161</sup> hominum? B

<sup>162</sup> ostendendit B

<sup>163</sup> erarant? T1

<sup>164</sup> simul T1

<sup>165</sup> infecta T1

<sup>166</sup> derelinquam Bossier : derelinquit B : derelinquunt T1

<sup>167</sup> sic – sole om. B

<sup>168</sup> etatis T1<sup>ac</sup>

<sup>169</sup> om. B

<sup>170</sup> aplane T1

<sup>171</sup> pertransseunte B : pertranseunt T1

<sup>172</sup> contingit T1

<sup>173</sup> erit T1

<sup>174</sup> erit B

<sup>175</sup> se ipsum om. B

obliquo ad zodiacum circulum, quia ab Ariete<sup>176</sup> ad Taurum<sup>177</sup> et a Tauro<sup>178</sup> ad Geminos transeuntes<sup>179</sup> apparent, primum quidem pluribus indiguerunt motibus, ut dixit Aristoteles, deinde autem et e converso factis. Sed et de hoc in hiis que deinceps dicere repromittit<sup>180</sup> manifestius; nunc (H. 403) autem tantum est, ait, manifestum, propter quam causam plura circularia corpora<sup>181</sup> sunt, quod proposuimus<sup>182</sup> querere; et<sup>183</sup> concise inferius et a sequentibus ascendens ad priora componit resolutorie demonstrationis assumptiones; plura enim sunt circularia et e converso<sup>184</sup> mota,<sup>185</sup> quia necesse generationem esse; generationem autem, siquidem necesse (H. 403.5)

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<sup>176</sup> arete *T1*

<sup>177</sup> Thaurum *B*

<sup>178</sup> Thauro *B*

<sup>179</sup> transseuntes *T1*

<sup>180</sup> repromittit *T1*

<sup>181</sup> corpora circularia *T1*

<sup>182</sup> proposuimus *Bossier* : propuimus *B* : preponimus *T1*

<sup>183</sup> *om. T1*

<sup>184</sup> contraverso *T1*

<sup>185</sup> motu *T1*