

# Greek and Latin Astrological Poetry Reconsidered

by

Stephan Heilen

University of Osnabrück

[stephan.heilen@uni-osnabrueck.de](mailto:stephan.heilen@uni-osnabrueck.de)

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## Abstract

A discussion of *La poésie astrologique dans la littérature grecque et latine* by Vanessa Monteventi that contextualizes this meritorious yet imperfect monograph in modern research on ancient astrological poetry and focuses on the whole range of its philological, astronomical, and astrological aspects. It is shown that Monteventi's title promises a broader perspective than what her book actually covers. A more fitting title would be *La poésie didactique astrologique dans la littérature grecque et latine de l'Antiquité*. Numerous poems relevant to her actual title yet not taken into account by the author are collected here for the first time ever without any pretense to completeness [see [Appendix 2, p. 62 below](#)], and their relevant characteristics briefly sketched, including discussions of two anything but trivial mathematical riddles contained in anonymous astrological poems. Besides a plethora of details that call for minor addenda/corrigenda, a few of Monteventi's topics are discussed in depth, such as the autobiographical horoscope by the first didactic poet writing under the pseudonym of Manetho and the sources of the smaller astrological poem by John Camaterus.

### About the Author

STEPHAN HEILEN is professor of classics with emphasis on Latin and neo-Latin literature, at the University of Osnabrück, Germany. After studying Latin, Greek, Italian, papyrology, and codicology in Münster and Florence, he received his PhD at Münster (1998) with the first critical edition of two neo-Latin didactic poems by Laurentius Bonincontri (1999). His habilitation (Münster, 2006) was an edition with translation and substantial commentary of the fragments of the Greek astrological manual of Antigonus of Nicaea (second c. AD; 2015). After holding a tenure-track position in classics at the University of Illinois at Urbana-Champaign (2006–2009, with promotion to associate professor), he answered a call to his current position in Osnabrück. His main research interest is the history of astrology in Greco-Roman antiquity and in the Renaissance, on which he has published extensively. Together with Claudio de Stefani, he is preparing a large anthology of ancient Greek astrological poetry (under contract for the series Oxford Classical Texts).

**Keywords** overlooked poems with astrological content, astronomical matter in astrological poems, mathematical riddles, literary floating from prose to poetry and back, mimetic functions and merits of astrological poetry, its selective coverage of the prose doctrine

## 1. Introduction

With a total of about 9,000 verses,<sup>1</sup> the amount of extant ancient astrological poetry is considerable. While the largest of these texts, the Latin poem *Astronomica* by Manilius (4,257 verses),<sup>2</sup> has attracted much scholarly attention, including that of some of the greatest philologists of the early modern and modern periods (e.g., Scaliger, Bentley, and Housman), little research has until recently been done on the single Greek astrological poems, including the second largest extant relevant text, i.e., the *Corpus Manethonianum*, with its 3,011 verses,<sup>3</sup> and almost no research has been done from a comparative perspective. The monograph *La poésie astrologique dans la littérature grecque et latine*<sup>4</sup> by Vanessa Monteventi constitutes a meritorious and largely successful attempt at conducting such a comparative analysis. It is the revised version of a PhD thesis supervised by Paul Schubert, an expert on the Greek astrological poet Anubio, at the University of Geneva. As Monteventi's title indicates, she focuses on the literary (i.e., nontechnical) aspects of Greek and Latin astrological poetry. Nevertheless, some technical details of the relevant poems are necessarily addressed by the author and will be paid special attention to in this discussion. Moreover, I will point out various small texts that Monteventi has passed over in silence.

The author explains her goal thus:

While the available research articles and monographs on ancient astrological poetry are generally devoted to a single poet and one specific text, there is no comprehensive analysis of the relevant poems, their mutual relationships, and their place in the history of Greek and Latin literature. [16, my free trans.]

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<sup>1</sup> This is my count.

<sup>2</sup> This figure is based on the edition in [Goold 1985](#).

<sup>3</sup> This figure is based on the edition by [De Stefani 2017](#). For references to recent scholarship on the various poems, see [p. 10 below](#). How little research has been done on the Greek astrological poems is shown by the sheer numbers of the respective titles registered in the *Année Philologique* - online [retrieved 19 Dec 2021]: Manilius: 412, Dorotheus: 23, Manethonian Corpus: 19, Maximus: 12, Anubio: 10, Nechepsos and Petosiris: 3.

<sup>4</sup> Schweizerische Beiträge zur Altertumswissenschaft 49. Basel: Schwabe Verlag, 2020. Pp. 325. ISBN 978-3-7965-4076-9. Cloth CHF 62.00.

Monteventi wishes to tackle this desideratum but does not substantiate the aforementioned claim, which is basically correct, with a survey (however brief) of already existing comparative studies of ancient astrological poems.<sup>5</sup> Only two books come close to being precursors of Monteventi's monograph insofar as they treat more than one astrological poem, but they both lack the decisive focus on the comparative analysis of astrological poetry:

- (a) B. Effe. 1977. *Dichtung und Lehre. Untersuchungen zur Typologie des antiken Lehrgedichts* (Munich), in which the three astrological poems of Manilius, [Manetho], and Maximus are discussed [106–136]; Effe's book is thus much more selective and briefer than Monteventi's.<sup>6</sup>
- (b) I. Boehm and W. Hübner. 2011. *La poésie astrologique dans l'Antiquité* (Paris), in which nine contributions by different authors are devoted to Nechepsos and Petosiris, Manilius, Dorotheus of Sidon, the *Manethoniana*, Anubio, Antiochus, Maximus, and the Byzantine poet John Camaterus (12th century). While this volume covers more than 99% of the material analyzed by Monteventi (only two Orphic fragments, two by "Ammon" and one by "Hermes", are missing, totaling 55 verses),<sup>7</sup> its contributors focus on different aspects of the poems in question,<sup>8</sup> and J.-H. Abry's concise introduction to the volume [Abry 2011], though valuable, remains necessarily sketchy.

Monteventi's book is clearly structured with five main sections: an introduction [I.15–56], a thorough presentation and discussion of each of the relevant astrological poems [II.57–183], two comparative sections on the didactic dimension of these poems with regard to form [III.185–234] and

<sup>5</sup> Her very brief reference to recent editions of astrological poems and poetical fragments [15 with n2] mentions [Lightfoot 2020](#) and [2023](#) as forthcoming yet omits the important edition of [Manetho] by [Claudio De Stefani in 2017](#).

<sup>6</sup> Monteventi presents and criticizes Effe's typological approach [42]. She mentions his book six more times [35 n69; 161 n304; 163 n314; 170 n329 (another criticism); 186 n4; 229 n117].

<sup>7</sup> For details, see [pp. 10–11](#). The poems attributed to Orpheus and Ammon are, however, mentioned in Abry's introduction [[2011](#), 11 and 12 n33], and the Hermetic text is mentioned in [Heilen 2011](#), 45 n108.

<sup>8</sup> For example, Calderón's contribution [167–178] focuses entirely on the metrical characteristics of Anubio's fragments, while another contribution to [Boehm and Hübner 2011](#) by D. Obbink on an edition of Anubio, announced in [Obbink 2006](#), has not been delivered nor published elsewhere. Dorotheus of Sidon and Maximus are each treated in two contributions with different focuses [115–154, 193–215].

content [IV.235–276], and a conclusion [V.277–284], followed by a tabular survey of the core data of the poems that have been analyzed [285], bibliography [287–304], a useful *index locorum* [305–322], and a short *index nominum et rerum* [323–325]. The main sections, I–IV, fall into well-organized sub-chapters that usually end with summaries. The book is throughout clearly phrased and pleasant reading. All Greek and Latin quotations are provided with (mostly reliable) French translations by Monteventi herself [see 17 n8].

## 2. Review by Chapter

I shall first review the aforementioned sections in some more detail and later address select problems in depth. While this method will produce an unusually long discussion in which the critical remarks will, in a purely quantitative perspective, prevail, I wish to emphasize that it is the plethora of Monteventi's sound observations that, although they cannot be addressed here in detail, inspire me to deal with this book extensively.

### 2.1 Monteventi's introduction

Of all chapters, the introduction requires the longest discussion. The first part of the introduction provides a survey of the origins and developments of ancient astrology in Mesopotamia, Egypt, and the Greek-speaking world [17–27], a brief explanation of how astrology functions [27–29],<sup>9</sup> and then a definition of what ancient astrology is (one might have expected this before its “fonctionnement”) and how it is related to astronomy and astro-meteorology [30–38]. This part is informative and, on the whole, correct.<sup>10</sup> Monteventi has done much fruitful reading of specialized literature, even if

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<sup>9</sup> The bibliographical references to previous research on the history and functioning of ancient astrology [16–17 with n6] are too selective; there is not even a single title by David Pingree.

<sup>10</sup> Select examples of incorrect statements:

De fait, pour un observateur du ciel, tout se passe comme si la voûte céleste se déplaçait d'est en ouest. Au terme d'une année, elle aura accompli un tour complet et sera revenue au point de départ. [27]

This is an obvious confusion of the apparent daily motion of all celestial bodies from east to west and the opposite annual motion of the Sun through the zodiac.

De fait, l'appellation *astronomia* ou *astrologia* était employée indifféremment pour qualifier l'une ou l'autre de ces disciplines [S.H. or both!]. Ainsi, les *Astronomica* de Manilius, poème du Ier s. ap. J.-C., concernent bien la doctrine astrologique, et non pas l'astronomie. [31]

This is not quite correct because Manilius' first book is entirely on astronomy. See the similarly problematic words on “une dimension ecphrastique dans les poèmes astrologiques, notamment dans le premier livre de Manilius, construit sur le modèle aratéen” [270]. Yet Monteventi has rightly excluded Aratus from her own analysis.

some bibliographical references are to derivative scholarship<sup>11</sup> or to monographs of dubious value,<sup>12</sup> while some important references are missing.<sup>13</sup> The second part of the introduction [38–56], which takes Monteventi back into her own field of philological competence, provides a solid survey of the main features of ancient didactic poetry (to which her material belongs) arranged by the following categories: problems of definition and distinction from other literary genres; teacher and student; authority, divine inspiration, and truth of the teacher; structure and content; poetic form, mnemotechnique, and truth; the role of the student; and interactions with other literary genres.

Of particular importance in this introduction is Monteventi's definition of astrology [30] and her application of this definition to the selection of relevant texts. Both the definition itself and especially its application are open to criticism.

## 2.2 Monteventi's definition of astrology

Monteventi defines astrology as an astral divinatory practice that is based on the belief in the direct influence of the stars on human lives.<sup>14</sup> She declares that she will, as a consequence of this definition, exclude the poem of Aratus, the Greek and Latin poems “in this tradition of astronomy and (astro)meteorology”, and all calendrical poems, such as Ovid's *Fasti*.<sup>15</sup> While

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<sup>11</sup> She often quotes Barton 1994.

<sup>12</sup> Esp. the historical monograph Cramer 1954. But it is also problematic to assert [27 n46], with Bakhouché 2002, the existence of a specifically Roman or Latin astrology.

<sup>13</sup> For instance, Monteventi [21 n24] informs the reader that the extant Greek horoscopes have been collected by Neugebauer and van Hoesen [1959] without mentioning Jones 1999 and the now authoritative catalog of all extant ancient horoscopes, including cuneiform, demotic, Greek, Latin, and other material in Heilen 2015a, 1.204–333.

<sup>14</sup> Dans cette étude, on entendra par astrologie une pratique divinatoire astrale qui atteste la croyance en l'influence directe des astres sur la vie humaine, telle qu'elle se constituera [S.H. one would expect “constituait”] à la période hellénistique à la suite des courants mésopotamiens et égyptiens. On considérera comme relevant de l'astrologie tout texte où il est fait état du lien essentiel qu'est la relation entre corps célestes et destinée humaine. [30].

<sup>15</sup> Dans les pages qui vont suivre, on considérera comme astrologique tout texte où l'influence des astres sur le destin des individus est rendue évidente. Il convient de spécifier dès à présent que le corpus des textes analysés dans cette

the exclusion of purely astronomical and calendrical material is plausible, Monteventi's proposed definition and exclusion has two weak points:

- (i) In its brevity, it omits the due clarification that exceptions will be made for the large initial sections of Manilius' and [Manetho]'s poems, which are purely astronomical (this concerns the entire first book of Manilius as well as [Manetho], *Apotel.* 2.1–140),<sup>16</sup> and it misleadingly suggests that the excluded astronomical poems are all in the tradition of Aratus: suffice it to mention formally different poems such as Mesomedes' ephrasis of an astronomical clock and its pictures of the 12 zodiacal signs in lyric meter and Doric dialect<sup>17</sup> or three short hexametrical nonastrological mnemonic poems of the *Anthologia latina* on the 12 zodiacal signs<sup>18</sup> and another one on the periods of the revolutions of the two luminaries and the five planets.<sup>19</sup>

More importantly, I have qualms regarding Monteventi's categorical exclusion of astrometeorology for two reasons. To begin with, Monteventi's definitory limitation to presumed stellar influences on human lives is incompatible with ancient definitions, especially Ptolemy's, which present astrology [*Apotel.* 1.1.1] as pertaining to stellar influences on *everything* contained in the sublunar world.

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étude n'inclut pas les *Phénomènes* d'Aratos, ni les poèmes grecs et latins s'inscrivant dans cette tradition d'astronomie et de météorologie [S.H. more precisely, astrometeorology, as Monteventi [35] clarifies]. De même, les textes en relation avec le calendrier, comme les *Fastes* d'Ovide, ne seront pas pris en compte. [34]

Monteventi duly mentions that Germanicus introduced a few astrological features in his adaptation that were absent from Aratus' Greek original. But since these features are astrometeorological in nature and do not pertain to human lives, she discards them in the course of a brief discussion [35–37].

- <sup>16</sup> Monteventi rightly includes and analyzes these passages despite her definition, see nn14, 15 above.
- <sup>17</sup> Mesomedes, *Carm.* 8 [Heitsch 1961, 29–30]. See the commentary in Rehm 1929. The clock described by Mesomedes was of the same kind described by Vitruvius, *De arch.* 9.8.8–15. See the archaeological evidence from Salzburg described in Schaldach 2016, 81–83 with fig. III.15. Mesomedes' verses 10–21 are devoted to the 12 zodiacal signs; his specifications of their qualities are systematically registered in Hübner 1982. The clock announced the full hours with acoustic signals, as is clear from the poem's final lines, 26–29.
- <sup>18</sup> See *Anthol. lat.* 123, 128, and 615 (six verses each). Cf. poem no. 679, which, being twice as long, puts all the constellations, i.e., including the extrazodiacal ones, into 12 mnemonic verses (on the zodiac: vv. 7–9a).
- <sup>19</sup> *Anthol. lat.* 798 (12 vv.). The periods are expressed in years, days, and—in the Moon's case—hours.

Monteventi thus leaves out much of what is called “universal astrology” (to which Ptolemy devotes his entire second book),<sup>20</sup> astrometeorology, the foundation horoscopes of cities, horoscopes of animals,<sup>21</sup> and so on. Monteventi’s too narrow definition of astrology does, however, not affect her monograph seriously for the simple reason that only a very few poetical treatments of the aforementioned areas of astrology happen to be extant.<sup>22</sup>

One such text, however, does deserve to be mentioned here: the Orphic poem *On Earthquakes* (Περὶ σεισμῶν) [Bernabé 2005 fr. 778]. Monteventi’s explicit exclusion of this poem [69], which she justifies by its belonging to ancient astrometeorology,<sup>23</sup> comes as a surprise and shows the problems involved in her definition because this interesting text, which comprises 66 dactylic hexameters, is teeming with specifications of effects on human beings (which Monteventi does not mention).<sup>24</sup> It may be a fragment of a larger, now lost poem. Still, the extant verses form a conceptually complete line of thought insofar as they specify, after a brief introduction [vv. 1–3], 24 different effects of earthquakes depending on the Sun’s position in each of the 12 zodiacal signs (from Aries to Pisces) and on whether the earth-

<sup>20</sup> See her similarly unsustainable claim:

L’astrologie grecque connaît deux grands systèmes permettant d’établir des pronostics selon les dispositions célestes: l’astrologie généthliaque et l’astrologie catarchique. [162]

For a different and thoroughly plausible distinction of the main branches of astrology, see Greenbaum 2020, 448–449.

<sup>21</sup> See Cicero, *Div.* 2.98 (on horoscopes of cities and animals); on horoscopes of animals only, see Augustinus, *Conf.* 7.6.8 and *Anthologia palatina* 11.383.2.

<sup>22</sup> Two examples of astrometeorological poetry are Quintus Cicero’s fragmentary poem [*Anthol. lat.* 642, 20 vv.], which describes the climatic effects of (the Sun’s passing through) the 12 zodiacal signs in vv. 1–14, and Lucan, *Phars.* 10.176–192, on which see p. 19 below.

<sup>23</sup> See 36 n71. Monteventi does, however, analyze Bernabé 2005, frs. 747 and 779. On the omitted Περὶ σεισμῶν, see Gundel and Gundel 1966, 69 n5 and 262–263; Martín Hernández 2006 and 2015, 132–136.

<sup>24</sup> Also her detailed explanation of the difference between astrology (as defined by her) and astrometeorology does not mention the existence of astrometeorological texts that specify effects on human beings [34]. Note that Abry 2011, 7 mentioned the Περὶ σεισμῶν without saying that it specifies effects on human beings.

quakes occur by day or night. This text would also be relevant in view of its didactic features because the poet takes the role of a teacher speaking directly to his student.<sup>25</sup>

In sum, Monteventi's definition of astrology disregards ancient definitions, teachings, and practices of astrology and suggests the possibility of drawing a clear dividing line between astrology and astrometeorology, which is not supported by the extant evidence.

- (ii) Moreover, Monteventi's distinction between astrological, astronomical, astrometeorological, and calendrical texts seems to be based on the tacit assumption that these categories suffice to analyze the whole heterogeneous spectrum of ancient astral poetry. I agree that they mostly do, yet some exceptions remain, for instance, the description of the apocalyptic "star wars" and the conflagration of the cosmos in *Oracula Sibyllina* 5.206–213 and 512–531.<sup>26</sup>

It would be useful if someone developed an all-encompassing, heuristically useful typology of Greek and Latin astral poetry, ideally including medieval and early modern forms, such as mnemonic verses<sup>27</sup> and, especially, astrological *concordia deorum*, which open

<sup>25</sup> Esp. vv. 1–3:

Φράζο δὴ καὶ τόνδε λόγον, τέκος, ὅπποτε κεν δὴ  
γαῖαν κινήσῃ σεισίχθων Κυανοχαίτης,  
ὅττι βροτοῖς ἐπὶ τ' εὐτυχίην κακότητά τε φράζει.

For another astrometeorological poetic text with didactic features (which, however, does not deal with stellar influences on human lives), see p. 19 below on Lucan, *Phars.* 10.199–218.

<sup>26</sup> These may be the remains of an otherwise lost Hellenistic poem: see Rzach 1923 col. 2140.

<sup>27</sup> They are very numerous and similar to the first three poems in n18 above but still shorter, i.e., they are mostly limited to one or two dactylic hexameters. See, e.g., two anonymous verses on the 12 zodiacal signs transmitted by John of Sacrobosco, *Tractatus de sphaera* [Thorndike 1949, 88 = Walther 1959, no. 18806]:

Sunt Aries Taurus Gemini Cancer Leo Virgo  
Libraque Scorpius Arcitenens Caper Amphora Pisces.

A probably late antique (rather than Byzantine) Greek formal precursor is [Manetho], *Apotel.* 1.16–17 on the seven planets:

Ἡέλιον, Μήνην, Κρόνον, Ἄρεα, Ἑρμέα, Ζῆνα,  
Κύπριδά τ' εὐπλόκαμον καλὴ λέγε Καλλιόπεια.

Another Latin example—this time not astronomical but astrological in content—is this summary of the canonical areas of life dominated by the 12 places (houses) of the horoscopic chart:

our eyes for an important opportunity that the ancient astrological poets left unexplored, presumably because councils of the gods, which are typical of the epic genre, had no place in ancient didactic poetry and became an admissible element of didactic poems only after the latter's transformation into the hybrid genre of "epic didactic poetry".<sup>28</sup>

### 2.3 Omission of relevant texts

A second objection concerns Monteventi's application of her definition because she tacitly leaves out a number of texts that would clearly fall under it. Before going into detail regarding these omissions, let us take a look at the list of authors and/or poems that Monteventi actually treats in chapter 2 of her monograph. I shall indicate in parentheses the titles if they are extant, the respective poetic meters if they are not dactylic hexameters, and recent important scholarly contributions:

- Nechepsos and Petosiris [iambic trimeters, probably as part of prosimetrum; Heilen 2011]
- *Orphica* [Bernabé 2005 frs. 747 and 779]
- Manilius, *Astronomica* [much research by various scholars, esp. Hübner 1984; Goold 1985; Feraboli, Flores, and Scarcia 1996–2001; Goold 1997; Hübner 2010]
- Dorotheus [Pingree 1976; Hübner 2021]
- Anubio [elegiac distichs; Obbink 1999 and 2006; Schubert 2015]
- [Manetho], Ἀποτελεσματικά [Lopilato 1998; De Stefani 2017; Lightfoot 2020 and 2023]
- Antiochus [Pérez Jiménez 2014]
- Maximus, Περὶ καταρχῶν [Zito 2016]

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Vita lucrum fratres genitor nati valetudo  
 uxor mors pietas regnum benefactaque carcer. [See Stegemann  
 1931–1932, 356; Knappich 1967, 61]

According to Boll, Bezold, and Gundel 1966, 62, these verses are based on Firmicus, *Math.* 2.20.2 and 2.20.13.

<sup>28</sup> This term was fittingly coined in Roellenbleck 1973 and 1975. Prominent examples of astrological *concilia deorum*, in which it is not the traditional 12 Olympic gods but the seven planetary deities that gather for decision-making, are Girolamo Fracastoro, *Syphilis* 1.219–246, analyzed in Heilen 2008 and Giovanni Pontano, *Urania* 1.870–969 [Weh 2017]. A late medieval precursor whose astrological council of the gods is formally independent—i.e., not embedded in a larger "epic didactic poem"—is Simon de Couvin's *De iudicio Solis in conviviis Saturni* [Haye 2014], which explains the alleged celestial cause of the Black Death in the mid-14th century. I am currently preparing an article on astrological councils of the gods.

- Ammon [[Bernabé 2005](#), fr. 781]
- *Corpus Hermeticum* [[Nock and Festugière 1945–1954](#), vol. 4, fr. 29]

These texts range from the second century BC to the fourth century AD (with an emphasis on the imperial period) and present an astonishing richness and variety with regard to their contents and literary features. They are also of extremely different size depending on their often fragmentary state of preservation. By far the smallest relevant text is by the anonymous author(s) who wrote under the pseudonym of “Nechepsos and Petosiris”; only three and a half iambic trimeters are extant in the original. The largest text is the six books attributed to “Manetho”, which were actually composed by one anonymous author of the second century AD [books 2, 3, 6] and three other, equally anonymous authors who presumably lived in the fourth century AD [books 1, 4, 5].<sup>29</sup>

While these 10 texts doubtlessly constitute the bulk of all extant Greco-Roman astrological poetry, a certain amount of poetic material that matches Monteventi’s definition—I shall review this material shortly—is passed over in silence. As we shall see, this shortcoming has only mild repercussions on the value of Monteventi’s book as a whole, but it must be pointed out in the interest of a correct appreciation of what this book purports to be about and what it is really about.

The problem is that Monteventi did not notice that she has committed circular reasoning. She claims to have selected, based on her definition of astrology, all relevant texts, no matter how long, short, or fragmentary they are,<sup>30</sup> to proceed from this selection to examining the relationship of her texts with nonastrological material that is commonly known as “didactic

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<sup>29</sup> For this distinction of four different authors, see [Lightfoot 2020](#), xxiii. It was apparently not known to Monteventi.

<sup>30</sup> La sélection des poèmes ne repose sur aucun prérequis de longueur: les textes peuvent être constitués de plusieurs livres, n’être conservés que sous forme fragmentaire, ou faire l’objet d’une brève composition ne comptant qu’une dizaine de vers. Cependant, il est primordial que le sujet principal concerne la discipline astrologique comme définie ci-dessus. [31]

poetry”,<sup>31</sup> and to discover that her texts are an important, hitherto neglected part of the tradition of didactic poetry.<sup>32</sup>

The truth, however, is that Monteventi has from the beginning tacitly selected only *didactic* astrological poems, in clear contradiction with her explicit claim [277] that “les pièces présentées ont été sélectionnées uniquement sur des critères de forme versifiée et de contenu astrologique”.<sup>33</sup> Her unwitting limitation to didactic astrological poems probably occurred under the influence of the seminal volume edited in [Boehm and Hübner 2011](#), the title of which exhibits the same slight imperfection as Monteventi’s.<sup>34</sup>

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<sup>31</sup> Étant donné la forme versifiée et la nature scientifique du contenu, ces poèmes posent la question de leur lien avec la tradition communément connue sous le nom de poésie didactique. [16]

L’objectif visait à étudier les liens qu’entretiennent ces poèmes avec la poésie didactique. [277]

Monteventi is, of course, aware of “la question épineuse de la définition de la poésie didactique dans la recherche actuelle” [17].

<sup>32</sup> Pour conclure, on a présenté dans cette étude un corpus de poèmes au contenu technique et scientifique qui nécessite d’être pris en compte lorsqu’on considère le genre de la poésie didactique et son développement au cours des siècles.... L’état des poèmes conservés est souvent fragmentaire. Néanmoins, ces poèmes s’inscrivent dans la tradition littéraire de la poésie didactique. [283]

Monteventi has duly differentiated this overall result earlier with reference to certain formal differences among her astrological poems and single astrological poems and nonastrological didactic poetry. Cf., e.g., “Cette étude n’apporte pas une réponse unique quant à la nature de la relation qu’entretient la poésie astrologique avec le genre didactique” [281].

<sup>33</sup> The fact that Monteventi implies the selective criterion of didactic formal characteristics is clear already on the first page of her introduction, where she asserts:

Pendant de nombreuses années, la plupart des vers astrologiques grecs et latins parvenus jusqu’à nous n’étaient connus que d’un cercle restreint de spécialistes versés dans cette littérature. [15]

This clearly does not apply to the texts that I shall mention in the following paragraphs.

<sup>34</sup> That colloquium was organized by the late Latinist Josèphe-Henriette Abry, an expert on Manilius, who was interested in exploring the other ancient (without exception Greek) didactic poems. As Abry declared in her introduction to [Boehm and Hübner 2011](#) [[Abry 2011](#), 7], she had been inspired to make this exploration by a critical remark in a review by David Pingree [1980, 266] of [Romano 1979](#):

The versified astrological texts that Monteventi has left out are generally short but there are more than a few. One reason for these omissions is Monteventi's (again tacit) limitation to independent texts, i.e., her exclusion of all astrological passages within larger nonastrological poems. The most substantial astrological passages of this kind are the so-called horoscope of Persephone in Nonnus, *Dionys.* 6.58–103<sup>35</sup> and that of the Great Flood sent by Zeus to extinguish the worldwide conflagration [6.229–249] (pertaining to universal astrology),<sup>36</sup> the detailed astrological prognostication delivered by Nigidius Figulus in Lucan, *Phars.* 1.639–672, based on the fictitious horoscope of the outbreak of the civil war (once more, universal astrology),<sup>37</sup> Horace's famous lines on his astrologically determined friendship (συνασ-

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She has looked to such didactic poems as Lucretius' *De rerum natura* and Vergil's *Georgics* as models when the astrological poems of Dorotheus, Manetho, and Maximus provide closer parallels to Manilius' central books.

Abry's research focus on didactic poetry accounts for the fact that the much smaller total amount of nondidactic astrological poetry was represented neither in the conference (which the present reviewer attended as a speaker) nor in its proceedings edited by Boehm and Hübner [2011]. A clue to noticing the slight imperfection in the title chosen by Abry for her conference and employed without change by her posthumous editors, namely, "La poésie astrologique dans l'Antiquité", can be found in Boehm and Hübner's preface, where they speak of "l'argument de ce colloque, qui traite de la poésie didactique astrologique de l'antiquité" [6]. As to the close familiarity of Monteventi with Abry's work, see Monteventi's "Hommage à Joséphe-Henriette Abry [1944–2008]" [2011].

- <sup>35</sup> It is cast by the divine astrologer Astraeus on behalf of Demeter, who wishes to know more about the suitor of her daughter Persephone, the outcome of that marriage, and her own destiny. See [Stegemann 1930](#), 87–88 and 94–100 as well as [Chuvin 1992](#), 9–12, 48–49, and 140–144.
- <sup>36</sup> See [Stegemann 1930](#), 87–94 and [Chuvin 1992](#), 34–39, 54–55, and 157–159. Both horoscopes feature Venus at three zodiacal signs from the Sun and are therefore astronomically impossible. See the diagrams in [Stegemann 1930](#), 93 and 96.
- <sup>37</sup> The astronomical analysis of this passage in [Housman 1927](#), 325–327, is unfair because it shows that most astronomical parameters were incorrect for the date in question without mentioning the possibility that Lucan had freely conceived the details in order to suit his overall purpose. See the more plausible interpretation in [Barrenechea 2004](#), 314–315 and esp. [Heilen 2007](#), 64–67. Besides the prediction by Figulus, there are various smaller astrological elements in Lucan's text, e.g., 10.35–36 *sidus iniquum/gentibus*, on which see [Schmidt 1986](#), 66–68 (with a contribution by W. Hübner).

τρία) with Maecenas [*Carm.* 2.17.17–30: see [Boll 1917](#)] and their imitation by Persius regarding himself and his friend Cornutus [5.45–51], the enigmatic, much debated prediction of the astrologer Horos in Propertius, *Eleg.* 4.1.71–150,<sup>38</sup> and the fictitious, defamatory birth horoscope of Ovid’s enemy Ibis.<sup>39</sup> In addition, one finds astrological “snippets” of various size that also deserve attention, such as Ovid, *Am.* 1.8.29–30 (*stella tibi oppositi nocuit contraria Martis;/ Mars abiit; signo nunc Venus apta suo*) or Persius, *Sat.* 6.18–19 on the problem of twins born with the same horoscope yet having different characters (*geminos, horoscope, uaro/productus genio*).

The passages mentioned thus far sum to 218 astrological verses, i.e., more than the five smallest among Monteventi’s 10 texts taken together (173.5 verses),<sup>40</sup> and the number would grow further if one included not only verses that deal with astrology in an “affirmative” manner but also those that criticize or ridicule astrologers and/or their art, such as Juvenal, *Sat.* 6.553–581, on women who put the greatest faith in astrologers or who even become so proficient in the art as to consult astrological writings themselves.<sup>41</sup>

While Monteventi’s definition excludes any nonaffirmative texts,<sup>42</sup> they may nevertheless deserve attention, partly because they draw the opposite picture of the figure of the astrologer, not, as in the large didactic poems, as a dignified teacher of arcane truth who (especially Manilius and [Manetho]) addresses kings and emperors but as a wretched quack, pretender, and criminal, and partly because they mention technical details of astrological doctrines such as horary astrology or revered authorities such as Petosiris: all

<sup>38</sup> See [Hübner 2008](#), 344–358, with its critical survey of earlier research and sensible judgment.

<sup>39</sup> Ovid, *Ib.* 209–220 quoted below [p. 25].

<sup>40</sup> [Riess 1891–1893](#), fr. 1; [Bernabé 2005](#), fr. 747, 779, and 781; [Pérez Jiménez 2014](#); and [Nock and Festugière 1945–1954](#), vol. 4, fr. 29.

<sup>41</sup> For details, see the commentary in [Courtney 1980](#).

<sup>42</sup> Note her second definition, especially the words “où l’influence des astres sur le destin des individus est rendue évidente” [34, quoted in [n15 above](#)]; her first definition (see the full quotation in [n14 above](#)) was less clear because its crucial expression “faire état de quelque chose” simply means “to mention something”.

these aspects are present, for instance, in Juvenal's aforementioned passage from the sixth satire.<sup>43</sup>

As for independent poems, Monteventi omits three relevant "affirmative" astrological Greek epigrams in the *Anthologia palatina* [9.822, 14.124, 14.141]:<sup>44</sup> one of them [9.822] asserts that all human affairs are ruled by the stars, one [14.141] asks for a horoscope of his newborn child to be cast, and one [14.124] makes detailed predictions based on his addressee's birth horo-

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- <sup>43</sup> See also Juvenal, *Sat.* 14.248–255 on a son who consults astrologers about his father's death and, learning that this is in the distant future, resorts to poison: cf. Ovid, *Metam.* 1.148 *filius ante diem patrios inquiri in annos*. While Juvenal [*Sat.* 6.581] mentions the astrological authority Petosiris, Paulinus of Nola mentions Nechepsos in *carm.* 3.8 *quique magos docuit mysteria uana Nechepsos* [= Riess 1891–1893, test. 5].
- <sup>44</sup> Various other poems either denigrate, ridicule, or parody astrology and astrologers, namely, *Anth. Pal.* 5.105, 7.687, 9.80, 11.114, 11.159, 11.160, 11.161, 11.162, 11.164, 11.183, 11.318, 11.383. Four more poems [7.157, 9.112, 11.23, 11.227] are rather neutral in their attitude toward astrology in that the first three of them simply express acceptance of predictions of an early death, while the last, being a defamatory poem, says that the anonymous addressee is hated by all men like the (astrologically maleficent) star of Saturn. All these various "nonaffirmative" poems of the *Anthologia palatina* as well as the "affirmative" ones mentioned above have been collected and analyzed in Galán Vioque 2002 (not mentioned by Monteventi). Many of them deal with astrological death predictions (more precisely, with how long someone will live) in some way or another, namely, *Anth. Pal.* 7.157, 7.687, 9.112, 11.23, 11.114, 11.159, 11.161, 11.164, 14.124; cf. the Latin ironical epigram by Martial, 9.82. Galán Vioque adduces one more poem, *Anth. Pal.* 9.201 (two hexameters), which is very late, by the Byzantine scholar Leo Philosophus in praise of the late antique astrologer Paul of Alexandria (fourth century AD) [2002, 234–235]. Among the "nonaffirmative" poems mentioned at the beginning of this note, some contain technical details: poem 5.105 draws ironically on the astrological qualities of Sirius and Gemini; poem 11.318 on those of Aries, Gemini, and Pisces; three of them [11.161 and 11.183 as well as the "affirmative" poem 11.227] draw on Saturn's negative qualities, especially his association with illness and death; another one [11.160] draws on both Mars' and Saturn's negative qualities; one [11.383.2] ironically states that Saturn rules even over the birth of animals [see n21 above]. Satirical and parodistic texts on astrology play an important role in the late medieval and early modern periods, too; see, e.g., Liuzo 1900; Juntke 1979; Cruz García de Enterría and Hurtado Torres 1981; Pfister 1990; Ogier 1991; Haberkamm 2004; and Avelar de Carvalho 2018.

scope.<sup>45</sup> To these we may add the astrological death prognostication for the emperor Constantius II (he died 3 Nov AD 361) that Ammianus Marcellinus, Zosimus, and Zonaras report<sup>46</sup> and the pseudo-Homeric hymn to Ares (17 verses), which is actually a late antique prayer to the planetary deity probably by Proclus [see West 1970], in which the speaker requests that Ares/Mars “give dauntless youth” and “shed down a kindly ray from above upon my life, and strength of war”.<sup>47</sup> That this is not just any ancient hymn but a peculiar one that falls under Monteventi’s definition of astrology is undeniable because the speaker explicitly mentions Mars’ influence (v. 9 δοτήρ, v. 16 δὸς), its cosmological origin “high up in the third sphere” (v. 10 ὑψόθεν),<sup>48</sup> its physical transmission through rays of gleaming light (v. 10 καταστίβων), and its effect on human life (vv. 10–11 ἐς βίωτητα/ ἡμετέρην).<sup>49</sup> As for Latin “independent” texts, Monteventi omits Claudian’s fictitious defamatory horoscope of Curetius [*Carm. min.* 44 (8 verses)].<sup>50</sup> Once more, there are nonaffirmative poems that might also deserve some interest, *scil.*

<sup>45</sup> The last two poems [nos. 124, 141] will be discussed in more detail on pp. 19–24 below.

<sup>46</sup> Seyfarth 1978, 1.218–219 (Ammianus 21.2.2):

Ζεὺς ὅταν εἰς πλατὺ τέρμα μόλη κλυτοῦ ὕδροχόοιο,  
 Παρθενικῆς δὲ Κρόνος μοίρη βαινὴ ἐπὶ πέμπτη  
 εἰκοστῇ, βασιλεὺς Κωστάντιος Ἀσίδος αἴης  
 τέρμα φίλου βιοτοῦ στυγερόν καὶ ἐπώδυνον ἕξει.

Cf. Paschoud 1979–2000, 2.1.22 (Zosimus 3.9.6) and Dindorf 1868–1875, 3.207 (Zonaras 13.11), who has the variant reading μοίρης...πέμπτης εἰκοστῆς. This prediction is Hor. gr. 361.XI.3 in Heilen 2015a, 1.295 with references to further literature [see 522 n721]. Although the four hexameters specify only the ecliptic longitudes of Saturn and Jupiter, they suffice for an astronomical dating.

<sup>47</sup> κλῦθι βροτῶν ἐπίκουρε, δοτήρ εὐθαλέος ἦβης,  
 πρὴν καταστίβων σέλας ὑψόθεν ἐς βίωτητα  
 ἡμετέρην καὶ κάρτος ἀρήϊον. [West 1970, vv. 9–11]

The request for “giving” is repeated [vv. 15–16: ἀλλὰ σὺ θάρσος/ δὸς].

<sup>48</sup> See esp. vv. 6–8:

...πυραυγέα κύκλον ἐλίσσων  
 αἰθέρος ἐπαπόροις ἐνὶ τεύρεσιν ἔνθα σε πῶλοι  
 ζαφλεγέες τριτάτης ὑπὲρ ἄντυγος αἰὲν ἔχουσι.

<sup>49</sup> Note also that this hymn resembles the hymn to Venus at the beginning of Lucretius’ didactic poem *De rerum natura* and may have drawn inspiration from the beginning of one of those larger astrological poems analyzed by Monteventi, whose beginnings are now lost.

<sup>50</sup> Compare Ovid’s horoscope of Ibis mentioned in n39 above.

Horace's admonition to Leuconoe not to consult astrologers as to her and his life expectancy [*Carm.* 1.11 (8 verses)], Propertius' *Eleg.* 2.27 (esp. vv. 1–4) on people's vain consultations of astrologers as to the time and manner of their deaths, and Claudian's defamatory poem on Curetius' father, the astrologer Uranius [*Carm. min.* 43 (10 verses)].

A systematic search would probably yield additions to this provisory list.<sup>51</sup>

- <sup>51</sup> To the best of my knowledge, no such list has ever been published. Problems in defining relevant texts are caused not only by their sometimes extremely perfunctory character but also by the fact that some poems treat topics that are essentially astrological but no longer (maybe not even by the poet himself) perceived as such. Take, for example, Ausonius, *Eclogue* 8 on the seven-day week: both the names of the weekdays and their succession are based on the not explicitly mentioned astrological doctrine of chronocratorship (i.e., single planets ruling over single days):

- Nomina, quae septem vertentibus apta diebus  
Annus habet, totidem errantes fecere planetae,  
Quos indefessa volvens vertigine mundus  
Signorum obliqua iubet in statione vagari.
- 5 Primum supremumque diem radiatus habet sol.  
Proxima fraternae succedit luna coronae.  
Tertius assequitur Titania lumina Mavors.  
Mercurius quarti sibi vindicat astra diei.  
Illustrant quintam Iouis aurea sidera zonam.
- 10 Sexta salutigerum sequitur Venus alma parentem.  
Cuncta supergrediens Saturni septima lux est.  
Octavam instaurat revolubilis orbita solem.

That this poem is essentially astrological is confirmed—if any confirmation is needed—by the fact that the same topic is treated by John Camaterus in both his didactic astrological poems: see *De zodiaco* vv. 153–160 [Miller 1872, 60]; *Isagoge* vv. 2036–2124 [Weigl 1907–1908, 66–69]. As for Ausonius, see his *Eclogue* 26 [Prete 1978, 115], which critically replies to a hexameter of unknown provenance on which weekday is suitable for cutting either nails, beard, or hair (*ungues Mercurio, barbam Iove, Cypride crines*) thus:

- Mercurius furtis probat ungues semper acutos  
Articulisque aciem non sinit imminui.  
Barba Ioui, crinis Veneri decor; ergo necesse est  
Vt nolint demi, quo sibi uterque placent.
- 5 Mauors imberbes et caluos, Luna, adamasti;  
Non prohibent comi tum caput atque genas.  
Sol et Saturnus nil obstant unguibus. ergo  
Non placitum diuis tolle monostichium.

*Anthol. lat.* 488 [Riese 1906] on the seven-day week is similar to Ausonius, *Eclogue* 8 above:

- Prima dies Phoebi sacro nomine fulget.  
Vindicat et lucens feriam sibi Luna secundam.  
Inde dies rutilat iam tertia Martis honore.

Of all the texts mentioned in the last five pages, only two are mentioned in passing by Monteventi.<sup>52</sup>

It remains to ask whether it would have been better if Monteventi had only changed her official selection criteria so as to cover exactly what she does select (thus leaving the book essentially as is) or if she had corrected her application of the given selection criteria, with consequences for the concept, structure, and content of the book, possibly including even an extension of her definition of astrology so as to include the very few relevant astrometeorological texts. The first option, which may seem preferable in the interest of feasibility and a well-focused analysis, would have required the expansion from two selection criteria to five: not only (1) versified form and (2) astrological content<sup>53</sup> but also (3) didactic and (4) independent form as well as (5) being a product of Greco-Roman antiquity.<sup>54</sup> This could have been more adequately reflected through an expansion of the book's title to "La poésie <didactique> astrologique dans la littérature grecque et latine <de l'Antiquité>."

The second option would have required a new chapter, preferably before the conclusion, devoted to material not covered by the aforementioned criteria (1) to (5). Such a chapter could have been limited to a survey similar to the one given above plus analysis of a few telling examples, thus elegantly avoiding the risk of losing control of the relevant material.<sup>55</sup> Such an additional chapter would have allowed Monteventi not only to round out her now in-

Mercurius quartam splendentem possidet altus.

5 Iuppiter ecce sequens quintam sibi iure dicavit.

Concordat Veneris magnae cum nomine sexta.

Emicat alma dies Saturno septima summo.

<sup>52</sup> These are Propertius, *Eleg.* 4.1.71–150 [136 n245, 205 n69, 264 n94] and the derisory epigram by Lucilius (*ca AD 60*) on the astrologer Aulus in the *Anthologia palatina* 11.164 [263 n93].

<sup>53</sup> "[S]électionnées uniquement sur des critères de forme versifiée et de contenu astrologique" [277: cf. p. 12 above].

<sup>54</sup> See p. 10 n28 above on late medieval and early modern astrological councils of the gods.

<sup>55</sup> This is true particularly with regard to the speech of Horos in Propertius, *Eleg.* 4.1.71–150, which has unique, challenging characteristics, on which see Hübner 2008. Among many other pertinent observations, Hübner remarks [352–353] that "Horos" is the name of an Egyptian deity as are "Hermes" and "Ammon" (whose verses and divine authority Monteventi discusses in chh. 2.9–10; on the divine name "Ammon", see Hübner 2008, 172). Moreover, Propertius uses Horos to express his own opinions and intentions [Hübner 2008, 346], just as those other two anonymous poets express theirs under the pseudonyms "Hermes" and "Ammon", with the important difference that Propertius' message is ultimately poetological, not astrological.

complete picture of Greek and Latin astrological poetry but to show that some of the material that she has omitted is again, in the widest sense, didactic, but not necessarily in an as serious, affirmative manner as the 10 texts actually chosen by Monteventi. Select examples may suffice:

- (1) One seriously didactic text that, however, does not comply with Monteventi's tacit criterion of independence [4] is in the 10th book of Lucan, where Caesar asks the Egyptian sage Acoreus to teach him the secrets of Egyptian culture, religion, and geography [*Pharsalia* 10.176–192]. See especially the imperatives at 10.178 (*edissere*), 10.180 (*profer*), and 10.181 (*prode*) as well as Caesar's justification of his request with reference to how the ancestors of Acoreus taught Plato [10.182 (*docuere*)]. In his reply, Acoreus devotes the first section [10.199–218] to an astrometeorological account of how the two luminaries and each of the five planets influence the sublunar world, and especially how Mercury, when reaching 0° Cancer in the zodiac and midheaven in the daily rotation, releases the flood of the Nile.<sup>56</sup>
- (2) Another poem [*Anthol. Pal.* 14.124], which is anonymous, couches seriously phrased astrological instruction by an astrologer regarding his client's destiny in a mathematical riddle that closely resembles oracular responses whose relationship with didactic astrological poetry Monteventi [241–248] pertinently discusses without, however, taking into account *Anthol. Pal.* 14.124. The speaker, who addresses his client in the second-person singular, specifies the single periods of the client's life—the “division of times” (διαίρεσις χρόνων) was an important branch of astrological predictions—as fractions of his concealed total lifetime  $x$ , allowing us to express the underlying math through the equation  $\frac{1}{6}x + \frac{1}{8}x + \frac{1}{3}x + 27 = x$ .<sup>57</sup> This leads to the solution of the riddle that  $x = 72$ .<sup>58</sup> The text reads thus:

<sup>56</sup> As for astronomical nomenclature, Acoreus mentions the Sun, the Moon, Saturn, Jupiter, Mars, Venus, Mercury, Cancer, Leo, Capricorn, and Sirius.

<sup>57</sup> It seems to have gone unnoticed that all three fractions are unit fractions, which are typical of Egyptian mathematics, while Egypt is also the homeland of Hellenistic astrology. On Egyptian unit-fractional computations, see Gillings 1972, 74–119; Imhausen 2007 and 2016, 89–99 and 189–192; for an older yet still useful German summary, see van der Waerden 1956, 28–47; for unit-fractional data in Greek horoscopes, see Heilen 2020b, 262–266.

<sup>58</sup> See the mathematical explanation by Buffière 1970, 91 n1. Galán Vioque 2002, 234 does not comment on this poem.

Ἡἑλιος μήνη τε καὶ ἀμφιθέοντες ἀλήται  
 ζοφοφόρον τοῖην τοι ἐπεκλώσαντο γενέθλην·  
 ἕκτην μὲν βίοτοιο φίλη παρὰ μητέρι μείναι  
 ὀρφανόν, ὀγδοάτην δὲ μετ' ἀντιβίοισιν ἀνάγκη  
 5 θητεύειν· νόστον δὲ γυναικῶν τε παῖδά τ' ἐπ' αὐτῇ  
 τηλύγετον δώσουσι θεοὶ τριτάτη ἐπὶ μοίρῃ·  
 δὴ τότε σοι Σκυθικοῖσιν ὑπ' ἔγγεσι παῖς τε δάμαρ τε  
 ὄλλονται. σὺ δὲ τοῖσιν ἐπ' ἄλγεσι δάκρυα χεύσας  
 ἐπτά καὶ εἴκοσ' ἔτεσσι βίου ποτὶ τέρμα περιήσεις.

- (3) In epigram 14.141 we find a request for astrological instruction that similarly entails a mathematical riddle: the anonymous speaker asks (an astrologer) what were the positions of the planets and fixed stars (in other words, the horoscope) at the time when his wife gave birth to a child on the previous day, adding that the time of birth, which is indispensable for casting the horoscope, was during the day and that  $\frac{2}{7}$  of the time that had already elapsed since sunrise was equal to  $\frac{1}{6}$  of the time that still remained until sunset:

Ἀπλανέων ἄστρων παρόδους τ' ἐπὶ τοῖσιν ἀλητῶν  
 εἰπέ μοι, ἠνίκ' ἐμὴ χθιζὼν ἔτικτε δάμαρ.  
 Ἡμαρ ἔην, ὅσσον τε δις ἔβδομον ἀντολήθηεν,  
 ἐξάκι τόσσον ἔην Ἑσπερίην ἐς ἄλλα.

As the scholiast wrote, and as modern research has confirmed, the solution is that the time of birth was  $4\frac{8}{19}$  hours after sunrise, when  $7\frac{11}{19}$  hours were still remaining until sunset.<sup>59</sup> I should like to add that

<sup>59</sup> See the mathematical explanation by Buffière 1970, 200 n13, which, however, contains one error that will in the following quotation be corrected in square brackets:

Soit  $x$ , le temps des 12 heures du jour écoulé;  $y$ , le temps qui reste du jour.  
 $y = 12 - x$ ;  $y = 6 \times \frac{2}{7} y$  [read:  $6 \times \frac{2}{7} x$ !]. Après résolution, on obtient:  $x = \frac{84}{19} = 4$  heures  $\frac{8}{19}$ ;  $y = 7$  h.  $\frac{11}{19}$ .

In the interest of clarity, I shall explain the “résolution” using modern mathematical fractions and notation as Buffière did, though one might well wonder by which method and in which computational steps ancient Greek or Roman mathematicians would solve this riddle since they had only unit fractions at their disposal [cf. n57 above]: In order to find  $x$ , we must combine the two equations (a)  $y = 12 - x$  and (b)  $y = 6 \times \frac{2}{7} x$  in such a way as to eliminate the variable  $y$ . Equation (b) is equivalent to  $x = \frac{1}{6} \times \frac{7}{2} y = \frac{7}{12} y$ ; combined with equation (a) this yields  $x = \frac{7}{12} (12 - x)$ ; then  $x = 7 - \frac{7}{12} x$ ; then  $x + \frac{7}{12} x = 7$ ; then  $\frac{19}{12} x = 7$ ; so  $x = 7 \times \frac{12}{19} = \frac{84}{19}$ , and  $y = 12 - \frac{84}{19} = 7\frac{11}{19}$ . Buffière translates the difficult second distich thus:

this time of birth cannot be the result of actually measuring time by means of an ancient sundial.<sup>60</sup> In other words, the epigram deals with a mathematical problem that has been artificially couched in an astrological context and in pseudo-oracular poetic form. One wonders if it entails a tacit challenge directed at a class of self-proclaimed experts who claim to be able to foretell things that are inaccessible to average human beings (unless they are inspired by the gods): if the astrologer turns out to be unable to solve the mathematical riddle, how can he pretend to tell a person's destiny?<sup>61</sup> Be this as it may, I should like to take the opportunity and address one difficulty mentioned by Buffière regarding the first line of this epigram. He translates “Des étoiles dis-moi le cours, et des planètes” [1970, 97], adding to the “et”:

ἐπὶ τοῖσιν, s'il n'a pas le sens banal de “en outre”, pourrait signifier la position des planètes sur les constellations zodiacales: dans quelle “maison” (bélier, taureau, etc.) se trouve chaque planète (Mars, Jupiter, etc.). Il faudrait traduire alors: “Dis-moi <l'emplacement> des constellations/et sur elles dis le passage des planètes”. [Buffière 1970, 200 n11]

There are four reasons why I am convinced that this misinterprets the Greek text (while Buffière's first, official translation [97] quoted above is correct):

- (3a) Instead of «ἀπλανέων ἄστρον», which means all (mostly extrazodiacal) fixed stars, one would expect a metrically suitable

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Le jour, jusqu' au couchant, avait six fois encore les deux septièmes du chemin fait depuis l'aube. [1970, 97]

Beckby erroneously puts the second distich into quotation marks (thereby assuming that it is the astrologer's answer, which is certainly not the case) and mistranslates it:

Tag war's, und nimmst Du zwei Siebtel des damals vergangenen Morgens [!], sechsmal so viel noch verblieb, bis sich die Sonne gesenkt. [1965–1968, 4.244–4.245]

He reports the scholiast's mathematical solution without comment: “Vergangen waren  $4\frac{8}{19}$ , übrig noch  $7\frac{11}{19}$  Stunden [4.538]”. Galán Vioque 2002, 234 does not comment on this poem.

<sup>60</sup> I thank Alexander Jones (ISAW, NYU) for confirming my judgment [email, 5 Dec 2021]. He adds that an observed time measured in 19ths of an hour would also imply “a precision much more refined than any ancient reported observation time, even in Ptolemy”. See also Jones 2020 and 2023.

<sup>61</sup> One may object, however, that the request is not explicitly to tell the child's destiny but to tell the positions of the celestial bodies at the time of birth; i.e., the request is, strictly speaking, not astrological but astronomical and therefore concerns what we now call the exact sciences.

equivalent of «ζφδίων», such as those employed by the astrological poets, namely, «ζωιδίων», «ζώων», or «δεικίλων».

- (3b) It would be awkward to speak of a planet as being located or moving “on” this or that fixed star, which is essentially a point whose celestial coordinates only rarely coincide with those of a planet.<sup>62</sup>
- (3c) Single fixed stars do play a role in ancient astrological theory and practice. Admittedly, their role is a very minor one, and they are not mentioned in the vast majority of extant ancient horoscopes (either documentary or literary). But there are a few theoretical treatments of the importance of bright fixed stars (especially in Firmicus, *Math.* 6.2, 8.31 and by the so-called Anonymous of AD 379),<sup>63</sup> and we find evidence of their inclusion in astrological practice in the elaborate horoscope of the Roman emperor Hadrian by Antigonos of Nicaea<sup>64</sup> and possibly also in the extremely early so-called Lion horoscope on the western terrace of the *Hierothesion* of Antiochus I on Mount Nemrud Dağı in Commagene.<sup>65</sup>

<sup>62</sup> It is an entirely different thing to imagine the planetary deities, as many ancient astrological texts do, as walking on the large, two-dimensional zodiacal belt, much like today’s celebrities on a red carpet. See Heilen 2015a, 2.522.

<sup>63</sup> Cumont 1935, *CCAG* 5.1.194–212.

<sup>64</sup> Heilen 2015a, 1.136 (Antigonos fr. 1 §28): see also 2015a, 176 (fr. 5 §§68–70: this is not part of the emperor’s horoscope) and the commentary on both passages 2015a, 745–748 (fr. 1 §38) and 1257–1299 (fr. 5 §§68–70), where the passages in Firmicus, the Anonymous of AD 379, and Babylonian precursors are also discussed.

<sup>65</sup> See Heilen 2005, esp. 146 with n7, 149–152; 2015a, 1.214–215 on Hor. gr. –61.VII.6–7(?). The situation is different in Hor. gr. 81.III.31 [P.Lond. 1.130] and in Hor. gr. 497.X.28 [Eutocius ap. Rhetorium 6.52: for both horoscopes, see Heilen 2015a, 1.232–233, 310–311] where the positions of the planets are, in addition to their ecliptic coordinates, defined in relation to individual fixed stars, yet without astrological interpretation [see Neugebauer and van Hoesen 1959, 26–27, 153, and 171]. A similar case to which A. Jones kindly directs my attention is Hor. gr. 319.XI.18–19 [P.Berlin 9825, Greenbaum and Jones 2017: cf. Heilen 2015a, 1.290]. My distinction of these three cases from the horoscopes of Hadrian and Antiochus is open to criticism because the absence of astrological interpretation is typical of the extant 168 Greek “documentary” horoscopes that are extant mostly on papyri [for details, see Heilen 2015a, 2.523–524 and Heilen 2020a, 490–491], with only five exceptions: Hor. gr. –3.X.2, Hor. gr. 95.IV.13, Hor. gr. 138–161, Hor. gr. 345.VI.27, and

Moreover, the astrological doctrine of simultaneously rising extrazodiacal fixed stars (*paranattellonta*) deserves mention.<sup>66</sup>

- (3d) It seems to have gone unnoticed to the present that the epigram's first verse has a close parallel in Ptolemy, *Apotel.* 1.2.4

αἶ τε τῶν ἀστέρων τῶν τε ἀπλανῶν καὶ τῶν πλανωμένων πάροδοι<sup>67</sup>  
 πλείστας ποιούσιν ἐπισημασίας τοῦ περιέχοντος καυματώδεις καὶ  
 πνευματώδεις καὶ νιφετώδεις, ὕφ' ὧν καὶ τὰ ἐπὶ τῆς γῆς οἰκείως  
 διατίθεται.<sup>68</sup>

that attests an ancient parallel for «ἀπλαν-», «παροδ-», and «ἀστ(ε)ρ-» together in astrological context. Moreover, the noun «πάροδος» is extremely rare in the extant poetic astrological record, and it is only in the present two instances [*Anthol. Pal.* 14.141.1; Ptolemy, *Apotel.* 1.2.4] that it means simply “passage”.<sup>69</sup>

Hor. gr. 350–450 [see Heilen 2015a, 2.526]. Hence, we cannot exclude that the authors of the aforementioned horoscopes which refer to fixed stars (Hor. gr. 81.III.31, Hor. gr. 319.XI.18–19, and Hor. gr. 497.X.28) would have attached some astrological meaning to them.

My reason for grouping the Lion horoscope, which equally lacks an explicit astrological interpretation, with that of the emperor Hadrian is that Antiochus of Commagene was a ruler, and that Regulus is conspicuous on that stone slab not only because of its position on the lion's chest—this had to be so because of the canonical *astrothesia*—but also because it is in conjunction with the Moon's crescent, a conjunction reported by Antigonus of Nicaea [fr. 5 §68 in Heilen 2015a, 1.176] to create the highest ranking human beings. Thus, I am inclined to assume that Regulus was meant astrologically by Antiochus of Commagene to characterize that stone relief as a royal horoscope, no matter which event's alignment it records (his birth, his coronation, or whatever).

<sup>66</sup> See especially the fifth book of Manilius.

<sup>67</sup> Y has the variant reading «περίοδοι»: cf. Hübner 1998, 6, *app. crit. ad lin.* 88. Wilhelm of Moerbeke's Latin translation, which is generally important for the constitution of Ptolemy's text, reads *Astrorum etiam non errantium et errantium accessus faciunt* [Vuillemin-Diem and Steel 2015, 161.l.73]. While “accessus” is imperfect, it supports the reading «πάροδοι» rather than «περίοδοι».

<sup>68</sup> See the translation in Robbins 1940, 7–9:

Moreover, the passages of the fixed stars and the planets through the sky often signify hot, windy, and snowy conditions of the air, and mundane things are affected accordingly.

<sup>69</sup> Cf. LSJ s.v. πάροδος (B) I.1.a. The noun occurs only twice more in astrological verse, namely, in [Manetho], *Apotel.* 1.353 and 1.357, both times in the different, technical

One may therefore wonder if the poet of the epigram composed the first verse with a view to Ptolemy's sentence, which features prominently near the beginning of his work and contains an explicit assertion of the astrological effects of those *πάροδοι*.<sup>70</sup> If so, the epigram's date would be no earlier than the third century AD.<sup>71</sup>

- (4) As an example of mock didactic poetry, one can adduce Claudian's presentation of the horoscope of Curetius [*Carm. min.* 44], in which the poet explicitly announces [vv. 1–2] that he reveals things that Curetius did not know before (i.e., the celestial causes for his abject character, mostly in sexual matters) and viciously emphasizes the truth of his defamatory and obscene horoscope reading:

Si tua, Cureti, penitus cognoscere quaeris  
sidera, patre tuo<sup>72</sup> certius ipse loquar.  
quod furis, adversi dedit inclementia Martis;  
quod procul a Musis, debilis Arcas<sup>73</sup> erat;  
5 quod turpem pateris iam cano podice morbum,  
femineis signis Luna Venusque fuit;  
adtrivit Saturnus opes. hoc prorsus in uno  
haereo: quae cunnum lambere causa facit?

The parodistic relationship between this poem and serious didactic poetry becomes even clearer in view of the similarly fictitious horo-

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meaning “transit”. Even less similar is the only poetic attestation of the verb «παροδεύω»: it occurs in Dorotheus, *Appendix* 2f [= Hephaestio, *Apotel.* 3.20.4] at [Pingree 1973–1974](#), 1.273 and [1976](#), 434, where the subject is neither a fixed star nor a planet but a number (ἀριθμὸς δὲ κεν ἐν χρόνῳ εὖτε/ζωιδίῳ φιλήτης ἐκλειπτικός οὐ παροδεύη).

<sup>70</sup> One additional argument in favor of this hypothesis is this: I understand the term «πάροδος» in both texts as drawing on the default assumption of ancient astrology that the observer of the sky keeps watching southward, so that the stars and planets “pass by” him in their apparent daily motion from east to west. If this is correct, our epigram employs the noun «πάροδος» metonymically because what the speaker actually wishes to know is not the passages of the celestial bodies, which take hours, but their positions within those passages at the moment of birth.

<sup>71</sup> According to the *Thesaurus Linguae Graecae*, there are four more attestations of «ἀπλαν-» together with «ἀλητ-» in Greek literature, all of them concerning fixed stars and planets: *Anthol. Pal.* 9.822.3 (ἀπλανέες δ' ἐκάρθε καὶ ἀντιθέοντες ἀλήται—this epigram is equally astrological and anonymous, possibly by the same poet); Nonnus, *Dion.* 1.498 (ἀπλανέων δὲ φάλαγγα καὶ ἀντιθέοντας ἀλήτας) and 6.69 (λεύσων ἔνθα καὶ ἔνθα καὶ ἀπλανέας καὶ ἀλήτας); and John of Gaza, *Ecphr.* 1.193 (καὶ πόλον ἀστροχίτωνα καὶ ἀπλανέας καὶ ἀλήτας). Maybe the epigrams influenced the late poets Nonnus and John of Gaza, but this cannot be ascertained.

<sup>72</sup> The astrologer Uranius, derided in the previous poem [*Carm. min.* 43].

<sup>73</sup> I.e., Mercury.

scope of Oedipus in [Manetho], 6.160–169: while the astrological poet wishes to explain the sexual perversion of the well-known mythic figure through an appropriately arranged planetary alignment, Claudian explains the (in his view) vile and sexually depraved character (v. 5 *morbum!*) of his contemporary, Curetius, with similarly concocted horoscopic details.<sup>74</sup> There is, of course, an important difference between the two figures (appropriate, one might say, to the difference between a serious and a parodistic text), namely, that Oedipus is, as a tragic hero, superior to average human beings both by his noble offspring and his intelligence, and that he is not aware of committing a horrifying perversion, while Curetius acts intentionally and is in all regards vile and abominable.

- (5) Ovid's reading of the fictitious horoscope of Ibis [Ovid, *Ib.* 209–220] is similar to Claudian's but lacks vocabulary related to learning, knowing, and truth:

210                   natus es infelix, ita di voluere, nec ulla  
                           commoda nascenti Stella levisve fuit.  
                           non Venus affulsit, non illa Iuppiter hora,  
                           Lunaque non apto Solque fuere loco,  
                           nec satis utiliter positos tibi praebuit ignes  
                           quem peperit magno lucida Maia Iovi.  
 215                   te fera nec quicquam placidum spondentia Martis  
                           sidera presserunt falciferique senis.  
                           lux quoque natalis, nequid nisi triste videres,  
                           turpis et inductis nubibus atra fuit:  
                           haec est, in fastis cui dat gravis Allia nomen;  
 220                   quaeque dies Ibin, publica damna tulit.

These examples show that there is interesting astrological poetic material beyond the texts analyzed by Monteventi, and some of it also deserves attention with regard to didactic features although it belongs to literary genres other than didactic poetry.

#### 2.4 Monteventi's other chapters

Chapter 2 (“Les poèmes astrologiques”, 57–183) provides for each of the 10 texts selected by Monteventi [see [p.10 above](#)] thorough, up-to-date information on work and author, state of preservation, date, structure, sources, and

<sup>74</sup> There is also a prose version of Oedipus' horoscope in Firmicus, *Math.* 6.30.1, which is very likely to go back together with the pseudo-Manethonian version to an older common source [see [Heilen 2010a](#), 131–132]. One notes a similarity in wording between Firmicus speaking of Oedipus' *incesto furoris ardore* and Claudian's *furis* [v. 3], which, however, precedes the sexual content of his poem [vv. 5–8]. For other fictitious horoscopes of famous figures from Greek myth and history (Paris, Demosthenes, Homer, Plato, Pindar, Archilochus, Archimedes, and Thersites) extant in Firmicus, *Math.* 6.30.11–12, 6.30.22–26, and 6.31.37: cf. [Heilen 2015a](#), 2.525.

content (with an adequately concise and mostly correct explanation of relevant astrological technique), the author's poetical stance (inspiration, invocation to the Muse, choice of meter), and his didactic stance (authority, truth, pedagogical technique). In the case of large texts, well-chosen sample passages are analyzed in detail, e.g., Manilius, *Astr.* 3.385–418 or [Manetho], *Apotel.* 6.738–750.<sup>75</sup> In her discussion of the multiauthored Manethonian corpus [see p. 11 above], Monteventi pertinently devotes a subchapter to each single book. Not only is chapter 2 the core chapter of her monograph in terms of size, it is also pleasant and highly rewarding reading thanks to its conceptual qualities; its clear, compact, and reliable account based on Monteventi's thorough acquaintance with earlier research literature; her own good and cautious judgment; and her often acute observations. More than once she points out interesting nonastrological parallels to a feature of the astrological poems, for instance, with regard to the supposed *prosimetrum* of Nechepsos and Petosiris, that the *Didascalica* by the Roman poet Accius (170–ca 85 BC) was probably composed in *prosimetrum*, thus providing a more or less contemporary parallel [65]. Only rarely do I wish to address a shortcoming, as I will below after this general appreciation of the book's main chapters.

Chapter 3 (“La didactique au niveau de la forme”, 185–234) changes the analytical perspective from single texts to single literary features. A large part of this chapter, namely, subchapters 3.1–3 [185–215], is devoted to a thorough analysis of all aspects of the choice of meter, iambic trimeter, elegiac distich, or dactylic hexameter. The remaining subchapters are devoted to the respective relationships between astrological prose manuals and astrological didactic poetry [3.4], and astrological poetry and knowledge [3.5]. The entire third chapter is a treasure trove of important insights often based on observations of detail made in chapter 2 that are now integrated into a wider, more general perspective that includes the various contributions by other literary genres.

In this chapter Monteventi shows convincingly that the versification of astrological material goes far beyond the simple transposition of prosaic, essentially arid, and nonpoetic material into verse.<sup>76</sup> The poetic meter serves the obvious and important function of facilitating memorization (mnemotechnique) and protecting the text against alterations. It also contributes, thanks to its delimitation by narrow boundaries (as opposed to the arbitrary, endless

<sup>75</sup> See Monteventi's methodological explanation on p. 79.

<sup>76</sup> See B. Effe's characterization of what he called, in his threefold typology of didactic poems, the “formal” type as opposed to those that are either “sachbezogen” or “transparent” [1977].

seeming endless flow of prose), to giving an impression of completeness. This is so although such poems can never exhaust the virtually infinite astrological subject matter contained in the respective prose sources on which the poets drew, even when a poet treats only one part of the doctrine (as does, for instance, Maximus in his poem on initiatives). This impression of completeness is further suggested by the poets through their employment of systematically arranged catalogs in the traditions of Homer and Hesiod.<sup>77</sup> Beyond these features, the various meters allow the poets to emphasize different aspects of the didactic form and divinatory content of their instruction: the iambic meter is distinguished by properties such as clarity and persuasion; the elegiac distich allows the poet, thanks to its “qualité physique” [199], to locate the larger cosmic and the smaller terrestrial elements of conditional clauses (i.e., the protasis and the apodosis of the typical binary omen structure of Babylonian origin) in the longer hexameter and in the shorter pentameter, respectively.<sup>78</sup> The stichic dactylic hexameter, being the typical meter of traditional oracular responses, is particularly

<sup>77</sup> See, e.g., that of the ships in Homer, *Iliad* 2.494–759 and the fragmentarily preserved *Catalogue of Women*, whose attribution to Hesiod Monteventi does not question.

<sup>78</sup> Excellent are, in this regard, pp. 198–200, esp. 199:

L'organisation de la matière peut être vue sur deux plans: celui de la protase—si tel astre se trouve dans tel endroit du ciel—, et celui de l'apodose—telle prédiction, favorable ou non, en sera tirée—[S.H. Monteventi presents Anubio fr. 7, vv. 8–9 as an example; since, however, about 10 letters of both verse endings are missing and other letters are uncertain, one might rather refer to an impeccably preserved fragment such as Anubio fr. 3c: κεντρογραφηθείσης δὲ μετ' Ἡελίοιο Σελήνης, / μείζονας, ἐνδόξους καὶ βασιλείς προλέγει.] Cette qualité physique du distique présente un avantage supplémentaire dans un contexte d'observation de phénomènes célestes et de leurs contreparties terrestres. Dans cette paire élégiaque, le poète utilise de manière iconique la grandeur de l'hexamètre pour décrire une configuration céleste, et le pentamètre, plus petit et plus humble, pour en illustrer la conséquence humaine. De cette manière, il emploie l'architecture binaire du mètre comme un reflet du fondement de l'astrologie: l'action des astres sur la vie des hommes.

Monteventi clarifies in the sequel [201] that the distribution of protasis in the hexameter and apodosis in the pentameter can be found in many of Anubio's astrological distichs but is not systematically employed, not least because some protases are too complex to be expressed in one hexameter. She also shows that Anubio's use of the “physical quality” of the elegiac distich has a precursor in certain epigrams by Posidippus of Pella (third century BC) that contain predictions that are

suitable for a divinatory art such as astrology. Monteventi shows that the astrological poets cleverly envisaged and exploited such characteristics and inherent opportunities of the various meters; therefore, their different metrical choices are much more than a superficial pursuit of formal distinction from this or that predecessor.

Monteventi also shows how the astrological poets pick up and develop further the cosmic or cosmological dimension of earlier poems by Hesiod, Xenophanes, Parmenides, Empedocles, Aratus, and so on. She also investigates the political dimension of many of these poems, as well as their relationship to power and those who hold the power. Moreover, she analyzes how the poetic invocations to deities convey authority to the poems and how the authors resourcefully employ metaphors, especially that of the journey [250–262], and other typical features of ancient didactic poetry, each of them with individual accents and preferences. In doing all this, she duly keeps in mind the fragmentary state of preservation of the majority of her 10 texts: since features that are absent from the fragments of some text may have occurred in its lost sections, caution is advised, and peremptory assertions must be avoided.

Another important aspect of Monteventi's analyses concerns the relationship between the poems and astrological prose manuals. Just as earlier didactic poets such as Aratus, Nicander, Lucretius, or Virgil used to versify preexisting prose manuals composed by other authors, the astrological poets are likely to have drawn extensively on (now lost) prose manuals. But in the case of astrological poetry the relationship is more complex because these poets probably also drew on earlier astrological poems, especially on the poems attributed to the semilegendary figures of Nechepsos and Petosiris, which Boll called "the bible of astrologers".<sup>79</sup> We have ample evidence of an opposite trend, too, because some astrological poems (esp. those of Dorotheus and Maximus) were later turned into one or even more still existing prose paraphrases, interestingly so because this productive reception of the poems indicates that some ancient readers considered them to contain useful knowledge that deserves to be rephrased in more easily intelligible language, i.e., to be not only of artistic but also of practical value.

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not astrological yet pertain, for instance, to the flight of birds and its signification for fishing and navigating.

<sup>79</sup> Boll 1908, 106 = Boll 1950, 4: "Es ist recht eigentlich die Astrologenbibel, die man fortgesetzt kommentiert und umschreibt." For further details, see Heilen 2015a, 1.39 n183.

The conclusion [277–284] provides a succinct and informative summary of the methods applied and insights gained in the previous chapters. One only misses an outlook on future research to be done, namely (at least in the present author’s opinion), an analysis of that poetic astrological material that belongs to literary genres other than didactic poetry [see pp. 13–17 above].

### 3. Select Problems

#### 3.1 Chapter 1 (Introduction)

Monteventi writes [16] that ancient astrological poetry was continued in the Byzantine world by John Camaterus (12th century) with his poem *Εἰσαγωγή ἀστρονομίας* [Weigl 1907–1908]. She seems to be unaware that besides this large, poorly organized<sup>80</sup> poem in 4107 so-called political verses (i.e., in an iambic meter of 15 syllables) of rather popular make, John Camaterus authored a second, shorter, more sophisticated astrological poem of uncertain title in 1351<sup>81</sup> iambic dodecasyllables.<sup>82</sup> Both poems are dedi-

<sup>80</sup> According to Feraboli 2011, 217, it is “un vero disordine compositivo”.

<sup>81</sup> Not 1154, as Zagklas 2019, 246, has it.

<sup>82</sup> Miller 1872, 53–111. For more details on both astrological poems, see Krumbacher 1897, 760–761; Weigl 1902, 7; Hunger 1978, 2.118 and 2.242; Pingree 1978, 2.433–434; and Caudano 2012, 57–59. A new edition of the shorter iambic poem is needed not least because Miller based his edition on three French manuscripts of the BnF Paris and one Italian manuscript from Turin (he was aware of the existence of some more manuscripts: see Miller 1872, 52 n1), while today some 20 manuscripts are known and ought to be collated [see <https://pinakes.irht.cnrs.fr/notices/oeuvre/4343/>]. For details on the shorter poem’s Byzantine iambic meter, see Miller 1872, 50. Miller edited this poem under the title «Ποίημα τοῦ ἐπὶ τοῦ κανικλείου τοῦ Καματηροῦ, περὶ ζωδιακοῦ κύκλου καὶ τῶν ἄλλων ἀπάντων τῶν ἐν οὐρανῷ» [53]. In his footnotes, he adduced variant readings of the manuscripts but did not discuss the authenticity of the title, nor did he in his introduction, nor did (as far as I know) any later scholar. In my view, Miller’s title cannot have been intended as such by John Camaterus because it describes the content very poorly. I assume instead that it was added by a scribe who drew the first words from the first section title in the poem (preceding vv. 31–35), which reads «Περὶ τοῦ ζωδιακοῦ κύκλου», and who knew little about astrology because the latter half (καὶ τῶν ἄλλων ἀπάντων τῶν ἐν οὐρανῷ) misrepresents the true content by suggesting material celestial bodies and maybe immaterial celestial circles. My rejection of the transmitted title raises the question of whether this iambic poem, which ends quite abruptly, is complete or unfinished. In favor of completeness, see the correspondence between vv. 1140–1144 (esp. the use of «τὸ λοιπὸν» in vv. 1140–1141) and the final v. 1351 [see Appendix 1, p. 60 below].

cated to John's sovereign, Emperor Manuel Comnenus (AD 1143–1180), as Manilius and the poets of [Manetho], *Apotel.* 1 and 5 had dedicated their poems to their respective rulers. The shorter poem, which has been appallingly neglected in modern research<sup>83</sup> and was overlooked by Monteventi too, especially deserves a brief look because of various interesting characteristics: its structure as a monobiblos [see v. 1 βιβλίον] combined with its focus on compact, systematic treatment of most of the elementary and genethliological tenets<sup>84</sup> at the expense of any poetic adornment such as in-

<sup>83</sup> One general reason for this neglect may be Krumbacher's devastating valuation of John's poem as a "poesieverlassenes Machwerk" [1897, 760] and of other Byzantine authors' poems as "tödlich langweilige Lehrgedichte". Another, more specific reason is probably Miller's [1872] incorrect designation of our iambic poem—as well as another astrological poem of 593 verses by Constantinus Manasses [Miller 1872, 8–39] (with erroneous attribution to Theodorus Prodromus: note the correction in Horna 1902, 24–26, confirmed in Hunger 1978, 2.118 and 2.243)—as "astronomical", both in the title of his publication and in his introduction. See, e.g., his following unsustainable assertions and distinctions regarding our iambic poem:

Or le poëme dans nous nous occupons prouve une connaissance réelle des principes de l'astronomie.... Indépendamment du poëme astronomique, Jean Camatère avait composé un autre opuscule du genre purement astrologique en vers politiques de quinze syllables. [Miller 1872, 48]

On pages 49–51, however, he temporarily gives the impression that he considers our iambic poem to be astrological, before he returns to speaking of it as a "poëme astronomique" [52]. Camaterus himself never uses words from the roots «ἀστρολογ-»- or «ἀστρονομ-» in his two astrological poems except for the title of the longer poem, «Εἰσαγωγή κατὰ μέρος ἀστρονομίας διὰ στίχου», if this is authentic. Instead, he once employs, instead of «ἀστρολογία», the *hapax legomenon* «ἀστρολεξία» in the iambic poem [v. 23 Τὴν γὰρ διαβόητον ἀστρολεξίαν]. Constantinus Manasses, instead, calls the science that he invites Irene, the emperor's sister-in-law, to learn ἀστρονομία [v. 12 [Miller 1872, 9]]. It was presumably because of Miller's inappropriate classification of both poems as astronomical that Abry 2011, 8–9 erroneously states that Camaterus' shorter poem "traite exclusivement d'astronomie", and this is probably why Monteventi, too, was unaware of its astrological content. A contributing factor may have been that Feraboli 2011 also mentions only the longer poem, i.e., the Εἰσαγωγή ἀστρονομίας, as an astrological work by Camaterus.

<sup>84</sup> This poem does not address the branches of universal, catarchic, medical, and interrogational astrology.

vocations to the muses, similes, catalogs, and so forth<sup>85</sup> makes it original and actually more useful to practitioners than the extant late antique poems.

This pursuit of usefulness and clarity is confirmed both by headings (probably written by John himself) that ease orientation between the topics treated and by the choice of the iambic meter which, as a matter of fact (yet probably unintentionally),<sup>86</sup> resumes, at a very late date, the meter employed at the beginning of Greek astrological poetry by Nechepsos and Petosiris. Moreover, this poem exhibits a plethora of didactic features, especially imperatives of learning (12 instances of «μάνθανε», 8 of «μάθε»), with occasional remarks that imply that the illustrious student, whose constant attention the poet ensures by addressing him repeatedly with personal pronouns (σὺ v. 935; σοὶ vv. 1, 6, 86, 438, 954; σε vv. 9, 1201), may actually practice astrology in the future (e.g., v. 1201 Τὸ τεχθὲν ἄτροφόν σε χρὴ πάντα λέγειν). This was not *a priori* an unrealistic or even absurd expectation because Emperor Manuel was a notorious defender of astrology.<sup>87</sup> It is hoped that this poem will, in the future, receive more attention.<sup>88</sup>

<sup>85</sup> Miller 1872, 51 goes so far as to speak of “des vers sans poésie. C’est simplement de la prose mesuré, je n’oserai pas dire rythmée”. He acknowledges, however, that Camaterus’ iambic poem is, compared to the astrological poem by Constantinus Manasses, “plus savant et plus technique, plus développé” [50]. Incidentally, Camaterus himself may have considered poetic adornment superfluous because, as he states in his iambic poem to Emperor Manuel [vv. 19–22], the subject itself is more delightful and charming than other disciplines:

Ὅθεν τὸ τερπνὸν τῆς προγνώσεως τόδε  
 Τῶν ἀστείων λάμβανε νῦν φιλοφρόνως.  
 Καὶ γὰρ χαρίεν μᾶλλον αὐτὸν τυγχάνων  
 Ἦπερ τὰ ἄλλα τῶν μαθημάτων πέλει.

<sup>86</sup> It seems that Camaterus did not know any of the larger ancient astrological poems. We know from John’s other work, the *Εἰσαγωγή ἀστρονομίας*, that he drew for that on Hephaestio of Thebes, John Lydus, Teucer of Babylon, Rhetorius, Ptolemy, Stephanus, Ammonius, Eratosthenes, a prose paraphrase of Maximus, and Paul of Alexandria [see Weigl 1902], in short, exclusively on prose works of which only Hephaestio’s includes scattered fragments from Dorotheus’ poem.

<sup>87</sup> See Boll 1903, 21 and Hunger 1978, 2.243. Miller 1872, 49–50 adds that the emperor repented his earlier indulgence in astrology on his death bed.

<sup>88</sup> See Appendix 1, p. 60 below.

Monteventi [25–26, cf. 246] discusses two early Greek sources that are little known among historians of astrology yet “suggèrent plus fermement la connaissance de cette pratique divinatoire à l’époque classique” [25]. These texts are Euripides, *Melanippe the wise* fr. 4 [Kannicht 2004, fr. 483] (its *terminus ante quem* is 411 BC), and Herodotus, *Hist.* 2.82.1. The Euripidean fragment speaks of the mythic figure Hippo (Melanippe’s mother) as she who first drew oracles from the risings of the stars:

ἡ πρῶτα μὲν τὰ θεῖα προμαντεύσατο  
 χρησμοῖσι σαφέσιν<sup>89</sup> ἀστέρων ἐπ’ ἀντολαῖς  
 She who first presaged the divine will through clear oracles at  
 [i.e., from] the risings of the stars.

Here Monteventi emphasizes correctly that we cannot determine the exact nature of the predictions that the two hexameters alluded to. As a matter of fact, the fragment does not even say that the “oracles” were about events in human lives, nor does it indicate whether the oracles were based on observations or on computations.

Herodotus, *Hist.* 2.82.1 writes:

Καὶ τὰδε ἄλλα Αἰγυπτίοισι ἐστὶ ἐξευρημένα, μείς τε καὶ ἡμέρη ἐκάστη θεῶν ὅτε ἐστὶ καὶ τῆ ἑκάστος ἡμέρη γινόμενος ὅτεοῖσι ἐγκυρήσει καὶ ὅκως τελευτήσει καὶ ὀκοῖός τις ἔσται· καὶ τούτοις τῶν Ἑλλήνων οἱ ἐν ποιήσει γινόμενοι ἐχρήσαντο.  
 And these other things have been invented by the Egyptians: to which god each single month and day belongs; what will happen to each man depending on the day of his birth, how he will die and what his character will be. And those Greeks who deal in poetry have made use of this material.

In this case, Monteventi wrongly insists that “Hérodote évoque l’astrologie horoscopique ou généthliaque”, and she does so explicitly against the majority of modern commentators on Herodotus, concluding,

L’extrait d’Hérodote ne laisse cependant pas de place au doute: il est bien question de l’établissement d’horoscopes. [26]

She overlooks that Herodotus speaks exclusively of calendrical data and does not claim any astronomical observations or computations. This is all the more important in view of the fact that the old Egyptian calendar was,

<sup>89</sup> Monteventi [25] reads <σαφέσιν> as if the adjective were a modern supplement of a lacuna in this iambic trimeter, but this is not the case. While the word is missing in one ancient source, Clemens Alexandrinus, *Strom.* 1.15.73.4, and printed in angled brackets in Früchtel, Stählin, and Treu 1960, it is transmitted in another, Cyrillus, *Adv. Iulian* 4.28, and edited without brackets in the edition of that text in Riedweg and Kinzig 2016, 300 as well as in Kannicht 2004, 533.

unlike the Julian calendar, not in a fixed relation with the solar year, with the consequence that absolutely no astronomical parameter, not even the solar longitude, was implied in an old Egyptian day of birth.

### 3.2 Chapter 2.1 (Nechepsos and Petosiris)

The complicated details of what is currently known about the pseudepigraphic work of Nechepsos and Petosiris are correctly summarized [57–68] with pertinent references to research by classical scholars and Egyptologists. However, regarding the date of composition of the *Salmeschiniaca* [66], Monteventi perpetuates the widespread erroneous interpretation of Hephæstio of Thebes, *Apotel.* 2.18.74 [= Antigonus of Nicaea, fr. 6 §74] «λέγει»<sup>90</sup> as referring to the legendary king Nechepsos.<sup>91</sup> Since the subject of «λέγει» is actually Antigonus of Nicaea,<sup>92</sup> who lived in the second century AD, we have no evidence that the *Salmeschiniaca* predate the pseudepigraphic writings of “Nechepsos”, which originated from the second century BC onward.

While Pingree 1974 grouped the fragments of Nechepsos and Petosiris in four categories and Heilen [2011, 25; 2015a, 48–50] grouped his own, more complete collection of the relevant fragments in 10 categories, Monteventi, who takes both predecessors into account, proposes a grouping in five categories [62–64] without listing the respective fragments. The correspondences of all three authors’ categories can be summarized thus:

$$\begin{aligned} M_1 &= P_1 = H_3 \\ M_2 &= H_1 + 2 + 4 + 5 + 6 \\ M_3 &= P_3 = H_7 \\ M_4 &= P_4 = H_9 \text{ and} \\ M_5 &= H_8 + 10 \end{aligned}$$

where M = Monteventi, P = Pingree, H = Heilen, and M<sub>1</sub> means Monteventi’s first category. Monteventi’s fivefold analysis has two disadvantages: on the one hand, it distinguishes heterogeneous material less sharply than desirable (her second group comprises fragments dealing with literary shape and method, elementary tenets, genethliological tenets, catarchic tenets, and the *thema mundi*); on the other hand, it wrongly assigns the elementary tenets

<sup>90</sup> See the respective editions in Pingree 1973–1974, 1.167 and Heilen 2015a, 1.180.

<sup>91</sup> One finds this mistake also in Akridas 2021, 13, the most recent publication on the *Salmeschiniaca*.

<sup>92</sup> As shown in Heilen 2015a, 2.1337.

exclusively to what she labels the genethliological group, thereby separating them from universal astrology [M1], to which they equally pertain.<sup>93</sup>

With regard to the iambic meter employed by Nechepsos and Petosiris, the reader may wish to take notice of [Tolsa 2024](#) on the fragments of the early Greek astrologer Critodemus (*ca* 100 BC) which—according to Tolsa’s analysis—contain traces of an original in iambic trimeters that was replaced by a prose paraphrase at an early date.

### 3.3 Chapter 2.2 (Orphica)

There is a mistranslation [70] of «λέχος ἀντήλλαξε καὶ ἦττονι φωτὶ συνῆψεν» ([S.H. [Vénus chez Saturne](#)] a changé l’époux [S.H. [de la native](#)] et l’a unie avec un homme de condition inférieure.) Read: “l’épouse [S.H. [du native](#)]”. Moreover, the gnomic aorists «ἀντήλλαξε» and «συνῆψε» are better translated in the present tense, as Monteventi rightly did before regarding «ἡμαύρωσε» and «κατέπαυσε» in the first lines of the same fragment.

Surprisingly, Monteventi translates the astrological technical term «ἐπέμβασις», which denotes a planetary deity’s entering a certain zodiacal sign (this concept occurs in [Bernabé 2005](#), fr. 779 and in the fragments of Dorotheus and Anubio) as “intervention” [70–71 with n73, 160], thus following her supervisor’s practice [[Schubert 2015](#), XCIX–CI]. The reason that motivates them both to do so is not clear. One would instead expect “entrée” [see [Heilen 2015a](#), 2.522] or the term used by modern astrologers, “transit”.<sup>94</sup>

### 3.4 Chapter 2.3 (Manilius)

Since a comprehensive analysis of the entire poem of Manilius would go far beyond the limits of a single book chapter, Monteventi reasonably focuses on one telling sample, *Astr.* 3.385–418, the discussion of which [79–98] includes

<sup>93</sup> Un deuxième ensemble regroupe les éléments astrologiques généraux: méthodologie, planètes, signes du zodiaque, aspects. Ces données pourront être utilisées pour l’astrologie génethliaque (horoscopes d’individus et horoscope du monde, ou *thema mundi*) et pour l’astrologie catarchique. [62]

If we take, for example, Hephaestio 1.23 (which belongs to universal astrology, i.e., to M1 = P1 = H3), we find in this chapter copious references to various elementary tenets such as the aspects, the alleged physical and moral qualities of the planetary deities, heliacal risings and settings, and so on, e.g., Hephaestio, *Apotel.* 1.23.16–17.

<sup>94</sup> See [Brennan 2017](#), 668 s.v. “transits (epembasis)” [*sic*]. One misses the astrological meaning “entry” or “transit” in LSJ s.v. II where only “commencement” is recorded as an astrological meaning. [Bouché-Leclercq 1899](#), 474 is not helpful on this topic.

pertinent references to other passages of the *Astronomica* such as 2.136–144, 3.31–46, and 4.430–443. However, the translation of *Astr.* 3.385–418 contains two mistakes:<sup>95</sup>

- (1) Since the rising times of the zodiacal signs are different both from one sign to another and for each single sign depending on the observer's geographical latitude, Manilius announces [vv. 3.390–392] that he will not provide detailed data but a general rule is enough. In this context, Monteventi translates v. 390 *atque hoc in totum certa sub lege sequendum est* as “Et cela, de manière générale, il faut s'en enquérir au moyen d'une règle fixe”, where “de manière générale” for “in totum” is wrongly detached from “s'en enquérir” [81]. Later she returns to that verse and writes, “il [S.H. *scil.* Manilius] se contentera de donner une loi fixe (*certa sub lege*, 3.390)” [88], while what Manilius actually has enough with is to give a general rule (*in totum*) instead of detailed data. See, e.g., Housman's pertinent reference to the opposition of teaching *in totum* and either *particulatim* or *generatim* at Seneca, *Epist.* 94.31 and Columella, *Res rust.* 3.2.31.<sup>96</sup>
- (2) v. 403 “auerso nascenti sidere Tauro” does not mean “lui [S.H., i.e., *Taurus*] qui naît avec une étoile située à l'arrière” but rather “the Bull who rises backward”, i.e., “hind foremost” [Goold 1997, 193]. Monteventi's mistake implies a misunderstanding of *sidus*, which here means constellation, not a single star, and insufficient familiarity with astrothetic detail<sup>97</sup> and rising phenomena. That is curious in view of the availability of plenty of correct translations of this line,

<sup>95</sup> Note also two more translation mistakes [270–271] regarding *Astr.* 1.679 *ingenti...orbe* (dans l'immense voûte celeste: read “avec son immense cercle”) and 1.703 (of the Milky Way), *in caeruleo candens nitet orbita mundo* (“son orbe lumineuse brille dans l'univers azur”). Azure is an intense, relatively light blue like that of the mineral lapis lazuli (its etymological origin), while Latin «caeruleus» like Greek «κυάνεος», means dark blue, almost black, and this is exactly what Manilius' context requires [Goold 1997, 61 *ad loc.* “dark blue”].

<sup>96</sup> Monteventi's third and last reference to this thought [95] paraphrases Manilius' thought correctly without quoting the words “in totum”.

<sup>97</sup> ἀστροθεσία is the two-dimensional arrangement of the single fixed stars within a constellation.

including Montevanti's declared base text, i.e., [Feraboli, Flores, and Scarcia 1996–2001](#), 2.47: “Toro che spunta con la parte posteriore”: cf., e.g., [Fels 1990](#), 231: “des Stieres, welcher als abgewendetes Sternbild emporsteigt”.

Moreover, Montevanti [80–82] does not explain Manilius' puzzling measurement of the rising times of the zodiacal signs in *stadia* [*Astr.* 3.418], where *quot stadiis oriantur quaeque cadantque* is translated as “sur combien de stades chaque signe se lève et se couche”. Here a reference to [Neugebauer 1975](#), 719 would have been in order, where we learn that the unit *stadium* that is employed by Manilius in vv. 275, 279, 282, 291, 418, 437 of the third book is nowhere else attested in ancient astronomical texts and means  $\frac{1}{2}^\circ$  of right ascension. The reader may further wish to consult Neugebauer's discussion of Manilius' method [[1975](#), 718], especially his rule 13:

$$\rho_2 = \frac{m}{6}, \rho_5 = \frac{M}{6}, \text{ and } d = \frac{1}{3}(\rho_5 - \rho_2),$$

where  $m$  is the shortest daytime  $M$  is the longest daytime,  $\rho_1$  is the first  $30^\circ$  or zodiacal sign after the vernal equinox, i.e., Aries,  $\rho_2$  is Taurus, and so forth, which is the content of *Astr.* 3.385–418.

In her discussion of “Autorité et vérité” [83–89], Montevanti addresses [83] Manilius' insistence that his reader, being the student, owes him, the teacher, “the technique” [v. 3.394 *mihi debeat artem*], namely, the basic rules for the determination of the rising times of the zodiacal signs. However, she seems to be unaware that the expression “mihi debeat artem” is ambiguous and misleading. While one should not go as far as Neugebauer [1975], who peremptorily asserts that Manilius “claims the invention” of those rules, one *can* certainly understand the Latin words as containing such a claim. We know for sure, however, that Manilius did not invent those rules that are attested much earlier in the treatise of Hypsicles (*ca* 175 BC) and in Hypsicles' Babylonian prototypes [[Neugebauer 1975](#), 718]. Moreover, as Neugebauer notes, Manilius clearly had but an incomplete understanding of astronomical rising times. Therefore, he must have derived his knowledge from a (presumably Greek) source that he passes over in silence. Hence, his demand is justifiable only if one interprets the words “mihi debeat artem” [3.394] as referring to the direct dependence of the student on his teacher, while the student will indirectly and ultimately depend on the true, unnamed Babylonian inventors. In short, there is noteworthy rhetoric of authority in Manilius, *Astr.* 3.393–394.

Montevanti's attention to stylistic features leads to many good observations such as those on chiasmic word order and acrostichs [94], regarding the chiasmic word order of Manilius, *Astr.* 3.413–416 [97], and on mimetic word order in 3.387 “quot [[S.H. \*scil. signa\*\]](#) surgant in quoque loco cedantque per horas” [95]. Regarding this last example, and with a view to the importance

of so-called iconicity<sup>98</sup> in current research on ancient poetry, one might reinforce Monteventi's correct observation on v. 3.387,

Le poète offre, par le placement et la succession de ses mots, un effet de mimétisme par rapport au mouvement des astres qui, du point de vue d'un observateur terrestre, se lèvent et se couchent,

with reference to the fact that it was customary in ancient astrology, especially in drawing horoscopic charts, to take the perspective of a person looking southward: the celestial bodies would then rise over the eastern horizon on the observer's *left* and set beneath the western horizon on his *right*, just as the words "surgant" and "cedant" are placed in the left and right parts of verse 387, respectively. Thus, the horizontally written hexameter in the poem becomes a tiny image of the vast horizon of an observer of the risings and settings of the stars, in compliance with the ancient astrological doctrine of the correspondence of microcosm and macrocosm.

### 3.5 Chapter 2.4 (Dorotheus)

While the information on author and work is altogether solid and useful, Monteventi digresses in an irrelevant report on the legendary background of the history of translation and adaptation of Dorotheus' poem [99–100]. Immediately before that, she mentions [99] that the Arabic paraphrase of Dorotheus' work contains 10 datable horoscopes,<sup>99</sup> eight of them for dates between 7 BC and AD 43 and two later ones for dates in 281 and 381 AD that appear to be Persian additions. Note that the horoscope that [Pingree 1976](#), XV dated to 20 Oct AD 281<sup>100</sup> has been convincingly redated to 2 Oct AD 44 in [Holden 1996](#), 34 n83, 37 n88, 96 n229.<sup>101</sup>

With regard to the horoscope diagrams in the Arabic manuscripts of the paraphrase of Dorotheus [100–101], it would have been good if Monteventi had explicitly clarified two points, namely, that these diagrams cannot go back to Dorotheus and that the presence of nine fully elaborated horoscopes

<sup>98</sup> Monteventi supplies more information on this poetological term on p. 95 with n150.

<sup>99</sup> They are contained in [Pingree 1976](#), 1.21.14–20, 1.24.2–19, 3.1.27–65, and 3.2.19–44.

<sup>100</sup> This dating is repeated in [Pingree 1978](#), 2.427; [1989](#), 229; [1997a](#) 46; [1997b](#), 127; and [Panaino 2009](#), 95.

<sup>101</sup> Holden is followed by [Gansten 2009](#), 28 n2, and [Heilen 2015a](#), 1.221–223, on Hor. gr. 44.X.2. For details on the other eight authentic horoscopes, see [Heilen 2015a](#), 1.216–221 on Hor. gr. –6.III.29, Hor. gr. 12.X.31, Hor. gr. 13.I.26, Hor. gr. 14.XI.25, Hor. gr. 22.III.30, Hor. gr. 29.V.2, Hor. gr. 36.IV.2, and Hor. gr. 43.VIII.2. For the one remaining Persian horoscope, see [Heilen 2015a](#), 331 on Hor. pers. 381.II.26.

in Dorotheus' manual indicates that this poet—unlike, for instance, Manilius—may have been personally capable of casting horoscopes unless he obtained all those data from one or more practicing astrologers.

In her fruitful discussion of the important prologue to the Arabic paraphrase of Dorotheus' poem [102–103], Monteventi states that she translated Pingree's English translation of it [1976, 161] into French and then had this checked against Pingree's Arabic original by Zina Maleh (a young Arabist colleague at the University of Geneva), who has contributed numerous corrections and suggestions.<sup>102</sup> Monteventi's consultation of an Arabist is meritorious, even if she does not explain what prompted her to do so, presumably the plausible intention of providing a direct translation of the Arabic instead of adding yet another translation step (with its intrinsic risks) to the already long series of translations from Greek (lost) to Pahlavi (lost) to Arabic to English. It seems that Monteventi was unaware that her effort was all the more in place because Pingree's translation is, regrettably, not reliable, as an eminent critic, the late Paul Kunitzsch, pointed out in his review, also apparently unknown to Monteventi and Maleh.<sup>103</sup> Interestingly, Kunitzsch exemplifies his criticism with select examples of mistakes and misunderstandings drawn from the prologue that Maleh checked for Monte-

<sup>102</sup> Monteventi 102 n167:

Je remercie vivement Zina Maleh pour avoir repris ma traduction française en la comparant au texte arabe, grâce auquel elle a pu apporter de nombreuses corrections et suggestions.

<sup>103</sup> Kunitzsch 1978, esp. 129 (first lines of the conclusion):

Diese arabistischen Mängel stimmen bedenklich. Wir haben hier nur einige zufällige Beispiele herausgegriffen, aber diese sind doch so grundsätzlicher Art, daß sie die Zuverlässigkeit der arabischen Edition und der englischen Übersetzung stark überschatten.

Pingree, who was arguably the most important modern scholar in the history of astrology and its transmission from one culture to another, had been trained as a classicist and Sanskritist before he learned Arabic, as he reports in his short autobiography,

by working through a manuscript of 'Umar ibn al-Farrakhan's translation of the Pahlavi version of Dorotheus of Sidon's astrological poem. [Calder and Heilen 2007, 518]

i.e., by working through the Arabic translation that he later published [Pingree 1976]. Only recently, an Arabist colleague pointed out to me that he has noticed cases of entirely missing sentences in Pingree's translation. Not knowing Arabic myself, I cannot personally judge these matters.

venti. It appears that Maleh rightly improved Pingree's expressions "of my work and words according to the stars" and "for from it there is the honey of medicine"<sup>104</sup> to "de mon travail et de mes mots sur les étoiles" and "car c'est de là que provient le miel savoureux".<sup>105</sup> However, Maleh could not know that 1 prol. 4 of Pingree's Arabic text contains a mistake («*muṣīb*» instead of «*maṣabb*») that leads to his translation "which are in Egypt and in Babylon, which is in the direction of the Euphrates" [Pingree 1976, 161], which is literally rendered by Monteventi [102] as "qui se trouvent en Égypte et à Babylone, qui est dans la direction de l'Euphrate", though the true sense is "die in Ägypten und in Babylon—das ist die *Mündungsstelle* des Euphrat—waren" [Kunitzsch 1978, 129, his italics] (which were in Egypt and in Babylon which is the mouth of the Euphrates). Moreover, Kunitzsch refers to the correct German translation of this passage by Rosenthal "und in Babel—das ist da, wo der Euphrat mündet" [Rosenthal 1965, 325, unknown to Monteventi].

There is one flawed translation [107] that requires closer attention. It regards a computational method described by "Dorotheus 4.1.11–15, p. 378 Pingree" [more correctly, Pingree 1973–1974, 1.190.3–7 (Hephaestio 2.25.16) ~ Pingree 1976, 256 and 378.11–15 (Dorotheus 4.1.158)]:

ἄλλοι δ' ἐκ Μήνης εἰς ὄγδοον ὠρονόμοιο  
 ζῶον ἀριθμήσαντες, ἀπὸ Κρόνου αὐθις ἔδωκαν·  
 εἰς δὲν δὴ λήξειε τόπον καὶ ἄνακτα τόποιο  
 σκέπτονται τούτων ἐπιμάρτυρας οὔτινες εἰσιν·  
 τῶν ἄπο δὴ φράσσαντο τέλος αἰσχροὺν τε καὶ ἐσθλόν.

Monteventi translates (the imperfections will be underlined):

D'autres, après avoir compté à partir de la Lune à l'horoscope jusqu'au huitième signe, établissent au contraire (la prédiction) à partir de Cronos [Saturne]: ils regardent le lieu précisément où il s'est arrêté, le maître du lieu, et leurs témoins, qui ils sont. C'est donc à partir de ces éléments qu'ils se prononcent sur la mort, mauvaise et bonne.

What the first two verses really mean is

Others count from (the position of) the Moon to the eighth zodiacal sign from the ascendant (i.e., to the eighth place of the *dodecatropos*)<sup>106</sup> and then cast (the resulting amount) out from (the position of) Saturn.

<sup>104</sup> Pingree 1976, 161 trans. of 1 prol. 3.

<sup>105</sup> Monteventi 102: cf. Kunitzsch 1978, 129.

<sup>106</sup> The text presupposes the so-called sign-house system (a term coined in Holden 1982: cf. Heilen 2015a, 2.691–693) in which each place coincides with one zodiacal sign. With regard to ancient texts, it would be more appropriate to speak of a "sign-place system".

The underlying principle is typical of ancient astrological computations of lots,<sup>107</sup> which always follow the pattern: measure the arc between two points  $x$  and  $y$  and then measure the same amount from point  $z$  in order to find the lot  $\lambda$ . In the present case, the meaning intended by Dorotheus is made clear by the Arabic paraphrase [4.1.158 in [Pingree 1976](#), 256]:

Also there were some of those learned in the stars who counted from the Moon to the eighth, then cast it out from Saturn; wherever it reached, they looked at that sign, which it was and which [planet] was the lord of that sign, [and] then they judged good or evil for him.<sup>108</sup>

Moreover, the correct meaning is confirmed by other ancient and medieval parallels, some of which explicitly attribute this method to Dorotheus, thus being presumably independent of Hephaestio:<sup>109</sup>

- Vettius Valens, *Appendix* 12.1.3 [[Pingree 1986](#), 423.13–14]: Κλήρος θανάτου κατὰ Δωρόθεον ἀπὸ Σελήνης ἐπὶ τὸν η' καὶ τὰ ἴσα ἀπὸ Κρόνου.
- Olympiodorus, *Comm.* 22 [[Boer 1962](#), 55.9–10]: κλήρος θανάτου ἀπὸ Ϟ ἐπὶ τὸν ὄγδοον τόπον καὶ τὰ ἴσα ἀπὸ η'. See also ch. 23, 60.34–35 κλήρος θανάτου ἀπὸ Ϟ εἰς τὸ η' ζῳδιον καὶ ἀπὸ Κρόνου δίδου τὸν μερισμὸν ἡμέρας καὶ νυκτός.
- Rhetorius 5.77.3 [[CCAG](#) 8.4.199.11–14]:<sup>110</sup>  
Κλήρος θανάτου ἀπὸ Σελήνης ἐπὶ τὸν ὄγδοον τόπον τοῦ ὠροσκόπου ἐπὶ ἡμέρας καὶ νυκτός· καὶ ὅπου ἂν ἐκπέσῃ ὁ κλήρος, σκόπει τοὺς ἐπιθεωροῦντας· ἐὰν γὰρ κακοποιὸς μόνος ἐπιθεωρήσῃ τὸν κλήρον, βιαιοθανάτους ποιεῖ.
- Apomasar (i.e., Abū Ma'shar in the Byzantine Greek translation), *De mysteriis* [[CCAG](#) 11.1.193.21–27]:  
Ὅ δὲ ὄγδοος τόπος ἔχει κλήρους πέντε, πρώτων μὲν τὸν τοῦ θανάτου, λαμβάνεται δὲ ἡμέρας καὶ νυκτός ἀπὸ τῆς Σελήνης μέχρι τῆς μοίρας τοῦ ὄγδοου τόπου, καὶ τὰ ἴσα ἀπὸ τῆς μοίρας τοῦ Κρόνου. εἰ μὲν οὖν ἐστὶν ὁ τοιοῦτος κλήρος κεκακωμένος καὶ ὁ κύριος αὐτοῦ, καὶ μὴ ἐφορῶνται ὑπὸ ἀγαθοποιοῦ, βίαιον ὑποστήσεται θάνατον· εἰ δ' ὑπὸ ἀγαθοποιοῦ ἐφορᾶται, εἰρηνικὸν τελευτήσει θάνατον.

<sup>107</sup> They are immaterial, significant points in a horoscope or chart.

<sup>108</sup> This is the English translation in [Pingree 1976](#), 256. The square brackets are his.

<sup>109</sup> I provide a list of the parallels because they have not (so far as I can see) been collected before.

<sup>110</sup> The text edited in the *CCAG* is counted as Rhet. 5.77 and, as far as this short quotation is concerned, it is exactly identical with that of Rhet. 5.77.3 in the forthcoming edition by the late D. Pingree, prepared by the present author.

- MS Venice, Biblioteca Nazionale Marciana, gr. 334, f. 146r: κλήρος θανάτου κατὰ Δωρόθεον ἀπὸ Σελήνης ἐπὶ τὸν ὄγδοον καὶ τὰ ἴσα ἀπὸ Κρόνου.<sup>111</sup>

Since the method contained in the five Greek hexameters quoted above [Pingree 1973–1974, 1.190 (Hephaestio 2.25.16)] has, to the best of my knowledge, never been commented on,<sup>112</sup> it may be useful to contextualize them, not least because this will show that Dorotheus actually “propose plusieurs méthodes différentes”, as Monteventi states without explanation. The Arabic paraphrase of Dorotheus’ poem deals with the matter of death extensively [Dorotheus 4.1.143–184 in Pingree 1976, 99–102, 255–258] beginning with the statement that “many men of the learned have spoken regarding death” [4.1.143 in Pingree 1976, 99, 255]. In his following doxography, which regrettably omits the names of the authorities referred to, the poet mentioned our lot-based method second [Hephaestio, *Apotel.* 2.25.16 ~ Dorotheus 4.1.158]. It was preceded by a much longer discussion of a place-based method [4.1.143–157] whose Greek equivalent is the paraphrase in *Apotel.* 2.25.15 (which, in turn, is reproduced in Hephaestio. *Epit.* 4.32.1).<sup>113</sup>

<sup>111</sup> I quote this from the codicological description in *CCAG* 2.33, counted in Stegemann 1939–1943, 118 as Dor. fr. 47b. Stegemann also refers to a paraphrase of this method in ‘Alī ibn Abi r-Riḡāl’s [in Latin: Haly Abenragel’s] *De iudiciis astrorum* 5.7. Moreover, Dorian Greenbaum kindly directs my attention to the Latin occurrence of Dorotheus’ method in Hugo of Santalla, *Liber Aristotilis* 3.8.1.5, Burnett and Pingree 1997, 86 *pars mortis quam nocte et die a Luna ad ipsius viii gradum assumunt et a Saturni gradu abicitur*. This Latin sentence closely matches Apomasar’s «λαμβάνεται δὲ – τοῦ Κρόνου» quoted above from *CCAG* 11.1.193.21–27. The “degree of the eighth place” mentioned in both Apomasar’s and Hugo’s texts probably refers to the initial degree of that place, i.e., to its *cuspis*.

<sup>112</sup> There is but a brief mention of it in Brennan 2017, 532.

<sup>113</sup> Hephaestio, *Apotel.* 2.25.16 was omitted by the author of the epitome. Hephaestio’s chapter on the quality of death [2.25] reports altogether three methods: Ptolemy’s [Hephaestio, *Apotel.* 2.25.2–14 = Ptolemy, *Apotel.* 4.9.1–15] and (without attribution) the two that he found in Dorotheus [Hephaestio, *Apotel.* 2.25.15 and 2.25.16]. Stegemann 1939–1943, 118–119 [followed in Pingree 1973–1974, 1.189, and Pingree 1976, 378] counted *Apotel.* 2.25.15–16 together as one fragment, fr. 47a, and printed it in the left column of a synopsis whose right column was occupied by the brief text in the Venetian manuscript [MS gr. 334] counted as fr. 47b. Since the text of Hephaestio, *Apotel.* 2.25.15 begins on the same height as that of the Venetian manuscript, the reader may misunderstand Stegemann’s arrangement. The Venetian text should have been placed farther down, on the same height as 2.25.16.

Despite its lengthy description, the first method is much simpler because it focuses on the eighth place of the *dodecatropos* while the second method requires a computational procedure based on the same eighth place combined with the two astrological signifiers of biological growth (the Moon) and biological decay (Saturn). Hence, there is a progression from the simpler method (by “some”) to the more complex one (by ἄλλοι, as the extant first original verse reads), and probably this progression is at the same time a chronological one from the earlier, original method to its later, more sophisticated version. As a matter of fact, both methods entail the eighth place and end similarly: once the significant zodiac sign (place or lot) is found, one must consider its astrological qualities, its planetary lord, and aspecting planets.<sup>114</sup> Only in the first method’s case do we learn how these data ought to be interpreted [Dorotheus 4.1.146–157].<sup>115</sup>

This suggests that the interpretation works along the same lines in the second method’s case, which further supports the impression that this method grew out of the first. Interestingly, only the second, more complex method is attested through Greek parallels [see the quotations above], and they present it as if it were Dorotheus’ only method for making predictions regarding the matter of death. It is only through the Arabic paraphrase that we know the simpler first method. And it is only thanks to Hephaestio’s quotation of the original verses, especially the word «ἄλλοι», that we can be sure that the description of the first method in the Arabic paraphrase is not a later addition but based on the original Greek poem. After the second method, several more follow, including three more references to the authority of “some”, but the paraphrase of Dorotheus’ section on death [4.1.143–184] never expresses any preference for any particular method, which allows the conjecture that the poet himself did not either.

<sup>114</sup> This is clear in Hephaestio, *Apotel.* 2.25.15–16, while the paraphrase of Dorotheus mentions the aspects only regarding the first method [4.1.145], omitting them with regard to the second [4.1.158]; this omission was rightly pointed out in [Schmidt 1998](#), 76 n196.

<sup>115</sup> The finding of the significant zodiacal sign (either a place or a lot) is in both cases described in roughly equal length: Dorotheus 4.1.143–144 (method 1) and 4.1.158 (method 2).

## 3.6 Chapter 2.5 (Anubio)

Monteventi's discussion [236–238] of Anubio's rule for finding the ascending zodiacal sign without knowing the hour of birth [fr. 2],<sup>116</sup> which comprises six elegiac distichs, contains various good observations yet requires some corrections and additions:

- In Monteventi's translation [237], expand “où le dieu s'est rendu” to “où le dieu maître de la maison s'est rendu”; this captures v. 4 « οἴκου δεσπόζων ἔνθα βέβηκε θεός ». Monteventi's omission of the first two Greek words is obviously a lapsus: cf. Schubert's translation of the same pentameter, “où s'est rendu le dieu maître de la maison” [2015, 62].
- “jusqu'à l'astre présent (où se trouve) la Lune” [237] mistranslates v. 6 « μέχρι Σεληναίης ἀστέρος ἰσταμένου ». Here Schubert [2015, 62] is equally wrong: “jusqu'à l'astre présent (occupé par) la Lune”. In his commentary *ad loc.* [120 n381], Schubert compares Hephaestio's paraphrase [Pingree 1973–1974, 2.2.15–17] and its fourth epitome [4.21.4–7], which (i.e., the epitome) he correctly identifies as the clearest of all three passages regarding what the poet must have meant regarding this detail, namely, ἕως τοῦ οἰκοδεσπότου τοῦ ζφδίου δ' ἐπέχει τηνικαῦτα ἡ Σελήνη (to the house-ruler of the sign which the Moon then occupies) [4.21.5].<sup>117</sup> His immediately following thought, however, is inaccurately phrased:

Il faut vraisemblablement entendre par ἀστέρος ἰσταμένου une planète maîtresse de maison, le participe du verb ἵσταμαι étant à prendre dans le sens de ‘étant présent’.

While I agree with the last part of this quotation (i.e., « ἰσταμένου » is here, for metrical reasons, equivalent to « ἐστῶτος »),<sup>118</sup> it is not « ἀστέρος ἰσταμένου » but « Σεληναίης ἀστέρος » that denotes the planet

<sup>116</sup> I follow Monteventi in quoting the fragments of Anubio according to the most recent edition in Schubert 2015. Different numberings of Anubio's fragments have been adopted in Obbink 2006 and Heilen 2010a. All three count this fragment transmitted by Hephaestio [Pingree 1973–1974, 2.2.11–14] as fr. 2.

<sup>117</sup> I think the word order of the corresponding expression in Pingree 1973–1974, 2.2.15, « ἕως τῆς Σεληνῆς τοῦ οἰκοδεσπότου », must be inverted so as to read « ἕως τοῦ οἰκοδεσπότου τῆς Σεληνῆς ».

<sup>118</sup> See Anubio fr. 8 ii 42 δαίμονος εἰν ἀγαθοῦ ζφδῖφ ἰστάμενοι (of Mercury, the Moon, and Venus; many letters, esp. of « ἰστάμενοι », are badly transmitted; some are entirely lost) as well as « ἐστῶς » (of a planet's position) in fr. 11 i 5, 11 ii 38, and 17m

which is lord of the house in which the Moon happens to be located (i.e., «Σεληναίης ἀστήρ» is here a heavily abbreviated and, if taken alone, highly ambiguous expression which does not simply mean “the Moon”<sup>119</sup> but stands for «Σεληναίης οἴκου δεσπόζων ἀστήρ»). This, however, is intelligible thanks to the corresponding verse 4 quoted above. Hence, correct Monteventi’s translation to “jusqu’à où se trouve l’astre (maître de la maison) de la Lune”.

- In her discussion of Hephaestio’s paraphrase [2.2.15–17 in [Pingree 1973–1974](#), 1.91] and its epitome [4.21.4–7 in [Pingree 1973–1974](#), 2.186–187], Monteventi rightly emphasizes [237] that the epitome understands Anubio’s method as referring to the ascendant at conception rather than birth. This is, however, in my view not just “une interprétation quelque peu different” or a “divergence de taille” [237] but a misunderstanding by the late Byzantine epitomator (probably John Abramius in the 14th century AD):<sup>120</sup> his words «τῆς σπορᾶς» and «κατὰ τὴν σποράν» [[Pingree 1973–1974](#), 2.186.22 and 2.186.27] were probably prompted by Hephaestio’s preceding presentation [2.2.9–10] of a different method that was actually about the ascendant at conception [2.2.9, ἐν τῷ τῆς σπορᾶς λόγῳ]. Before that, Hephaestio had been paraphrasing Ptolemy’s method for finding the ascendant if the hour of birth (!) is unknown [2.2.1–7: cf. Ptolemy, *Apotel.* 3.3.1–5 in [Hübner 1998](#), 172–175], and it seems that his third method (i.e., Anubio’s) is again about birth horoscopes, even if neither Hephaestio’s presentation nor Anubio’s verses make this explicit.
- Immediately afterward, Monteventi correctly and briefly diagnoses (with reference to Schubert) a serious misunderstanding in the epitome regarding the last elegiac distich, but when she moves on to take a closer look at Hephaestio’s and the epitome’s renderings of the previous distich [[Schubert 2015](#), fr. 2.9–10], she misjudges the evidence because she does not realize—nor did Schubert—that

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2. Of the latter three instances, only the last is certain, the other two being plausible restorations of missing text by modern editors.

<sup>119</sup> Note the countless cases of ancient Greek references [e.g., in Ptolemy, *Apotel.*] to the five planets Saturn, Jupiter, Mars, Venus, and Mercury as ὁ τοῦ Κρόνου ἀστήρ, and so on. For more details on the various ways ancient authors refer to the planets, see [Heilen 2015a](#), 2.569–575.

<sup>120</sup> See [Pingree 1973–1974](#), 2.xxv and [Heilen 2015a](#), 1.69.

these two prose renderings are both flawed by mistakes. While the distich in question simply reads:

χρῆ δὲ Σεληναίης προτέρης ἀνελέσθαι ἀριθμόν,  
ὄρην νυκτερινὴν σκεπτόμενον θέματος,

requiring the reader to supply much from the preceding rule for day births, Pingree 1973–1974, 2.2.16 paraphrases:

ἐπὶ δὲ τῶν νυκτερινῶν χρῆ ἄρξασθαι ἀπὸ τῆς Σελήνης τῇ αὐτῇ μεθόδῳ καὶ ἐκβάλλειν ὁμοίως ἀπ’ αὐτῆς ἥτοι Ἑλίου τὴν τῶν μεταξὺ ζωδίων ποσότητα.

The freedom of choice between Moon and Sun (ἀπ’ αὐτῆς ἥτοι Ἑλίου) cannot be right. Since one expects a reversal of the procedure passing from day to night horoscopes, the reversal must concern either:

- (a) the direction of counting signs between the lords of the zodiacal signs in which the luminaries are located or
- (b) the direction of casting that distance out from the luminary of the “sect” (Sun by day, Moon by night).

Since «*χρῆ ἄρξασθαι ἀπὸ τῆς Σελήνης*» paraphrases v. 9 *χρῆ δὲ Σεληναίης προτέρης ἀνελέσθαι ἀριθμόν*, both Anubio and Hephaestio must mean (b) and, therefore, the words «*ἥτοι Ἑλίου*» must be an erroneous gloss (maybe caused by a misunderstanding of the preceding words «*τῇ αὐτῇ μεθόδῳ*») that was, in the course of transmission, integrated into the text.

The corresponding text of the epitome reads:

ἐπὶ δὲ τῶν νυκτερινῶν γενέσεων ἀπὸ τοῦ ζωδίου ἄρξου τοῦ κατὰ τὴν ἐποχὴν τῆς Σελήνης καὶ ἐκβαλε τὴν ποσότητα τῶν ζωδίων τῶν μεταξὺ τῶν οἰκοδεσποτῶν καὶ αὐτῶν ἐν οἷς εὐρίσκονται οἱ οἰκοδεσπότες· καὶ εἰς ὅπερ ἂν ζῳδίων καταλήξῃ ὁ ἀριθμός, ἐκεῖνο λέγε ὀροσκοπεῖν κατὰ τὴν σποράν. [4.21.6]

The words «*αὐτῶν ἐν οἷς εὐρίσκονται οἱ οἰκοδεσπότες*» are very likely to have originated from a marginal gloss on the preceding words «*τῶν οἰκοδεσποτῶν*», with «*αὐτῶν*» taking up «*τῶν ζωδίων*». When this gloss was wrongly integrated into the text, it was connected to the preceding words by addition of «*καὶ*». If we delete «*καὶ αὐτῶν ἐν οἷς εὐρίσκονται οἱ οἰκοδεσπότες*» (and also the final words «*κατὰ τὴν σποράν*»), the epitome correctly renders Anubio’s thought. The fact that Monteventi did not notice these two intrusions in Hephaestio’s and the epitome’s texts has to do with (and is partly excused by) Pingree’s idiosyncratic editorial method.<sup>121</sup> Monteventi’s conclusion reads:

<sup>121</sup> Pingree did not aim to restore the original text of Hephaestio (this was in his view impossible) but to edit each recension of Hephaestio’s text as it existed in the Byzantine period, thus leaving numerous meaningless expressions in his edited text without signaling these problems to the reader in the apparatus. For more details on

En somme, on constate qu'il arrive que les contraintes métriques soient à l'origine d'une certaine obscurité pour le sens des vers. Une paraphrase explicative peut donc, selon l'habileté du prosateur, être un éclaircissement. [238]

While I fully agree with the first sentence,<sup>122</sup> the second is only generally true, but it does not fit the specific, corrupt prose explanations that Montevanti had just quoted.<sup>123</sup>

### 3.7 Chapter 2.6 ([Manetho])

Montevanti states [119 n207] that she will quote the text according to the edition with translation and commentary in [Lopilato 1998](#). This, however, has been superseded by the edition in [De Stefani 2017](#): cf. [Heilen 2017](#). Montevanti is clearly aware of De Stefani's edition because she mentions it in the same footnote and twice afterward [119 n209 and 223 n99]. She does not explain or justify her surprising choice, which impairs the quality of her quotations and translations. In order to substantiate this judgment, it will suffice to list all those verses that Montevanti presents in her chapter on [Manetho] [118–152] following, with regard to one or even more words, [Lopilato 1998](#) against the telling consensus of [De Stefani 2017](#); [Lightfoot 2020](#) and [2023](#), all expert editions of late antique Greek poetry:<sup>124</sup> [Manetho], *Apotel.* 5.2, 5.6, 5.7 [120]; 2.142, 2.146 [128]; 3.233 [132]; 6.466, 6.470 [138]; 6.371 [139]; 6.752 [140]; 4.620, 4.623, 4.626 [141]; 1.144 [146]; 1.198, 1.204 [147]; 5.15, 5.21, 5.22, 5.23 [149]; 5.205, 5.207 [150]; 5.269, 5.270, 5.271, 5.273 [152].<sup>125</sup>

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Pingree's method and the resulting obscurities in his editions of Greek astrological prose texts, see [Heilen 2010b](#), 300–303.

<sup>122</sup> In order to remove one further obscurity, one could expand Montevanti's translation of v. 9 "il faut soustraire le chiffre de la Lune la première" by adding "(du signe du Soleil)".

<sup>123</sup> One further corruption of both Hephaestio's paraphrase and its epitome regarding Anubio fr. 2 was rightly pointed out in [Schubert 2015](#), 121 n383, with reference to [Pingree 1973–1974](#), 2.2.17 ἐν ἀρχῇ τῶν ζωδίων = 2.4.21.7. Maybe these nonsensical words must be combined (as Schubert seems to suggest without quoting the Greek text) with «τῆς ἐκβαλλομένης ποσότητος» (to be found only in [Pingree 1973–1974](#), 2.2.17, one line below «ἐν ἀρχῇ τῶν ζωδίων») so as to read «ἐν ἀρχῇ τῆς ἐκβαλλομένης ποσότητος τῶν ζωδίων», but all that I am convinced of is that «τῆς ἐκβαλλομένης ποσότητος» must be removed or deleted from its transmitted position in 2.2.17.

<sup>124</sup> Lightfoot's edition was not yet accessible to Montevanti.

<sup>125</sup> One could adduce more cases that occur outside the chapter on [Manetho], e.g., vv. 6.312 [274] and 6.306 [275]. In addition, there are numerous discrepancies between Montevanti's (= Lopilato's) text and either De Stefani's or Lightfoot's texts.

In one of these instances [v. 1.198], Lopilato's reading [1998, 31], followed by Monteventi [147], is metrically impossible:

ἐν ἀθανάτοισιν θηληῆς

(read «ἐν ἀθανάτοιο θηληῆς» with Koechly, De Stefani, and Lightfoot). In another instance [v. 6.466] the reading «ἠδέ» (and) adopted by Monteventi [138] following Lopilato instead of «ἠέ» (or) following Koechly, De Stefani, and Lightfoot distorts the technical content (for details, see p.49 n129 below). Moreover, Monteventi's lapsus v. 2.15 «ζωδιακοῦ» [127], without *iota subscript*, is exactly copied from Lopilato 1998, 39, as is v. 6.740 «ἦχι» [137] instead of «ἦχι», from Lopilato 1998, 140.

On the other hand, she rightly follows with Lopilato (and Lightfoot) the manuscript reading «καὶ ὄρη» in v. 6.747 [137] against Koechly's conjecture «καθ' ὄρης», which is followed by De Stefani, who was unaware of the proof in favor of the manuscript reading adduced in Heilen 2010b, 319.

Monteventi never raises the question whether the proem to book 1 (i.e., vv. 1.1–15) might originally have been the proem to book 2, i.e., to the first book of the original core poem (books 2, 3, 6). She correctly mentions [127] that Koechly had already pointed out the lack of a proem to book 2 and she also mentions, in the immediate context, the extant proem to book 1, but the idea of a transposition is not raised, maybe because she was unaware of my review of De Stefani's edition in which I mentioned this possibility in passing [Heilen 2017, 222].

I now take a more cautious approach to this idea because it seems impossible that vv. 1.1–15 represent exactly the original opening of book 2, but I still wonder if it is a modified version of that presumably lost original proem. My main reasons are the structural function and higher poetic quality of vv. 1.1–15 (while the rest of book 1 lacks discernible structure) as well as their similarity to the proem of book 1 of Dorotheus [see Monteventi 143].

With regard to [Manetho]'s remark in *Apotel.* 2.41–42 [131] that the major part of the Antarctic Circle is invisible to us, a clarification might have been useful, given that the poet is here wrong because Mediterranean observers cannot see any of that circle [Lightfoot 2020, 549–550].

Monteventi mistranslates [Manetho], *Apotel.* 6.8 ἀμφὶ τροφῆς βρεφέων ἠδ' ἀτροφίης ἀλεγεινῆς as “au sujet de la subsistance des fœtus et leur douloureux dépérissement”. The poet does not mean fetuses but newborn children [134]: see Lightfoot 2020, 473, in which «ἀμφὶ τροφῆς βρεφέων» [v. 8] is translated as “of children's nurture”. This is clear from the following discussion of this topic in vv. 6.19–112, where the poet speaks time and again of what will happen to the child after being born depending on the planetary alignment

at the time of birth.<sup>126</sup> See also the summary of topics in the Florentine *codex unicus*, the first entry of which reads «περὶ τροφῆς καὶ ἀτροφίας παίδων» [Lightfoot 2020, 472].

In her discussion of the autobiographical horoscope that the poet of books 2, 3, and 6 presents at the end of his poem [6.738–750], Monte-venti mistranslates

ἀμφὶ δὲ μέσσον  
οὐρανὸν ἔστρωφᾶτο βέλος Κένταυρος ἀνέλκων [v. 748–749]

as

et dans la région du milieu du ciel, le Sagittaire accomplissait son évolution [S.H. a typo for “révolution”?] en tirant son trait. [138]

The text instead means “and round Midheaven roamed the Centaur [i.e., Sagittarius], drawing up his arrow”.<sup>127</sup> Moreover, Monte-venti refers to the obsolete and partly erroneous commentary on this horoscope in Neugebauer and van Hoesen 1959, 90 [138 n250], apparently unaware of Heilen 2010b, 316–321.

On the other hand, she does well to embark on an analysis (the first ever, if I am not wrong) of whether this autobiographical horoscope of our astrological poet matches the conditions for births of astrologers and diviners as specified earlier in the same book [6.465–475], esp. v. 473 μάντιες ἀστρονόμοι τ’ οἰωνοπόλοι τ’ ἐγένοντο,<sup>128</sup> with the result that they do match [138–139].

<sup>126</sup> E.g., ...τοῖσπερ τ’ ἀπὸ γαστέρος ὀρνυμένοισιν  
Ἄρης καὶ Φαίνων ὑπὲρ ὠρονόμοιο βεβῶτες  
λεύσουσ’ ἐς δύσιν ἐλκομένην ἐριφεγγέα Μήνην. [vv. 6.20–22]

See further references to birth in 6.25 (ὄσσοις γεινομένοισιν), 6.33 (ἀπ’ ὠδίνων καὶ γαστέρος ἐκπροθορόντες), and so on. There is, admittedly, a single claim involving embryotomy in 6.35–42; however, this surgical intervention does not take place at just any moment of pregnancy but at the time of birth, and it obeys a specific planetary alignment at birth described in vv 6.35–40.

<sup>127</sup> My translation combines elements of the respective translations in Lopilato 1998, 442 and Lightfoot 2020, 527.

<sup>128</sup> I should emphasize now a terminological detail that has probably long been observed by others, even if I cannot readily find any such remark in the published literature on [Manetho] or even in Lightfoot 2020 and 2023: the poet of the core poem [books 2, 3, 6] never speaks of ἀστρολόγοι but does mention ἀστρονόμοι twice [2.206 and 6.473]—the contexts clearly show that he means astrologers—while the poets of the later books [1, 4, 5] call astrologers ἀστρολόγοι [1.293 = 4.128, 4.142, 4.211, 5.265]. On the ancient use and meaning of both terms, see Hübner 1989. Lightfoot

This result calls for closer examination. Monteventi presents the tenet in question thus:

- 465 ἦμος δ' Ἑρμείαιο δόμοις καλὴ Κυθήρεια  
 σύν τ' αὐτῷ Στίλβοντι φαεῖνητ' ἠδέ θ' ὄροισιν  
 ἀλλήλων βεβαῶτες ἐναλλάγδην φορέοιντο,  
 θεΐησιν σοφίησι κεκασμένοι ἐξεγένοντο  
 ἄνδρες· ἦ γὰρ μέτρα μακρῆς χθονὸς ἐξεδάησαν  
 470 ἦσιν ἐπιφροσύνησιν, ἦ ἐνθέντες πραπίδεσσιν  
 ἀθανάτων ἔργων φύσιος πέρι μητιόωσιν.  
 εἰ δ' ἄρα καὶ Φαίνων τούσδ' ἀκτίνεσσιν ὄρφῃ,  
 μάντιες ἀστρονόμοι τ' οἰωνοπόλοι τ' ἐγένοντο  
 ἐκ σπλάγγων τε βροτοῖς θυέων τ' ἄπο θεσπίζοντες,  
 475 ἦ μάγοι ἀρρήτοισι θεοῦς καλέοντες ἀοιδαῖς. [138]

One textual mistake requires correction: in vv. 6.465–467, the two astronomical conditions must be connected with «ἠέ» (or),<sup>129</sup> not «ἠδέ» (and), as common sense suggests—while both conditions could astronomically be fulfilled together, that would necessarily happen far more rarely—and the Latin parallel in the *Liber Hermetis* 34.29 confirms this: “Si uero permutatos habuerint terminos siue domus uel simul fuerint”.<sup>130</sup> Hence,

When in Hermes' [S.H. i.e., Mercury's] houses, lovely Cythera [S.H. i.e., Venus] with Stilbon [S.H. i.e., Mercury] himself shines, or in the terms<sup>131</sup> of the other each reciprocally is borne. [vv. 465–467: Lightfoot 2020, 507]

The first of these two conditions is clearly fulfilled because both Venus and Mercury were located in Gemini, as the poet tells us [6.745–746]. In addition, the birth of an astrologer requires that Saturn be in aspect with Mercury

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2020 seems deliberately to avoid the modern terms “astronomer” and “astrologer” in her translations of v. 2.206 “Seers, interpreters of stars and dreams” [417] and v. 6.473 “Seers, star gazers, augurers are born” [507].

- <sup>129</sup> The crucial word was corrected in Koechly 1858, XVI and 52 (he had wrongly printed «ἠδέ» and translated “atque” in his earlier edition of 1851, 68), which De Stefani 2017 and Lightfoot 2020 rightly follow in their editions, but Monteventi follows Lopilato 1998.
- <sup>130</sup> The Latin text quoted in Lightfoot 2020, 506, *app. loc. sim.* inverts the sequence of the two conditions and adds (whether rightly or wrongly, we cannot tell in the absence of [Manetho]’s source text) the houses as an alternative to the terms (“terminos siue domus”).
- <sup>131</sup> The terms are sections of irregular extension within the zodiacal signs; for details: see Heilen 2015a, 2.718–726.

and Venus [v. 472]. As Monteventi rightly states, this condition is fulfilled by Saturn's trine aspect from Aquarius [see v. 757 and [Figure 1, p. 52 below](#)].

Moreover—these details are important to add—both Mercury and Saturn happened to be in their respective night houses, and this is a night horoscope; therefore, both planets exercise their influences more strongly according to ancient astrological doctrine and, one might presume, harmoniously because the trine aspect is the stronger one of the two harmonious aspects (trine and sextile), while square aspects and oppositions have negative connotations.

Ancient readers will also have noticed that the Sun and the two benefics Jupiter and Venus are with Mercury in Gemini, thus enhancing its effects, while Mars, who is associated with negative characteristics such as rashness and violence, is in the sign of his depression (Cancer) and therefore weak, which suits a poet. The Moon, being in conjunction with Saturn in the sign of Aquarius (which is ascending and thus occupying the strongest place of the *dodecatropos*), joins Saturn's harmonious trine aspect with Mercury, the Sun, Jupiter, and Venus in Gemini.<sup>132</sup>

<sup>132</sup> Moreover, the group of six bright fixed stars at  $\delta$  5°,  $\zeta$  20°,  $\theta$  15°/27°/30° and  $\mu$ , 7° mentioned in Antigonus of Nicaea's horoscope of Hadrian and in other sources [see [p. 22](#) with [n64 above](#) and [Heilen 2015a](#), 1259, table 37], but not by [Manetho], is here occupying all four cardinal places (I, IV, VII, X) and is in conjunction with the Moon in the ascendant, thus matching perfectly the rules outlined by Antigonus fr. 5 §§68–70 [see esp. §68 ποιῶσι τὰς τύχας μείζονας καὶ ἐνδοξοτάτας] and possibly lending some additional support to the poet's concluding prayer for everlasting fame [vv. 6.751–754],

Ἄντ' ἀρ' ἐγὼ Μούσῃσι καὶ αἰθερίοισιν ἅμ' ἄστροις  
εὐξάμενος λιγὸν ὕμνον ἐμῆς καταπαύσω ἀοιδῆς.

[S.H. De Stefani and Lightfoot: Monteventi [140], following Lopilato, *has ἐμὴν...ἀοιδήν*]

ἀστέρες εὐφεγγεῖς, Διὸς αἰγιόχου τε θύγατρεις,  
ἵλατε καὶ κλέος αἰὲν ἐμῆ πορσύνετ' ἀοιδῆ.

I assume, however, that the ἀστέρες εὐφεγγεῖς (bright stars) in v. 6.753 are the planets in the poet's horoscope, not select bright fixed stars: see [Lightfoot 2020](#), 871 *ad loc.*, which refers to the same adjective «εὐφεγγής» applied to Mercury in v. 6.505 and to Jupiter in vv. 2.253 and 6.39. Of all the promising features emphasized in the main text above, Monteventi mentions only one, namely, Mercury's being in his night house [139]. On astrological exaltations and depressions, see [Heilen 2015a](#), 2.713–717 with table 15. The core poem, [Manetho], *Apotel.* bks 2, 3, 6, contains one other tenet regarding the birth of astrologers [2.202–209], which, however, does not apply to the poet's horoscope because it requires that Mercury be in a house of Saturn, i.e., in Capricorn or Aquarius, which is not the case.

I cannot, however, subscribe to the follow statement:

Si l'horoscope donné en fin de [S.H. read: "du"] sixième livre est véridique, les vers 6.465–475 ont peut-être été modelés sur le thème astral du poète. Si tel n'est pas le cas, le poète a certainement construit son thème astral en fonction de ces vers où la naissance d'astrologues est annoncée. [139]

The first part of this thought is unlikely in view of the aforementioned parallel in the *Liber Hermetis*. The second is unlikely because the final horoscope does match a real configuration of the planets in AD 80, which did not occur any other time in the preceding or following two millennia.<sup>133</sup> And neither [Manetho] himself nor his readers knew that readers in a distant future would be able to find this out; therefore, a forged horoscope might easily not match any date in late antiquity. Moreover, Monteventi does not even mention that the most simple explanation may be true, namely, that [Manetho] reports honestly both the tenet that he found in his astrological source for vv. 6.465–475 and the astronomical data that he (or some technically more competent adviser) derived from the available planetary tables for his birthday. If so, he probably appreciated the match between the astrological tenet, his own birth horoscope, and his occupation with astrology all the more.

Admittedly, there remains the possibility that the exact time of birth was unknown, as happens so often in antiquity, and had to be conjectured—technically speaking, “rectified”—by the astrologer. If so, one might expect to find at least one decisive planet either in the ascendant or in the midheaven. And indeed Saturn and the Moon are ascending. This comes, however, with the drawback that the most important planet in our poet's horoscope, Mercury (the planetary deity of both writing and astrology), is together with the Sun, Venus, and Jupiter in place V, i.e., *not* in one of the four cardinal places (I, IV, VII, X). One could refer to the poet's own words in vv. 3.8–17 for the blessings granted by Saturn in the ascendant.<sup>134</sup> But these blessings concern wealth and glory [esp. vv. 3.16–17], not writing or astrology; while Mercury in the ascendant would, according to vv. 3.90–95, grant both fame

<sup>133</sup> Computed with the Electional Search tool of *Solar Fire 9*, based on modern tropical longitudes.

<sup>134</sup> The passage on the planets in the centers [vv. 3.8–131] does not address the Moon in the ascendant.

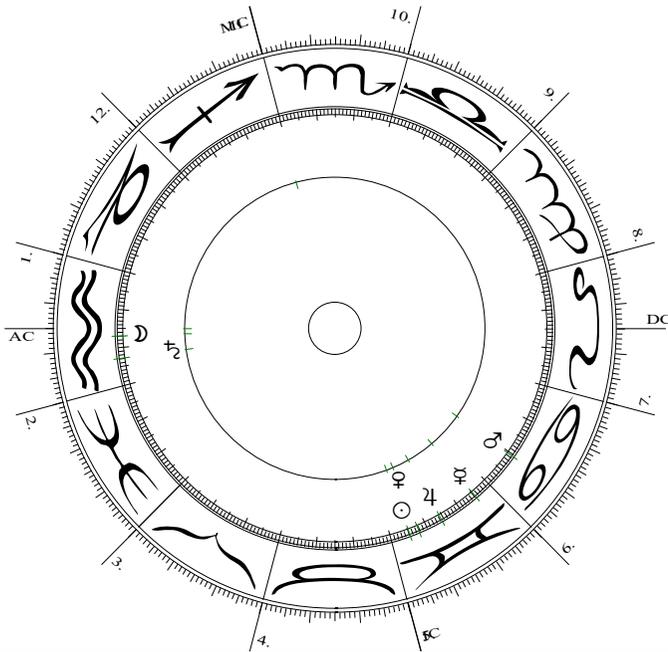


Figure 1. The birth horoscope of  
[Manetho] (based on vv. 6.738–750),  
28 May AD 80 at about 23:35 (Alexandria)

The diagram was created with *Galiastro* 4.3, based on SwissEphem. My choice of Alexandria is conjectural. The domification complies with the ancient sign-house system (more correctly, sign-place system: see p. 39 n106), which was the standard during our poet's lifetime. That he complied with this system is clear from vv. 6.35–37:

ἦν δὲ Σεληναίη μὲν ἐφ' ὠρονόμῳ ἐπιτέλλη,  
ἐν προτέρῳ δ' ὄρης ζῶφ Φαίνων προθέησιν,  
δαίμονα τόντε κακὸν πρότεροι φῶτες καλέσαντο

(here the 12th place of the *dodecatropos* is clearly called a zodiacal sign), 6.246 μεσουρανίῳ ζῶφ, 6.250 ἐν ζῶφ...μεσουρανεόντι δισώμῳ, 6.237–238 μεσουρανίῳ/ δεικίλῳ ἢ ἐ θ' ὑποχθονίῳ, 6.312–3 ὅσσοι ἐφ' ὠρονόμου ζῶφ τριτάτῳ καθορώνται,/ ἢ ἐ μεσουρανεόντι πόσοι βεβάασιν ὑπερθεν, 6.315 ὅπποτε δ' ἐξ ὄρης τριτάτου τ' ἀπὸ δεικίλοιο, 6.348–349 εἴτ' ἂν δ' ὠρονομη Φαίνων, ζῶων δ' ἀνὰ μέσσον/ Ἑρμείας ἐφέπη, and 6.638–639 ναὶ μὴν καὶ Πυρροίεις βεβαῶς ζῶφ βιότοιο/ ἐξόπιθ' ὠρονόμοιο for books 1, 4, and 5: cf. 1.262 (Ζῶδιον ὠρονόμοιο).

For technical reasons, I here chose a time some minutes earlier than for the figure that I gave in [Heilen 2010b](#), 319, when I was unaware of [Manetho]'s compliance with the sign-place system. The choice of time in the diagram above ensures that the cusps of the 12 places coincide with the boundaries of the zodiacal signs. This was not otherwise technically possible with *Galiastro* 4.3.

and foreknowledge of the future, even if the latter is not attained by means of astrology but rather through dreams.<sup>135</sup>

Moreover, if Mercury were ascending, the two planetary deities Jupiter and Venus as well as the Sun would be ascending with it (while Saturn and the Moon would be located in place IX). The fact that our poet reports Mercury and its companion planets as being located in place V seems to indicate that he made no substantial change to his true time of birth. This impression gains additional support if we compare the autobiographical horoscope of the roughly contemporary famous orator Aelius Aristides, who reports [*Or.* 50.57–58] that he was born with Mercury, the tutelary deity of oratory and literature, ascending and with Jupiter’s being in the very degree of mid-heaven [see [Heilen 2006](#), esp. 121 (figure)].

This brings us to [Manetho]’s second gift, i.e., his poetic talent. For this, Monteventi rightly compares vv. 6.366–372, where three astronomical protases all lead to the same astrological apodosis, i.e., the birth of a poet, with Venus and Mercury being located

- (a) in each other’s houses,
- (b) in each other’s “terms”, or
- (c) in one and the same sign with Mercury in its terms and Venus in its house.

Condition (a) is, in our poet’s case, clearly not fulfilled. Before examining condition (b), let us quickly settle (c), which depends on how one understands

<sup>135</sup> I.e., not by means of “technical” but rather through “nontechnical” divination as distinguished by the Stoics: see [Wardle 2006](#), 126–127 and [Heilen 2020a](#), 239. Vv. 3.90–95 read thus:

Ἑρμῆς δ’ ἀντέλλων μὲν ἐφ’ ὄρης εὐκλέας ἄνδρας  
καὶ πολλῆς σοφίης ἐπίστορας ἐξετέλεσεν·  
πολλάκι καὶ προδαῖναι ἐνὶ πραπίδεσσι βροτοῖσιν  
πεύρατα μελλόντων δωρήσατο, καὶ θ’ ἐτέροισιν  
θεσπίζειν φήμησιν ὄνειράσι θ’, ἃ σφισιν αὐτοῖ  
ὄρφναίην κατὰ νύκτα βαθὺ κνώσσοντες ἴδονται.

Lightfoot translates this as:

Hermes in the Ascendant makes famed men and experts in wisdom of many forms. Often foreknowledge in the hearts of men of the future’s bounds he places, when to others they prophesy through words and dreams, which they in the dark night when deep in sleep have seen. [[2020](#), 451]

The gift of prophecy is further emphasized if Jupiter is in conjunction with Mercury, as is the case in [Manetho]’s horoscope: see the Greek parallel quoted in [Lightfoot 2020](#), 450 in the *app. loc. sim.*

the assignment of term and house in vv. 6.371–372:

ταῦτα γὰρ [S.H. read δ' ἄρ']<sup>136</sup> ἐκτελέουσι, καὶ ἦν ζυγὴν ἀνώωσιν  
οἶμον, τοῦ μὲν ἐπόντος ὄροισ, τῆς δ' αὐτε κατ' οἶκον.

Lightfoot translates this as “These things they do when on a common path, he in his terms, or [S.H. read “and”] she within her house” [2020, 499]. She comments [n12]: “Less likely: he in *her* terms and [!] she within *his* house.<sup>137</sup> The modifiers should belong to the subject”. If one follows this thoroughly plausible comment, (c) is not fulfilled because Venus is not in one of its own houses, Taurus and Libra.

What, then, about the remaining condition (b)? Mercury’s tropical longitude was, on the date in question (28 MayAD 80 in the last hour before midnight), 25° 14’ GEM, which corresponds roughly to 29° to 30° GEM in the ancient sidereal framework,<sup>138</sup> while Venus’ term is, according to the authoritative “Egyptian” system [see Heilen 2015a, 2.719, table 17b], 12° to 17° GEM (sidereal), thus leaving a gap of at least 12° (i.e., from 17° to 29° GEM). Venus’ tropical longitude was 7° 46’ GEM, i.e., about 12° to 13° GEM in the sidereal framework, while Mercury’s “Egyptian” term is 0° to 6° GEM (sidereal), thus leaving a gap of at least 6° (i.e., from 6° to 12° GEM). Hence, we ought to ask how likely or unlikely it is that the longitudes of Venus and Mercury calculated by someone in the first or second century AD present such deviations, especially in Mercury’s case. Now if we consider that even Ptolemy’s tables could, in Mercury’s case, be off by up to above 7°<sup>139</sup> and that they were generally the best tables we know of from antiquity, we must conclude that errors of about 12° are not at all unlikely for people using other, less refined methods.<sup>140</sup> Therefore Monteventi, who does not discuss

<sup>136</sup> Thus correctly in De Stefani 2017 and Lightfoot 2020 because a causal connection cannot be right here. Monteventi follows once more the less reliable edition of Lopilato.

<sup>137</sup> Lightfoot’s italics.

<sup>138</sup> On the discrepancy of about 4° 30’ between tropical and sidereal longitudes around AD 80, see Heilen 2015a, 2.599. See the general conversion formula given in Jones 1999, 1.343.

<sup>139</sup> See Carman and Recio 2019, 81, chart 29, which visualizes errors of up to about 450 minutes of arc around inferior conjunction (i.e., in Mercury’s epicycle) and up to about 200 minutes of arc around superior conjunction.

<sup>140</sup> This is the judgment of Alexander Jones [personal communication, 2021 Nov 27], who also kindly directed my attention to the article quoted in the previous footnote.

condition (b) at all,<sup>141</sup> happens nevertheless to be right in her judgment [139]: “En ce qui concerne le don poétique, l’horoscope du poète n’est pas en contradiction avec la prediction suivante” (i.e., with vv. 6.366–372 [see p. 53 above]).<sup>142</sup>

Before we move on, it may be useful to support the aforementioned judgment on deviations with a survey of the (regrettably very limited) extant evidence regarding longitudinal deviations in ancient horoscopes specifying the positions of Venus and/or Mercury to the degree of arc. The following table will be limited to horoscopes that can be astronomically dated to before AD 250, thus covering the presumed lifetime of [Manetho] plus about one century before and after it. This table updates earlier, incomplete attempts to the same effect in Neugebauer and van Hoesen 1959, 182, table 17 and Baccani 1992, 72–76, esp. 73, table 3.<sup>143</sup> The identifiers of the single horoscopes in the left column comply with those assigned in my catalog of ancient horoscopes [Heilen 2015a, 1.204–333].<sup>144</sup> The data in the right two columns are the sidereal longitudes given in the texts minus the data obtained by modern tropical recomputation for Venus and Mercury.<sup>145</sup>

It is interesting to see that even elaborate papyrus horoscopes such as Hor. gr. 95.IV.13 [P.Lond. 1.98 *recto*] and Hor. gr. 137.XII.4 [P.Lond. 1.110 and P.Paris 19 *bis*],<sup>146</sup> which were presumably expensive to commission, con-

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<sup>141</sup> Note her summarizing comment on vv. 6.366–372: “On retrouve la présence de Vénus et Mercure, ensemble ou séparés, et l’élément des maisons”. Add: “et des confins” [140].

<sup>142</sup> I said that she happens to be so because Monteventi appears soon afterward to have based her judgment on an incorrect assessment of condition (c), writing:

Cet extrait [S.H. i.e., again, vv. 6.366–372] ne va pas à l’encontre de la position de Vénus et de Mercure dans les maisons de ce dernier (les Gémeaux), comme décrite dans l’horoscope du poète. [140]

<sup>143</sup> None of the three relevant horoscopes that Baccani adds beyond *Greek Horoscopes* (i.e., P.Oxy. XXXI 2555, P.Oxy. XLVI 3298a, and P.Prag. 198) has extant longitudinal data for Venus or Mercury.

<sup>144</sup> Two horoscopes in my catalog, Hor. gr. 175.XII.22 and Hor. gr. 213.VI.13, must be redated to the fifth century AD, as shown in Caballero-Sánchez 2021.

<sup>145</sup> Unless otherwise stated, data regarding horoscopes analyzed in *Greek Horoscopes* are those computed by Neugebauer. I did not recompute his data.

<sup>146</sup> These two papyri contain essentially the same text, while a third one [P.Paris 19] contains fragments of a different, still more elaborate horoscopic text regarding the same moment in time whose data regarding Venus and Mercury are lost. For details, see Neugebauer and van Hoesen 1959, 39–44.

Horoscope	Venus	Mercury
Hor. gr. -71.I.21 [= <i>GH</i> <sup>a</sup> no. L -71]	+10°	-5°
Hor. gr. -42.XII.27 [= <i>GH</i> no. L -42]	-3 <sup>ob</sup>	+7°
Hor. gr. 40.IV.5 [= <i>GH</i> no. L 40]	+6°	+10°
Hor. gr. 44.X.2 <sup>c</sup>	0°	+16°
Hor. gr. 46.I.3 [= <i>GH</i> no. 46]	+5°	-6°
Hor. gr. 76.I.24 [= <i>GH</i> no. L 76]	-3°	+5°
Hor. gr. 81.III.31 [= <i>GH</i> no. 81]	+8° 37'	-0° 56'
Hor. gr. 95.IV.13 [= <i>GH</i> no. 95] <sup>d</sup>	-13 <sup>oe</sup>	-20 <sup>of</sup>
Hor. gr. 110.III.15 [= <i>GH</i> no. L 110,III]	+1°	textual corruption
Hor. gr. 114.V.13 [= <i>GH</i> no. L 114,V]	+1°	+5°
Hor. gr. 127.XI.23 [= <i>GH</i> no. L 127,XI]	+4°	-9°
Hor. gr. 130.I.14 [= Jones 1999, no. 4239]	degree unspecified	-6°
Hor. gr. 137.XII.4 [= <i>GH</i> no. 137a,b]	-2°	+25 <sup>g</sup>
Hor. gr. 200-300(?)b [= <i>GH</i> no. 250,2]	-1° (uncertain)	-9°
Hor. gr. 218.XI.27 [= Jones 1999, no. 4245]	degree lost	-7°

<sup>a</sup> *GH*= Neugebauer and van Hoesen 1959.

<sup>b</sup> This probably should be corrected to +6° because Venus' position is probably not 11° CAP but 20° CAP: see Heilen 2015a, 2.1017 n2550.

<sup>c</sup> The source is Dor. arab. 3.2.19-44. This had first been misdated in Pingree 1976, XV to 20 Oct AD 281; for details, see p.37 with n101 above and esp. Heilen 2015a, 1.221-223.

<sup>d</sup> Regarding this horoscope, A. Jones informs me [e-mail, 27 Nov. 2021] that "it looks like Neugebauer calculated the Moon's longitude for one day off so that the assigned date of the horoscope should be 95 April 14, not 13".

<sup>e</sup> Based on a fairly reliable restoration. For the restorations of the longitudes of both Venus and Mercury, see Neugebauer and van Hoesen 1959, 34-35.

<sup>f</sup> Based on an uncertain restoration.

<sup>g</sup> The recomputation in Neugebauer and van Hoesen 1959, 41, contains a typo: instead of "ΜϞ 20", read "Μϙ 20" (immediately afterward, the authors correctly state that "one should expect Μϙ"). Even so, however, there remains a computational lapsus because the difference between the ancient text and modern computation is not "[-5]" but "[+25]".

Table 1. Deviations of sidereal longitudes of Venus and/or Mercury given in degrees of arc in extant Greek horoscopes for dates prior to AD 250 from modern tropical recomputation

tain huge errors such as those listed in [Table 1](#), p. 56 above. One would have expected the respective astrologers to have invested more care in their computations.<sup>147</sup>

In her discussion of the lines that immediately precede the autobiographical horoscope [222–223], Monteventi should have adopted Koechly's lacuna after v. 732, as do De Stefani and Lightfoot, and pointed out that [Manetho] has nicely arranged the succession of topics: first a detailed treatment of slave horoscopes [vv. 684–731], then a much briefer reference to royal horoscopes [vv. 732–737] with *recusatio* because their analysis is forbidden, and last, after the two social extremes, the poet's own, harmonious horoscope [vv. 738–750], which serves in a truly original manner as the traditional sphragis to the entire core poem [books 2, 3, 6].

Monteventi speaks all too cautiously of these three books as forming “peut-être un ensemble de trois livres” [223]. While she is rightly convinced [274] that books 2, 3, and 6 were composed by one and the same poet, her doubts regarding the attribution of books 1, 4, and 5 to other poets seem overcautious.

Monteventi comments thus on vv. 5.34–35: “Dans cette prédiction, toutes les planètes et lumineaires sont en conjonction, c'est-à-dire qu'ils sont réunis en un même point” [223]. Correct “point” to “signe”. Even when astrologers work with precision to degrees of longitude, which [Manetho] does not do, they allow for certain small distances between the conjunct celestial bodies. These distances are called orbs [see [Heilen 2015a](#), 2.753 and 2.787]. And even when two planets have the exact same zodiacal longitude, their ecliptic latitudes are almost always different, so that they hardly ever occupy the same point when observed from Earth.

In the final tabular survey of Monteventi's 10 texts (“Annexe”) [285], the number of extant verses of Dorotheus' poem must be corrected from “environs 100 vers” to about 400: cf. [Heilen 2017](#), 221 “ca 390 hexameters”, to which the restorations of single verses in [Hübner 2021](#) must be added.

<sup>147</sup> We obtain a few more cases if we extend our perspective to horoscopes that specify longitudes only to the zodiacal sign because sometimes recomputation shows that the planet in question was actually in a neighboring sign, so as to allow the assertion that the magnitude of the deviation was at least such and such. In Hor. gr. 80.VIII.4 [[Jones 1999](#), no. 4236a], for instance, the deviations as defined in [Table 1](#) are at least +5 in Venus' case and at least +11 in Mercury's; in Hor. gr. 212.V.7 [[Jones 1999](#), no. 4242], that of Mercury is at least  $-11^\circ$  (while Venus was actually in the sign given by the text); and in Hor. gr. 223.XII.14 [[Jones 1999](#), no. 4247], that of Venus was at least +5 (while Mercury was actually in the sign given by the text). Such cases corroborate the overall impression given by [Table 1](#).

The bibliography [287–304] is solid and up-to-date. There is, however, some new or overlooked research to add:

- On Manilius: *Astr.* 3.31–46, 4.430–443 [Monteventi 85–87 (see also 209 on 4.444–450)]. [Vogel 2014](#), 422–423 shows that it is especially the difficulty of achieving variety in expressing numbers poetically that causes the poet’s complaint;
- On Dorotheus: [Hübner 2021](#) which reconstructs verses that belonged to Dorotheus’ first book, especially regarding the qualities of the zodiacal signs, and his fifth book on initiatives. See also [Cottrell and Ross 2019](#), which argues against Pingree’s hypothesis of a middle Persian intermediary in the transmission of the poem from Greek to Arabic;
- On Anubio: the reference to Schubert’s edition of Anubio [114 n194] ought to be augmented by a reference to [De Stefani 2016](#) for suggestions about further textual improvement;
- On [Manetho]: see [Lightfoot 2020](#) and [2023](#) (known to Monteventi as forthcoming);
- On Porphyry’s *Introduction* [153]: its authenticity has recently been challenged with strong arguments in [Lázló 2021](#); regarding ch. 38, quoted by Monteventi [153 n280], see [Lázló 2021](#), 398, 408;
- On the Greek epithets of the planets [154 n287]: see [Cumont 1935](#);
- On “le *dodecatopos* (δωδεκάτοπος)” [156 with n289 and 157 n293] or more correctly, in my view, “la δωδεκάτροπος”,<sup>148</sup> especially that of Manilius: see [Hübner 1995](#);
- On the distinction of the zodiacal signs in τροπικά, στερεά, and δίσωμα [173–174]: see [Hübner 1982](#), 74–88;
- On “astrological chorography” [210 n81], i.e., astrological geography, the association of specific countries and regions to specific zodiacal signs: Monteventi refers exclusively to the outdated account in [Bouché-Leclercq 1899](#), 327–347; add the up-to-date survey and analysis in [Heilen 2015b](#), esp. 301–329, with references to further recent literature;
- On Augustus’ choice of Capricorn [278 n5]: see [Terio 2006](#).

Lapsus and conceptual imperfections: 63 “le moment [S.H. read: “temps”] d’ascension des signes du zodiac”; 66.1 “du quatrième [S.H. read:

<sup>148</sup> In favor of the «-ρ-», see [Hübner 1995](#), 5 n3, with further references (esp. to Housman’s works) and arguments. Moreover, both forms are certainly feminine, not masculine, as Monteventi systematically has them.

“troisième”] livre”; 68.–3 “mythologique”: [S.H. read “mythique”]; 87 n127 “la mythologie stellaire” [S.H. read: “les mythes stellaires”]; 86 “L’ambivalence [S.H. read: “correspondence”] entre forme et contenu”. On page 122, Monteventi gives an unsatisfactory definition of the concept of the “great year”: “un cycle d’un certain nombre d’années, correspondant à la révolution du cosmos qui, partant d’un point donné, revient à ce même point”; and, following Schubert 2015, she employs the French term “horoscope” both for “nativity” [e.g., 137, 139, 248, 260] and for “ascendant” [e.g., 107, 156, 159, 201, 237]. One should avoid this confusing practice.

There are very few typos to correct: 25 “fr. 482 [S.H. read “483”] Kannicht”; 42 “transparente” [S.H. in a German quotation from Effe 1977, read “-ent”]; 126 “floriglège” [S.H. read “florilège”]; 151 “5.4” [S.H. read “5.5”]; 193 “Néchespos” [S.H. read “Néchepsos”]; 241 “cractère” [S.H. read “caractère”]; 139 “en fin de [S.H. read: “du”] sixième livre”.

Formalities: on several occasions, when this or that Greek or Latin passage is referenced (e.g., 65 n47 to Nechepsos et Petosiris fr.1 in Riess 1891–1893), one would wish for a cross-reference to the full quotation with translation of the same passage [in this case, to p. 67]. Other desirable backward references are missing, e.g., 122 n216 [on P.CtYBR 422] to p. 64. Monteventi repeats Greek and Latin quotations together with her own translations when she returns to them instead of referring the reader to the earlier presentation of exactly the same material. This practice eases reading, but it comes at the price that sometimes the repetitions concern rather large chunks of text, e.g., Nechepsos and Petosiris fr. 1 [Riess 1891–1893], where 67–68 = 251, or *Corpus Hermeticum* [Nock and Festugière 1945–1954, vol. 4, fr. 29], where 179 = 214.

#### 4. Conclusion

In sum, this book is, despite shortcomings at the levels of concept and content, especially regarding astrological technicalities, a welcome contribution on a previously understudied topic. It will be appreciated by readers who approach the book’s topic as historians of ancient literature, especially didactic poetry, because they will find an opportunity to broaden their horizon to a vast number of texts that are all available in critical editions yet hitherto, except for Manilius, more or less neglected. It will also be appreciated by readers who are already, due to their interest in the history of astrology, familiar with the doctrinal content of some or all of the texts in question because these readers will greatly benefit from Monteventi’s ability to embed these texts in their literary contexts and traditions.

## APPENDIX 1

### THE SOURCES OF JOHN CAMATERUS'

#### SHORTER ASTROLOGICAL POEM

This poem of uncertain title in 1351 iambic dodecasyllables [Miller 1872, 53-111] is, despite its neglect by modern researchers, of interest for various reasons [see pp. 29–31 above]. One particularly interesting question, regarding its sources, requires separate treatment in the present appendix.

John refers to two otherwise unknown astrological authorities, namely, Selech and the Babylonian Meslas. Selech is quoted twice, first in vv. 375–376 (Μάνθανε τανῶν δώδεκα τόπων λόγους/Μυστηριώδεις ἀπὸ τῆς Σέλεχ βίβλου) with regard to the lengthy subsequent section on the 12 places of the *dodecatropos*, which extends at least until v. 453 (or rather until v. 475?), and then once more with Meslas for the final two sections on the lot of fortune [vv. 1145–1268] and the lunar nodes [vv. 1269–1350]: cf. vv. 1140–1144.<sup>149</sup>

Ἔχεις τὸ λοιπὸν ἀπὸ τῆς Σελέχ βίβλου  
Μαθηματικὸς μυστικωτέρους λόγους  
Μυστηριώδεις ἀστέρων οὗτοι λόγοι·  
Μάνθανε λοιπὸν καὶ περὶ κλήρου τύχης  
Ἄπερ ὁ Μεσλάς [var. I. Λασβάς] Βαβυλώνιος γράφε.

See also the poem's final verse, 1351: «Καὶ ταῦτα βίβλος Βαβυλωνίων γράφει». Taken together, these two references (note the plural «Βαβυλωνίων» in v. 1351 and the singular «βίβλος» in vv. 1140 and 1351) seem to imply that Selech was Babylonian too and that Camaterus was using just one book under both authors' names (comparable to the pseudonymous couple Nechepsos and Petosiris?). The aforementioned passages further indicate that the writings attributed to Selech and Meslas emphasized that they contained secret knowledge.

One wonders how to explain the names “Selech” and “Meslas”. Krumbacher [1897, 760–761] thought that, if they were not fake authorities [761: “wenn sie nicht gar auf Trug beruhen”], Camaterus knew them indirectly through Greek sources, and called for an investigation. But apparently this call has remained unheard to the present. I shall try to make a modest contribution to the question.

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<sup>149</sup> Erroneously referred to in Miller 1872, 51 as “1124–1128”.

The Orientalist Kristin Kleber, University of Münster, [email of 13 Dec 2021] informs me that the two names do not look Babylonian. I am particularly grateful to Ran Zadok (University of Tel Aviv, professor emeritus of Mesopotamian, Iranian, and Judaic Studies), an expert on Semitic names and their renderings in other languages, for the following [email of 18 Dec 2021]:

Μεσλας may be based on a *qetl* (<*qitl*) formation of M-Š-L “to rule” in Canaanite, actually in Hebrew and Phoenician-Punic. This formation produces nouns [see Fox 2003, 141–148]. Regarding onomastic (anthroponymic) documentation, this root is productive in Phoenician-Punic (so far not in Hebrew). Cf. Phoenician *Mšl* [Benz 1972, 143], which resembles the hypothetical source of Μεσλας as well as the compound Punic anthroponyms *Mlqrtmšl* and *Qrtmšl* [Benz 1972, 179], the latter’s theophorous element, viz. *Qrt*, is an abbreviated form of *Mlqrt*. All the three names are discussed in Benz 1972, 355, s.v. *mšl*. Σελεχ apparently derives from Š-L-K “to nourish, provide” in Phoenician-Punic [see Benz 1972, 416–417]. The root produces anthroponyms only in Phoenician and Punic, viz. the compound theophorous names Phoen.-Pun. *šmnšlk*, as well as Pun. *B’šlk* and *šmššlk* [Benz 1972, 73, 98–100, 181]. However, the predicative element of these names, viz. *šlk*, is in the D stem in view of the Greek and Latin transcriptions -συλληχ and -silec- [Benz 1972, 416–417], i.e., one would expect here \*Σελλεχ; perhaps the second lambda was omitted in the course of transmission and copying (like the simple -l-, which is indeed recorded in the abovementioned Latin -silec-).

Zadok concludes that

both names...seem to be Phoenician-Punic, which is compatible with the astronomical expertise of the Phoenico-Punic maritime civilization.

If Zadok is right, I cannot think of any parallel in the history of astrology and I would not dare to speculate on how Phoenician names ended up being considered Babylonian. It is enough that the present note makes Zadok’s analysis accessible to other researchers. As for Camaterus’ sources, he may have drawn on translated Arabic material too, either directly or indirectly: see his presentation of the planetary dignities in the order houses, exaltations, triplicity rulers, terms, decans [vv. 41–144], followed by an explicit assignment [vv. 145–148] of decreasing powers (δυνάμεις) from the houses = “5” down to the decans = “1”, on which the preceding order was based. This hierarchy is the same as, and possibly derived from, Al-Qabīṣī’s (Alcabitius) *Introduction to Astrology* 1.22–23 [Burnett, Yamamoto, and Yano 2004, 239–240]. See Heilen 2015a, 2.714 n1579. As a consequence of these observations, caution is advised regarding the peremptory statement in Caudano 2020, 216 n86 that “these poems [S.H., i.e., the two astrological poems authored by Camaterus and the one by Manasses] relied exclusively on classical or Byzantine material”.

## APPENDIX 2

As an aid to the reader, I have created the following index of the ancient Greco-Roman astrological<sup>150</sup> passages suggested above (without any pretense to completeness) for consideration in addition to those mentioned by Monteventi.<sup>151</sup>

Ammianus Marcellinus		Claudian	
21.2.2	15–16	<i>Carm. min.</i>	
Anonymous		43	17
<i>On Earthquakes</i>	8–9	44	16, 24–25
<i>Anthologia latina</i>		[Homer]	
<i>Epigr.</i>		<i>Hymn to Ares</i>	16
488	17 n51	Horace	
642 <sup>a</sup>	8 n22	<i>Carm.</i>	
<i>Anthologia palatina</i>		1.11	17
<i>Epigr.</i>		2.17.17–30	14
5.105	15 n44	John Camaterus	
7.157	15 n44	<i>De zodiaco</i> <sup>b</sup>	29–31, 60–61
7.687	15 n44	153–160	17 n51
9.80	15 n44	<i>Isag.</i>	
9.112	15 n44	2036–2124	17 n51
9.201	15 n44	Juvenal	
9.822	15	<i>Sat.</i>	
11.23	15 n44	6.553–581	14, 15 n43
11.114	15 n44	14.248–255	15 n43
11.159	15 n44	Lucan	
11.160	15 n44	<i>Phars.</i>	
11.161	15 n44	1.639–672	13
11.162	15 n44	10.35–36	13 n37
11.183	15 n44	10.176–192	8 n22, 19
11.227	15 n44	10.199–218	9 n25, 19
11.318	15 n44	Martial	
11.383	15 n44	<i>Epigr.</i> 9.82	15 n44
14.124	15, 15 n44, 19–20	Nonnus	
14.141	15, 20–24	<i>Dionys.</i>	
Ausonius		6.58–103	13
<i>Ecl.</i>		6.229–249	13
8	17 n51		
26	17 n51		

<sup>150</sup> Widely defined, including poems that criticize or ridicule astrologers and their practices [see p.14 above].

<sup>151</sup> One poem by the Byzantine poet John Camaterus is included because Monteventi herself includes the other of his two astrological poems in passing [16].

Ovid		5.45–51	14
<i>Amor.</i> 1.8.29–30	14	6.18–19	14
<i>Ibis</i> 209–220	14, 25	Propertius	
<i>Metam.</i> 1.148	15 n43	<i>Eleg.</i> 2.27	17
Paulinus of Nola		Zonaras	
<i>Carm.</i> 3.8	15 n43	13.11	16
Persius		Zosimus	
<i>Sat.</i>		3.9.6	16

<sup>a</sup> By Quintus Cicero.

<sup>b</sup> Title uncertain: for details, see [p.29 n 82 above](#)

## BIBLIOGRAPHY

### Primary sources

Al-Qabīṣī (Alcabitius). *Introduction to Astrology*. See [Burnett, Yamamoto, and Yano 2004](#).

Ammianus. *Res gestae*. See [Seyfarth 1978](#).

*Anthologia palatina (graeca)*. See [Beckby 1965–1968](#); [Buffière 1970](#).

*Anthologia latina*. See [Riese 1906](#).

Antigonus of Nicaea. *Fragmenta*. See [Heilen 2015a](#).

Antiochus. *De stellarum in locis thematis significationibus fragmentum epicum*. See [Pérez Jiménez 2014](#).

Anubio. *Carmen astrologicum elegiacum*. See [Obbink 2006](#); [Schubert 2015](#).

Ausonius. *Eclogae*. See [Prete 1978](#).

Camaterus, John. *Poemata astrologica* See [Miller 1872](#); [Weigl 1907–1908](#).

**CCAG** *Catalogus Codicum Astrologorum Graecorum*. 12 vols. Brussels, 1898–1953.

Cicero. *De divinatione*. See [Wardle 2006](#).

Clemens Alexandrinus. *Stromata*. See [Früchtel, Stählin, and Treu 1960](#).

Corpus Hermeticum. See [Nock and Festugière 1945–1954](#).

Critodemus. *Fragmenta*. See [Tolsa 2024](#).

Cyrrillus Alexandrinus. *Contra Iulianum*. See [Riedweg and Kinzig 2016](#).

Dorotheus. *Fragmenta et interpretatio arabica*. See [Stegemann 1939–1943](#); [Pingree 1976](#).

Hephaestio of Thebes. *Apotelesmatica*. See [Pingree 1973–1974](#), vol. 1.

- Hephaestio of Thebes. *Apotelesmaticorum epitomae quattuor*. See [Pingree 1973–1974](#), vol. 2.
- Hugo of Santalla. *Liber Aristotilis*. See [Burnett and Pingree 1997](#).
- Iohannes de Sacroboso. *Sphaera*. See [Thorndike 1949](#).
- LSJ Liddell, H. G.; R. Scott; and H. S. Jones. *A Greek-English Lexicon*. 9th edn. Oxford 1940. *Revised Supplement*. Edited by P. G. W. Glare. Oxford 1996.
- Lucan. *Bellum civile*. See [Housman 1927](#).
- [Manetho]. *Apotelesmatica*. See [Koechly 1851](#) and [1858](#); [Lopilato 1998](#); [De Stefani 2017](#); [Lightfoot 2020](#) and [2023](#); [Fels 1990](#); [Feraboli, Flores, and Scarcia 1996–2001](#).
- Manilius. *Astronomica*. See [Goold 1985](#) and [1997](#).
- Maximus. *Catarchae*. See [Zito 2016](#).
- Nechepsos and Petosiris. *Fragmenta*. See [Riess 1891–1893](#).
- Nonnus of Panopolis. *Dionysiaka*. See [Chuvin 1992](#).
- Olympiodorus. *Commentarium*. See [Boer 1962](#).
- Pontano, Giovanni. *Urania*. See [Weh 2017](#).
- Ptolemy. *Apotelesmatica* (vulgo *Tetrabiblos*). See [Robbins 1940](#); [Hübner 1998](#); [Vuillemin-Diem and Steel 2015](#).
- Spshujidhvaja. *Yavanajātaka*. See [Pingree 1978](#).
- Vettius Valens. *Anthologiae*. See [Pingree 1986](#).
- Zonaras, I. *Epitome historiarum*. See [Dindorf 1868–1875](#).
- Zosimus. *Historia nova*. See [Paschoud 1979–2000](#).

### Secondary sources

- Abry, J.-H. 2011. “Le cercle des poètes disparus... État de la question”. Pp. 7–21 in [Boehm and Hübner 2011](#).
- Akridas, A.-G. 2021. “Σαλμεσχ(ο)ινιακά: Measurement Standards of Astrotheology? A New Approach to the Meaning and the Relevance of the Term”. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 148: 12–17.
- Avelar de Carvalho, H. 2018. “Astrology and Sarcasm in Three Medieval Portuguese Songs of Mockery”. *Culture and Cosmos* 22: 47–55.
- Baccani, D. 1992. *Oroscopi greci. Documentazione papirologica*. Messina.
- Bakhouché, B. 2002. *L'astrologie à Rome*. Louvain.
- Barrenechea, F. 2004. “The Star Signs at Brundisium: Astral Symbolism in Lucan 2.691–2”. *Classical Quaterly* ns 54: 312–317.
- Barton, T. S. 1994. *Ancient Astrology*. London/New York.

- Beckby, H. 1965–1968. *Anthologia Graeca*. 2nd edn. 4 vols. Munich.
- Benz, F. L. 1972. *Personal Names in Phoenician and Punic Inscriptions*. Rome.
- Bernabé, A. 2005. *Poetae epici Graeci. Testimonia et fragmenta. II: Orphicorum et Orphicis similium testimonia et fragmenta*. vol. 2. Munich/Leipzig.
- Boehm, I. and W. Hübner. 2011. *La poésie astrologique dans l'Antiquité. Actes du colloque organisé les 7 et 8 décembre 2007 par J.-H. Abry avec la collaboration d'Isabelle Boehm*. Paris.
- Boer, E. 1962. *Heliodori ut dicitur in Paulum Alexandrinum commentarium. Interpretationes astronomicas addiderunt O. Neugebauer et D. Pingree*. See [Heilen 2015a](#), 2.502 for argument that this text is actually by Olympiodorus, not Heliodorus.
- Boll, F. 1903. *Sphaera. Neue griechische Texte und Untersuchungen zur Geschichte der Sternbilder*. Leipzig. Repr. Hildesheim, 1967. Online (Boll's personal, annotated copy): <https://digi.ub.uni-heidelberg.de/diglit/boll1903>.
- Boll, F. 1908. "Die Erforschung der antiken Astrologie". *Neue Jahrbücher für das Klassische Altertum* 11: 103–126. Repr. [Boll 1950](#), 1–28.
- Boll, F. 1917. "Sternenfreundschaft. Ein Horatianum". *Sokrates N.F.* 5: 1–10. Repr. [Boll 1950](#), 115–124.
- Boll, F. 1950. *Kleine Schriften zur Sternkunde des Altertums. Herausgegeben und eingeleitet von Viktor Stegemann*. Leipzig.
- Boll, F.; C. Bezold; and W. Gundel. 1966. *Sternglaube und Sterndeutung. Die Geschichte und das Wesen der Astrologie*. 5th ed. Darmstadt.
- Bouché-Leclercq, A. 1899. *L'astrologie grecque*. Paris. Repr. Brussels, 1963; Aalen, 1979; Cambridge, UK, 2014.
- Bowen, A. C. and F. Rochberg. 2020. *Hellenistic Astronomy: The Science in Its Contexts*. Leiden/Boston.
- Brennan, C. W. 2017. *Hellenistic Astrology: The Study of Fate and Fortune*. Denver.
- Buffière, F. 1970. *Anthologie grecque. Première partie: Anthologie Palatine*. vol. 12, books XIII–XV. Paris.
- Burnett, C. and D. Pingree. 1997. *The Liber Aristotilis of Hugo of Santalla*. London.
- Burnett, C.; K. Yamamoto; and M. Yano. 2004. *Al-Qabīṣī (Alcabitius): The Introduction to Astrology. Editions of the Arabic and Latin Texts and an English Translation*. London/Turin.

- Caballero-Sánchez, R. 2021. “On the Chronology of the *Anonymous Commentary to Ptolemy’s Tetrabiblos*: Analysis of the Astronomical Evidence”. *Journal for the History of Astronomy* 52: 442–461.
- Calder, W. M. III and S. Heilen. 2007. “David E. Pingree: An Unpublished Autobiography”. *Greek, Roman & Byzantine Studies* 47: 515–523.
- Calderón, E. 2011. “Étude métrique de l’hexamètre dans le *Carmen astrologicum* d’Anubion”. Pp. 167–180 in [Boehm and Hübner 2011](#).
- Carman, C. C. and G. L. Recio. 2019. “Ptolemaic Planetary Models and Kepler’s Laws”. *Archive for History of Exact Sciences* 73: 39–124.
- Caudano, A.-L. 2012. “An Astrological Handbook from the Reign of Manuel I Komnenos”. *Almagest* 3: 47–65.
- Caudano, A.-L. 2020. “Astronomy and Astrology”. Pp. 202–230 in L. Stavros ed. *A Companion to Byzantine Science*. Leiden/Boston.
- Chuvin, P. 1992. *Nonnos de Panopolis, les Dionysiaques*. vol. 3. songs VI–VIII. Paris.
- Cottrell, E. J. and M. T. Ross. 2019. “Persian Astrology: Dorotheus and Zoroaster, According to the Medieval Arabic Sources (8th–13th Century)”. Pp. 87–105 in *Proceedings of the Eighth European Conference of Iranian Studies Held on 14–19 September 2015 at the State Hermitage Museum and Institute of Oriental Manuscripts, Russian Academy of Sciences, in St Petersburg*. vol. 1: *Studies on Pre-Islamic Iran and on Historical Linguistics*. Saint Petersburg.
- Courtney, E. 1980. *A Commentary on the Satires of Juvenal*. London.
- Cramer, F. H. 1954. *Astrology in Roman Law and Politics*. Philadelphia. Repr. Chicago, 1996.
- Cruz García de Enterría, M. and A. Hurtado Torres. 1981. “La astrología satirizada en la poesía de cordel. El *Juyzio* de Juan del Encina y los *Pronósticos* de Rodolfo Stampurch”. *Revista de Literatura* 43: 21–62.
- Cumont, F. 1935. “Les noms des planètes et l’astrolâtrie chez les Grecs”. *Antiquité Classique* 4: 5–43.
- De Stefani, C. 2016. rev. [Schubert 2015](#). *Bryn Mawr Classical Review* 2016: Oct 23. Online: <https://bmc.brynmawr.edu/2016/2016.10.23/>.
- De Stefani, C. 2017. *Ps.-Manethonis Apotelesmatica. Einleitung, Text, Appendices*. Wiesbaden.
- Dindorf, L. 1858–1875. *Ioannis Zonarae epitome historiarum*. 6 vols. Leipzig.
- Effe, B. 1977. *Dichtung und Lehre. Untersuchungen zur Typologie des antiken Lehrgedichts*. Munich.

- Fels, W. 1990. *Marcus Manilius, Astronomica. Astrologie. Lateinisch/Deutsch*. Stuttgart.
- Feraboli, S. 2011. "Spunti di un catalogo stellare in un poeta bizantino". Pp. 217–224 in [Boehm and Hübner 2011](#).
- Feraboli, S.; E. Flores; and R. Scarcia. 1996–2001. *Manilio. Il poema degli astri (Astronomica)*. 2 vols. Milan.
- Fox, J. 2003. *Semitic Noun Patterns*. Winona Lake.
- Früchtel, L.; O. Stählin; and U. Treu. 1960. *Clemens Alexandrinus*. 3rd edn. vol. 2. Berlin.
- Galán Vioque, G. 2002. "La astrología y los astrólogos en la *Antología Palatina*: alusiones y parodias". *MHNH: Revista Internacional de Investigación sobre Magia y Astrología Antiguas* 2: 221–236.
- Gansten, M. 2009. *Primary Directions: Astrology's Old Master Technique*. Bournemouth.
- Gillings, R. J. 1972. *Mathematics in the Time of the Pharaohs*. Cambridge, MA.
- Goold, G. P. 1985. *M. Manilii astronomica*. Leipzig.
- Goold, G. P. 1997. *Manilius: Astronomica*. Repr. with corrections. Cambridge, MA/London [1st edn 1977].
- Greenbaum, D. G. 2020. "The Hellenistic Horoscope". See [Bowen and Rochberg 2020](#), 443–471.
- Greenbaum, D. G. and A. Jones. 2017. "P.Berl. 9825: An Elaborate Horoscope for 319 CE and Its Significance for Greek Astronomical and Astrological Practice". *ISAW Papers* 12. Online: <http://dlib.nyu.edu/awdl/isaw/isaw-papers/12/>.
- Gundel, W. and H. G. Gundel. 1966. *Astrologumena. Die astrologische Literatur in der Antike und ihre Geschichte*. Wiesbaden.
- Haberkamm, K. 2004. "'Juppiter' contra 'Saturn(us)' contra 'Zeus': astrologisch modifizierter und satirisch verkehrter Titanenkampf in Grimmelshausens 'Ewig-währender Kalender' und Martin Walsers 'Tod eines Kritikers'". *Simpliciana* 26: 451–472.
- Haye, T. 2014. "Simon de Couvin's *De iudicio Solis in conviviis Saturni*". *Wiener Studien* 127: 217–313.
- Heilen, S. 2005. "Zur Deutung und Datierung des 'Löwenhoroskops' auf dem Nemrud Dağı". *Epigraphica Anatolica* 38: 145–158.

- Heilen, S. 2006. "Aelius Aristides über seine Geburtssterne. Eine überfällige Richtigstellung". *MHNH: Revista Internacional de Investigación sobre Magia y Astrología Antiguas* 6: 109–125.
- Heilen, S. 2007. "Ancient Scholars on the Horoscope of Rome". *Culture and Cosmos* 11: 43–68.
- Heilen, S. 2008. "Fracastoros Göttersammlung im Krebs (Syph. 1,219–246)". Pp. 143–176 in S. Heilen, R. Kirstein, R. S. Smith, S. M. Trzaskoma, R. L. van der Wal, and M. Vorwerk edd. *In Pursuit of Wissenschaft: Festschrift für William M. Calder III zum 75. Geburtstag*. Hildesheim.
- Heilen, S. 2010a. "Anubio Reconsidered". *Aestimatio: Critical Reviews in the History of Science* 7: 127–192.
- Heilen, S. 2010b. "Problems in Translating Ancient Greek Astrological Texts". Pp. 299–329 in A. Imhausen and T. Pommerening edd. *Writings of Early Scholars in the Ancient Near East, Egypt and Greece: Translating Ancient Scientific Texts*. Berlin/New York.
- Heilen, S. 2011. "Some Metrical Fragments from Nechepsos and Petosiris". Pp. 23–93 in [Boehm and Hübner 2011](#).
- Heilen, S. 2015a. Hadriani genitura. *Die astrologischen Fragmente des Antigonos von Nikaia*. 2 vols. Berlin/Boston. Repr. 2017.
- Heilen, S. 2015b. "The Star of Bethlehem and Greco-Roman Astrology, Especially Astrological Geography". Pp. 297–357 in P. D. Barthel and G. H. van Kooten edd. *The Star of Bethlehem and the Magi: Interdisciplinary Perspectives from Experts on the Ancient Near East, the Greco-Roman World, and Modern Astronomy*. Leiden.
- Heilen, S. 2017. "Claudio De Stefani (ed.), *Ps.-Manethonis Apotelesmatica. Einleitung, Text, Appendices, Wiesbaden, 2017*". *MHNH: Revista Internacional de Investigación sobre Magia y Astrología Antiguas* 17: 220–238.
- Heilen, S. 2020a. "Hellenistic Horoscopes in Greek and Latin: Contexts and Uses". See [Bowen and Rochberg 2020](#), 490–508.
- Heilen, S. 2020b. "Short Time in Greco-Roman Astrology". Pp. 239–270 in [Miller and Symons 2020](#).
- Heitsch, E. 1961. *Die griechischen Dichterfragmente der römischen Kaiserzeit*. vol. 1. Göttingen.
- Holden, J. H. 1982. "Ancient House Division". *Journal of Research of the American Federation of Astrologers* 1: 19–28.

- Holden, J. H. 1996. *A History of Horoscopic Astrology: From the Babylonian Period to the Modern Age*. Tempe.
- Horna, K. 1902. *Einige unedierte Stücke des Manasses und Italikos*. Vienna.
- Housman, A. E. 1927. *M. Annaei Lucani Belli civilis libri decem*. 2nd edn. Oxford. Corrected repr. of 1st edn. 1926.
- Hübner, W. 1982. *Die Eigenschaften der Tierkreiszeichen in der Antike. Ihre Darstellung und Verwendung unter besonderer Berücksichtigung des Manilius*. Wiesbaden.
- Hübner, W. 1984. “Manilius als Astrologe und Dichter”. Pp. 126–320 in W. Haase and H. Temporini edd. *Aufstieg und Niedergang der Römischen Welt*. vol. 2.32.1. Berlin/New York.
- Hübner, W. 1989. *Die Begriffe “Astrologie” und “Astronomie” in der Antike. Wortgeschichte und Wissenschaftssystematik mit einer Hypothese zum Terminus “Quadrivium”*. Wiesbaden.
- Hübner, W. 1995. *Die Dodekatropos des Manilius (MANIL. 2,856–970)*. Stuttgart.
- Hübner, W. 1998. *Claudii Ptolemaei Ἀποτελεσματικά*. Stuttgart/Leipzig.
- Hübner, W. 2008. “Maghi e astrologi in Properzio”. Pp. 335–363 in G. Catanzaro and F. Santucci edd. *I personaggi dell’eglogia di Properzio. Atti del convegno internazionale, Assisi, 26–28 maggio 2006*. Assisi.
- Hübner, W. 2010. *Manilius. Astronomica. Buch V*. 2 vols. Berlin/New York.
- Hübner, W. 2021. *Disiecti membra poetae. Neue Spuren des astrologischen Lehrdichters Dorotheos von Sidon*. Stuttgart.
- Hunger, H. 1978. *Die hochsprachliche profane Literatur der Byzantiner*. 2 vols. Munich.
- Imhausen, A. 2007. “Egyptian Mathematics”. Pp. 7–56 in V. Katz ed. *The Mathematics of Egypt, Mesopotamia, China, India, and Islam: A Sourcebook*. Princeton.
- Imhausen, A. 2016. *Mathematics in Ancient Egypt. A Contextual History*. Princeton.
- Jones, A. 1999. *Astronomical Papyri from Oxyrhynchus (P. Oxy. 4133–4300a)*. 2 vols. Philadelphia.
- Jones, A. 2020. “Greco-Roman Sundials: Precision and Displacement”. Pp. 125–157 in [Miller and Symons 2020](#).

- Jones, A. 2023. "Precision of Time Observation in Greco-Roman Astrology and Astronomy". Pp. 12–34 in M. Morfouli ed. *The Ultimate Quest: A History of Accuracy in Time Measurement/La quête suprême. Une histoire de la précision dans la mesure du temps. Almagest 13.2* (special issue).
- Juntke, F. 1979. "Über eine satirische astrologische Praktik für das Jahr 1585". *Gutenberg-Jahrbuch* 54: 193–198.
- Kannicht, R. 2004. *Tragicorum Graecorum fragmenta*. vol. 5.1. Göttingen.
- Knappich, W. 1967. *Geschichte der Astrologie*. Frankfurt.
- Koehly, A. 1851. *Arati Phaenomena et Prognostica. Pseudo-Manethonis et Maximi carmina astrologica, cum fragmentis Dorothei et Anubionis*. Paris. Repr. 1931.
- Koehly, A. 1858. *Manethonis Apotelesmaticorum qui feruntur libri VI. Accedunt Dorothei et Anubionis fragmenta astrologica*. Leipzig.
- Krumbacher, K. 1897. *Geschichte der byzantinischen Litteratur von Justinian bis zum Ende des oströmischen Reichs (527–1453)*. 2nd edn. Munich.
- Kunitzsch, P. 1978. rev. [Pingree 1976](#). *Byzantinische Zeitschrift* 71: 127–129.
- Lázló, L. 2021. "Revisiting the Authenticity of Porphyry's *Introduction to Ptolemy's 'Apotelesmatics'*". *Classical Philology* 116: 392–411.
- Lightfoot, J. F. 2020. *Pseudo-Manetho, Apotelesmatica: Books Two, Three, and Six*. Oxford.
- Lightfoot, J. F. 2023. *Pseudo-Manetho, Apotelesmatica: Books Four, One, and Five: Edited with Introduction, Translation, and Commentary*. Oxford.
- Liuzo, A. 1900. *Un pronostico satirico di Pietro Aretino*. Bergamo.
- Lopilato, R. 1998. *The Apotelesmatika of Manetho*. PhD dissertation, Brown University. Providence. UMI Microform 9830484.
- Martín Hernández, R. 2006. "Orfeo científico". *Estudios Clásicos* 129: 111–119.
- Martín Hernández, R. 2015. *La ciencia de Orfeo. Lapidarios y escritos sobre astrología y medicina*. Madrid.
- Miller, E. 1872. "Poèmes astronomiques de Théodore Prodrome et de Jean Camatère, d'après les manuscrits de la Bibliothèque Nationale de Paris". *Notices et extraits des manuscrits de la Bibliothèque Nationale et autres bibliothèques* 23.2: 1–112.

- Miller, K. J. and L. Symons. 2020. *Down to the Hour: Short Time in the Ancient Mediterranean and Near East*. Leiden/Boston.
- Monteventi, V. 2011. "Hommage à Joséphe-Henriette Abry (1944–2008)". Online: [https://www.academia.edu/attachments/97780581/download\\_file?s=profile](https://www.academia.edu/attachments/97780581/download_file?s=profile)
- Neugebauer, O. 1975. *A History of Ancient Mathematical Astronomy*. Berlin.
- Neugebauer, O. and H. B. van Hoesen. 1959. *Greek Horoscopes*. Philadelphia. Repr. 1987.
- Neugebauer, O. and H. B. van Hoesen. 1964. "Astrological Papyri and Ostraca: Bibliographical Notes". *Proceedings of the American Philosophical Society* 108: 57–72.
- Nock, A. D. and A.-J. Festugière. 1945–1954. *Corpus Hermeticum*. vols. 1–4. Paris.
- Obbink, D. 1999. "P. Oxy. 4503–4507. Anoubion, Elegiacs". Pp. 57–109 in N. Gonis et al. edd. *The Oxyrhynchus Papyri LXVI*. London.
- Obbink, D. 2006. *Anubio, Carmen astrologicum elegiacum*. München/Leipzig.
- Ogier, J. M. 1991. "Get aus, ir alteu hüer!": Wittenwiler's Astrological Satire". *Seminar* 27: 1–11.
- Panaino, A. 2009. "Sasanian Astronomy and Astrology in the Contribution of David Pingree". Pp. 73–103 in D. Pingree, G. Gnoli, and A. Panaino edd. *Kayd: Studies in History of Mathematics, Astronomy and Astrology in Memory of David Pingree*. Rome.
- Paschoud, F. 1979–2000. *Zosime. Histoire nouvelle. Texte établi et traduit*. 3 vols. in 5 parts. Paris.
- Pérez Jiménez, A. 2014. "Antiochi *De stellarum in locis thematis significationibus fragmentum epicum*. Edición, traducción española y comentario". *MHNH: Revista Internacional de Investigación sobre Magia y Astrología Antiguas* 14: 217–289.
- Pfister, S. 1990. *Parodien astrologisch-prophetischen Schrifttums 1470–1590. Textform–Entstehung–Vermittlung–Funktion*. Baden-Baden.
- Pingree, D. 1973–1974. *Hephaestionis Thebani Apotelesmaticorum libri tres*. 2 vols. Leipzig.
- Pingree, D. 1974. "Pseudo-Petosiris". *Dictionary of Scientific Biography* 10: 547–549.
- Pingree, D. 1976. *Dorothei Sidonii carmen astrologicum. Interpretatio arabica in linguam anglicam versa una cum Dorothei fragmentis et graecis et latinis*. Leipzig.

- Pingree, D. 1978. *The Yavanajātaka of Sphujidhvaja*. 2 vols. Cambridge, MA/London.
- Pingree, D. 1980. rev. [Goold 1977](#) and [Romano 1979](#). *Phoenix* 34: 263–266.
- Pingree, D. 1986. *Vettii Valentis Antiocheni Anthologiarum libri novem*. Leipzig.
- Pingree, D. 1989. “Classical and Byzantine Astrology in Sassanian Persia”. *Dumbarton Oaks Papers* 43: 227–239.
- Pingree, D. 1997a. *From Astral Omens to Astrology: From Babylon to Bīkāner*. Rome.
- Pingree, D. 1997b. “Māshā’allāh: Greek, Pahlavī, Arabic and Latin Astrology”. Pp. 123–136 in A. Hasnawi, M. ‘Awwād, and R. Rashed edd. *Perspectives arabes et médiévales sur la tradition scientifique et philosophique grecque*. Leuven/Paris.
- Prete, S. 1978. *Decimi Magni Ausonii Burdigalensis opuscula*. Leipzig.
- Rehm, A. 1929. “Zum V. Hymnus des Mesomedes”. *Philologus* 84: 267–272.
- Riedweg, C. and W. Kinzig. 2016. *Kyrill von Alexandrien. Werke. Erster Band. “Gegen Julian”*. vol. 1, books 1–5. Berlin/Boston.
- Riese, A. *Anthologia latina sive poesis latinae supplementum, pars prior: Carmina in codicibus scripta*. Leipzig.
- Riess, E. 1891–1893. “Nechepsonis et Petosiridis fragmenta magica”. *Philologus* suppl. 6: 325–394.
- Robbins, F. E. 1940. *Ptolemy*, Tetrabiblos. Cambridge MA/London. Repr. 1994.
- Roellenbleck, G. 1973. “Die lateinische epische Lehrdichtung Italiens im fünfzehnten und sechzehnten Jahrhundert”. Pp. 491–496 in J. Ijsewijn and E. Keßler edd. *Acta Conventus Neo Latini Lovaniensis. Proceedings of the First International Congress of Neo Latin Studies*. Munich.
- Roellenbleck, G. 1975. *Das epische Lehrgedicht Italiens im fünfzehnten und sechzehnten Jahrhundert. Ein Beitrag zur Literaturgeschichte des Humanismus und der Renaissance*. Munich.
- Romano, E. 1979. *Struttura degli Astronomica di Manilio*. Palermo.
- Rosenthal, F. 1965. *Das Fortleben der Antike im Islam*. Zurich/Stuttgart.
- Rzach, A. 1923. “Sibyllinische Orakel”. *Pauly’s Realencyclopädie der classischen Altertumswissenschaft* 2.A.2: 2103–2183.

- Schaldach, K. 2016. "Measuring the Hours: Sundials, Water Clocks, and Portable Sundials". Pp. 63–93 in A. Jones ed. *Time and Cosmos in Greco-Roman Antiquity*. New York/Princeton.
- Schmidt, M. G. 1986. *Caesar und Cleopatra. Philologischer und historischer Kommentar zu Lucan. 10,1–171*. Frankfurt.
- Schmidt, R. 1998. *Hephaistio of Thebes. Apote<le>smatics. Book II: Translated and Annotated*. Cumberland.
- Schubert, P. 2015. *Anoubion. Poème astrologique. Témoignages et fragments*. Paris.
- Seyfarth, W. 1978. *Ammiani Marcellini rerum gestarum libri qui supersunt*. 2 vols. Leipzig.
- Stegemann, V. 1930. *Astrologie und Universalgeschichte. Studien und Interpretationen zu den Dionysiaka des Nonnos von Panopolis*. Leipzig/Berlin.
- Stegemann, V. 1931–1932. "Horoskopie". *Handbuch des Deutschen Aberglaubens* 4: 342–400.
- Stegemann, V. 1939–1943. *Die Fragmente des Dorotheos von Sidon*. 2 vols. Heidelberg.
- Terio, S. 2006. *Der Steinbock als Herrschaftszeichen des Augustus*. Münster.
- Thorndike, L. 1949. *The "Sphere" of Sacrobosco and Its Commentators*. Chicago.
- Tolsa, C. 2024. *The Orphic Astrologer Critodemus: Fragments with Annotated Translation and Commentary*. Berlin.
- van der Waerden, B. L. 1956. *Erwachende Wissenschaft. Ägyptische, babylonische und griechische Mathematik*. Basel.
- Vogel, M. 2014. *Ter quinque volumina: Zahlenperiphrase in der lateinischen Dichtung von ihren Anfängen bis ins zweite Jahrhundert n. Chr.* Münster.
- Vuillemin-Diem, G. and C. Steel. 2015. *Ptolemy's Tetrabiblos in the Translation of William of Moerbeke: Claudii Ptolemaei Liber Iudicialium*. Leuven.
- Walther, H. 1959. *Initia carminum ac uersuum medii aevi posterioris Latinorum*. Göttingen.
- Wardle, D. 2006. *Cicero on Divination: De divinatione Book 1. Translated with Introduction and Historical Commentary*. Oxford.
- Weh, D. 2017. *Giovanni Pontanos Urania. Buch 1. Einleitung, Edition, Übersetzung und Kommentar*. Wiesbaden.

- Weigl, L. 1902. *Studien zu dem unedierten astrologischen Lehrgedicht des Johannes Kamateros*. Würzburg.
- Weigl, L. 1907–1908. *Johannes Kamateros, Εἰσαγωγή ἀστρονομίας. Ein Kompendium griechischer Astronomie und Astrologie, Meteorologie und Ethnographie in politischen Versen*. Würzburg.
- West, M. L. 1970. “The Eighth Homeric Hymn and Proclus”. *Classical Quarterly* 20: 300–304.
- Zagklas, N. 2019. “‘How Many Verses Shall I Write and Say?’: Poetry in the Komnenian Period (1081–1204)”. Pp. 237–263 in W. Hörander, A. Rhoby, and N. Zagklas edd. *A Companion to Byzantine Poetry*. Leiden.
- Zito, N. 2016. *Maxime, Des initiatives. Texte établi, traduit et annoté*. Paris.