# THE *CHRONOKRATORES* IN GREEK ASTROLOGY, IN LIGHT OF A NEW PAPYRUS TEXT

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## ABSTRACT

This article is a study of the system of "time-lords" (χρονοκράτορες) in Greek astrology, by which forecasts were given on the basis of the division of the lifespan into periods of 129 months, ruled by the planets in succession. The origins of the system, which probably lie in ancient Egyptian astrology, remain obscure, but a more detailed picture of its development and use in the Greco-Roman period can be gained from literary sources alongside applications in the papyrological record, including a substantial new text of the second century CE published here with translation and commentary.


## I. INTRODUCTION

In his landmark study on the history of Greek astrology, Auguste Bouché-Leclercq admitted to basing his discussion of the popular system of "time-lords" (χρονοκράτορες), by which forecasts proceeded

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from the partition of the lifespan of a native (an astrological term for the person whose horoscope is being examined) among the planets in periods of 129 months, on the late ancient author Firmicus Maternus, "faute de mieux."[1] It is the purpose of this article to bring to light a new witness to this system in a Greek papyrus, which, if it does not resolve much of the obscurity surrounding the origin and rationale of the system, securely attests its application in Roman Egypt at least a century before Firmicus. This witness takes the form of an extensive horoscope, or more accurately, forecast apparently based on a horoscope but omitting its usual astronomical data, substituting for the position of planets at birth an application of the system of *chronokratores*. Here the evidence for the *chronokratores* will first be reviewed, as well as the genre of discursive or deluxe horoscopes, followed by an edition, translation, and commentary on the new text, a papyrus which also presents some novelties in the form of rare or new vocabulary and predictions not yet paralleled in Greek astrology.

## II. *CHRONOKRATORES*

Greek writings on astrology, already by the time of Vettius Valens in the mid-second century CE, make reference to a system of distribution of the lifespan among seven planetary χρονοκράτορες that was apparently well enough known to require no theoretical elaboration. What little can be concluded about the origins of this system and the logic behind its derivation is best presented through a survey of the surviving sources.

A popular division of human life into seven ages, already found in Solon, was merged in Greek thought with the concept of the influence of the seven planets, the latter coming to enjoy broad popularity in astrology,[2] while the concept of a seven-fold cosmic division with implications for human physiology can also be found in the pseudo-Hippocratic *On Hebdomads*.[3] The doctrine of celestial influences can be

[1] Bouché-Leclercq 1899:491–506.

[2] Gundel 1927; Gundel and Gundel 1950:2156–2157; H. G. Gundel ap. Boll, Bezold, and W. Gundel 1966:173–183.

[3] Roscher 1913; Boll 1913:112–128, 137–145.

traced back ultimately to ancient Egypt; a system of natal astrology based on the planetary weekday of birth is first found in Greek in Claudius Ptolemy (second century CE). The explicit periodization of life and assignment of each period to a planet described by Ptolemy from unknown sources in a section on time-divisions at the end of the *Tetrabiblos* (4.10.4–12) proved the most popular. In the first instance he presents the system as a sort of framework and check against inappropriate predictions otherwise obtained from particular calculations:

> ἐπὶ τῶν χρονικῶν διαιρέσεων τὰς τῶν ἡλικιῶν διαφορὰς καὶ ἐπιτηδειότητας πρὸς ἕκαστα τῶν ἀποτελεσμάτων ἀναγκαῖον προυποτίθεσθαι καὶ σκοπεῖν, ὅπως μὴ κατὰ τὸ κοινὸν καὶ ἁπλοῦν τῶν πρὸς τὴν ἐπίσκεψιν θεωρουμένων συμβατικῶν λάθωμεν αὐτούς ποτε τῷ μὲν βρέφει πρᾶξιν ἢ γάμον ἤ τι τῶν τελειοτέρων εἰπόντες, τῷ δὲ πάνυ γέροντι τεκνοποιίαν ἤ τι τῶν νεανικωτέρων, ἀλλὰ καθάπαξ τὰ διὰ τῶν ἐφόδων τῶν χρονικῶν θεωρούμενα κατὰ τὸ παρόμοιον καὶ ἐνδεχόμενον τῶν ταῖς ἡλικίαις συμφύλων ἐφαρμόζωμεν· ἔστι γὰρ ἐπιβολὴ μία καὶ ἡ αὐτὴ πάντων ἐπὶ τῶν χρονικῶν διαφορῶν τῆς καθόλου φύσεως τῶν ἀνθρώπων ἐχομένη καθ’ ὁμοιότητα καὶ παραβολὴν τῆς τάξεως τῶν ἑπτὰ πλανωμένων ἀρχομένη μὲν ἀπὸ τῆς πρώτης ἡλικίας καὶ τῆς πρώτης ἀφ’ ἡμῶν σφαίρας, τουτέστι τῆς σεληνιακῆς, λήγουσα δὲ ἐπὶ τὴν πυμάτην τῶν ἡλικιῶν καὶ τῶν πλανωμένων σφαιρῶν τὴν ὑστάτην, Κρόνου δὲ προσαγορευομένην, καὶ συμβέβηκεν ὡς ἀληθῶς ἑκάστῃ τῶν ἡλικιῶν τὰ οἰκεῖα τῇ φύσει τοῦ παραβεβλημένου τῶν πλανωμένων, ἃ δεήσει παρατηρεῖν, ὅπως τὰ μὲν καθόλου τῶν χρονικῶν ἐντεῦθεν σκοπῶμεν, τὰς δὲ τῶν κατὰ μέρος διαφορὰς ἀπὸ τῶν ἐν ταῖς γενέσεσιν εὑρισκομένων ἰδιωμάτων.
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> Ptol. *Tetr.* 4.10.4–5

> In the case of time-divisions (*chronikai diaireseis*), for each (prediction of an) effect (*apotelesma*) it is necessary to establish first the different tendencies of the ages, and to

> take care that we do not accidentally follow the common and simple thrust of the incidents (*symbatika*) contemplated in the inquiry and predict for a baby business or marriage or anything proper to those of more mature age, and for one of advanced age, child-rearing or anything proper to those of younger age. Rather, let us once and for all harmonize our contemplations for the course of time-divisions according to what is consistent with and possible for those at each age. For in respect of time-divisions all have one and the same onset of general human nature, whose bearing follows the likeness and analogy of the sequence of the seven planets, beginning with the first age and the first sphere from us, that is, the lunar, and ending at the last of the ages and the outermost of the planetary spheres, that called Saturn's. Indeed the incidents for each of the ages are those proper to the nature of the analogous one of the planets, which it will be necessary to observe so that we may consider the general traits of the years on the one hand, and on the other the particular differences arising from the characteristics found in the nativities.

The order follows that of the planetary spheres—Moon (4 years), Mercury (10), Venus (8), Sun (19), Mars (15), Jupiter (12), Saturn (the remainder)—and explains human development as the result of the influence of each of the personal characteristics of the planet upon the native during that period. A more complex system of "release" (ἄφεσις) is then developed (13–27) in which the "general" (καθολικοί) *chronokratores* distribute their rule to yearly, monthly, and daily subordinates, all of which can be calculated by observation of degrees and aspects, thus integrating the system with zodiacal astrology. Predictions based on the yearly *chronokratores*, as observed in particular signs or other places, are drawn more broadly for effects on that year's events beyond a particular native in a section of a still-unpublished discussion of

Apomasar (Abū Maʿshar);[4] to be distinguished also is the concept of "cosmic" *chronokratores* with dominion over sequential, millennial portions of the total lifespan of the universe.[5] The simpler enumeration of the general periods circulated independently, as for example in a handy table from a Byzantine astrological collection, where the value of 30 years has been assigned to Saturn:

περὶ τῶν ὑπαλλήλων ἑπτὰ ἡλικιῶν·
ζ΄· γεροντικὴν ἡλικίαν ἔχει ὁ Κρόνος ἔτη λ΄.
ς΄· πρεσβυτικὴν ἡλικίαν ἔχει ὁ Ζεὺς ἔτη ιβ΄.
ε΄· ἀνδρικὴν ἡλικίαν ἔχει ὁ Ἄρης ἔτη ιε΄.
δ΄· νεωτερικὴν ἡλικίαν ἔχει ὁ Ἥλιος ἔτη ιθ΄.
γ΄· μηρακιώδη ἡλικίαν ἔχει ἡ Ἀφροδίτη ἔτη η΄.
β΄· παιδικὴν ἡλικίαν ἔχει ὁ Ἑρμῆς ἔτη ι΄.
α΄· τρόφιμον ἡλικίαν ἔχει ἡ Σελήνη ἔτη δ΄.

On the seven successive ages:
7: advanced old age is the possession of Saturn, for 30 years.
6: the age of elderliness is the possession of Jupiter, for 12 years.
5: the age of manhood is the possession of Mars, for 15 years.
4: the age of young adulthood is the possession of the Sun, for 19 years.

[4] περὶ χρονοκράτορος, §3 in a work titled *The Secret Book of Effects* (ἡ ἀποτελεσματικὴ βίβλος τῶν μυστηρίων), described here with reference to a digital facsimile of Florence, Biblioteca Medicea Laurenziana cod. Plut. 28.33, ff. 11v–12v (http://mss.bmlonline.it/Catalogo.aspx?Shelfmark=Plut.28.33); cf. *CCAG* vol. 1, 39–40 cod. 11 (for further versions, see *CCAG* vol. 4, 40 and vol. 5.1, 5).

[5] See, e.g., the anonymous Byzantine text in *CCAG* vol. 8.1, 196, εἰς τὴν γένεσιν τῆς κοσμικῆς ⟨διαθέσεως⟩ διαλαμβάνει ἕκαστος τῶν ἀστέρων τὴν χρονοκρατορίαν χίλια ἔτη, subject to similar internal subdistributions of the καθολικοὶ χρόνοι to the other planets, and with internal reference to the analogous system of 129-month periods for human lives (ὁμοίως δὲ ἐπὶ τῶν ἀνθρώπων ἐάν τις γεννηθῇ, ἕκαστος λαμβάνει τὴν χρονοκρατορίαν ι΄ ἔτη καὶ θ΄ μῆνας); the cosmic system and its subdivisions, on which see in general Cumont 1931, are further elaborated "according to the Chaldaeans" (κατὰ τοὺς Χαλδαίους) in the text edited in *CCAG* vol. 5.2, 135–137.

3: the age of adolescence is the possession of Venus, for 8 years.
2: the age of childhood is the possession of Mercury, for 10 years.
1: the age of nursing is the possession of the Moon, for 4 years.[6]

Upon this distribution, a cycle of "general" *chronokratores* with a period of ten years, nine months was developed, in which rule similarly progressed from planet to planet. Here each period was subdivided with the original year totals apparently converted to months, while the values for Moon and Mercury were increased: Sun (19 months), Moon (25), Saturn (30), Jupiter (12), Mars (15), Venus (8), and Mercury (20). In effect, the values represent the conversion to months of the so-called "minimal years" (ἴδια or ἐλάχιστα ἔτη) for each planet under a related system, for determining the lifespan allotted by each planet as master of the nativity:[7] in that role, each of the planets promised a "maximum," "middle," or "minimum" complement of years (τέλεια or μέγιστα; μέσα; ἴδια or ἐλάχιστα ἔτη), depending on various incidental factors. The maximum years result from the sum of the degrees allotted to each planet by each of the zodiac signs under the Egyptian term-system (ὅρια),[8] and the middle years from the arithmetical mean between them and the minimum years. Yet another path of astrological derivation pertains to the minimum years. The values have been explained as derived from the synodic periods of the respective celestial bodies, but there is probably a more complex relation involving also the zodiacal periods, the Metonic cycle, and the Egyptian calendrical cycle of 25 years;[9] the question is in need of further study.

[6] Florence, Biblioteca Medicea Laurenziana cod. Plut. 28.34, f. 145v (unpublished: transcribed from the facsimile at http://mss.bmlonline.it/Catalogo.aspx?Shelfmark=Plut.28.34); on the manuscript and its astrological contents, see *CCAG* vol. 1, 60–72 cod. 12.

[7] On this system, see Bouché-Leclercq 1899:407–411; Neugebauer and van Hoesen 1959:10–11; Heilen 2015a:648–650.

[8] On the terms, see recently Tolsa 2018:248–251.

[9] For the latter, see Neugebauer and Parker 1969:220–225 (the reference is owed to an anonymous reader for *HSCP*). The same minimum year values for the planets, but not the

The Sun, for daytime births, or the Moon, for nighttime births, occupies the first period in the cycle and the first subdivision within it, while the order among the subsequent planets follows their position along the zodiac-ecliptic in the geniture. This system is found already in Ptolemy's near contemporary Vettius Valens, who devotes a chapter to "the division of propitious and unpropitious time-periods into ten years and nine months" (Περὶ τῆς εἰς ι΄ ἔτη καὶ μῆνας θ΄ διαιρέσεως ἐμπράκτων τε καὶ ἀπράκτων, *Anthologiae* 6.6).[10] Here Valens presents himself as bringing order to confused and haphazard accounts among his predecessors, who are not named. The term χρονοκράτωρ is not introduced until partway through the description, the planets being called instead "releasers" (ἀφέται) at the outset. A further development is the subdivision into analogous periods for hours, days, and months (ὡριαῖοι, ἡμερήσιοι, μηνιαῖοι) in addition to years (ἐνιαύσιοι) (6.6.6). Also considered is the moderation of effects of the *chronokratores* themselves by the agency of the planets directly preceding and following in the succession (κατὰ τὴν τοῦ παραδιδόντος καὶ παραλαμβάνοντος ἐνέργειαν καὶ διάθεσιν οἰκείαν ἢ ἐναντίαν, 6.6.7). Valens closes with a sample geniture, a nighttime birth where the zodiacal positions give the succession Moon, Venus, Jupiter, Saturn, Mars, Sun, Mercury, with a sample prediction for 15 Pauni (8 June) in the 53rd year of the native's life.[11]

A lengthy but by no means satisfactory explanation of the system, as Bouché-Leclercq saw, comes later in the fourth-century work of Julius Firmicus Maternus. Firmicus in fact devoted a full treatise to

luminaries, are provided as the length of time for which each is "operative" (χρηματίζει) over the native in the fragmentary treatise of *PSI* XV 1495 (back, 8–11); the same term is used in the *chronokrator*-like periodization of the Old Coptic Horoscope (discussed below).

[10] In other places (4.26; 5.7.17–36), and in the ancient *Appendix* (*Additamenta antiqua*), the predecessor Critodemus is cited in discussion of doctrines that may be related. The extent to which the *chronokratores* are equivalent to the system of "distributions" (ἐπιμερισμοί) attributed to Critodemus will be explored in a forthcoming collection of the fragments of the latter author by Cristian Tolsa (*The Orphic Astrologer Critodemus: Fragments with Annotated Translation and Commentary*), whom I thank for permission to mention it here.

[11] *Anthologiae* 6.6.11–31 with Heilen 2015a:263 (no. Hor. gr. 132.II.7), 1000.

the subject, which does not survive,[12] and promises further discussion, to include an explanation of the origin of the month values for the planets, which is only partly supplied in his extant work.[13] Firmicus does offer a more detailed enumeration of the effects of each star as *temporum dominus* through its distribution of the months to the rest of the stars, in the order Saturn, Jupiter, Mars, Sun, Venus, Mercury, and Moon.[14] These forecasts are complicated by the need to account for variations due to relations among the stars themselves.[15] A guiding principle is correspondence between the contributions of each star to the geniture, and its effects in its period of *chronokratoria*.[16] Echoing the cautions of Ptolemy, Firmicus stresses the importance of performing this calculation at the outset of dealing with genitures, since it can, for example, cut short the life of the native before good effects promised by other constellations can take hold.[17] The system is above all ancillary to, and dependent upon, the simple casting of genitures. In Manilius, whom Bouché-Leclerq mentions in passing as having been plagiarized by Firmicus, nothing closely comparable is found. Periodization of the lifetime is considered at some length (3.510–617), but the assignations are made only to zodiac signs, not planets, discussion of which Manilius in general postpones or perhaps deliberately avoids.[18]

Further explanation of the system in Greek comes in the early fifth-century work of Hephaistion, who discusses "the division of the

[12] *omnia licet in hoc opere sparsim dicta sint, specialiter tamen in singulari libro quem de domino geniturae et chronocratore ad Murinum nostrum scripsimus et comprehensa sunt et explicata* (*Mathesis* 4.20.2).

[13] *quid autem ista temporum distributione fiat, in libris apotelesmatum dicemus* (*Mathesis* 2.27.2); the reference to plural "books" there seems to promise a more extensive discussion than eventually comes at 6.33–40, where the author also mentions a previous discussion of his on how to find the *temporum dominus* (6.33.1).

[14] *Mathesis* 6.33–40.

[15] E.g., the Sun (*Mathesis* 6.39.5) and Moon (*Mathesis* 6.40.1–2).

[16] As expressed for Saturn: *respice itaque quatenus sit in genitura positus ... quae cum omnia diligenti ratione collegeris, tunc inuenies quid faciat cum dominus temporum fuerit* (*Mathesis* 6.33.2).

[17] *Mathesis* 4.20.1.

[18] For the view that Firmicus in fact also used another source shared with Manilius, see now Hübner 1989:88; on the difficulties in the third book of Manilius, see Green 2014:28–33; on the absence of the planets, see Volk 2009:93 (*chronokratores*), 116–126.

ten years and nine months," arriving at the same distribution of the 129-month period.[19] Hephaistion also provides the greatest detail thus far known on the origins of the system, which he ascribes to ancient Egypt (Hephaistion *Apotelesmatica* 2.29.1, Pingree 1973–1974:200):

> ἤδη δέ τινες τῶν ἀρχαίων Αἰγυπτίων συνθέντες τὰς περιόδους ὁμοῦ τῶν ζ΄ ἀστέρων συντεινούσας εἰς ἔτη δέκα καὶ μῆνας θ΄, ἀρξάμενοι ἀπὸ πρώτου καὶ αἱρετικοῦ φωτὸς ἐμέρισαν τοῖς ἐφεξῆς ἀστράσι κατὰ τὰ ἐφεξῆς ζῴδια ἑκάστῳ διδόντες τὴν ἰδίαν περίοδον.
>
> Some of the ancient Egyptians have already added together the periods of the seven stars, which amount to ten years and nine months, and beginning with the first luminary, the one of the sect (αἱρετικόν), have apportioned to the following stars in order of the following zodiac signs, giving to each its own period.

There follows as in his predecessors an internal subdivision (ὑποδιαίρεσις), with each releaser dividing the days proportionally (κατὰ ἀναλογίαν μερίζει) to the allocation of months in the 129-month period; e.g., Saturn in its 30-month period takes the first 210 days for itself and assigns the next 84 days to Jupiter, and so on. The χρονοκρατορίαι are then taken up in order (*Apotelesmatica* 2.30–36, Pingree 1973–1974:202–226), to provide a general template for the subdivisions.

Some more fragmentary references to the system can be identified in Greek astrological treatises on papyrus. Model predictions for a χρόνος are made in *P.Mert.* II 56, of the second century CE, in which the character of the planets between which rule is passed (Venus and Mars are mentioned) may be the organizing principle. The treatise-fragment *P.Münch.* II 27, of the same century, mentions χρονογραφίαι in relation to planetary positions, specifically the Sun and Moon. In these "time-period tabulations," one is tempted to recognize the same sort of sequential predictions offered by the Bodleian papyrus. In *SB* XXII

[19] *Apotelesmatica* 2.29, Pingree 1973–1974:200–202: διαίρεσις ι΄ ἐτῶν καὶ μηνῶν θ΄.

15231, a fragment of a bookroll reused on the back for a horoscope (a nativity of 186/7 CE: *BKT* IX 102), predictions of a similar general character and vocabulary as those of the new text published here are given for sequential periods of days (on the Egyptian calendar), presumably in a human lifetime, though the basis is not stated in the surviving portion. The identification of predictions for periods in a human lifetime is more certain in P.Mich. inv. 29 recto,[20] of the second or third century CE, and a basis at least in part on planetary positions at birth is suggested by the technical terms χρηματίζειν (ii 2) and a conditional clause in ἐὰν ὁ τ[ ] (ii 1) that might be restored with the periphrastic expression for a planet (ὁ sc. ἀστήρ and the definite article in the genitive to introduce a planetary god, as in the new text). The influence of a Greek treatise also surfaces in some astrological instructions in Demotic, *O.Narm.Dem.* I 27, with loanwords in Greek script for astrological technical terms: there is a fragmentary mention of a case in which "you act as apportioner (μοιρωλόγος, for μοιρο-) the *chronokrator* (χρονοκράτωρ) for a man" (*i̯w=f ḫpr i.ir=k ir* μοιρωλόγ\ο/ς *(n) p;* χρονοκράτ\ωρ/ *r wʿ rmṯ*). The term μοιρολόγος, previously interpreted as "fortune-teller," is better understood with reference to μοιρογραφία ("tabulation of degrees") in astrological computations, and hence the text would have given a procedure for determining the order of the planets as *chronokratores* based on degree-positions at birth.[21]

Beyond theoretical discussions, the application of the system in practical astrology can also be established. At the turn of the sixth century, Rhetorius considered the progression of the Moon towards each planet, giving in effect a succession of *chronokratores* beginning with the Moon. This calculation starts from the positions of planets, ascendant, and midheaven, which are then subject to various computations based on aspects and distances from midheaven, yielding a customized succession of planets and their aspects, and which is

[20] Edited by Ambühl, Markovska, and Milnor 1995; for the text on the verso, see also *P.Oxy.Astr.* 1:305.

[21] Andreas Winkler is thanked for this reference and discussion of the alternative interpretation advanced here; see further Winkler 2022.

illustrated by model horoscopes.[22] The term "releaser" (ἀφέτης) is applied to the Sun or Moon when they begin one of these sequences. In his analysis of the career of the fifth-century patrician Pamprepius in light of his nativity, Rhetorius pays similar attention to periods of life.[23]

Practical, astrological application of the version of the system with fixed terms is also attested. In a fourth-century ritual handbook of Greek and Old Coptic texts on papyrus, the well-known Paris magical codex, we find an excerpt from a similar presentation in the Greek portion, beginning at 53 years, 9 months, that is, the start of the sixth 129-month period of the lifespan, and assigning this period to Mercury, with releases to Mercury (20 months), Venus (8 months), the Sun (19 months), Mars (15 months), the Moon (25 months), Jupiter (12 months), and Saturn (30 months), in that order, bringing the total to 64 years, 6 months. For the releases to the Sun, Mars, the Moon, Jupiter, and Saturn, short forecasts are added:[24]

> ἀπὸ ἐτῶν νγ΄ καὶ μηνῶν θ΄ ἔλαβεν τοὺς χρόνους Ἑρμῆς ἐπὶ ἔτη ι΄ καὶ μῆνας θ΄, ἀφ' ὧν ἑαυτῷ ἐπιμερίζει μῆνας κ΄, ὡς εἶναι [ειν pap.] ἔτη νε΄ μῆνας ε΄, εἶτα Ἀφροδίτῃ μῆνας η΄, ὡς εἶναι καὶ ὧδε ἔτη νς΄ μῆνα α΄, εἶτα Ἡλίῳ μῆνας ιθ΄, ὡς εἶναι ἔτη νζ΄ μῆνας η΄· ἐν τούτοις ἐπιμεριζομένοις Ἡλίῳ χρόνοις, τοῦτ' [τουτ' pap.] ἔστιν τοῖς ιθ΄ μησίν, ἐπιβαλοῦ εἰς ὃ [ό pap.] ζητεῖς. μετὰ τοῦτο ἐπιμερίζει Ἄρει [αρεϊ pap.] μῆνας ιε΄, ὡς εἶναι ἔτη νη΄ μῆνας ια΄· οὗτοι ἐνα⟨ν⟩τίοι [ενατιοι pap.] χρόνοι· εἶτα Σελήνῃ μῆνας κε΄, ὡς εἶναι ἔτη ξα΄· οὗτοι καλοί· εἶτα Διὶ [διϊ pap.] μῆνας ιβ΄, ὡς εἶναι ἔτη ξβ΄· οὗτοι καλοί· εἶτα Κρόνῳ μῆνας λ΄, ὡς εἶναι ἔτη

[22] *CCAG* vol. 8.1, 227–237 with Neugebauer and van Hoesen 1959:132–135 no. L 401 and 150–152 no. 488; Heilen 2015a:299 no. Hor. gr. 400–401, 309 no. Hor. gr. 488.

[23] *CCAG* vol. 8.1, 221–224, with Neugebauer and van Hoesen 1959:140–141 no. L 440; Heilen 2015a:301–302 no. Hor. gr. 440.IX.29.

[24] Paris, Bibliothèque nationale de France cod. suppl. gr. 574, f. 10v (ed. *PGM* P IV 835–849; abbreviations silently expanded; collated with the digital facsimile available at https://gallica.bnf.fr/ark:/12148/btv1b525030475); on the passage, see also Neugebauer and van Hoesen 1964:62–63 no. 126; Gundel 1968:66–67. On the codex, see recently Love 2016.

> ξδ΄. οὗτοι σωματικῶς φαῦλοι, ἐν οἷς καὶ κλιμακτῆρες [κλιμακτηρας pap.].
>
> (Starting) from 53 years 9 months, Mercury has taken the time up to 10 years and 9 months, of which it distributes 20 months to itself, to make 55 years 5 months, then to Venus 8 months, to make 56 years 1 month thus far, then to the Sun 19 months, to make 57 years 8 months. In this time distributed to the Sun, that is the 19 months, undertake that which you seek. After this, (Mercury) distributes to Mars 15 months, to make 58 years 11 months—these times are adverse—then to the Moon 25 months, to make 61 years—these ones are good—then to Jupiter 12 months, to make 62 years—these are good—then to Saturn 30 months, to make 64 ½ years—these are bad with respect to the body, and within them lie also the *klimakteres* (*sic*).[25]

A version of the customized periodization applied by Rhetorius appears also in the so-called Old Coptic Horoscope, dated ca. 95 CE.[26] This document, drafted in Greek and Old Coptic on a papyrus bookroll later reused for a copy of Hyperides, establishes first the horoscope (columns i–iii), then makes divisions of the lifespan into periods corresponding to planets with the resulting, extensive predictions (columns iv–vi), in the order Venus (birth to 6 years, 9 or 5 months, 25 days), Mars (?) (to year 25, month 2, day 25), Jupiter (to year 34, month 5, day 24), and another whose name is lost (to year 54, month 10, day

[25] Critical years in the lifespan as multiples of seven (see in general Boll 1921); only one (the 63rd) could have fallen in this period, and as Stephan Heilen points out to me, the singular κλιμακτήρ may have been meant, or there may have been a more serious corruption of κλιμακτὴρ ἀ⟨νδρόκλα⟩ς by *saut du même au même*, as this "man-breaking" climacteric year is so termed by Firmicus Maternus (*Mathesis* 4.20.3, *androclas*), attributed in turn to "the Egyptians."

[26] P.Lond. inv. 98: Černý, Kahle, and Parker 1957; Neugebauer and van Hoesen 1959:28–38 no. 95; Heilen 2015a:237–238 no. Hor. gr. 95.IV.13, 326 no. Hor. kopt. 95.IV.13. See recently Greenbaum and Jones 2017:164 for brief comment on the "extensive statements concerning the life of the native derived from elements of the horoscope ... unparalleled in any other known Greek horoscope on papyrus"; Winkler 2018:306–307 considers the process of composition of this text as either compilation from Greek and Demotic handbooks or selective translation of a Demotic handbook into Greek.

4). Subdivision within each period, however, is lacking. This section is primarily in Old Coptic, but with Greek rubrics, whose form recalls the presentation of the periods in the Paris magical codex as well as the new text, e.g., column v 125–127, "Third time-period: the (star) of Jupiter is operative from 25 years, 2 months, 25 days, until 34 years, 5 months, 24 days" (τρίτος χρόνος· ὁ τοῦ Διὸς χρηματείζει ἀπὸ (ἐτῶν) κε΄ μῦνας β΄ ἡμέρας κε΄ ἕως (ἔτη) λδ΄ μῦνας ε΄ ἡμέρ(ας) κδ΄). No word corresponding precisely to χρονοκράτωρ is found in the Greek, but in the Old Coptic there is reference in the protaseis of predictions to having a certain star (ⲥⲟⲩ) as one's ⲕⲣⲁϩⲧⲟⲩⲱⲧ, an otherwise obscure term that might be so explained.[27] Egyptian divinities, related to the decans, to whose influence monthly or sub-monthly periods were assigned at global rather than personal scope, are catalogued in the fragmentary calendar *P.Oxy.* III 465 with the epithet κραταιός (12) used to express rule over a particular period, recalling the *chronokratores*.[28]

A picture of the system of *chronokratores* can thus be synthesized from the accounts of the authors Ptolemy, Vettius Valens, Firmicus Maternus, and Hephaistion. For the purpose of forecasts, the lifetime of the native was divided into periods of 129 months, each assigned to one of the seven planets in an order determined by the celestial disposition at birth. Each period was divided among the planets in the same order, with subdivisions matching in months the so-called "minimum" planetary years, whose still obscure origin may involve in part a derivation from the orbital periods, as suggested also by Hephaistion's reference to περίοδοι. At least on the part of Hephaistion, the system was attributed to ancient Egyptian astrological tradition, which is borne out in the presence of its four most extensive applications in the papyrological record from Egypt itself: the Greek text published here; a similar but more fragmentary and unpublished text now in Florence, which probably belongs with a smaller fragment already published, now in

[27] Column iv 121–column v 123 with the note of Černý, Kahle, and Parker 1957:91.

[28] Now P.Lond. inv. 1526; see also Neugebauer and van Hoesen 1964:61–62 no. 124; Heilen 2015a:1335.

Milan; and two in bilingual Egyptian-Greek textual contexts (the Paris magical codex and the Old Coptic Horoscope).[29]

## III. DISCURSIVE HOROSCOPES

That the new text, whose contents are described in further detail below, is a horoscope personalized for an individual is indicated by the use of the second person in the forecasts. Fluctuation between the second and third persons probably stems from imperfect adaptation of an exemplar in the form of a handbook. A handbook, or extract thereof, might also have adopted the second person (as in the example in the Paris magical codex) but should have done so consistently; a model horoscope presented in a literary text would not be expected to mix the two persons in reference to the same native. The length, the layout in bookroll format, and the stylish prose with literary diction (e.g., βαρύθυμος, iii 58), affectations such as postpositive ἐντός (iii 57–58), and the Ionic ἰητροί for ἰατροί (iii 50)[30] place the new text among what have been called "deluxe" or "elaborate" horoscopes; the term "discursive" has been introduced here, since "elaborate" has recently been taken to refer more specifically to the presence of detailed astronomical calculations.[31] The present text is, in its level of detail on forecasts, paralleled only by the Old Coptic Horoscope, but it remains silent on the details of the position of the planets at the native's birth, which

[29] For the Egyptian and specifically temple context of much of the preserved Greek astronomical and astrological papyri, see Jones 1994; for literary texts, see also Kroll 1923. The Florence papyrus is PSI inv. 3780, which will be published in *PSI* XX by Alexander Jones and Marco Perale, whom I thank for permission to mention it here; it probably represents a more substantial portion of the same horoscope of which a smaller fragment was published in Daris 1987:40–42 (P.Med. 124, identified as a "trattato astrologico"). Close resemblances in phrasing (e.g., expression of release with the phrase παραλαμβάνει [planet N] ἔτη $n_1$ μῆνας $n_2$ εἰς συνπλήρωσιν ἐτῶν $n_3$ μηνῶν $n_4$, with or without the specification ἐκ τῶν καθολικῶν χρόνων of the particular *chronokrator*; select parallels are mentioned in the commentary below) suggest a derivation from a common formulary for the fragments of the Florence-Milan and Bodleian horoscopes, which cannot have belonged to the same manuscript.

[30] Planets are also named in a literary style with reference to eponymous gods as "the (star) of," e.g., Hermes (ὁ τοῦ Ἑρμοῦ sc. ἀστήρ, i 20), for which see Cumont 1935.

[31] *P.Oxy.Astr.* (1) p. 47; Greenbaum and Jones 2017.

the Old Coptic Horoscope gives, and which would have been required to determine the order of the *chronokratores* according to the system as described in the astrological manuals.

Apart from a few epigraphic instances, the main source for original ancient horoscopes in the Greco-Roman world is the Greek and Demotic papyri from Egypt. The typical papyrus horoscope is laconic, giving only the basic information on positions of the planets in zodiac houses and date and time of the nativity.[32] Oxyrhynchus, the find-spot of the new text, does not fail to yield up an impressive crop of horoscopes.[33] More discursive papyrus horoscopes are a rarity, but attested. These texts, while still lacking predictions,[34] may give a longer introduction before proceeding to the astronomical data; a fragmentary example from Oxyrhynchus cast in the reign of Tiberius reads "Considering it necessary [...] the genitures from you, dear Tryphon, I shall attempt [...] in regard to the chronological data (?) supplied to me [...] they are the following ..."[35] Another, cast at Hermopolis in 81 CE, composed in several narrow columns as a literary bookroll and containing an unusual reference to the place of the astrological decans,[36] is prefaced by the calculator, who also gives his name at the end of the document,

[32] Or "minimal" in the typology of Greenbaum and Jones 2017. For Greek horoscopes on papyrus in general, see Neugebauer and van Hoesen 1959 (supplemented by Neugebauer 1962 and Neugebauer and van Hoesen 1964:67–70), Baccani 1992, and Heilen 2015a:213–316, including 168 "Originalhoroskope" from papyrological sources. For horoscopes from Egypt in Demotic, see recently Winkler 2016, 2018, and 2022; for recent overviews of the content and context of ancient horoscopes in general, see Greenbaum 2020 and Heilen 2020.

[33] See recently *P.Oxy.Astr.* 4236–4300a.

[34] One exception may be the very fragmentary *P.Oxy.Astr.* 4278; line 11 in particular may include a prediction, possibly of a "bad death" (κακῶς θα[νεῖν], θα[νατωθῆναι], or similar; for a few more exceptions, see Heilen 2015a:526n741). A similar situation occurs in the Demotic horoscopes, with only two cases of forecasts known, both laconic (Winkler 2018:300).

[35] *P.Oxy.* II 235 (Neugebauer and van Hoesen 1959:18–19 no. 15/22; Heilen 2015a:218 no. Hor. gr. 15–22), beginning ἀναγκαῖον ἡγησάμ[ενος ca. 7 ]ν̣α̣ . . [ ca. 7 ] | γενέσεις παρὰ σοῦ, Τρύφων ἀ̣γ̣α̣π̣ε̣τ̣έ̣, ε̣[ ca. 6 ] | πειράσομαι πρὸς τοὺς δοθέντ̣ας ἡ[μῖν ca. 8 ] | χρόνους, τυν[χ]ά[ν]ουσι δὲ οὗτοι (...); for the statement of the basis of calculation, see now also *P.Oxy.Astr.* 4276.

[36] See now also *P.Oxy.Astr.* 4245 (geniture of 218 CE), which dispenses with a preface but places the data in connected prose rather than schematic list form, and the more fragmentary *P.Oxy.Astr.* 4284–4285.

with a concern to position his work within a venerable Egyptian tradition: "Those of the Egyptians who long ago made manful and diligent inquiry into celestial phenomena and discovered the motion of the seven (planetary) gods as comprising and dispensing all things have left us with knowledge about them via eternal canons, whence I, after making each calculation accurately, have arranged for you aspect and phase with respect to degree and minute, and that which generally pertains to inquiry, lest I waste time in recounting each one. For it is thus that the predictive mode in astrology is rendered unambiguous, that is, consistent. Farewell, my dear Hermon."[37] Reference to Egyptian—possibly alongside Mesopotamian—precedent is made more concisely by the compiler of a geniture of 137 CE on a papyrus said to come from Thebes; the compiler presents his calculations for "the seven (planetary) gods" as the result of considerations "based on many books as it has been transmitted to us by the ancient sages, that is the Chaldeans and Petosiris, but in particular also King Necheus, as they themselves also have been advised (?) by our lord Hermes and Asclepius, that is, Imouthes, son of Hephaestus."[38]

[37] P.Lond. inv. 130 (Neugebauer and van Hoesen 1959:21–28 no. 81; Heilen 2015a:232–233 no. Hor. gr. 81.III.31; cf. also Heilen 2015b), beginning [τ]ῶν Αἰγυπτίων οἱ τὸ | παλαιὸν ἄν[δρ]ες γε|νόμενοι [γ]νησίως | τε περὶ τὰ οὐράνι|α φιλοπονήσαν|τες καὶ ἐπιγνόν|τες τὴν τῶν ἑπτὰ | θεῶν κείνησιν | τὰ ὅλα ᾰ[υ]νέχου|σάν τε καὶ διοικοῦ|σαν ἀφ[θ]όνως ἡ|μεῖν διὰ κανό|νων αἰωνίων | ἀπέλειπον τὴν | περὶ αὐτῶν γνῶ|σιν· ὅθεν ἕκα|στον ψηφίσας ἀ|κριβῶς τέταχά | σοι πρός τε μοῖ|ραν καὶ λεπτὸν | σχῆμά τ[ε] καὶ φά|σιν καὶ τὰ | πρὸς | ἐπίσκεψιν ἁπλῶς | τείνοντα ἵνα μὴ | ἐπιλεγόμενος ἕ|καστον ἐνχρονίζω· | οὕτως γὰρ ὁ ἐν ἀστρο|λογίᾳ προρητικὸς | τρόπος ἀναμφί|βολος, τουτέ̣σ̣τ̣ιν | ὁμόλογος κατορ|θοῦτ̣αι. ἔρρωσό | μοι, φίλτατε Ἕρ|μον; the calculator, Titus son of Pitenis, inserts himself at column viii 185–191, Τίτος Πιτηνιος ἐψήφισ̣α ὡς πρ̣όκε̣ι̣τ̣αι. For internal mention of the caster or copyist of a horoscope, see now also *P.Oxy.Astr.* 4266 i 12, ὁ γράψας Διάπαλος, an otherwise unattested proper name; a facsimile suggests rather -πανος, which is no better attested, and perhaps διὰ παν‹τ›ός "always" was intended.

[38] P.Louvre inv. 2342 bis (Neugebauer and van Hoesen 1959:42–44 no. 137c; Heilen 2015a:265–266 no. Hor. gr. 137.XII.4), i 1–5, beginning ἑπτὰ θε[οί·] | σκεψάμενος ἀπὸ πολλῶν βίβλων ὡς παρεδόθη | ἡμεῖν ἀπὸ σοφῶν ἀρχαίων, τουτέστιν Χαλδαικῶν | καὶ [Π]ετοσιρις· μάλιστα δὲ καὶ ὁ βασιλεὺς Νεχευς· | ὥσπερ καὶ αὐτοὶ συν`η´ύδρευσαν ἀπὸ τοῦ κυρίου ἡμῶν | Ἑρμοῦ καὶ Ἀσκληπιοῦ, ὅ ἐστιν Ιμουθου, υἱὸς Ἡφήστου. Closely related to this text are two others concerning the same nativity, one a near duplicate without this preface and with slightly different data (P.Louvre inv. 2342 and P.Lond. inv. 110; see Neugebauer and van Hoesen 1959:39–42 nos. 137a–b), suggesting that a single person consulted two different astrologers. For the use of comparable "framing stories" in

## IV. THE NEW TEXT

The new text witnesses the application of the standard periodization of the *chronokratores* in a double division of the lifespan into 129-month periods portioned out to planets (with only the Moon and Venus surviving) and individual periods subdivided with fixed values (25 months to the Moon, and so on). The latter cycle of releases apparently proceeded through the planets in the order Moon, Venus, Mercury, Mars, Sun, Saturn, Jupiter, and it is probable that the former, of general *chronokratores*, did also. The order of planets does not correspond to the *heptazonos* or other canonical sequences;[39] it could be drawn from an individual horoscope, or a handbook that covers all possible combinations (or takes one case as a model), in this case a nighttime birth, the planets arranged according to their position in the horoscope at birth,[40] which happens also to match the standard sequence of the planets with respect to zodiac degrees (ὅρια) in the Egyptian system for the sign of Aries.[41] As shown above, internal features of the text indicate the imperfect adaptation of a formulary to an individual horoscope, rather than a simple extract from a literary text. In any case, the papyrus gives a simple version of the system of *chronokratores*, neither duplicating nor extending it to a three-fold division by year, month, and day, examples of which have been discussed already.

The surviving portion runs at least into the native's sixteenth year. Troubled years they would have been, with difficulties predicted for the parents too, not least of which would have been the death of the father in the release to the Sun during the *chronokratoria* of the Moon (between the native's fifth and eighth years). Too little remains for a thorough account of how the predictions relate to the general conceptions of the character of each planet. They were probably informed by astrological

Egyptian astrological texts, see Winkler 2016:248 and Quack and Ryholt 2019, texts 10–11; for Petosiris and Necheus in particular, Heilen 2015a:539–562. The transferred sense "astrologers" irrespective of ethnic origin might also be operative for Χαλδαῖοι here.

[39] See respectively Boll 1912:2556–2570 and Gundel and Gundel 1950:2100–2101.

[40] Cf. Firmicus Maternus *Mathesis* 2.26.2–3.

[41] See Bouché-Leclercq 1899:207: the starting point there is Jupiter, and the two luminaries are omitted.

data, in particular aspects of planets to zodiac signs, which went unrecorded. The papyrus bears little resemblance to the sample forecasts given in the discussions of the *chronokratoria* by Firmicus Maternus and Hephaestion. In the preserved releases, the Moon, Mars, and the Sun preside over general disaster, while only Venus offers unmixed good; Saturn, though first said to be a "destroyer of the nativity" (ὀλετὴρ γενέσεως, ii 39), allows some improvement in the course of its release under the Moon, as does Mercury under Venus (iii 48–53).

This early attestation of the application of the system in astrology invites questions about the context of this consultation, which still elude answers; were the astronomical data, in particular positions of the geniture, issued separately for the native in another form, and conveyed to the compiler of the present text as a specialist? The unusual emphasis on predictions for the parents of the native may point towards a specialized consultation tailored for their benefit. Whatever the particulars of that consultation, its textual remnants constitute a significant witness for the history of Greek astrology. There is, first, a further attestation for a sort of middle way, found also in the discursive horoscopes, between the theory of literary texts and the bare documents of the practice of the majority of surviving horoscopes, giving only astronomical data. This more discursive type of applied astronomy indicates both a higher intellectual level for the practitioners and clients and a larger role for the written formularies on which they apparently depended. Second, we see the transmission and elaboration of Egyptian astrological doctrine via Greek, reflected here still within its homeland, but destined to circulate more broadly via the tradition of literary texts in Late Antiquity and Byzantium, as reflected in the work of Rhetorius.

## V. EDITION

### Discursive Horoscope Based on the *Chronokratores*

Oxford, Bodleian Library, MS. gr. class. B 24 (P) 1–2 | 16 cm (h) x 57 cm (w) | Late second century CE | Figs. 1–2

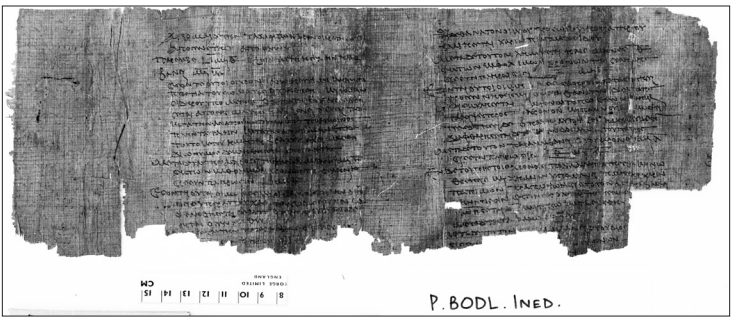


Figure 1. Oxford, Bodl. MS gr. class. B 24 (P) 1–2 verso, columns i–ii. Image reproduced with the permission of the Bodleian Library, which holds its copyright.

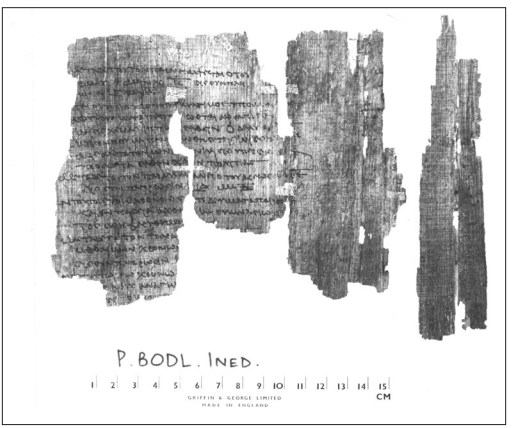


Figure 2. Oxford, Bodl. MS gr. class. B 24 (P) 1–2 verso, columns iii–iv. Image reproduced with the permission of the Bodleian Library, which holds its copyright.

The papyrus was purchased at Al-Bahnasā, site of the ancient city of Oxyrhynchus, by the archaeologist W. M. F. Petrie in February or March 1922 on an expedition on behalf of the British School of Archaeology in Egypt. In a letter of 11 March of that year sent from Al-Bahnasā to the papyrologist A. S. Hunt, Petrie mentions the extensive exploitation of the soil, enriched by decomposing papyri and other ancient material, for fertilizer (*sebakh*), and his own purchases of papyri, "three or four literary pieces" that he planned to bring to London, asking whether Hunt would be willing to describe and report on them.

> We have been here three weeks [...]. We are in the old palm grove, immensely changed by a railway running across Bahr Yusuf, & a sebakh line going round the back of the town, with shrieking trains going out in the dark before dawn. Sebakh has been carried enormously, & much papyrus found. I am buying up all I can get, especially every scrap of uncial literary; feeling my way as to values by not \always/ offering enough ~~always~~ for Byzantine accounts & c. There are three or four literary pieces of 100 words or so. As these are bought, we shall have all to London. Would you be open to looking over all the pieces & giving us—as a matter of business—a report on them in June? [...]."[42]

Hunt presumably agreed, for the present papyrus apparently came into his hands and remained at his Oxford home until it was deposited by his widow at the Bodleian Library in 1934.[43] There it remained until 1974, when it was brought for inspection by C. H. Roberts to the Ashmolean Museum, where it was mounted in glass and photographed before its return in 1979.[44] R. A. Coles, who undertook this inspection, planned a collaborative publication among himself, J. C. Shelton, and

[42] A photocopy is kept in the Papyrology workroom, Sackler Library, Oxford. For the 1922 activities of Petrie, and the involvement of Hunt, see now Hickey 2020:298–301.

[43] Cf. *P.Bodl.* I, p. 318.

[44] Manuscript notes kept in the Papyrology workroom, Sackler Library, Oxford.

H. G. Gundel.[45] Between late 1975 and 1976, Shelton and Coles produced a draft typescript edition of the documentary text on the recto (see below) and the principal remains (columns i–iii) of the astrological text on the verso. Gundel, having identified in general terms a treatise on the *chronokratoria*, began to furnish a commentary, but the project never came to fruition. The present edition is informed by the drafts and notes of Coles, Shelton, and Gundel, kept by the Egypt Exploration Society; readings are occasionally adduced in the commentary only where they may reflect a more complete state of the papyrus than now survives. A *descriptum* in *P.Bodl.* I p. 318 gives only the titles of the texts on both sides, with no mention of the earlier draft editions.[46]

The recto bears an unpublished copy of court proceedings concerning a dispute over an inheritance, with internal reference to a transaction in the reign of Nero (year 8, 17 Pachon = 10 May 62 CE: iii 58–59) and mention of the divine Hadrian in the genitive (i 14) that is probably regnal (i.e., ca. 117–138), placing this document in the mid-second century, and the text on the verso in its second half at the earliest, a result consistent with the palaeography of both texts.[47] Of the text on the verso we have the beginning at the head of column i with substantial margin to the left, and portions of four continuous columns, as the fragment bearing columns iii–iv joins directly to that bearing columns i–ii despite their separate mounting; column iv gives only a few letters before the break at the right. The top edge is intact, with a margin of ca. 1.5 cm, and the *intercolumnium* ranges ca. 3–5 cm. The bottom edge is lost, with perhaps ten or so lines missing (see the note on iv 65); the surviving columns i–iii are ca. 12 cm high and 10–12 cm wide. The orthography is fairly regular, despite some phonetic spellings; there are a few corrections by the original writer (ii 23, 31, 32, and perhaps iii 55). Abbreviations are confined to forms of the repeated

[45] As above, copies of correspondence kept in the Papyrology workroom, Sackler Library, Oxford.

[46] For the legal text, cf. also the note of an unpublished conference paper by J. de Jong in Palme 2007:xxvii.

[47] For the verso: among literary papyri, cf. *P.Oxy.* L 3533 with Turner 1987:144 no. 86 (second century CE, assigned); and among documents, *BGU* VII 1572 (139 CE); *P.Oxy.* XXXIII 2676 (151 CE); *P.Mich.* XVIII 788 (173 CE); *P.Mich.* XI 620 (240 CE).

expressions of years (ἔτος) and months (μείς). There is consistent punctuation by *ecthesis*, but no lectional signs are used.

COLUMN I

ἄρξομαι δὲ τὴν τάξιν τῶν χρονοκρατόρων
ἀπὸ γενετῆς vac. ἀπὸ Σελήνης·
παρέλαβε (ἔτη) τ̄ μῆ(νας) θ̄ ἐξ ὧν αὐτὴ ἡ Σελήνη λαμ-
βάνει μῆ(νας) κ̄ε̄.
ἔσοντε οὗτοι οἱ χρόνοι νωθρευτικοὶ καὶ λεπτο-
πυρετίᾳ τοῦ σώματος ὀχληθήσῃ vac. καὶ τομὴν
σιδήρου ὑπομενεῖς· ὁ δὲ πατήρ σου ἀπαλλαγή-
σεται ἀπὸ τῆς μητρός, ἣ καὶ ξενειτεύσει· τάδε
κατὰ τὴν ἀνατροφὴν τοῦ γάλακτος· πολύκοινος,
πλὴν ταῦτα ἦν vac. κατὰ τὴν ἀνατροφήν· ἐπὶ δὲ
τοῦ τοκετοῦ ἡ μήτηρ βραχύ τι ἐχειμάσθη·
διώνυμος δὲ κληθήσεται ἀπὸ γενετῆς.
μετὰ δὲ ταύτην Ἀφροδείτη παραλαμβάνει μῆ(νας) η̄
ἐκ τῶν καθολικῶν χρόνων τῆς Σελήνης
εἰς συνπλήρωσιν (ἐτῶν) β μη(νῶν) θ̄.
ἔσονται οὗτοι οἱ μῆνες καλοὶ μέτριοι· πλὴν οἱ γο-
νεῖς ὑπὲρ αὐτοῦ χάρ[ι]τας ἀποδώσουσιν· vac. ὠ-
φεληθήσεται δὲ αὐτοῦ ὁ πατήρ· ἐπίχαρις δὲ
ἔσται vac. ὁ γεννηθείς.
μετὰ δὲ ταύτην παραλαμβάνει ὁ τοῦ Ἑρμοῦ
[μῆ(νας)] κ̄ ε̣ι̣[ς] συνπλήρωσιν (ἐτῶν) δ̄ μη(νῶν) ε̄
[ ca. 10 ] . [ ca. 5 ]ο̣ι̣[ ca. 15 ]
. . . . . .

COLUMN II

[[ταιδε]] `δεῖ´ θάνατον οἰκείου προσώπου ἢ ὁ πατήρ σου
βλαβήσεται vac. χάριν πράγματος ἰδίου.
μετὰ δὲ τοῦτον λήμψεται Ἥλις μῆνες ιθ̄
ἐκ τῶν καθολικῶν χρόνων τῆς Σελήνης
εἰς συνπλήρωσιν (ἐτῶν) ζ̄ μη(νῶν) γ̄.
ἔσονται οὗτοι οἱ μῆνες σαπροί· ἀκαταστατήσει

γὰρ ὁ γεννηθεὶς καὶ vac. ὄψεται θάνατον ἰδίου πατρὸς
καὶ σκυλήσεται vac. καὶ ἐν ᾧ τόπῳ ἐγεννήθη κα-
ταλείψει πρὸς vac. χρόνον καὶ πάλιν ἐπαν[α]κάμψει·
τελευτήσει δὲ vac. ὁ πατὴρ αὐτοῦ ἐν ἡμέραις μ̄η̄·
διαφθαρήσεται δὲ ⟦καὶ⟧ ἡ ἐνδομενία τοῦ πατρός.
μετὰ δὲ τοῦτον παραλαμβάνει ὁ τοῦ Κρόνου μῆ(νας) λ̄
εἰς συνπλήρωσιν (ἐτῶν) θ̄ μη(νῶν) θ̄.
ἐν δὲ τούτοις τοῖς χρόνοις πολλὰ ἀκαταστήσεις καὶ νω-
θρεύσεις καὶ ζημίαν ὑπομενεῖ ἡ μήτηρ χάριν
πατρικῶν πραγμάτων εἰς τὸ τὸν ἀστέρα βλάψαι
τὴν γένεσιν· vac. ἔστιν γὰρ ὀλετὴρ τῆς γενέσ[εως ca. 5 ]
ἰαθήσεται δὲ καὶ τόκῳ κατασχεθήσε[ται ca. 2–7 ]
μετὰ δὲ ταῦτα καλῶς ἕξεις.
μετὰ δὲ τοῦτον [παρα]λαμβάνει ὁ τοῦ Διὸς [μῆ(νας) ιβ̄]
εἰς συν[πλήρωσιν ἐτῶν]τ̄ μηνῶν θ̄.
[ ca. 20–25 ] . . [. . .] . . [ ca. 5 ]
. . . . . .

COLUMN III

μετὰ δὲ τοῦτον παραλήμψεται ὁ τοῦ
Ἑρμοῦ vac. μῆνας κ̄ εἰς συνπλή-
ρωσιν (ἐτῶν) ιγ̄ μη(νὸς) α̅.
[ἔ]σται οὗτος ὁ χρόνος σκυλτικός· ὑπομενε[ῖ] δὲ
ἀφ' ὕψους καταπεσεῖν ὥσται ἀφελπισθῆ[ν]ε
καὶ εἰς χεῖρας ἰητρῶ[ν] ἐλθεῖν· vac. ὁ δὲ αὐθάδ[η]ς
κυβερνήσει καὶ πάλι[ν σ]ωθήσεται καὶ ἔστα[ι] [ἐπί]ση-
μος μετὰ τὸν κίν[δυνο]ν καὶ εἰς ὑπερέχοντα
πρόσωπα ἐλθεῖν χά[ρι]ν πολειτίας.
μετὰ δὲ τοῦτον παραλαμ[β]άνει ὁ τοῦ Ἄρεως μῆ(νας) ιε̄
εἰς συνπλήρωσιν (ἐτῶν) ιδ μη(νῶν) δ̄.
ἐν τούτοις τοῖς χρόνοις ἐ[πι]τηδεύματα ποιήσεις
καὶ ἐν παιδείᾳ ἀχθέ[σ]η καὶ γυμνασιῶν ἐν-
τὸς ἔσῃ βαρύθυμος.
μετὰ δὲ τοῦτον παρα[λαμβάνει] Ἥλις vac. [ ca. 5 ]
καθολικῶν χρόνων [τῆς Ἀφροδίτη]ς

εἰς συνπλήρωσιν (ἐτῶν) [ ι̅ε̅ μη(νῶν) τ̅α̅.]
ἐν̣ δὲ τούτῳ τῷ χρόνῳ [ ca. 10–15 ].
[ ca. 5 ]ενους ἀναγκ̣ [ ca. 10–15 ]
[ ca. 5 ] . . στη κα̣ὶ . . [ ca. 10–15 ]
. . . . . .

COLUMN IV

μ[
μ[
.[
ἐν [
[ ca. 3 lines lost
.[
θ̣[
. .[
. . . . . .

i 3 L., μ̣̊ pap. and passim 5 l. ἔσονται 8 l. ξενιτεύσει 3 l. Ἀφροδίτη ii 25 l. Ἥλιος μῆνας 28 μη vac. νες pap. 31 χρόνον: χ corr. from π iii 45 τοῦτον for ταύτην (see comm.) 49 l. ὥστε ἀπελπισθῆναι 53 l. ἐλεύσεται (see comm.), πολιτείας 55 δ̅ from corr.? 59 l. Ἥλιος

## Translation (Columns I–III)

(column i) I shall begin the sequence of the time-rulers (*chronokratores*) from birth, (starting) from the Moon. It has taken on 10 years, 9 months, of which the Moon itself takes 25 months.

These times will be ones of malaise, and you will be troubled in body by light fever, and you will endure a wound by iron. Your father will separate from your mother, who will also go abroad—and that during your nursing on milk—(and be) promiscuous, but this was during your nursing. At birth the mother was just slightly distressed. (The native) will be called by two names from birth.

After this one (the Moon), Venus takes over for 8 months out of the time generally belonging (*katholikoi chronoi*) to the Moon, for a total of 2 years, 9 months.

These months will be middling good, but the parents will give thanks for the sake of him; his father will be profited, and the native will be a source of pleasure.

After this one (Venus), the (star) of Mercury takes over for 20 months, for a total of 4 years, 5 months ...

[*Release to Mars: period of 15 months, for a total of 5 years, 8 months* ...] (column ii) it is necessary that ... the death of a person of (your) own household, or your father will be injured on account of his own business.

After this one (Mars), the Sun will take 19 months out of the time generally belonging to the Moon, for a total of 7 years, 3 months.

These months will be rotten, for the native will be unstable, and he will see the death of his own father and be troubled and arrive at the place in which he was born for a time, and come back again, but his father will die within 48 days, and his father's household property will be destroyed.

After this one (the Sun), the (star) of Saturn takes over for 30 months, for a total of 9 years, 9 months.

In these times you will be very unstable and have malaise, and your mother will suffer loss on account of the paternal estate, in regard to the star's injuring the nativity, for it is a destroyer of the nativity, but she will be healed, and occupied with childbirth [...] and after this, you will be well.

After this one (Saturn), the (star) of Jupiter takes over for 12 months for a total of 10 years, 9 months [...]

[*Entry for Venus, which takes over the next* chronokratoria *of 10 years, 9 months; then the first release thereof to Venus itself for 8 months, total 11 years, 5 months* ...]

(column iii) After this one (Venus), the (star) of Mercury will take over for 20 months, for a total of 13 years, 1 month.

This time will be troublesome, and (the native) will suffer falling from a height, such that his condition will be hopeless and he will come into the hands of doctors, but he will navigate stubbornly and be saved again, and he will be distinguished after the danger and come into contact with lofty personages on account of civic affairs.

After this one (Mercury), the (star) of Mars takes over for 15 months, for a total of 14 years, 4 months.

In these times you will take up pursuits, and in education you will be vexed, and inside school-grounds you will be indignant.

After this one (Mars), the Sun takes over [for 19 months (?)], out of the time generally belonging to Venus, for a total of 15 years, 11 months.

In this time [...]

## Commentary

i 1 ἄρξομαι. The same transitional marker is used in astrological literature: see Ptolemy *Tetrabiblos* 2.9.3, ἀρξόμεθα δὲ τῆς καθ' ἕνα ἕκαστον τῶν πλανωμένων ποιητικῆς ἰδιοτροπίας; Hephaestion *Apotelesmatica* 2 pref. §4 (Pingree 1973–1974:81.18), ἀρξόμεθα δὲ ἐφεξῆς κατὰ τάξιν οὕτως; Paulus of Alexandria *Elementa apotelesmatica* 34 (Boer and Neugebauer 1958:92.21–22), ἀρξόμεθα πρῶτον ἀπὸ τοῦ ἡλιακοῦ περιπάτου; cf. also in the broader discourse on celestial science, [Geminus] *Calendarium* (Aujac 1975:98.1), ἀρξόμεθα δὲ ἀπὸ θερινῆς τροπῆς.

5 ἔσοντε (l. ἔσονται). For the interchange of αι with ε, see Gignac 1976: vol. 1, 192–193.

νωθρευτικοί. The adjective is an *addendum lexicis*; for the sense, cf. νωθρεύσεις in ii 36–37 below.

5–6 καὶ λεπτοπυρετίᾳ τοῦ σώματος ὀχληθήσῃ. A comparable prediction is given in Vettius Valens *Anthologiae* 5.8.31 (Pingree 1986:225.7–8), ἀσθενήσει ἢ ῥιγοπυρέτοις ὀχληθήσεται καὶ τῶν ἐντὸς ἢ κοιλίας πόνοις.

λεπτοπυρετίᾳ. The noun is an *addendum lexicis*, but its existence was already suggested by the Latin *leptopyretia* in Marcellus Empiricus (20.127 with *TLL* 7.2.1180 s.v.); cf. *LBG* 927b s.v. λεπτοπύρωσις; LSJ *Suppl*. 92b s.v. λεπτοπυρέτιον.

6–7 τομὴν σιδήρου. The version of the idiom in Rhetorius, in the excerpts edited in *CCAG* vol. 8.4, 151.9, predicting natives "who attempt (or, experience) cutting by iron on account of sickness"

(τομῆς σιδήρου διὰ νόσον πειρώμενοι), makes clear a specific connotation of surgery; for its use in predictions more generally, see Vettius Valens *Anthologiae* 2.34.16 (Pingree 1986:100.22); Apomasar *De revolutionibus nativitatum* 4.4 and 4.5, Pingree 1968:195.24, 198.20 (cf. Apomasar *De revolutionibus nativitatum* 2.22, Pingree 1968: 111.16–17, σώματος τομὴ διὰ σιδήρου); for mentions of iron in other contexts, see Cumont 1937:97–98.

7–10. No precise parallels for the scenario in astrological forecasts are known; various separations of the native's parents are discussed by Vettius Valens in a chapter headed Περὶ χωρισμοῦ γονέων (*Anthologiae* 2.34), including a comparable phrasing οἱ τούτου γονεῖς χωρισθήσονται (2.34.4, Pingree 1986:99.27). In an anonymous treatise on nativities in a Byzantine codex, it is predicted that a woman's children are to be "reared on alien milk" (ξένῳ γάλακτι τραφῆναι, *CCAG* vol. 11.2, 117.4–5). For anxiety about promiscuity in wives denoted with πολύκοινος, cf., e.g., Ps.-Manetho *Apotelesmatica* 3.85 and in general Cumont 1937:180, but the specific application to the native's mother is not paralleled. Compare perhaps the caution about promiscuity in wet-nurses expressed by the prohibition against "going to bed with a man" (ἀνδροκοιτέω) in wet-nursing contracts (*C.Pap.Gr.* I p. 220 index X s.v. and the commentary to *P.Oxy.* LXXVIII 5168.16).

10–11. Predictions about the difficulty of the native's birth are not paralleled, but pain to the mother in nursing is foreseen in a later treatise on the zodiac (*CCAG* vol. 12, 187.8–10, 187.31–188.1); in the same manuscript it is predicted that a woman will "experience much trouble issuing from the womb" (ἀπὸ ὑστέρας πολλὰ χειμασθήσεται, *CCAG* vol. 12, 183.27), possibly in that case a form of hysteria.

11. The bearing of a double name is also predicted, alongside "double paternity" (διπάτριος, διπάτωρ) in the excerpts of Rhetorius edited in *CCAG* vol. 8.4, 134.2, and Dorotheus *On Cardinal Points* §56 (Pingree 1976:365.11–12).

13 Ἀφροδείτη (l. Ἀφροδίτη). For the vowel interchange, see Gignac 1976: vol. 1, 189–191.

17 χάρ[ι]τας ἀποδώσουσιν. The idiom is also used of the native (addressed in the second person) in the fragmentary horoscope published in Daris 1987 (P.Med. 124, lines 2–3, which probably belongs with further fragments now in Florence: see note 29); and further in the Byzantine treatise on the zodiac in *CCAG* vol. 12, 185.24.

17–18. Forecasts of future benefit with ὠφελέω are common (e.g., Apomasar *De revolutionibus nativitatum*, passim), but not yet attested for the father of the native.

18–19. This attribute is associated with Venus in, e.g., Vettius Valens 1.3.56, Pingree 1986:18.1 (ἐπιχάριτος); Vettius Valens 2.17.30, Pingree 1986:69.17, and Vettius Valens 2.17.34, Pingree 1986:69.27 (ἐπιχαρής).

22 ] . [ ca. 5 ]ο̣ι̣[. We expect ἔσονται οὗτοι οἱ μῆνες or χρόνοι. Shelton read [ἔσονται οὗτοι οἱ μῆνες . . .] . .ι̣κοὶ . [.

ii 23. A continuation of the entry on the *chronokratoria* of Mars, which will have lasted 1 year, 3 months, bringing the total to 5 years, 8 months.

⟦ταιδε⟧ `δεῖ´. The loss of the foot of the preceding column leaves the motivation for the correction unclear, and it may in fact have begun there. The pronoun σου might suggest correction from a third-person finite verb, e.g., [ὄψε]ται as in ii 29 below, to an impersonal construction with δεῖ and a preceding, e.g., τότε γάρ σε ἰδεῖν; an articulation δ' εἶδε is also conceivable, sc. ὁ μήτηρ σου, but the elision is not so written elsewhere in the text.

θάνατον οἰκείου προσώπου. The same idiom for the native is found in the fragmentary horoscope published in Daris 1987 (P.Med. 124, lines 1–2, which probably belongs with further fragments now in Florence: see note 27); see further Hephaestion *Apotelesmatica* 2.33.12 (Pingree 1973–1974:214.19–20); similarly *Epitome* 4.41.12 (Pingree 1973–1974:254.15–16) and *Epitome* 4.38.15 (Pingree 1973–1974:244.19–20).

23–24. Harm to the father of the native is similarly expressed in Dorotheus *On Cardinal Points* §28 (Pingree 1976:363.12); Apomasar *De revolutionibus nativitatum* 2.5 (Pingree 1968:48.8–18).

25 Ἥλις (l. Ἥλιος). For the syncopated form, see Gignac 1976: vol. 2, 25–27.

ιθ̄. The first letter is in a crease, but the reading is secure.

28 μῆνες (μη vac. νες pap.). The scribe avoids a preexisting hole in the papyrus, as also in 29–31 below. On this practice see Jones 2015, esp. 376–378.

σαπροί. The adjective is also applied to time-periods in Vettius Valens *Anthologiae* 1.18.71–77 (Pingree 1986:36.4–10), and to planetary weekdays in the *hemerology P.Kellis* I 82.

ἀκαταστατήσει. The same prediction for the native's youth is made in Vettius Valens *Anthologiae* 2.34.4 (Pingree 1986:99.28; also following the divorce of the parents), Hephaestion *Apotelesmatica* 1.1.54 (Pingree 1973–1974:9.26–27); cf. also 37 below.

29 ὄψεται θάνατον ἰδίου πατρός. The idiom is used for various relatives in, e.g., Dorotheus *Fragments* 1.17.8 (Pingree 1976:334.8) and *On Oppositions* §72 (Pingree 1976:352.8–9); Vettius Valens *Anthologiae* app. 1.57 (Pingree 1986:373.25–26); Hephaestion *Apotelesmatica*, passim.

30 ἐν ᾧ τόπῳ ἐγεννήθη. Similar reference to the birthplace (ἐν (τῷ) τόπῳ ὅπου (οὗ) ἐγεννήθη) is made in a Byzantine treatise on the zodiac and nativities in *CCAG* vol. 10, 108.32–33, 113.2, 116.5–6 (in all cases, the natives will not die in their birthplaces).

31–32. For attention to the time of the father's death, compare Vettius Valens *Anthologiae* 7.3.24 (Pingree 1986:256.17–18), a retroactive prediction of this event "in the nineteenth year" (τῷ ιθ΄ ἔτει); for the time-limit, Hephaestion *Epitome* 2.2.23.42 (Pingree 1973–1974:63.2–4), predicting the finding of a fugitive ἐν ἡμέραις μη΄ under one celestial alignment (different time-limits under others).

33. Loss of inheritance is predicted, e.g., in Dorotheus *On Conjunctions of Planets* §95 (Pingree 1976:354.9); Vettius Valens *Appendix* 1.16

(Pingree 1986:370.21); Apomasar *De revolutionibus nativitatum* 3.4 (Pingree 1968:150.18–20).

ἐνδομενία. Paulus of Alexandria *Elementa apotelesmatica* 24 (Boer and Neugebauer 1958:56.6) includes ἐνδυμενία in a list of features susceptible of prediction by the cardinal point lower midheaven. For the alternation between the spellings ἐνδο- and ἐνδυ-, see *DGE* 1545a s.v.

36–37 νωθρεύσεις. The verb is new to astrological texts; for the sense cf. νωθρευτικοί above, i 5. The cognate νωθρεία is mentioned in an uncertain context in the fragments of the discursive horoscope in PSI inv. 3780 (see note 29 above).

39 ὀλετὴρ τῆς γενέσ[εως]. For the expression, cf., e.g., Dorotheus *On Oppositions* §78 (Pingree 1976:352.22–23), of Jupiter as τῶν πατρικῶν ὀλετὴρ κτημάτων.

40 καὶ τόκῳ κατασχεθήσε[ται]. The connective καί suggests against the sense "she will be burdened with interest," which would rather have had an adversative than καί; a comparable expression διὰ τόκον λυπηθῇ in the Byzantine treatise on prognostication from the zodiac in *CCAG* vol. 4, 161.19 probably does refer to interest since the native is male. For the original sense of τόκος in predications, see further, e.g., Dorotheus *Fragments* 1.3 passim (Pingree 1976:325.1–17), e.g., ὁ Ἥλιος, ὁ ὡροσκόπος καὶ ἡ Σελήνη ἐν ἀρσενικοῖς ὄντες ζῳδίοις ἐν τῷ καιρῷ τοῦ τόκου εὐτοκίαν παρέχουσιν.

41 καλῶς ἕξεις. The same idiom is used in an anonymous *selenodromion* in *CCAG* vol. 11.1, 139–142 passim and two treatises on predictions from the zodiac in *CCAG* vol. 10, 111.25 and 234.21.

44 ] . . [. . .] . . [. Shelton read ]εφα .[ after the first break.

After Jupiter, the first *chronokratoria* comes to an end, and the next, according to the underlying geniture reflected by the first sequence, should belong to Venus: hence, lost at the foot of column ii is, e.g., μετὰ δὲ τὴν Σελήνην παραλαμβάνει ἡ Ἀφροδίτη τὴν χρονοκρατορίαν (ἔτη) τ̄, μ̄η̄(νας) θ̄, followed by the first release, to Venus itself, e.g., ἐξ ὧν ὁ τῆς Ἀφροδίτης λαμβάνει

μῆ(νας) η̄ εἰς συνπλήρωσιν (ἐτῶν) ῑα̅ μη(νῶν) ε̄, followed by the specific forecast. The text resumes at the head of the following column with the next release, to Mercury.

iii 45 τοῦτον. The sequence requires that the referent be Venus; the gender is apparently determined by a construction such as ὁ τῆς Ἀφροδίτης (ἀστήρ), as used for Hermes here and in the following line.

48 χρόνος σκυλτικός. For this epithet of a time-period, see also Hephaestion *Apotelesmatica* 2.33.15 (Pingree 1973–1974:214.30) and *Epitome* 4.44.15 (Pingree 1973–1974:262.33).

ὑπομενε̣[ῖ]. Shelton read ὑπομενε[ῖς].

48–51. Predictions of injury by falling from a high place, followed by a recovery, are also made in Hephaestion *Apotelesmatica* 1.1.129 (Pingree 1973–1974:18.10–11).

49 ὥσται ἀφελπισθῆ[ν]ε̣ (l. ὥστε ἀπελπισθῆναι). Shelton read for the second word ἀφελπισθῆ[ν]αι. For the vowel interchange, see the note on i 5 above; for the false aspiration, Gignac 1976: vol. 1, 93. There is a striking parallel in phrasing in a late Greek prognostic treatise on the zodiac in *CCAG* vol. 10, 224.14–15, of a female native who will fall ill such that "people will give up hope for her, but she will recover" (νὰ τὴν ἀπελπίσουν οἱ ἄνθρωποι, μὰ θὰ ὑγιάνῃ).

50 ἰητρῶ[ν]. The Ionic form of the noun is otherwise unknown in astrological texts. The successful intervention of ἰατροί is predicted in, e.g., the excerpts of Rhetorius edited in *CCAG* vol. 8.4, 188.8, 193.24–194.1; for references to physicians in general, see Cumont 1937:93, 128–129. The construction with χείρ might connote surgery (i.e., the physicians are χειρουργοί); cf. the note on i 6–7 above.

αὐθά̣δ[η]ς. The adjective is applied to conduct in a pejorative sense in, e.g., Apomasar *De revolutionibus nativitatum* 4.7 (Pingree 1968:204.4); more neutrally, e.g., the excerpts of Rhetorius edited in *CCAG* vol. 8.4, 178.14, as an attribute of natives, alongside θυμικός and ἔνδοξος.

51 κυβερνήσει. The verb is used metaphorically of political power in Apomasar *De revolutionibus nativitatum* 2.4 (Pingree 1968:41.8–9), κυβερνήσει ὁ ἔχων τὴν ἐναλλαγὴν κατ' ἐκεῖνον τὸν χρόνον βασιλικὰ ἔργα; a literal sense seems less probable here, but cf. Ps.-Manetho *Apotelesmatica* 4.398 of the production of watchful helmsman of ships (σκαφέων τε κυβερνητῆρας ἀύπνους) and in general Cumont 1937:109–110 and MacMullen 1971:109.

51–52 ἔσ̣τ̣α̣ι̣ [ἐπί]ʂημος. For the idiom, see, e.g., Vettius Valens *Anthologiae* 2.23.12 (Pingree 1986:84:18–19): ὁ τοιοῦτος εὐτυχὴς ἔσται καὶ ἐπίσημος.

52–53 ὑπερέχ̣ο̣ν̣τ̣α̣ πρόσωπα. The expression is a particular favorite of Vettius Valens and Hephaestion; friendship with such people (φιλία ἐξ ὑπερεχόντων προσώπων) is promised in Vettius Valens *Appendix* 1.106 (Pingree 1986:378.5) and similarly Hephaestion *Apotelesmatica* 2.33.1 (Pingree 1973–1974:213.4), *Epitome* 4.40.1, 4.41.1 (Pingree 1973–1974:249.11 and 252.30); see in general MacMullen 1971:108–109.

53 ἐλθεῖν. For ἐλεύσεται; the construction apparently resumes the natural clause of result in ii 49–50 above, in which the form ἐλθεῖν appears.

πολειτίας (l. πολιτείας). Not a common term in astrological predictions; ill effects on polities (εἰς τὰς πολιτείας κακὰ ἔσονται) are forecast on the basis of the observation of lightning in the anonymous treatise in *CCAG* vol. 3, 48.22. For the vowel interchange, see the note on i 13 above.

56 ἐ[πι]τ̣ηδεύματα ποιήσε̣ι̣ς. For the idiom, cf. the prediction of success for a native ἐν ᾧ τετύχηκε πράσσων ἤτοι τέχνην ἢ ἐπιστήμην ἢ ἐπιτήδευμα in Vettius Valens *Anthologiae* 2.19.4 (Pingree 1986:77.13–14); good fortune in ἐπιτηδεύματα more generally is also promised in Dorotheus *On Conjunctions of Planets* §118 (Pingree 1976:356.6) and Hephaestion *Apotelesmatica* 2.34.1 (Pingree 1973–1974:216.8); on references to occupations in astrology in general, see Cumont 1937:86–112. The term becomes a rubric of sorts for activities that might be timed according to catarchic astrology in the anonymous *selenodromion* in *CCAG* vol. 11.1, 144.25–27, in which

the thirtieth day is "good for all pursuits, founding storehouses, marriage, joint ventures, selling, buying, reconciling, planting" (καλὴ εἰς πάντα τὰ ἐπιτηδεύματα, θησαυροὺς κατατίθεσθαι, γαμεῖν, κοινωνεῖν, πωλεῖν, ἀγοράζειν, εἰρηνεύειν, φυτεύειν).

57 ἐν παιδείᾳ ἀχθέ[σ]ῃ. Unparalleled; παιδεία occurs in an uncertain context in the fragments of the discursive horoscope in PSI inv. 3780 (see note 29 above). The opposite prediction of success in *paideia* is common, e.g., of natives ἐν παιδείαις δοξαζόμενοι, Vettius Valens *Anthologiae* 1.19.14 (Pingree 1986:38.20); cf. the promise of being συνετὸς ... κἂν ἄπειρος παιδείας τυγχάνῃ, Vettius Valens *Anthologiae* 6.2.25 (Pingree 1986:235.32–33).

57–58 γυμνασιῶν ἐντὸς ἔσῃ βαρύθυμος. Again unparalleled; the poetic adjective βαρύθυμος, a form of which can probably be read in an uncertain context in the fragments of the discursive horoscope in PSI inv. 3780 (see note 29 above), is used absolutely in Dorotheus *On Conjunctions of Planets* §95 (Pingree 1976:354.13) and *On the Purchase of Various Items* §5 (Pingree 1976:387.26), as well as some later, anonymous treatises, e.g., in *CCAG* vol. 4, 166.28–29. Danger of physical injury ἐν παλαίστραις καὶ γυμνασίοις is forecast in Hephaestion *Apotelesmatica* 2.13.10 (Pingree 1973–1974:142.14); for references to sport, see also Cumont 1937:79–80. The postposition of ἐντός is probably another literary affectation; see the introduction and, e.g., Vettius Valens *Anthologiae* 1.20.9 (Pingree 1986:43.10–11), πράξεων ἐπιμόχθων ἢ ἐπικινδύνων ἐντὸς γινόμενοι.

59 Ἥλις (l. Ἥλιος). For the form, see the note on ii 25 above.

59–60. The writer probably intended [μῆ(νας) ι̅θ̅ (ἐκ) τῶν] καθολικῶν χρόνων, but there is insufficient space; was the specification of months omitted?

64 [ ca. 5 ] . . στη καὶ . . [. Shelton read ]εστη καὶ π . . [.

iv 65. The *ecthesis* suggests a heading, probably μ[ετὰ δὲ τοῦτον]. The surviving entries average eight lines per release, with no more than one release lost at the foot of any preceding column, while that for the Sun had already received at least five lines in column

iii. Hence most likely Saturn began and ended in the lacuna, and we have here the beginning of the release of Jupiter, the last for the *chronokratoria* of Venus.

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