"A poem in leaden hexameters": On rehabilitating Dorotheus' *Carmen Astrologicum*

J. L. Lightfoot, Professor of Greek Literature, New College, University of Oxford

Summary. Our main evidence for the lost five-book astrological poem of Dorotheus of Sidon is an Arabic translation by David Pingree, but examination of the Greek fragments reveals essential aspects of the poem over and above its informational content. Dorotheus engineered his poem to convey technicalities in a minimally offputting and maximally engaging way. He does not fight shy of specialist terms and concepts, but makes them easy for the reader to process. He avails himself of poetic formulary, which he also ingeniously repurposes, to serve the ends of *variatio* and to flatter the reader's cultural competence and *paideia*. And his mostly very correct metre speaks to his ambition for a poem that should be seen as a work combining "factual" and "formal" didactic poetry in equal measure.

INTRODUCTION

This essay is about the astrological poem of Dorotheus of Sidon, written in about the third quarter of the first century AD. In its field it was a hugely influential work: David Pingree traced its massive afterlife, even as he disparaged the Greek original[1]. The latter, in five books, has been lost, and we are uncertain of even such basic matters as its title[2]. The state of the evidence is not completely catastrophic, but because of the formidable and offputting way the poem has been transmitted (poetic extracts interspersed throughout a prose paraphrase from which it is not always clear what comes from Dorotheus himself; an inaccurate and indirect Arabic translation; and then even more indirect transmission as extracts and in epitomes), there is still much more to be discovered about it. That is true even of the most "accessible" parts, the quotations of Dorotheus' original verses in Hephaestion, which are what this paper concentrates on. It draws substantially on my work on the Manethoniana[3], and the reader should be warned that I use the convention established in those books of using M^a to refer to the poet of books 2, 3, and 6; M^b for book 4; M^c for book 1; and M^d for book 5.

This text was not only usable, but contained a high-end professional astrologer's toolkit. Whether or not its original Greek name was *Pentabiblos*, that was what the Arabic scholars in the Abbasid court called it[4], implying its parity of status with Ptolemy's *Tetrabiblos*. For

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[1] On the transmission of Dorotheus see D. Pingree, *Yavanjātaka*, Leiden, 1978, vol. 2, p. 426–427; id. « Classical and Byzantine Astrology in Sassanian Persia », *DOP* 43, 1989, p. 227–239; id. « From Alexandria to Baghdād to Byzantium: The Transmission of Astrology », *IJCT* 8, 2001, p. 3–37; id. « Dorotheus of Sidon », in *Complete Dictionary of Scientific Biography*, vol. 15 = Suppl. I, Detroit, MI, 2008, p. 125. The quotation in the title comes from « Classical and Byzantine Astrology », art cit., p. 229. In Greek it was paraphrased by Hephaestion (early fifth century), who is the source of most of our quotations (D. Pingree, *Hephaestionis Thebani Apotelesmaticorum*, *Libri Tres*, 2 vols, Leipzig, 1973–1974). Via Pahlavi, it was translated into Arabic, and thence ultimately influenced astrology in the Latin West.

[2] Firm., *Math*., 2.29.2 refers to *Dorotheus … qui apotelesmata … scripsit* ("Dorotheus … who wrote apotelesmata"), but this is not necessarily meant as a formal title. Often it is referred to simply as "Carmen Astrologicum", which is what Pingree called it in his edition, which, despite imperfections, remains standard (W. Hübner, « Dorothée de Sidon: L'édition de David Pingree », in I. Boehm and W. Hübner (edd.), *La poésie astrologique dans l'Antiquité: Actes du colloque organisé les 7 et 8 décembre 2007 par J.–H. Abry avec la collaboration de I. Boehm*, Paris, 2011, p. 115–133).

[3] J. L. Lightfoot, *Pseudo-Manetho, Apotelesmatica*, *Books Two, Three, and Six: Edited with Introduction, Translation, and Commentary*, Oxford, 2020; ead., *Pseudo-Manetho, Apotelesmatica*, *Books Four, One, and Five: Edited with Introduction, Translation, and Commentary*, Oxford, 2023.

[4] D. Pingree, *Dorothei Sidonii Carmen astrologicum: Interpretationem Arabicam in linguam Anglicam versam una cum Dorothei Fragmentis et Graecis et Latinis*, Leipzig, 1976, p. xiv.

them it was a go-to authority, especially for the fifth book, which contained a branch of astrology Ptolemy had not covered. These were forecasts concerning the auspiciousness or inauspiciousness of a projected action (Καταρχαί or "Inceptions"), and it is from this section that most of Hephaestion's quotations are drawn. To stress Dorotheus' technicality is to say nothing new—nor will it win me any friends if I add that his poem is much more technical than the Manethoniana, because one of the issues this volume tackles is the impression that late antique poetry takes flight into abstruse regions of impenetrability.

I shall not devote this essay to countering the idea that technical writing takes flight into the abstruse and is divorced from the real world. Of course it is not, but arguing that basic and obvious point would risk the essay becoming a less interesting review of the kind of thing astrology covers. Its whole raison d'étre were matters of immediate concern, life and death no less—marriage, business, travel, soldiering, health and sickness. If more were to be said on that score, it would be precisely that astrology, whether natal or catarchic, is not the place to look for "great themes" and burning issues, but that, on the contrary, it is *the* go-to source for quotidian reality and pressing day-to-day concerns. I devoted much of my commentaries on Manetho to arguing precisely that. I take it as read that astrology was nothing without real-world application, and have little more to say on that score for Dorotheus himself.

My argument is rather about the formal and stylistic qualities of the verse. It is that this technicality in no way precludes careful artistry, provided one looks in the right places and is not expecting the wrong kind of thing. Here we have a species of poetry precision-engineered for informational content, though—crucially—building on capacities the hexameter always had, calling on capabilities that lettered Greek readers could also be expected to have. It even manages to flatter their cultural competence in traditional letters and mythology, in no way compromising the hard-core astrological content. Stegemann made a start. Pingree was neither interested in this nor possessed the requisite level of Greek. We can do better.

Our idea of the shape of the work came originally from an overview of the five books by the tenth-century biographer and bibliographer Ibn al-Nadīm, and then from the Arabic translation itself. al-Nadīm informs us that the first book concerned horoscopes, the second marriage and children, the third prorogations, the fourth the revolution of the years of nativities, and the fifth, as we known, catarchic and interrogational astrology[5]. It was designed to be complete and systematic, and we form the best impression of the original by combining the evidence of Hephaestion's quotations and paraphrases with the Arabic translation/paraphrase, even though neither has stayed perfectly faithful to the original[6]. The extracts most useful for this paper, apart from the extensive fragments of Dorotheus' catarchic astrology from the fifth book, come from the first book's basic informational overview. Because they were omitted from the Arabic, on which Pingree based his edition, he relegated them to an appendix, which rather undersells their importance in the grand scheme. One sequence concerns zodiacal geography (which lands each sign governs), another the *horia* (which of the thirty degrees within each sign are allocated to which planet). These are an excellent opportunity to see Dorotheus handling precise facts and numbers.

[5] W. Gundel and H. G. Gundel, *Astrologoumena*, Wiesbaden, 1966, p. 118–119; Pingree, « Dorotheus of Sidon », art. cit.

[6] The Arabic version of book one, as it stands, confusingly mixes up general principles with themed chapters on the native's upbringing and parentage, siblings, and prosperity. For instance, material about parentage (ch. 3) and upbringing (ch. 4) is spliced between exaltations (ch. 2), places (ch. 5), and planets (ch. 6), and again in ch. 7, upbringing is treated between planets and masculine and feminine hours (ch. 8). Hephaestion better preserves the introductory information, but not in its original order, which was, according to Hübner (« Dorothée de Sidon », art. cit., p. 122), zodiacal geography; terms, trigons, houses, and exaltations.

SPEAKER AND ADDRESSEE

I begin with the self-characterisation of the speaking voice and his relationship with the addressee. The speaker insists on his didactic task; this is, in Malcolm Heath's terminology, both finally and formally didactic, in that it both sets out to teach and makes a parade of doing so[7]. He sets out his stall, and promises the addressee learning and "truth" that will be communicable to other interested parties[8].

Although an addressee is useful to focus attention in transitional passages, he is not equally present throughout. There is less rhetorical need for an addressee in passages that are purely informational and state fact. "How-to" descriptions of techniques and procedures, on the other hand, elicit a recipient who is buttonholed with imperatives and instructional expressions that situate him, as is conventional in astrology, as a lesser practitioner ("look", "count", "reckon", "calculate", "forecast this"). The same convention is present in the instructional passages in the Manethoniana. It is true that that corpus, which is dominated by apotelesmata of the (more or less) standard *if–then* form, contains far fewer instructions. Nevertheless, when the poets *do* describe procedure, they reach for the same types of formulation as Dorotheus.

The addressee, then, is a devotee of the discipline who stands in need of instruction from the master. But there is a special modification of this convention in catarchic astrology (not only in Dorotheus, but also Maximus), whereby the addressee is *also* a potential beneficiary of the technique. The lesser adept thus becomes also the person who stands in need of advice on marrying, travelling, or striking a business deal—a latter-day Perses who is no longer being fictively instructed in agricultural techniques, but is being given technological know-how to enable a bit of practical and plausible self-help. There is a similar double positioning of the addressee as both expert and potential beneficiary in some medical didactic, notably in the snake-bite remedies of Eudemus (*SH* 412A) and Andromachus the Elder[9]. But in Dorotheus this rhetoric of involvement only comes into play when the activity is not too unpleasant. It is one thing to picture the addressee eliciting advice on getting married or engaging in a building project or making an investment, but the poet is loth to picture him going to law (always a painful prospect in astrology) or being thrown into prison[10]. If only for that reason,

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[7] M. Heath, « Hesiod's didactic poetry », *CQ* 35, 1985, p. 245–263, at p. 253.

[8] p. 339.3 καὶ γενέσεως τὰ ἑκάστα διίξομεν ὄφρα δαείης ("We shall review the principal points of the geniture, for you to learn them"); p. 432.3–4 Ὅσσοι δ' ἐν στρατίῃσι φιλοπτολέμοισιν ἔσονται | τῇδε διδαγμοσύνῃ πεπνυμένος ἐξαγορεύσεις ("Apprised by this teaching who will be in battle-loving armies, you shall declare it"); p. 398.1 πλωέμεναι χατέουσιν ἀληθέα ταῦτά κεν εἴποις ("You may communicate these truths to those who desire to sail"); p. 405.18 ὧδε σύ κεν χατέουσιν ἀληθείην ἀγορεύσεις ("You shall tell the truth to those who desire to know it"; see below, p. 000, for the background in early Greek hexameter poetry).

[9] In Andromachus (LXII Heitsch), complicatedly so, for the headline addressee is the emperor (1–3, 25–26, 75–76), who, as the fragment wears on, partly transforms into a generic figure. Nero, rather oddly, is both potential victim and hence beneficiary of the potion (25–26), but also the healer who administers it (29–30; later, 41–42, 53–54, 57, 60). There is a translation by R. Leigh, *On Theriac to Piso, Attributed to Galen: A Critical Edition With Translation and Commentary*, Leiden, 2016. Matters are simpler in other medical poems. In Aglaias of Byzantium (*SH* 18), the addressee is *only* the expert, and so too Philo of Tarsus (*SH* 690), where it is the remedy itself that speaks.

[10] Building works (p. 386.19 τελειοῖς, "you complete"); making purchases (p. 388.25, 31 δώσεις, "you shall give", 32 καταθήσεαι, "you shall put down as payment"; p. 389.1 βούλεαι [Housman], "you wish", 389.3 δοίης, "you give"); recovering debt (p. 395.25 ἐθέλεις, τοι); doctoring (p. 418.26 φαρμακόεν λύσεις, "you shall put to flight with a drug(?)"; p. 419.2 ἀνεμώλια πάντα τελέσσεις, "everything you do will be unavailing"). Travel is treated in both ways. The addressee is the technical expert (p. 397.14 τεκμαίρεο, "take note of"; p. 398.1, quoted in n. 8), the participant mostly in the third person (p. 397.6 ἐφ' ὅν τις ἄπεισι, "for which someone is departing", 7

it would be naive to take literally the presentation of the addressee. Yet this rhetoric of involvement does, very generically, illustrate astrological poetry's very peculiar combination of technocracy and practical day-to-day applicability.

The addressee is instructed in a lively way—there are far more examples of τοι than there were in any of the Manethoniana[11]—and in no-nonsense language. The instructions in the extant verses are mostly in the form of imperatives[12], and although that is of course not an adequate sample the impression in general is of no beating about the bush, of getting a job done. Perhaps, if we could see more, nuance would be detectable in different kinds of address. In the extract on the right time to marry, the polite optative φράσσαιο, "you might forecast" (p. 391.13) explains the broad principle, while the more emphatic imperative ἀναίνεο, "decline" (p. 392.8) pulls no punches in advising the addressee *not* to marry under the stipulated circumstances.

The semantic range of Dorotheus' second persons is mostly restricted to verbs for looking (or seeking) and forecasting (τεκμαίρομαι, φράζεσθαι, etc.), sometimes also counting[13]. Dorotheus places greater technical demands on the addressee than Manetho, or indeed Maximus, although the intellectual burden cannot be called high. One asks no philosophical questions: one just gets the data, perhaps performs a few simple manipulations (like transferring an arc), and interprets them according to the rules. The background of τεκμαίρομαι is in Hellenistic didactic[14], but the meaning relevant to Dorotheus, "forecast", comes specifically from Aratus' *Diosemeiai*, the weather signs, where no thinking ability is required at all: one simply read off an outcome from natural phenomena, especially celestial (1154). As in the Manethoniana, "there is a terribly narrow compass but intense, if unreflecting, mental activity within it"[15].

Conversely, there is no trace in Dorotheus of the extended range of themes found in (Lucretius and) Manilius. The addressee is not exhorted to mental alertness; no questions are forestalled, no objections anticipated; there are no promises of success, nor anticipations of failure. Dorotheus, in short, is using the fiction of the didactic addressee only insofar as it supports a piece of genuinely "final" didactic: the *telos* of this poetry is as a genuine instruction manual. And instructive it is meant to be. The next sections of the paper will illustrate the extent to which Dorotheus does not flinch from technicality and technocracy.

στέλλοιτο, "sets out", and mostly throughout p. 398, on the unpleasant matter of sailing). But he *may* be depicted going on a journey himself (p. 397.12 ἄρχοιο ξενίης, "begin your sojourn"), and a coda in the sailing fragment tells him to watch the mast (p. 398.27 πεφύλαξο). The fragment on soldiering (p. 432) uses the second person for technical advice, while the potential soldier is an anonymous person (ἀνήρ). Yet the addressee of the one on amity is both the practitioner (p. 434.13 φῶτά τοι ἔστω, "may the luminaries be [well placed] for you") *and* the directly interested party (p. 434.7 ᾧτινι συμβαλέεις … πεφιλήσεαι, "whoever you meet, you will have friendly relations [with him]"; 12 μέλλης φιλίας ξυνδήμεναι, "[when] you are to strike up a friendship").

[11] Lightfoot, *Manetho*, vol. 1, p. 192 and n. 64. I count a dozen examples in some 390 lines of verse, which gives Dorotheus almost the same rate (1/32.5 lines) as Dionysius the Periegete (1/32 lines).

[12] p. 344.8 φράζεο; p. 386.9 δέρκεο; p. 397.14 τεκμαίρεο; p. 402.5 τέκμαιρε; p. 407.10 φράζεο; p. 431.15 δίζεο; p. 432.5 ἀρίθμεε (and for what this is worth Hephaestion also uses imperatives, and so does the Arabic). Infinitive: p. 394.9 τεκμαιρέμεν; polite optatives: p. 391.13, 396.7 φράσσαιο; p. 398.5 τεκμαίροιο.

[13] In addition to the examples in the previous note: p. 388.28–29 αἰ λεύσσῃς κεν (if you see the Moon in first quarter); p. 391.16–17 τοι ... δερκομένῳ (look at the aspecting stars in a marriage chart).

[14] "Know" (from signs) (Nic., *Ther.*, 396, *Al.*, 186; Aratus, 170), "give to understand/reveal/disclose" (Nic., *Ther.*, 231, 362, 680, *Al.*, 105; Kidd on Aratus, 18).

[15] Lightfoot, *Manetho*, vol. 1, p. 210.

HANDLING OF TECHNICAL CONTENT

Numbers

Dorotheus (unlike the Manethoniana) does not flinch from using numbers, which he needs especially for the houses of the zodiac[16] and for degrees within a sign[17]. That already says something about the different intentions of the two poems. The focus here, however, is on how the numbers are represented, since poets have a choice whether to represent the number unadorned, or, with a little more stylistic panache, as a multiplicative (twelve or two-times-six?). Vogel's excellent book on poetic renderings of numbers has already considered Dorotheus[18], and reached the conclusion that multiplicatives add a touch of *variatio*, desirable in passages of an unrelieved numerical character[19]. No rationale appears for the multiplicative rendering of this or that particular number; the aims seem rather to have been variety, metrical convenience, and perhaps memorisability. This is entirely reasonable and supportive of the present argument: Dorotheus has done what he can towards elegance and artistry without compromising in the slightest on clarity or economy. He still packs as much as he can into as small a compass as he can manage, with nothing to spare.

One of Vogel's passages is the section on *horia* from the first book (p. 429–430). She notes, not only the sustained use of multiplicatives (δὶς δύο, δὶς δύ', δὶς δὲ δύω, "twice two"; δὶς τρεῖς, "twice three"; δὶς τέσσαρας, "twice four"), but also the fact that all are used for numbers less than ten (and six of them for four). Vogel's examples can be slightly augmented[20], but she is clearly correct that there are not many cases where an author sees fit to use a multiplicative for a number as small as this. To her comments on the *horia* I simply add the poet's liking for multiples in another section, concerning the planetary exaltations (places where they are happiest and strongest). Additives are normal[21], but we also get three nines (324.3 ἐννέα τρισσάκι[22]), four sevens (324.2 καθ' ἑβδομάδος δὲ τετάρτης), and five threes (324.4 τρίτης κατὰ πεντάδος)[23]. The interesting point is that Dorotheus is not counting in multiples of ten, with add-ons as appropriate. In the most obvious comparanda for the poetic rendition of exact numbers, namely epitaphs with age at death, the tendency is to give decades plus remainder, although other multiples are sometimes used if the result is exact with no remainder. The Sibylline Oracles, too, tend to operate in base ten (alternatively twenty, a hundred), whether they are giving a number of years[24] or of a letter in the alphabet. The famous riddle on the name of God operates in base ten (Or. Sib. 1.142–5). In general, where base ten is not used, there is often a reason (for instance, days in a week, days in a month, signs in the Zodiac, canonical number of Niobids of each sex), although in a minority of cases it happens just because it is convenient. I do not think that mere convenience is Dorotheus' purpose. Rather, instead of identifying 28 and 15 as 20+8 and 10+5, he is posing

[16] p. 378.11 εἰς ὄγδοον ὡρονόμοιο ("to the eighth place of the horoscope"); p. 393.16 δωδέκατον μετὰ χῶρον ἀφ' ὡρονόμοιο ("in the twelfth place from the horoscope"); p. 397.11 ὅπερ ἕκτον ἀφ' ὡρονόμοιο ("which is the sixth from the horoscope").

[17] p. 398.4–5 εἰς δεκάτην ("to the tenth"), 8 ἀπ' ὀγδοάτης ("from the eighth"), 17 ἐκ μοίρης δεκάτης ("from the tenth degree"), 22 ὅτ' ἀμείψεται ἐννέα μοίρας ("when it shall have passed nine degrees").

[18] M. Vogel, *Ter Quinque Volumina: Zahlenperiphrase in der lateinischen Dichtung von ihren Anfängen bis ins zweite Jahrhundert n. Chr.*, Münster, 2014, p. 68–78.

[19] But the tedium is artificially exaggerated by uprooting them from their original context, which is now lost, and printing them *seriatim*, as in Pingree's edition. In the original they were separated to an unknowable extent.

[20] Vogel, *Ter Quinque*, p. 71 n. 204; add Or. Sib., 11, 230 δὶς τέσσαρες, 12.234 δὶς δύο; *AP* App. Probl., 71.4 δὶς δύο.

[21] p. 323.21 κατ' ἐννέα καὶ δέκα μοίρας ("in nineteen degrees"), 324.1 εἰκοστῇ δὲ μιῇ ("in the twenty-first").

[22] Vogel, *Ter Quinque*, p. 51–53, on τρὶς ἐννέα.

[23] Nominal forms in -άς are most concentrated in Sibylline oracles and in epitaphs giving age at death (decades, other units). They are also found in mathematical epigrams (riddles, challenges).

[24] The exception is Or. Sib., 11, 49–50, referring to tetrads and enneads, but it is sadly obscure.

the reader a tiny arithmetical challenge, a far gentler version of the kind of thing that is found in mathematical riddles[25]. The reader receives a series of little nudges towards mental agility.

Technical terms

The poet is not at all shy of technical terminology, which he renders either exactly or with slight deference to metre and poetic morphology.

Miscellaneous: p. 324.5 ταπεινώσεις, "dejections" (normally ταπείνωμα), ὑψώματα, "exaltations" (cf. p. 361.22 ὕψος τύχῃ) (Lightfoot, *Manetho*, vol. 1, p. xxviii); p. 370.3 ἀφέτην (Lightfoot, *Manetho*, vol. 1, p. 709); p. 384.15 ἐκλείψιος; p. 386.14 ἀποκλιμάτεσσιν (Lightfoot, *Manetho*, vol. 1, p. xxviii); p. 388.23, 26 συνδέσμῳ δ' ἀνάγοντι ... ἐν κατάγοντι (for σύνδεσμος ἀναβιβάζων, καταβιβάζων, the ascending and descending node: Lightfoot, *Manetho*, vol. 1, p. 892); p. 388.28 φάσιν; p. 388.29 συνόδου, p. 389.2 σύνοδον (the Moon's conjunction with the Sun); p. 392.1 ἥδε καταρχή, of the current catarchic chart; p. 402.24 ἐπούσης, of planetary location in?; p. 403.4–5 σύνδεσμον ... λυέμεναι (~ λύειν), of the Moon passing the node; p. 403.6 συναφὴν (ποιεῖν), 9 (Lightfoot, *Manetho*, vol. 1, p. xxix); p. 403.10 ἐσπερίῳ, "western" (Lightfoot, *Manetho*, vol. 1, p. 623); p. 434.11 ἐκλειπτικὸς, παροδεύῃ(?). But at p. 391.12, ζῳδίου (printed by Pingree) does not scan and is presumably corrupt for ζῴου, which is the normal recourse in the Manethoniana for a metrical rendering of ζῴδιον, "sign" (and used at p. 393.14).
Planetary motion: p. 397.17 στηρίζει, "is stationed" (of a planet between prograde and retrograde); p. 386.20 προσθετικὴ φάεσιν καὶ τοῖς κατὰ μῆκος ἀριθμοῖς, of the Moon increasing in light and apparent speed; p. 388.24 δρόμον τ' αὔξησιν ἀριθμοῖς (normally αὐξάνειν ἀριθμοῖς, again of the Moon gaining speed).
Aspect: p. 399.2 τρίγωνος, "trine", τετράγωνος, "quartile"; p. 388.35 τὸ τρίτον ... τετράγωνον (of Moon phase, the third quarter); p. 388.33 εἰς διάμετρον, "opposition". Verbs: p. 403.15 τριγωνίζωσιν, "be in trine". Slightly eccentric but not prosaic ("a trilateral/quadrilateral schema"): p. 328.6 σχήμασι τριπλεύροις; p. 337.24 τριπλεύρου; p. 388.29 τετράπλευρον (adv.), p. 399.16 τετράπλευρος, p. 389.2 τετρατίῃ πλευρῇ (of Moon phase). Also not poetic: p. 399.3 ἀντικρὺ (opposition).

In some cases (although they seem fewer than the "straight" renderings) the poet has elected to use poetic vocabulary, but in a way that leaves the underlying technical notion entirely unobscured:

Phase: p. 403.2 μινύθουσα, "waning" (normally φθίνειν); p. 393.18 πάμμηνος, "full"; p. 394.8 ἀπὸ παμμήνου (noun); p. 388.24 πλησιφάεσσα, "full" (normally πλήθουσα).
Sect: p. 323.3, 6 ἤματι ... νυκτὶ, 10 ἠμάτιος ... ἔννυχος, 13 ἠματί<η>, νυκτός (see Lightfoot, *Manetho*, vol. 1, p. xxix, 889).
Rulership (normally expressed with κύριος and δεσπότης: see Lightfoot, *Manetho*, vol. 1, p. 890): p. 386.10 οἴκων βασιλῆας; p. 378.13 ἄνακτα τόποιο, p. 386.14 ἄναξ; p. 397.14 ἀνάκτωρας, 17 κρατεόντων.
Terms for benefic and malefic (normally ἀγαθός, φαῦλος: see Lightfoot, *Manetho*, vol. 1, p. xxviii): p. 326.6 κακοεργέες; p. 326.8 φαῦλος; p. 390.22 φθοροποιὸν; p. 391.18 φαυλοῖσι; p. 398.2, 6 κακός; p. 398.14 ὀλοός; p. 399.32 κακομήτιες. p. 397.4, 398.2 ἐσθλός; p. 392.2 ἐσθλοὶ; p. 399.29 νωμήτορες ἐσθλῶν; p. 326.14 χρηστὸν; p. 399.33 εὐέρκται. This is where the poet most indulges a penchant for poetic synonymity.

[25] e.g. *AP* App. Probl., 69,64, a riddle on the word ῥῖς, spelling out its numerical value (126 + 36 + 90 + 30 + 10 + 8 + 10 = 310).

Houses: the coexistence of poeticised and prose forms is illustrated by p. 397.10–11 ἐπὶ δαίμονος οὐλομένοιο ἠὲ τύχης, "in the Evil Demon or House of Fortune". Prosaic is κακὸς δαίμων, to which p. 393.14 ἐν ζῴῳ ... κακοδαιμονέοντι is closer.

Dorotheus' ways of handling an unpromising array of options for the *kentra* seems to have set the tone for later poetic astrology, and sets out a range of options later followed by the Manethoniana (Lightfoot, *Manetho*, vol. 1, p. 879–881):

Ascendant. Dorotheus replaces ὡροσκόπος and ἀνατολή (horoscope, rising-place) with the same suite of options later poets will follow. ὡρονόμος: p. 386.11 ὡρονόμον; p. 397.15 ὡρονόμου; p. 373.27, 393.16, 396.5, 397.11, 434.25 ἀφ' ὡρονόμοιο; p. 397.4 ἐν ὡρονόμῳ; p. 399.32 ὡρονόμῳ. ὥρη: p. 391.11 ἀνερχόμενον σκοπὸν ὥρης; p. 405.19 ζῴοιο ... ὡρονομοῦντος; p. 402.34 ὥρην; p. 432.6, 434.5 ἐξ ὥρης; p. 432.11 ἐν ὥρῃ.
Medium Caelum. Circumlocutions for μεσουράνημα (midheaven): p. 377.18 μεσουρανέοντος ὑπὲρ ζῴοιο; p. 386.12 ζῷον ὅτι ψαύει μέσον οὐρανὸν ἀμφιπολεῦον; p. 391.14 μεσουρανίου; p. 396.6–7 ἐκ μεσάτοιο | ὕψεος; p. 399.16 ἄνω χθονὸς.
Descendant. All essential variations on δύσις (setting place): p. 328.13 δύνων; p. 342.10 κέντρον δυτικὸν; p. 390.22 ἐν δυτικῷ; p. 391.12 ζῴου ... δυομένοιο; p. 396.6 ἐκ δυτικοῦ κέντρου; p. 397.5 δύνοντι; p. 403.9 δυτικῷ; p. 403.12 εἴως δυομένου; p. 434.25 τὸ δῦνον.
Imum Caelum. For ὑπόγειος (underground): p. 328.6 ὑποχθονίῳ κέντρῳ; p. 396.8 ζῴῳ ὑποχθονίῳ. At p. 391.16 μέσατον χθονὸς might be taken for the midheaven, but the context makes clear what is meant.

Names of signs[26]

A similar story can be told about how Dorotheus renders the names of signs—about the unhesitating use of the standard names, with light-touch modifications for metrical reasons or to add a little poetic cachet. The poet typically uses standard prose forms, or with light morphological adjustments. Standard prose forms are generally used for Aries (Κριός), Taurus, Gemini (Δίδυμοι), Cancer (Καρκίνος), Leo, Libra (Ζυγός[27]), Scorpio, Capricorn (Αἰγόκερως), Aquarius (Ὑδροχόος), and Pisces (Ἰχθύες). For Sagittarius, Dorotheus follows Aratus in accommodating prose Τοξότης to the hexameter by recourse to the Homeric *hapax* Τοξευτής, and with Virgo he replaces Παρθένος with the epic Παρθενικός, this time with no metrical need (Aratus had stuck to Παρθένος). On occasion, though, he offers slightly more ambitious variants which usually have some basis in archaic hexameter or Hellenistic poetry: for Sagittarius, Τοξευτήρ[28], Ὀιστευτήρ[29], as well as periphrastic τόξοιό τε Ῥυτήρ[30]; for Virgo, Κούρη[31]; for Aries, the Homeric form Ἀρνειοῖο[32]; for Gemini, Κασιγνήτοις[33]. In these cases, the poet was not *obliged* by the metre to depart from the norm, but doing so gave him metrical options he would not otherwise have had. It also allowed him moments of a little

[26] V. Stegemann, *Die Fragmente des Dorotheos von Sidon*, vol. 1, Heidelberg, 1939, p. 24–25, and « Dorotheus von Sidon: Ein Bericht über die Rekonstruktionsmöglichkeiten seines astrologischen Werkes », *RhM* 91, 1942, p. 326–349, at p. 348.
[27] The earlier name was Χηλαί ("Claws"), but Ζυγός first appears in Hipparchus: Lightfoot, *Manetho*, vol. 1, p. 570, on 2.136–137, and references.
[28] p. 402.20; cf. Aratus, 400, 506, 685.
[29] p. 418.29, cf. Antipater [Sidonius?], *AP* 6, 118.3 = *HE* 498; also Call., *Hymn* 2, 43 ὀϊστευτὴν.
[30] p. 323.2; cf. Aratus, 301, 621 ῥύτορα τόξου.
[31] p. 418.27, p. 323.18; not Aratus.
[32] p. 432.7; *Il*., 2, 550, al.; Maximus, 72; Stegemann, *Die Fragmente*, vol. 1, p. 24, and « Dorotheus von Sidon », art. cit., p. 348.
[33] p. 402.9; not Aratus, but Pind., *Nem.*, 10, 85 uses the noun to refer to *one* of the brothers.

more literary ambition. The allusions are rather more precise than the bland *presque homérique* idiom he has been using to render technical terms. The reference to Gemini, in particular, evokes a mythological hinterland and perhaps an allusion to Pindar which is culturally "richer" than anything we have seen so far, and will be more consistently visible in his treatment of the planets.

For the moment, however, let us continue with Dorotheus' renderings of prose terminology. Signs were grouped into categories that were artefacts of both their ascribed physical characteristics and their position in the zodiacal circle[34]. Dorotheus certainly renders these at p. 392.3–4 ἐν τροπικῷ ... ζῴῳ and p. 405.23 ζῴοις δ' ἐν τροπικοῖς ("tropic signs": Lightfoot, *Manetho*, vol. 1, p. 617–618); p. 405.20 στερεὸν ("solid"), 21 δίσωμα ("double-bodied"); p. 428.25 θηρὶ (for θηριῶδες, "bestial", the category to which Taurus belonged[35]). It is also possible, with Hübner, to reconstruct more[36], although at some point this becomes circular: one hits on a list in Hephaestion that might, with a little manipulation, be made to fall into a hexameter, and hey presto, one has a new fragment of Dorotheus. At p. 434.9–10 ζῴων ἀκουόντων … δερκομένων, the "signs that hear and see" are not an taxonomical category (in the same way as tropic or solid signs), but refer to signs in affective relationship with one another, which makes sense in a passage about friendship and good relations: the signs stand in some sort of rapport[37]. The usual terms are βλέπον and ἀκοῦον; Dorotheus poeticises one half of this and practises a phonological sleight, on which more will be said later, to accommodate the other.

He allows himself a little more ambition in the use of ornamental epithets. With the sample so small, generalisations come with a risk. But it does seem that Dorotheus decorates his constellation-names more often than Aratus. For instance, Aratus does not ornament Leo (six instances) or Pisces (thirteen instances) at all. He decorates one of ten of Taurus, two of ten of Scorpio, one of eight of Libra and Sagittarius, and one of seven of Aquarius[38]. But if we compare Dorotheus, one of five instances of Cancer are ornamented, four of six of Leo, and one of five of Virgo. Pragmatically, this is because Dorotheus is using epithets mostly to stretch the name to a caesura or a line-end, and Aratus is not; but the point is that Dorotheus has allowed himself this leeway in the first place. And his choice of epithets shows more literary ambition. Leo is βλοσυρός ("shaggy" or "grim") twice, as he was in the pseudo-Hesiodic *Shield*[39]. Cancer (αἴθων, "fiery") and Leo (χαιτήεις, "hairy", with reference to its mane) also have epithets that were applied to other creatures in early Greek hexameter poetry[40]. Novel are p. 402.12 βρυχητῆρος ... Λέοντος ("the roaring Lion") and p. 398.15 Παρθενικὴ σταχυηφόρος ("the sheaf-bearing Maid") (which will be imitated by M[b]). These

[34] W. Hübner, *Die Eigenschaften der Tierkreiszeichen in der Antike: Ihre Darstellung und Verwendung under besonderer Berücksichtigung des Manilius*, Wiesbaden, 1982; Lightfoot, *Manetho*, vol. 1, p. 876.
[35] Hübner, « Dorothée de Sidon », art. cit., p. 126.
[36] Hübner, « Dorothée de Sidon », art. cit., p. 123: Hephaestion's θῆλυ ("female") must come from Dorotheus, but prosaic θηλυκόν was available to the poet as well; p. 124: Hephaestion (ed. Pingree), i. 21.20 κοπτόμενον μέλεσι<ν> renders μελεοκοπούμενον ("with mutilated limbs"); p. 124–126: Hephaestion (ed. Pingree), i. 21.21 ἥμισυ φωνῆεν is restored as ἥμισυ φωνήεντος (~ ἡμίφωνος), which (unless I have misunderstood) is apparently to be understood as "half of a being endowed with voice".
[37] cf. Hübner, *Eigenschaften*, §1.221.3: βλέπον, ἀκοῦον: Firm., *Math*., 8.3; Manil., 2, 466–519; *CCAG*, i, p. 155.7 and viii/1, p. 257.17–20.
[38] 167 κεραὸν ... Ταῦρον ("the horned Bull"); 84–85 μέγα θηρίον ... Σκορπίον ("the great beast, Scorpio"), 402–403 τέραος μεγάλοιο | Σκορπίου ("the great monster Scorpio"); 89 μεγάλας … Χηλάς ("the great Claws"); 506 ἐλαφροῦ Τοξευτῆρος ("the nimble Archer"); 392 ἀγαυοῦ Ὑδροχόοιο ("the illustrious Water-pourer").
[39] p. 335.2 βλοσυροῦ ... Λέοντος and p. 398.12 βλοσυροῖο ... Λέοντος; ps.-Hes., *Scut*., 175 βλοσυροῖσι λέουσιν.
[40] p. 418.26 Καρκίνος αἴθων; the line-end recalls especially *Il.*, 15, 690 αἰετὸς αἴθων; p. 323.2 χαιτήεις τε Λέων; χαιτήεις of horses in ps.-Phocylides and Apollonius.

epithets describe the form the constellation notionally represents rather than the phenomenal aspect of the constellation *qua* pattern of stars. The exception is αἴθων, which is a curiosity. In the Homeric line-end Dorotheus' verse recalls (n. 40), αἴθων refers to the eagle's tawny plumage. It only makes sense in Dorotheus in the other sense of αἴθων, glittering or fiery. But Cancer is a faint and unimpressive constellation, so the epithet is unlikely to describe its visual appearance. Unless the poet is simply being perverse, does he rather intend αἴθων as an active participle, evoking the idea of burning heat? The extract comes from a passage concerning illness, and the fever-inducing Dog Days take place in Cancer, after all. One way or another, there is a lot to unpack in this epithet. Dorotheus is making demands of the reader that go beyond arid technicality and seem to involve a certain amount of lexical playfulness.

Names of planets

Dorotheus' ambitions become clearer still. The poet employs both the "scientific" light names (Stilbon etc.), which were originally designed to avoid mythological baggage[41], and also a fully mythologised conception, whereby the planet is either called the star of that god (rare in Dorotheus' poetic fragments[42], though there are more examples in Hephaestion, which may or may not represent the original), or *is* the god outright.

On the one hand, it is reasonable to think in terms of a spectrum of mythologisation, at its strongest where planets are explicitly called gods[43]. On the other—and Dorotheus' predecessor Alexander of Ephesus plays an unquantifiable role here—the poet treats the names not as inflexible categories, but creatively combines them. An excellent example of creative labelling is p. 430.124 στίλβων ἀστὴρ μέγας Ἑρμάωνος ("the great glittering star of Hermes"), where the light name becomes an epithet of ἀστὴρ, and the divine and light names are combined in one and the same appellation[44].

I. *Proportions of light and mythological names*

Mythological names mostly consist of Cronos, Zeus, etc., but Dorotheus also uses mythological periphrases derived from the gods' familiar literary characters. The salient point is how differently the types of name are distributed within and outside the *horia*.

1. In the *horia* (p. 429–430) there are sixty planetary names (or sixty one including a second reference to Mars in Aries). Of these, there are twenty-nine straight light names[45], plus four light names used as epithets[46], and one in a genitival expression (p. 430.124 στίλβων ἀστὴρ μέγας Ἑρμάωνος). Meanwhile there are twenty-nine mythological names[47]. A further two epithets are used as personal names (p. 429.9 Θούρῳ, p. 429.66 Θοῦρος, "the Furious One"), which I would be inclined to count as proxies for mythological names. At all events, the numbers in the two categories are almost exactly matched, although the headline figure conceals very different proportions for individual planets: broadly speaking, as one proceeds

[41] Lightfoot, *Manetho*, vol. 1, p. 896 and bibliography in n. 2.
[42] See Lightfoot, *Manetho*, vol. 1, p. 899 Tab. 2. The examples in Dorotheus are p. 430.124 (as quoted above) and Ἄρεος ἀστήρ ("star of Ares"), and p. 432.8 ἀστέρος ἀγκυλομήτεω ("star of Him of Crooked Counsel"), where Saturn's name is replaced by a mythological epithet (on which more below).
[43] p. 323.7 θεὸς πολέμοισιν ἀνάσσων ("the god presiding over battles"), p. 337.24 θεὸς Ἥλιος ("the god Helios"), p. 386.5 θεῷ (any planet); Lightfoot, *Manetho*, vol. 2, p. 180–181.
[44] For this type of expression, also in M^b, see Lightfoot, *Manetho*, vol. 1, 898 n. 4.
[45] 10x Φαίνων; 9x Φαέθων; 3x Πυρόεις; 0x Venus; 7x Στίλβων.
[46] p. 429.66 φαέθων Ζεὺς, p. 430.124, 144 Ζεὺς φαέθων; p. 430.164 στίλβων ... Ἑρμείας.
[47] 2x Κρόνος; 3x Ζεὺς; 6x Ἄρης + 1 "star of"; 4x Κυθέρεια; 3x Κύπρις; 5x Παφίη; 4x Ἑρμῆς or Ἑρμείας + one in genitival expression.

from outer to inner planets, the proportion of light names falls, until Venus' light name, Phosphorus, is not used at all[48]. It is not evident why this should be, but very clear, and will become still clearer from her epithets, that the poets prefer evoking the many titles of the goddess of Love than her light-bearing capacity. (Was this, not just because she was sexy, but also because they wanted to avoid confusing the issue with Venus' incarnation as specifically Morning Star?)

2. Outside the *horia* there are seventy-three planetary names, of which only fourteen are light names. Again there are very different preferences for individual planets, with malefics more hospitable to light names and benefics totally shunning them[49].

Outside the *horia* there is therefore a much greater preference for mythological names, although the extent to which they are preferred over light names still differs from planet to planet and, for whatever reason, the patterns for each planet are similar to those in the *horia*, only replicated at a lower level. What is the reason for the difference between the *horia* and the rest of the poem? Could it be that light names in general give a "sciency" feel, which is appropriate in a numerical section? It is not that one set of names conveys a metrical advantage over another. At any rate, it is an important insight that different parts of the poem had different characters: there was no uniform texture throughout. Moreover, from comparisons with the Manethoniana it seems that Dorotheus again establishes an idiom that later poets imitate[50]. There is no single book that matches his preferences, but he sets a standard around which they range but from which they do not significantly depart, most markedly in the favour for Phainon and disfavour for Phosphoros.

II. *Epithets*

If Dorotheus was fairly generous in decorating the names of Zodiacal signs, he is amply so with the planets themselves, which offer far richer literary and mythological associations than constellations. And so pleased is he to exploit these associations that he not only employs ornamental epithets, but uses standalone epithets as personal epithets to an extent (as I shall argue) that may have been very considerable indeed, and that seems to count as his special mannerism. This section asks how Dorotheus has chosen to characterise the planets, what qualities has he chosen to foreground; what sources he draws on; and ultimately what might be the implications for his ambition as a poet and the cultural attainment of his readers.

i. Occurrence

Decorative epithets, attaching to a personal name:

Saturn. p. 323.4 αἰνὸς δὲ Κρόνος ("dread Cronos"); p. 391.22 and 397.8 Φαίνων κρυόεις ("chill Phainon"); p. 429.66 Κρόνος ἀγκυλομήτης ("Cronos of crooked counsel");

[*Jupiter.* p. 428.160 Κρονίδαο Διὸς is not the planet];

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[48] Saturn (10/2) and Jupiter (9/3) much prefer light names, but Mars prefers mythological (3/6), and Venus has *only* mythological names (0/12). The exception to the outer-inner order is Mercury, which slightly prefers light names (7/5).

[49] Saturn: 10 Φαίνων, 11 Κρόνος; periphrasis: p. 383.8 Ζῆνος δ' αὖ γενετῆρα; Jupiter: 7 Ζεύς; 2 Κρονίδης. Mars: 3 Πυρόεις; 14 Ἄρης. Venus: 4 Ἀφρογενής; 8 Κύπρις; 1 Κυθήρη. Mercury: 1 Στίλβων; 8 Ἑρμῆς or Ἑρμείας; periphrasis: 323.8 Μαίης ... κοῦρον; p. 392.2 Μαίης ὠκὺν γόνον ("the swift offspring of Maia"); p. 402.32 Μαίης τε πάις. For ratios of mythological names to light names, see Lightfoot, *Manetho*, vol. 1, p. 897 Tab. 1. Revised figures for Dorotheus, specifically for the poem outside the *horia*, are as follows. Saturn: 1.2:1; Jupiter: 9:0; Mars: 4.7:1; Venus: 13:0. Mercury: 11:1.

[50] It is also the case that both Dorotheus and M[a] ornament Phainon, which is unusual: Lightfoot, *Manetho*, vol. 1, p. 903.

Mars. p. 383.8 ἔμπυρος Ἄρης (“fiery Mars”); p. 399.13 ὀλοφώιος Ἄρης (“baneful Mars”); p. 397.7–8 πυραυγής | Ἄρης (“fiery-gleaming Mars”), p. 429.47 θοῦρος Ἄρης (“furious Mars”), p. 432.10 πτολιπόρθιος Ἄρης (“Mars the city-sacker”);
Sun. p. 386.9 Ἠέλιόν τε μέγαν (“great Helios”); p. 388.30 αἴθοπος Ἠελίοιο (“flaming Helios”);
Venus. p. 391.13 ἠυκόμου Κυθερείης (“the fair-haired Cytherean”); p. 399.19 ἐρόεσσα Κυθήρη (“lovely Cythera”); p. 399.23 Κύπρις ἄνασσα (“Lady of Cyprus”);
Mercury. p. 392.2 Μαίης ὠκὺν γόνον (“swift offspring of Maia”); p. 430.164 στίλβων ... Ἑρμείας (“glittering Hermes”; on the use of light-name as epithet, see Lightfoot, *Manetho*, vol. 1, p. 903);
Moon. p. 323.6 δῖα Σελήνη (“godlike Selene”), 14 ἑλικῶπις ... βασίλισσα Σελήνη “Queen Selene, with twisting glances”, p. 328.6 κερόεσσα Σελήνη (“horned Selene”); p. 361.21–22 πότνια θεία ... Σελήνη (“holy Lady Selene”); p. 386.4 πολυτρέπτοιο Σελήνης (“much-turning Selene”); p. 386.9, 399.22 κραιπνήν ... Σελήνην (“swift Selene”); p. 395.27 δῖα Σεληναίη (“divine Selene”), p. 398.34 Μήνης ἑλικώπιδος (“the Moon with twisting glances”); p. 399.17 ἠύκερον Μήνην (“the well-horned Moon”); p. 399.33 θοῇ ... Σελήνῃ (“swift Selene”); p. 434.17 λευκάντυγα Μήνην (“the white-railed Moon”, referring to her chariot).

Standalone epithets, *in lieu* of a personal name:
Saturn. p. 432.8 ἀστέρος ἀγκυλομήτεω (“star of Him of Crooked Counsel”); p. 324.1, 369.6, 403.15 Αἰγίοχος (“Aegis-bearer”); p. 407.17 Αἰγιόχοιο; p. 399.20 Αἰγιόχῳ;
Mars. p. 407.15 Ἐνυαλίου; p. 368.25 Ἐνυαλίῳ; p. 368.26, 387.5 Θοῦρος (“the Furious One”); p. 398.26 Θούροιο; p. 391.21 βροτολοιγὸς (“Man-slayer”). The periphrasis p. 323.7 θεὸς πολέμοισιν ἀνάσσων (the god presiding over battles) stretches the identifier across a whole line;
Venus. p. 391.21 Παφίην; p. 387.3, 407.12 Παφίης;
Mercury. p. 323.10 Ἀργεϊφόντης;
Moon. p. 387.1 Κερόεσσα; p. 388.35 ἑλικῶπις; p. 403.14 ἑλικῶπιν ἄνασσαν (“Mistress with twisting glances”).
Other: p. 407.9 βασιλῆες (“rulers”) = luminaries?

But this might just be the tip of an iceberg. Much of our evidence for planetary epithets in Dorotheus come from two lists in the manuscript Marcianus Graecus 313, published by Pingree (edn p. 435–436), and which I abbreviate to Pingree[1, 2]. These lists have been characterised as aids to the reader, “una sorta di dizionario minimo, per fugare incertezze ed ambiguità nella consultazione” [51]. But if that is the case, they would be most helpful if the epithets had not appeared attached to a divine name in their original contexts (for otherwise they would be self-explanatory). And we can test this hypothesis to some extent, by checking back to the original contexts in the case of those epithets (helpfully asterisked by Pingree) that have one. The results are suggestive. Of epithets unique to the first list, Αἰγίοχος, Κρονίδης, Θοῦρος, βροτολοιγὸς are indeed all self-standing; ὠκύς is used in the periphrasis Μαίης ὠκὺν γόνον; βραδύς (of Saturn) is used predicatively, and κρυόεις qualifies a light name. Of those unique to the second, ἀγκυλομήτης, Κερόεσσα, Ἐνυάλιος are self-standing; πότνια is separated from Σελήνη by a line. In other words, the listed epithets are attested in

[51] P. Radici Colace, « Gli epiteti dei pianeti nel Carmen Astrologicum di Doroteo di Sidone tra astrolatria, cultura tecnica e retorica », *Atti della Accademia Peloritana dei Pericolanti, Classe di Lettere, Filosofia e Belle Arti*, 68, 1992, p. 187–203, at p. 190.

passages where there is no name-identifier[52]. On the other hand, the only one that is attested *only* as a decorative epithet is ὀλοφώιος ("deadly"), for Mars—and so much is lost of Dorotheus' poetry that clearly we cannot be certain that there was no passage in which this was used as a standalone name as well. Conversely, of the decorative epithets attested in the quoted fragments, there are none, other than those already accounted for, that figure in either list.

If the general pattern holds good, and the lists contain items that were principally used as personal names / principal references, the implication is that Dorotheus use a great deal of non-standard nomenclature for the planets. The lists also include alternative names, as if anything other than the basic divine name was in potential need of clarification as well: light names (placed first in the first list); Τιτάν and Ὑπερίων for the Sun; Μήνη, Τιτανίς, and Θειαντίς for the Moon, as well as syncretistic names (Hecate, Artemis); Ἑρμείας, as if this were sufficiently different from Ἑρμῆς to require separate listing. What is crystal clear is the poet's enormous investment in varying the ways he referred to his planets; what follows is an exploration of his sources and favourite themes and emphases.

ii. Sources and semantic range

Dorotheus' planetary epithets include:

——Straight borrowings from epic. Noun-epithet combinations: Κρόνος ἀγκυλομήτης ("Cronos of crooked counsel"); θοῦρος Ἄρης ("furious Ares", but relocated in the line *vis-à-vis* the *Iliad*); δῖα Σελήνη ("divine Selene"). Single epithets attested in Pingree[1] and/or Pingree[2] (original context unknown): Jupiter: ὑψιμέδων ("ruling on high") (Pingree[1, 2]). Mars: κορυθαίολος (Pingree[1, 2]), cf. *Il*., 20, 38 Ἄρης κορυθαίολος ("Ares of the flashing helm"), ps.-Man. 1.75 = Anubion F 21.59 Obbink κορυθαίολος Ἄρης; βροτολοιγός (Pingree[1, 2]), cf. βροτολοιγὸς Ἄρης ("man-slaying Ares"), and cases; ἐγχέσπαλος (Pingree[1, 2]), cf. *Il*., 15, 605 Ἄρης ἐγχέσπαλος ("spear-wielding Ares"), Or. Sib. 12, 100; ὅ(μ)βριμος (Pingree[1, 2]), cf. ὄβριμος Ἄρης ("mighty Ares"); ῥινοτόρος ("shield-piercing") (Pingree[2]), cf. *Il*., 21, 392. Venus: χρυσῆ ("gold") (Pingree[1]); εὐστέφανος ("well-garlanded"—although Aphrodite is not the only referent of the epithet in early Greek hexameter poetry) (Pingree[1]). Mercury: διάκτορος ("messenger") (Pingree[2]), cf. διάκτωρ (Pingree[1]); ἐριούνης; σῶκος (Pingree[2]), cf. *Il*., 20, 72. Sun: Ὑπεριονίδης ("son of Hyperion") (Pingree[2]); ἀκάμας "tireless" (Pingree[2]);

——Light variations on epic: πτολιπόρθιος Ἄρης ("Mars sacker of cities") combines *Il*., 20, 152 Ἄρηα πτολίπορθον, Hes., *Th*., 936 Ἄρηι πτολιπόρθῳ, and *Il*., 5, 333 πτολίπορθος Ἐνυώ; Μαίης … γόνον ("son of Maia") renews early Greek hexameter Μαίης … υἱός, *Od*., 14, 435 Μαιάδος υἷι (or Tragic Μαίας παῖς);

——Transferences from one figure to another in an opportunistic way (a large category). Venus: ἠυκόμου Κυθερείης ("fair-haired Cythera", ἠύκομος hexameter epithet of heroines and goddesses, but not Aphrodite); likewise ἐρόεσσα ("lovely") epithet of nymphs; ἄνασσα ("mistress") a common epithet of goddesses, though (semi-accidentally) of Aphrodite herself in HHom. Aphr., 92. Mercury: ὀξύς ("swift") (Pingree[1]) in virtue of its speed (Radici Colace, « Gli epiteti », art. cit., p. 196), but epic ὀξὺν Ἄρηα; Μαίης ὠκὺν γόνον ("swift son of Maia"): in early Greek hexameter poetry the deity to whom ὠκύς applies—in the feminine—is Iris, herself a divine messenger; πινυτός ("shrewd"), most often in early Greek hexameter poetry of Penelope. Moon: ἑλικῶπις ("of twisting glances"): epithet of attractive young women, also Muses, but intelligently applied to the Moon in view of (i) the conceit of the Moon as an eye, and (ii) the association of ἑλικ- words with her, cf. Lightfoot, *Manetho*, vol. 2, p. 543–4, n. on 4.91, and p. 564, n. on 4.146; χρυσάμπυξ "with golden bridle" (Pingree[1,2]):

[52] ἀγκυλομήτης, θοῦρος, and κερόεσσα are used as decorative epithets as well, but that does not invalidate the point.

epithet of horses, Muses, Hours, implying now the chariot of the Moon (Lightfoot, *Manetho*, vol. 1, p. 859, n. on 6.711);
——Borrowings from post-archaic poetry. To epithets drawn from fifth-century lyric and tragedy (Lightfoot, *Manetho*, vol. 1, p. 919 n. 64: εὐφεγγής ("brilliant"); σελασφόρος ("light-bearing"); χρυσαυγής ("with golden rays")), add χαλκ{ε}ομίτραν ("of the brazen girdle") (Mars), which is used in Bacch. fr. 20A.14 Maehler as epithet of Euenus, the *son* of Ares. Hellenistic Poetry: Διωναίη, of Venus, from Theocr., 15, 106; Τιτηνὶς, of the Moon, from Ap. Rhod., 4, 54 (see Livrea ad loc.); κερόεσσα, of the Moon, cf. *vl* (Geminus) in Aratus, 733 κεράεσσα; τριοδῖτις: Chariclides Com. (3rd c.?) fr. 1.1 K.–A. Ἑκάτη τριοδῖτι.

Neologisms:
All remain hapax unless flagged (*). Saturn: δυσαυγής*, βλαβεραυγής* (both "of baneful ray"). Jupiter: πολυφεγγής*, πολύφεγγος ("ample in light"). Mars: λοιγολαμπής ("banefully gleaming"), οὐλαμόεργος ("worker of war"), πυριμάρμαρος* ("gleaming with fire"), (?)χρυσαιχμής [*ex emend.*] "of golden spear-tip", φλογολαμπής ("flaming"). Venus: διπρόσωπος ("two-faced"); ζευξίγαμος ("joining in marriage"); κογχογενής ("born from a shell"); λαμπάκτις ("with shining rays"); λαμπροφαής* ("shining") (ps.-Man. 4.53 is presumably derivative); νησοβασίλεια ("Queen of the isle"; but νήσου βασ. in Pingree[2]). Mercury: διάκτωρ (no entry in LSJ). Sun: λαμπής; Φάων, cf. *Od*., 14, 502 φάε, of Dawn; Aratus, 607 φάουσαι (of a constellation); Hesych. φ 1104 φῶντα. λάμποντα). Moon: ἀργυρόφεγγος ("with silvery light"), διχόζωνος ("of double phase"), ἑλικαυγής ("with twisted beams"), Θειαντίς, λευκάντυγα ("white railed"), νυκταυγής ("shining at night"), νυκτιμέδουσα ("ruling the night").
Several are phenomenal. They refer to light (λαμπής, Φάων), or describe the quality of the light, or consist of a compound one of whose components refers to appearance / visibility (?χρυσαιχμής). These epithets are generally ornamental (as in ps.-Manetho): they usually cannot be connected with the light-names, except in the case of fire-epithets for Mars. Otherwise they just evoke general radiance (λαμπ-, φεγγ-, αὐγ-) or describe other aspects of the appearance (διχόζωνος) or the time of appearance (νυκταυγής, νυκτιμέδουσα).
New epithets on mythological themes include: Θειαντίς; ζευξίγαμος (Radici Colace, « Gli epiteti », art. cit., p. 197 n. 34); κογχογενής (cf. ἀφρογενής); νησοβασίλεια. διάκτωρ simply modifies διάκτορος. οὐλαμόεργος (Mars) is *presque homérique*, from οὐλαμός = "battle"; it is equivalent to e.g. πολεμόκλονος and ἐγρεκύδοιμος ("battle-rousing", "rousing din", cf. Lightfoot, *Manetho*, vol. 1, p. 909 nn. 10 and 11; Radici Colace, « Gli epiteti », art. cit., p. 197 n. 32).

In Sum:
1. Planetary epithets were a major feature of Dorotheus' poetry, one of the few flourishes with which he leavens the austere technicality. Indeed, as far as we can see from the extant fragments, few decorative epithets are *non*-planetary: if he is going to create little moments of brightness and colour at all, it is for the planets that he takes the pains[53].

2. He is apparently among the first astrological poets to characterise the planets using a formulary that combines appearance and mythology, "science" and the character of the associated deity, and to do so in *presque homérique* terms. He was certainly influential on the Manethonian poets, although the basic techniques can already be seen in the fragment of

[53] p. 391.12 ἱμερόφρονα (κούρην) ("lovely in spirit"); p. 397.9 ὕβριας αἰνάς ("dread outrages"); p. 405.17 κρίσιας περινεικέας ("disputatious lawsuits"). I interpret the epithets as informational in p. 383.9–10 θυμοῦ ... ἀεργηλοῦ ("an idle spirit"), p. 386.11 αἰθέρος ἀκροτάτοιο ("the highest heaven"), and arguably even p. 387.5 μαλερὴν δὲ περὶ φλόγα: it is a *destructive* flame that Mars sends forth.

Alexander of Ephesus' Φαινόμενα (*SH* 21) describing each of the planets as a note in the scale of Hermes' cosmic lyre[54], so Dorotheus cannot have created the idiom *ex nihilo*.

3. In the first volume of Manetho I observed that Dorotheus invests his creative energies, less in phenomenal than in mythological epithets: that is, while he is interested in appearance and light, he is even more so in the mythological persona and associations of the deity with whom the planet is identified[55]. The mythology, among which genealogy, and to a lesser extent birthplace and traditional haunts, are particularly prominent[56], is essentially commonplace, which any culturally competent reader could be relied on to recognise. The staples of early Greek hexameter poetry would have furnished most of it (as they furnish most of the epithets themselves), although a few items are part of a mainstream that is post-Homeric. Aphrodite's shell is mentioned first, apparently, in Plautus[57], but the famous fresco from the Casa di Venus in Pompeii showing the goddess reclined in an enormous shell speaks to its iconic status at the very time Dorotheus was writing.

Perhaps Dorotheus' treatment of mythology is not unlike his handling of multiplicative numbers. Taken in itself, nothing is terribly demanding, and yet there is a tiny mental hurdle to be cleared before the moment of recognition. All of us who know our Homer, which in Greece is everyone, can recognise him of the crooked counsel, the Aegis-bearer, the bringer of war, the foam-born, and the Argus-slayer. But the demands Dorotheus is making of his reader are not entirely trivial, especially if they require an epithet to be decoded that is used untraditionally, or which is attested in connection with the god in question in only one or a very small number of passages. For instance, if κορυθαίολος ("of the flashing helm") was a standalone name, as is implied by its presence in Pingree's lists, the reader has to be alert to the *one* passage in the *Iliad* where it is applied to Ares rather than Hector in order to work out the new referent; similar demands are made by Ares ῥινοτόρος ("shield-piercing") and ἐγχέσπαλος ("spear-wielding"), and by Hermes σῶκος ("mighty one", "saviour"). And Θειαντίς, which is unique as an epithet of the Moon, requires us at the very least to brush up our knowledge of the *Theogony*. The exercise is a learned one even if these epithets were accompanied by the name of the planetary deity in question, but becomes much more so if, as I argue, they often figured as the sole personal name. All this notwithstanding, the Arabic translators appear not to have been bamboozled. Very likely they had access to digests like those extant as Pingree[1, 2]. By rendering the epithets back into ordinary planetary names, they reproduce Dorotheus' sense but lose the little moments of poetic ambition and cultural richness.

POETICS

[54] Exact overlaps: 2 δῖα Σεληναίη ("divine Selene"); 3 χελυοξόος ("shell-scraping") (Pingree[2]); the form of personal name combining light and mythological names: 3 Στίλβων χελυοξόου Ἑρμείαο ("the Glittering One, (star of) shell-scraping Hermes"), 4 Φωσφόρος ... φαεινότατος Κυθερείης ("the Bringer of Light, most radiant (star of) the Cytherean"), 6 Πυρόεις φονίου Θρήϊκος Ἄρηος ("the Fiery One, (star of) murderous Thracian Ares": an excellent illustration of the imbrication of light name and mythology), 7 Φαέθων Διὸς ἀγλαὸς ... ἀστήρ ("Phaethon, resplendent star of Zeus"), 8 Φαίνων Κρόνου ... ἄστρον ("Phainon, star of Cronos"). Alexander's epithets reinforce the mythological associations of the gods (χελυοξόος, Θρήϊκος) and evoke his/her character (φονίου, cf. Lightfoot, *Manetho*, vol. 1, p. 909 n. 6 φοίνιος Ἄρης, where this example should have been noted).
[55] Lightfoot, *Manetho*, vol. 1, p. 918–920.
[56] Jupiter: Κρονίδης; Sun: Ὑπεριονίδης; Venus: Διωναίη (cf. *Il*., 5, 370), Moon: Θειαντίς (cf. Hes., *Th*., 371), Τιτανίς. Add the divine names of the planets in n. 49 above. Places: Παφίη, Κυθερία, Κύπρις, Κυλλήνιος.
[57] *Rudens* 704 *te ex concha natam esse autumant* ("they report you born of a shell"); Tib., 3, 3, 34; Stat., *Silv.*, 1, 2, 117–118, 3, 4, 5; *LIMC* II/1. 103, s.v. Aphrodite, V.B (A. Delivorrias).

That brings us to Dorotheus' poetics—to the very stuff of which he manufactures his verses. Hephaestion praised his εὐέπεια, and we will want to know whether any other components of his poem show the same close and intelligent engagement with earlier sources, and make the same demands on the reader[58].

Borrowings and allusions

Perhaps at the outset matters seem unpromising. Dorotheus can be found doing the less impressive things that the Manethoniana do. There is a certain amount of cadging of line-endings and other morsels from archaic poetry: these are simply verse-fillers, or verse-patterns devoid of content, although not so overused as to give the impression that this is an easy, lazy way to construct the line, as in some of the Manethoniana[59]. In general, early Greek hexameter poetry is the main resource, though echoes of Hellenistic poetry are also to be found[60]. As in the Manethoniana, a few lines are assembled from more than one archaic original, sometimes "midrashically" spliced together with a link word[61]. Yet—at least in what is extant—we are not seeing the cleverness of the best of the earliest Manethonian poet, who splices two related archaic lines, or one archaic and one Hellenistic line, or even two Hellenistic poets[62]. Dorotheus is not, as far as we can see, constructing little pageants of literary affiliation. But the opportunities and limitations in more technical material are different from those in apotelesmata. The *q* part of the *if p then q* construction[63] offers opportunities, seized on with glee by some of the Manethonian poets, to depict real-world outcomes in gritty, gory, piteous, and sometimes very funny rewrites of earlier verse (such as the wholesome Nausicaa's laundry being turned into a smelly fuller's shop[64]). It is possible of course that Dorotheus was simply not interested in this kind of thing; but allowance must also

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[58] On poetics: Stegemann, *Die Fragmente*, vol. 1, p. 22–25 (Sprache), p. 25–27 (Metrisches).

[59] Line-ends: p. 390.23 δούλιον ἦμαρ ("day of slavery") = *Il*., 6, 463; p. 397.4 ἐν πᾶσιν ἄριστος ("best among all") ~ *Od*., 20, 163 μετὰ πᾶσιν ἄριστοι, Hes., *Op*., 694 ἐπὶ πᾶσιν ἄριστος; p. 399.31 πλόος ἄλλος ἀμείνων ("another voyage better than this") ~ Hes., *Op.*, 445 νεώτερος ἄλλος ἀμείνων; p. 402.15 ἔνθα καὶ ἔνθα; p. 402.16 ἐπ' ἀρωγῇ ("for succour") = *Il*., 23, 574; p. 431.15 ἐστὶν ἑκάστου = *Il*., 20, 25; p. 403.7 αἰνὰ παθόντα ("suffering grievously") ~ *Il*., 22, 431 αἰνὰ παθοῦσα; p. 419.2 πάντα τελέσσεις ("you will accomplish all") ~ *Od.*, 23, 250 πάντα τελέσσαι; p. 398.2 κακὸς ἠέπερ ἐσθλός ("foul or fair") ~ *Il*., 9, 319 κακὸς ἠδὲ καὶ ἐσθλός (a gift just waiting for an astrological poet). Other components of the verse: p. 391.20 μέγα χάρμα ("great joy"); p. 394.5 δόμον ἀνέρος ("a man's house") = *Il*., 7, 22; p. 395.29 ὡς δ' αὕτως ("in the same way"). Verse-patterns: p. 386.12 μέσον οὐρανὸν ἀμφιπολεῦον ("roaming the midheaven") ~ μέσον οὐρανὸν ἀμφιβεβήκει; p. 393.15 οἴσεται, ὅς κεν ἔχῃσι ("will have (predominance), whoever has …") ~ *Od*., 4, 756 ἐπέσσεται, ὅς κεν ἔχῃσι; p. 393.17 εἴκελος ἔσται ("will be like") ~ HHom. Aphr., 279 θεοείκελος ἔσται; p. 402.33 φθισίβροτος αἶσα κίχησι ("mortal fate will find") ~ *Il*., 22, 297 φθισίμβροτον αἰγίδ' ἀνέσχεν; p. 403.3 χερειότερ' ἔργα τελέσσει ("will wreak worse harm") ~ *Od.*, 17, 51, 60 ἄντιτα ἔργα τελέσσῃ; p. 418.27 ἡ δέ νυ Κούρη ("the Maid")~ *Il*., 22, 405 ἡ δέ νυ μήτηρ, Nic., *Ther*., 322 ἡ δέ νυ χροιή. More contentful is p. 396.7 τί δ' αὖ τέλος ἔσσεται αὐτῷ ("what outcome he will have") ~ *Il*., 2, 347 ἄνυσις δ' οὐκ ἔσσεται αὐτῶν.

[60] p. 369.6 σθένος οὐλοὸν αὐτῶν ("their baneful might") ~ Ap. Rhod., 4, 1033 θέρος οὐλοὸν ἀνδρῶν; p. 392.9 δὴ γάρ κεν ~ Ap. Rhod., 3, 144; p. 398.14 ἐπ' ἄλγεσιν ἄλγεα θήσει ("will pile harm upon harm") ~ Ap. Rhod., 1, 297 ἐπ' ἄλγεσιν ἄλγος ἄροιο (also Eur., *Tr*., 596 ἐπὶ δ' ἄλγεσιν ἄλγεα κεῖται); p. 402.23 κακηπελίῃ μογέοντες ("suffering in an evil plight") ~ Nic., *Ther*., 319 κακηπελίῃ βαρύθοντες. οὐλοόν first appears in Hellenistic Poetry (Lightfoot, *Manetho*, vol. 1, p. 585, on 2.194); so does ἀεργηλός ("idle"), p. 383.10 (Ap. Rhod., 4, 1186, with Livrea ad loc.; Nic., *Ther*., 50, with Overduin ad loc.); p. 389.3 ἔσσετ' ἄμεινον ("shall be better") ~ Theocr., 4, 41.

[61] p. 428.102 βαθυδινήεις τε μέγας ῥόος Ὠκεανοῖο ("the great deep-eddying stream of Ocean") is an "Ocean" compilation, pulling together Homeric ῥόος Ὠκεανοῖο + *Od.*, 10, 511 Ὠκεανῷ βαθυδίνῃ, *Th*., 133, *Op.*, 171 Ὠκεανὸν βαθυδίνην. p. 418.28 χθόνα ποσσὶν ἀμύσσων ("tearing up the ground with its feet", of Scorpio) apparently combines *Il*., 19, 284 χερσὶ δ' ἄμυσσε (Briseis) and 23, 121 χθόνα ποσσὶ δατεῦντο (mules), with no link word, and no carry-over from the original contexts. For "midrash", see Lightfoot, *Manetho*, vol. 1, p. 152 and n. 27.

[62] Lightfoot, *Manetho*, vol. 1, p. 147–165.

[63] Lightfoot, *Manetho*, vol. 1, p. 48–51.

[64] Lightfoot, *Manetho*, vol. 1, p. 806–807, n. on 6.433–434.

be made for what Hephaestion is quoting. His interest is precisely in the instructive passages, and he does not quote from those sections (for instance the catalogues of outcomes that run parallel to the second and third books of the Manethoniana) where, if anywhere, there was scope for enlivening little moments from the *Iliad* and *Odyssey*.

In general Dorotheus' relationship to earlier sources and the early Greek hexameter idiom can be characterised as pragmatic. Insofar as one can generalise from what survives, his raids on earlier poets tends to fall into two groups. The first are phrases that are going to be helpful for the narrator's characterisation and attitudes, for the relationship between him and the addressee, and for his self-presentation as an authoritative teacher[65]; the drill of orderly lists thus falls under this heading[66]. A good instance is p. 405.18 ἀληθείην ἀγορεύσεις ("you will speak sooth"), which is in fact most similar, not to didactic, but to HHom. Herm., 561 ἀληθείην ἀγορεύειν ("to speak sooth"), of the Thriai, and so nicely encapsulating a transition from oracular to technocratic truth. But it also recalls the EGHP line-ending ἀληθέα πάντ' ἀγορεύσω: such expressions usually preface a speech in which the speaker gives a satisfying amount of detail, something both rich and precise[67]. That would be a good nuance to evoke in a technical expert's speech.

The second category consists of whatever phrases the poet can manipulate to provide the kinds of specificity he needs; of phrases that will help with informational or technical content. Such requirements include nomenclature[68], geometrical relationships[69]; and even specialist terminology where opportunity presents itself[70]. A particularly nice bit of creative misprision occurs in the *horia*, where the poet repeatedly needs expressions for a planet occupying a range of degrees. In practice his ἔλλαχε μοίρας ("received as its degrees", and similar expressions) are taken from Hes., *Th*., 203–204 ἠδὲ λέλογχε | μοῖραν ("she received as her portion") and HHom. Herm., 428 ὡς λάχε μοῖραν ἕκαστος ("as each received his portion"), where the context is gods receiving portions of honour, privileges that will be enduringly their own. Perhaps it is not so very great a leap, for in a sense that is what the planets are, and the degrees are their proper domains.

In short, where the use of his predecessors is concerned, Dorotheus' poetry is opportunistic, sometimes cleverly and wittily so. But while no imperial poet will pass up the opportunity to display *paideia* through allusion, and despite the occasional attempt to tap into a specifically Homeric ethos (and Iliadic miserabilism never disappoints: p. 397.12 πῆμα φυτεύει ~ *Il*., 15, 134 κακὸν μέγα πᾶσι φυτεῦσαι, "to engender a great harm for all"), in Dorotheus' case it seems a decorative rather than essential part of his project.

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[65] p. 339.3 τὰ ἑκάστα διίξομεν ~ *Il.*, 9, 61, where the speaker is the didactically-inclined Nestor, HHom. Dem., 416 πάντα διίξομαι ("I shall tell all"); p. 395.25–26 ὧδέ τοι ἔστω | λώιον ("this will be best for you") ~ Hes., *Op*., 433 ἐπεὶ πολὺ λώιον οὕτω ("since this is much better"), 759 τὸ γὰρ οὔ τοι λώιόν ἐστιν ("this is not an advisable course"); p. 432.4 πεπνυμένος ἐξαγορεύσεις ("you will be speaking from a position of knowledge") ~ *Il*., 7, 347 (al.) πεπνυμένος ἦρχ' ἀγορεύειν ("the wise (Antenor) began to speak"). From Hellenistic poetry: p. 392.8 ἀναίνεο, "decline" ~ Nic., *Ther*., 664; see too p. 000 and n. 14, on τεκμαίρομαι = "forecast".

[66] p. 386.15–16 ἐνὶ πρώτοισι ... αὐτὰρ ἔπειτα ("first … and then"); p. 429.66 μετέπειτα δὲ; see also Lightfoot, *Manetho*, vol. 2, p. 574, n. on 4.170.

[67] J. L. Lightfoot, « Τί ἐστιν ἀλήθεια; Sibylline Truths », to be delivered at the conference « "Listen to the Sibyl in all things": Reconsidering the Jewish-Christian Sibylline Oracles » (Naples; 5–8 June, 2023).

[68] Borrowed geographical expressions in the *klimata*: p. 428.102 ῥόος Ὠκεανοῖο ("stream of Ocean"); p. 428.102 ~ *Il*., 2, 611 Ἀρκάδες ἄνδρες ("Arcadian men"); p. 428.83 στόμα Πόντου ("mouth of Pontus") ~ Theocr., 22, 28; constellation names: Παρθενική ("the Maid").

[69] p. 399.3 ἀντικρὺ ~ *Il.*, 5, 130 = "opposite", "face to face".

[70] Above: μέσον οὐρανόν, of the midheaven; κακὸς ... ἐσθλός of malefics and benefics.

Metre

Will it be any different with metre? Yes, I suggest: it will. For if we had expected artlessness from the poet's fairly non-committal attitude to earlier sources, we will be forced to think again. Housman wrote that "Dorotheus is a good metrist and strict in his observance of scansion: stricter than Homer, incomparably stricter than the rest of the astrologers[71]." This section consolidates and expands the remarks I have already made on Dorotheus' metre in the first volume of Manetho; it draws on my more extensive comparisons between astrological poets in the second[72]. All the Manethonian poets, along with Dorotheus, Maximus, and "Antiochus", are included in the comparison. It is his metrical fastidiousness that above all proves Dorotheus no mechanical technocrat.

Outer metric

What stands out is Dorotheus' relatively high dactylicity, which puts him in the general camp of the progressives. He has the second highest average number of dactyls per verse (73.87), after M^b (74.26); the highest total of lines with four dactyls, and conversely the second lowest total with only one (and the third lowest total with only two). He has the lowest proportion of lines in which the first foot is a spondee; the third lowest proportion of lines in which both the first and second feet are spondees; and the second lowest in which all of the first, second, and third feet are spondees.

Inner metric

Somewhat surprisingly, given his dactylicity, he has the highest proportion of lines with B_1 and the second lowest of B_2—apart, that is, from M^d, who is a complete outlier. But these figures are artificially elevated by the *klimata* and *horia*[73]. Without these, out of the remaining lines there would be 46.45% masculine and 52.9% feminine caesurae. That might still not sound very significant[74], but astrological poetry tends in general to run against the trend of the hexameter from Homer onwards for the feminine to predominate, and to have high rates of masculine caesurae[75]. Seen in that light, Dorotheus joins the company of those in whom the feminine predominates, although in him it does so by the smallest margin, being exceeded by M^b (56.46%), M^c (64.31%), and Maximus (67.43%). He is the most loth to forego a caesura at B altogether.

He is also the fondest of the bucolic diaeresis. He is extremely reluctant to violate any of the laws concerning word-break in the second foot: he is the most averse to violating Meyer I, almost all cases of which anyway are with metrical words; and he is the most loth simultaneously to violate Meyer I and II, where the same is true. (Numbers for Gieseke and Hilberg are so tiny anyway it is hard to infer much.) Tiedke's Law (that words of shape — — and ⏑ ⏑ — are avoided after the hepthemimeral caesura) is violated in almost a third of lines within the *klimata* and *horia* (20/62), but that is caused entirely by the need to accommodate planetary names (Φαίνων, Φαέθων, Πυρόεις, Ἄρης, Παφίη, Στίλβων) and other technicalities (μοίρας, ἴσας)—situations that inflate numbers outside Dorotheus as well, and are recognised

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[71] A. E. Housman, « Dorotheus of Sidon », *The Classical Papers of A. E. Housman, Collected and Edited by J. Diggle and F. R. D. Goodyear*, ii: 1897–1914, Cambridge, 1972, p. 740–757, at p. 747. It is true that the sentence opens "If once we turn our eyes away from his pertinacious misconception of the properties of initial ζ", cf. 743: "the only dark blot on Dorotheus' fair fame as a metrist". There *are*, in fact, a couple of blots, as will emerge below; but I would not include initial ζ, which has Homeric warrant, among them.

[72] Lightfoot, *Manetho*, vol. 1, p. 276, and add Lightfoot, *Manetho*, vol. 2, p. 369–381.

[73] Appendices IIA and IIB = 62 lines, containing 48 masculine and 12 feminine caesurae, two incomplete.

[74] Comparisons in Lightfoot, *Manetho*, vol. 1, p. 243: a good match would be with Hesiod, who has 47.4% masculine.

[75] Lightfoot, *Manetho*, vol. 2, p. 1001.

licences—and if one sets those aside he has the second *lowest* proportion of violated lines, after M^b, in all astrological poets.

But perhaps there is after all one tiny blot on what Housman called Dorotheus' fair fame: Stegemann is incorrect that Hermann's Bridge is *invariably* respected[76]. There is a single violation (p. 434.18 ἄμεινον ἐπεί), plus another with a metrical word (p. 432.6 ἐπὴν δὲ τοιοῦτος), which leaves him approximately in line with other astrological poets other than "Antiochus" and the arch-offender M^d. Neither of the offences is "excused" by the necessity of including a technical term.

Prosody
To begin with *muta cum liquida*[77], position at word-boundary goes drastically down in the astrological poets *vis-à-vis* Homer, while word-boundary correption goes up. Dorotheus cannot escape these trends, but he is still highest among his peers for word-boundary position, and second lowest for word-boundary correption. In other words he is the *least* unHomeric among those who display generally unHomeric trends. Conversely, word-internal correption (Attic correption) is non-existent in Homer, but takes off afterwards, reaching its greatest extremes in books 4 and 1—but Dorotheus is the *least worst* offender. And he has the highest figure of all—higher than Homer himself—for word-internal position, which drops off from Homeric levels in other astrological poets (in some more drastically than others, but in none more so than in "Antiochus").

He moderately dislikes hiatus. The figures I have used make him the fourth most loth to apply it in the princeps (after books 4, 2, and poet A in the first book). As for the (contracted) biceps, using Pingree's text produces ten examples = 1 in 39 lines[78], seven of them in the third foot. This would make him considerably laxer than M^a. But applying Housman's view of hiatus (i.e. excluding καί οἱ, καὶ (ϝ)ἐλπίδες, ἢ ἀστέρος), and adopting his emendations would eliminate all those in the third foot and thus bring the number down to 1 in 130 lines, a comparable figure to M^a's maximum of 112.33[79].

In general, metrical licences, such as they are, are used to incorporate technicalities. This explains the short syllable before ζ for the name of Zeus (Jupiter) that so annoyed Housman: 6/9 instances of hiatus in princeps are accounted for because they involve planetary names or other astrological terms. So too the few violations of Meyer I, II, and the violations of Tiedke and Naeke. In general, Dorotheus gives the impression of being a nice, careful metrician. The principal semi-exception to this is *Silbenmessung*, whose correctness was overstated by Stegemann[80]. In some cases appeal can be made once again to the need to accommodate specialist terminology. Thus, at p. 434.9 ἀκουόντων, the *u* is consonantalised presumably to permit the inclusion of a technical term (signs that audit one another: see above), though this is not the case with the consonantalised yod in p. 432.6 τοιοῦτος. Synizesis in p. 339.3 γενέσεως accommodates a technical term. The state of the text is no doubt unhelpful. For some problems fixes are easily found (p. 419.1 surely Αἰγοκερῆϊ); for others, less so (p. 434.15 ἀπόστροφοι).

[76] Stegemann, *Die Fragmente*, vol. 1, p. 25 and « Dorotheus von Sidon », art. cit., p. 347.
[77] Housman, « Dorotheus of Sidon », art. cit., p. 747–748.
[78] This is a correction of my figure in Lightfoot, *Manetho*, vol. 1, p. 267.
[79] Housman, « Dorotheus of Sidon », art. cit., p. 744–746; Lightfoot, *Manetho*, vol. 1, p. 267.
[80] Stegemann, *Die Fragmente*, vol. 1, p. 26, and « Dorotheus von Sidon », art. cit., p. 347.

INFORMATION PROCESSING

In the first volume of Manethoniana I addressed the relentlessness with which the poets bombard the reader with detail, and asked if and how they try to alleviate it. The same questions arise for Dorotheus—all the more so, in fact, given his greater penchant for technical instructions. The reader needs to process matter that is not so much intellectually difficult as relentlessly dense. How might the poet be extending a helping hand?

He turns out, not very surprisingly, to be employing most of the techniques I discussed a propos of Manetho[81]. The essentials are organisation and the foregrounding of significant detail. Internal paragraphing breaks the work up into reassuringly manageable segments, and syllabuses announce the forthcoming subject-matter[82]. If only we had longer stretches of Dorotheus to analyse, we would no doubt see the rigour of the prose treatise meeting and happily matching the aesthetics of *Medalliondichtung*[83]. There is much call for systematic, comprehensive, and closed lists of entities (signs or groups of signs), and there are at least three examples (p. 323, trigons; 398, Zodiacal signs in the καταρχή for travellers; 402, Zodiacal signs in the καταρχή on imprisonment) which suggests that short, self-contained, and tightly-argued passages were a running feature of Dorotheus' poem[84]. Again, Dorothean lists suggest orderly prioritisation by the careful use of "first", "second", "next", "last" and so on. The *horia* usually spell out "first" and "last", and sometimes other items ("next", "third").

Word order puts what matters into focus. I shall not repeat the minutiae of the discussion in the first volume of Manetho, nor reintroduce Mrs Cable's evangelical children[85]. But the poet adheres to the same rules for Focus that enable the Manethonian poets to direct their readers' attention to the key players in the apotelesmata. A short excerpt on the energising effect of Mars on Saturn places the names of the planets at the head of the clause, even before the conditional ἤν (p. 383.8–11). In the lists of Zodiacal signs just mentioned, their names again tend to stand in Focus position at or close to the head of the clause (p. 398, 402), so that the reader can easily follow the vertical elements of the syntagma as it works downwards[86]. Numbers also tend to be placed at the head of their clause. A little indication of the poet's concern for cognitive "etiquette" occurs in the fragment of verse at p. 405.17–23. Here, the ornamental epithet (κρίσιας) περινεικέας ("disputatious lawsuits") comes second because it adds little, but the predicative epithet that contains the important content comes first in ἀτελὴς τοῦδ' ἔσσεται ὁρμή ("fruitless will be its effort"). One could no doubt find a similar list to compare in prose, but the poet would yield no ground whatsoever to the prose writer in cognitive clarity[87].

[81] Lightfoot, *Manetho*, vol. 1, Part Five.

[82] p. 339.3 καὶ γενέσεως τὰ ἑκάστα διίξομεν ὄφρα δαείης; p. 341.15 αὐτίκα δ' ἀμφὶ γάμοιο διίξομεν ἱμερόεντος (see n. 8). See too I 24: "Now I will cause to pass by you [in review] the things in which I showed you [what to do] if you wish to judge the nativity with regard to property and fortune."

[83] Lightfoot, *Manetho*, vol. 1, p. 212–213, and vol. 2, p. 128, 148, 998.

[84] The tight effect is enhanced by asyndeton, which predominates on p. 323 and 398 (asyndeton and connectives are more evenly split on p. 402). Maximus' lists of zodiacal signs (1–48; 327–387; 467–537, 568–602) are connected.

[85] Lightfoot, *Manetho*, vol. 1, p. 193–205, esp. p. 193–194.

[86] For the idea of the syntagma, see Lightfoot, *Manetho*, vol. 1, p. 186.

[87] Note, though, W. Hübner, *Raum, Zeit und soziales Rollenspiel der vier Kardinalpunkte*, Leipzig, 2003, p. 188, who adduces an instance where discrepancies between Greek and Arabic paraphrases are to be explained by an original unclear poetic formulation.

Is this meant to be memorised? Hephaestion thought so, and modern scholars find it plausible[88]. The features just reviewed could be very useful for memorisation, although no one, presumably, would want to argue that an *aide memoire* was the *only* thing Dorotheus aspired to be. Apart from the metre itself, I would point out, as features that are conducive to mental processing and possibly also to memorisation, that information units tend to be coextensive with metrical units, whether whole-[89] or half-lines (p. 388.23–24). Not *ad nauseam*, though, for syntactical and lexical *variatio* lightens the effect without comprising robust structure[90]. Jingles and repetitions would clearly make memorisation easier. There are not as many in what survives of Dorotheus' verse than in some of the Manethoniana, and one certainly does not find the kind of obtrusive isocola and parallelisms that occur in M^c and M^d. But one can instance p. 378.13 τόπον καὶ ἄνακτα τόποιο ("the place and the Lord of the place")[91]; p. 397.4–5 ἐσθλὸς ἐν ὡρονόμῳ βεβαὼς … ἐσθλὸς καὶ δύνοντι βεβὼς ("good entering on the Ascendant, and good entering on the Descendant"); and the neatly antithetical couplet on p. 326.13–14 which deals with the opposite situations of bad planet in good place and vice versa.

CONCLUSION

Bernd Effe made a distinction between three kinds of didactic that is well known[92]. The factual, or *sachverbunden*, type is really doing what it purports to do: it sets out to teach, and teaches. The formal is more interested in parading its conquest of technical difficulty, the transference into verse of recalcitrant subject-matter. And the "transparent" uses didactic as a window onto higher realities; the immediate subject, whatever it is, is only a way into larger and more important truths. Effe consigned (rather unceremoniously) the Manethoniana to the first category: *sachverbunden* is, according to Effe, precisely what it is, no more and no less, and verse facilitates its memorisation. When Pingree made his disgruntled remark about Dorotheus he was thinking in the same way.

Effe's basically good idea is open to criticism on the grounds that didactic poems can be more than one thing at a time[93]. One feels the reductiveness of his way of proceeding particularly keenly in his treatment of Manilius. The zero-sum game of classification means that the poet's neo-Lucretian *sachverbunden* fervour is made to trump his efforts both to ornament his poem and to use it to inculcate truths about the rational, knowable cosmos,

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[88] Lightfoot, *Manetho*, vol. 1, p. 179; Hephaestion (ed. Pingree), i. 297.11 εὐεπείας χάριν καὶ μνήμης ("for the sake of pleasing verse and memory"); Stegemann, *Die Fragmente*, p. 21–22, and « Dorotheus von Sidon », art. cit., p. 346–347.

[89] p. 391.11–16: a line or couplet is devoted to what each *kentron* represents in a marriage *katarche*: note especially 14, where the terminology for the MC is stretched to occupy an entire line; p. 394.5–9; p. 396.5–8: *kentra* and their significations in a line or half a line, with the names of the *kentra* in the first halves of each line (a tiny spillover in 6), and the significations in the second; p. 398: each of the first four signs occupies a couplet, and most of the rest either one, two, or three whole lines, with the exception of only Libra (p. 398.16); p. 405.17–23: each of three different kinds of sign on the ASC occupies one line or a couplet.

[90] e.g. p. 323, the different ways of expressing the idea of planetary rulership of the trigons, with planets in the nominative, genitive, preposition with case, and accusative; p. 323–324, the exaltations: κατ' + acc., περὶ + acc., bare dative, ἐν + dative, καθ' + genitive, περὶ + dat., κατὰ + gen. again; p. 391.13, 16 ἂν φράσσαιο / ἐξαγορεύσει; p. 396.5–8, the *kentra* from which conclusions are inferrable: ἀφ', ἐκ, ἐκ, bare dative. See too p. 388, on buying and selling: each phase of the Moon has a different number of lines, and there is *variatio* in the way in which each is labelled.

[91] For the Πρίαμος Πριάμοιό τε παῖδες figure, see D. Fehling, *Die Wiederholungsfiguren und ihr Gebrauch bei den Griechen vor Gorgias*, Berlin, 1939, p. 139–141.

[92] B. Effe, *Dichtung und Lehre: Untersuchungen zur Typologie des antiken Lehrgedichts*, Munich, 1977; Manethoniana on 126–131 (Maximus on p. 131–136, Manilius on p. 106–126).

[93] See the review by P. H. Schrijvers, *Mnemosyne*, 35, fasc. 3.4, 1982, p. 400–402, on p. 400.

instead of all three being allowed to coexist to varying degrees. Once the matter is phrased in those terms, I have throughout this paper of course been arguing that Dorotheus is *sachverbunden* and formal in equal measure, and even if Pingree missed that point, the Gundels did rather better when they wrote of "sein sprachlich und metrisch hochstehendes Gedicht"[94]. Attention-seeking poetic *flosculi* are not to be found, but painstaking art has gone into concision and clarity of expression and the conversion of verse into a vehicle of professional specialism. I have also stressed that different parts of the poem may have had different styles, with the *klimata* and *horia* perhaps positively *cultivating* a special technical register with its own metrical licences. It is a less obvious and perhaps more interesting question whether Effe's other type, "transparent", is represented in any way at all. It is in Manilius, of course, who not only versifies a highly technical body of material (and even avails himself, when it suits him, of the expert narrator and practitioner-addressee[95]), but also wants to insert it into a coherent and defensible cosmology. Stegemann claimed in fact to have found two pieces of evidence for Dorotheus speaking reflectively and philosophically—but neither demonstrably reflects the original poem[96]. On the contrary, one comes from a passage headed λόγοι τοῦ Δωροθέου ἀπὸ βίβλου Σαρακηνικῆς ("words of Dorotheus from a Saracenic book", *CCAG* v/3., p. 122–124), in other words is explicitly a back-translation from Arabic. More confidence-inspiring is a poetic extract that shortly follows in the same manuscript, where Dorotheus gives a quasi-physical explanation of the counteractive effects of the two malefics which is lacking from the parallel account in ps.-Manetho[97]. But this still stops short of proof that the poet made any systematic efforts to ground his system in a cosmology that made sense in Platonic, Aristotelian, Stoic, or any other coherent philosophical terms[98].

I could have written a paper arguing that Dorotheus' poem reflected real-world situations, practical concerns, hopes, dreams, fears, and so on. But that would have been just to repeat for him what is true of all astrology. I have instead concentrated on what seem to me the distinguishing qualities of his poem, analysing the ways in which the poem is streamlined to carry information in an attractive way. And there is certainly more to discover about the influence of these qualities on later poets, for instance on Dionysius Periegetes, who seems to have found Dorotheus useful for spatial expressions concerning position and extension, and evidently found himself unable to resist Καρκίνος αἴθων, that blazing Crab[99]. But that is a matter, not only of the influence of poet *a* on poet *b*, but of their use of a common facilitating

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[94] Gundel and Gundel, *Astrologoumena*, op. cit., p. 118.

[95] Especially in the sections on the Lot of Fortune and the Horoscope. See K. Volk, *The Poetics of Latin Didactic: Lucretius, Vergil, Ovid, Manilius*, Oxford, 2002, p. 199 and n. 9 (on 3.169–509).

[96] Stegemann, *Die Fragmente*, p. 19–20. One (his fr. 119) came from an Arabic source, and divided matter into four existential categories; Pingree's edition does not include it. The other occurs in an extract in Vat. gr. 1056 (15th c.): Dorotheus is specifically cited for the claim that it is through the foresight of the *demiourgos* that astrology comes about (*CCAG* v/3, p. 124.3–8). Boll supposed the sentiment to be that of a Christian writer; Stegemann was hospitable to the idea of genuine Dorotheus underlying this. To me it sounds as if the *Timaeus* is somewhere in the mix (Lightfoot, *Manetho*, vol. 2, p. 180–181).

[97] *CCAG* v/3, p. 125.3–8 = Pingree, p. 368–369; cf. Lightfoot, *Manetho*, vol. 1, p. 68–69.

[98] The Gundels thought so too (*Astrologoumena*, op. cit., p. 118, 121), but they dated Dorotheus to the turn of the era, before Manilius, as if astrology was not yet "ready" for this kind of thing. It is a matter, not of readiness, but of what an individual author sets out to do.

[99] p. 323.4 τριτάτην λάχεν αἶσαν ("has the third portion") and Dion. Per. 525 πρώτην αἶσαν λάχον ("has the first portion") (though with a common background in Homeric λαχὼν ἀπὸ λῃΐδος αἶσαν, "having a share of the spoil"); p. 391.16 μέσατον χθονὸς and 856 μεσάτην χθόνα ("in the middle of the land"); p. 418.26 and 595 Καρκίνος αἴθων (above, p. 000); p. 428.25 (καλὸν) πέδον Αἰγύπτοιο and 227 (λιπαρὸν) πέδον Αἰγύπτοιο ("the fair/sleek plain of Egypt »); p. 428.102 and 1163 μέγας ῥόος Ὠκεανοῖο ("great stream of Ocean", unique to the two authors); p. 428.180 τέταται χθὼν and 759 ἐκτέταται χθών ("the land extends").

medium. For we can now say that Effe's distinction between the formal and the *sachverbunden* types of didactic poetry was always something of a false dichotomy. Poetry is apt for information. That was what the Muses were figures for in the first place[100], the conveyance of precise data that the poet feigns he would not otherwise have known or been able to master, especially in catalogues. Hexameter poetry is also very good, as I documented for Dionysius, at describing layout, the position of one entity with respect to another; geography and astrology are equal beneficiaries of this capacity[101]. It is not the case that poetry sits on top of the information as a separate level, or has to do something she is not equipped for in order to communicate fact, or conversely that fact has to make concessions in order to be accommodated into the medium. On the contrary, it suggests Epicurus, Eratosthenes and Co. who thought poetry just for pleasure were missing the point. By the time the hexameter didactic tradition reaches Dorotheus it has been stylised to the point that it will not be to everyone's taste. But it is a highly specialist realisation—over and above Dorotheus' attempts to tap memories of Homer and mainstream mythology—of something inherent in hexameter poetry itself: the potential for factual, precise, memorable, and engaging communication.

[100] W. W. Minton, « Invocation and Catalogue in Hesiod and Homer », *TAPA* 93, 1962, p. 188–212.
[101] J. L. Lightfoot, *Dionysius Periegetes*, *Description of the Known World: With Introduction, Text, Translation, and Commentary*, Oxford, 2014, p. 75–84; also *Manetho*, vol. 1, p. 875–895.