

A Survey of Vettius Valens
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The *Anthologiae* of Vettius Valens presents us with the longest, and at the same time the most difficult, text surviving from the astrological literature of antiquity. Valens's exotic methods, many unparalleled in other astrological works, and the vicissitudes of the text itself, which was written over a period of many years and which was thereafter in constant use from late antiquity to the Renaissance, make interpretation of this work difficult.¹ The *Anthologiae* is, however, important for the study of ancient astrology: it presents some 125 actual horoscopes whose interpretation illuminates ancient astrological doctrines during the first centuries of our era. These horoscopes also give brief life histories of the clients, from which some demographic information can be derived. The *Anthologiae* also illustrates astronomical calculation of the pre-Ptolemaic type and gives tables that predate the *Almagest* and the *Handy Tables*.²

One hundred years of research into the methods of ancient astrology, the fruits of which can be found in *CCAG*, and the labors of editors and commentators, particularly Kroll, Neugebauer, Pingree, and Bara, have illuminated many dark corners. This work has uncovered Valens's century, perhaps even his birthdate, and has gone far toward restoring his text to its state in the fifth century AD, the date of the archetype of the extant tradition. This paper will survey what can be learned of Valens' biography, will compare his methods and goals with those of the other surviving astrological writers, particularly Ptolemy, whose *Tetrabiblos* became this art's undisputed classic, and will outline what can be gained from the text with further research: information about astrologers whose works are lost but who are quoted in the *Anthologiae*; pre-Ptolemaic mathematical and graphical methods for astronomical calculations; and glimpses into the everyday world of the practicing astrologer.

BIOGRAPHY

The *Anthologiae* supplies our only accurate information about its author.³ Vettius Valens (Ούέττιος Ούάλης, medieval Latin Balens, Arabic Walis) of Antioch was conceived on 13 May 119 AD and born nine months later on 8 Feb. 120 AD. His mother predeceased his father in the 140's. At age 34 he "worked abroad, was a friend of great men, was in mortal danger because of a woman, and suffered cuts and bleeding." At age 35 he took a sea voyage during which he was in danger from pirates and from a storm. He moved to Egypt in search of occult knowledge. There, according to his account, which matches other ancient tales of religious quests, he "suffered much, endured much...and spent money that seemed inexhaustible,

because I was persuaded by mountebanks and greedy men” (301.16K; 288.15P). His teachers were avaricious, and, although he paid great sums, he did not attain the truth. He then withdrew into an ascetic life for a time, but was later drawn back by the lure of astrology, particularly the lure of determining which star rules a given period, i.e. the “chronocratorship” — see the note in Appendix B on Book IV 1-5 (172.9K; 163.6P).⁴

His dedication to astrology was total. He was never attracted by horse races, spectacles, art and music, or love (242.8-18K; 231.34-232.10P). He never came to desire command, high rank, wealth or possessions (355.9-15K; 340.22-27P). His astrology was a mystery and an ascetic art. Even kingship was insignificant compared to the god-like knowledge granted man by astrology/astronomy: “by means of it one can know the sun’s ordered paths... and the varying paths of the moon... From all this we hope to understand everything on earth, in the seas, in heaven, as well as the beginning and end of all created things” (241.20-29K; 231.16-24P). Astrology enabled him to bear all blows of Fortune:

Fate has decreed for each person the immutable working out of events, surrounding him with many occasions for good or bad... Two self-begotten gods, Hope and Fortune, the assistants of Fate, control man’s life and make him bear Fate’s decrees by using their compulsion and deception... Fortune raises some high only to cast them down and degrades others only to raise them to glory... Hope moves everywhere in secret, smiling like a flatterer, and she displays many attractive prospects which cannot be attained. By deceiving men, she controls most of them... Those ignorant of the prognostic art are led away and enslaved by these gods. They endure all blows and suffer punishments with pleasure. Some partially attain what they hoped for; their confidence begins to increase, and they await a permanently favorable outcome—not realizing how precarious and slippery are these accidents of Fortune. Others are disappointed in their expectations, not just once, but always... But those who have trained themselves in the prognostic art and in the truth keep their minds free and out of bondage. They despise Fortune, do not persist in Hope, do not fear death, and live undisturbed... They are alien to all pleasure or flattery and stand firm as soldiers of Fate. (219.26-220.28K; 209.10-210.6P)⁵

Astrology taught him his duty: in a revealing passage he compares himself to an intelligent slave of a harsh master (=life), a slave who does not contravene his master’s orders and who thus avoids pain and suffering (355.15-21K; 340.27-33P). Astrology was his fortification against the inevitable fatalities of life. Such doctrines are of course not confined to Valens: Ptolemy defends astrology’s usefulness by first declaring that the prognostic art tames and

calms the soul and prepares it to meet whatever the future brings with steadfastness (*Tetr. I* 3.5).⁶

In short, astrology was the anchor of Valens' faith. The religious feelings expressed in the *Anthologiae* become more striking when Valens' phrases are compared with those from an obviously religious text like the *Hermetica*. These texts emphasize the need for secrecy, for maintaining the doctrine free from defilement at the ears of the vulgar. In maintaining this secrecy, the adepts separate themselves from the uninitiated. Just as Hermes tells Asclepius that his discourse should not be profaned by the presence of the crowd, so Valens likewise urges his students to conceal this work "from the unworthy or uninitiated" (359.24K; 344.27P).⁷ Valens exacts oaths of secrecy from his students:

I adjure them by the sacred circle of the sun, by the varied paths of the moon, by the powers of the five other stars, and by the circle of the twelve signs to keep these matters secret, never to share them with the ignorant or the uninitiated, and to remember and to honor the one who inducted them into this art. May it go well for those who keep this oath and may the aforesaid gods grant them what they wish; may the opposite happen to those who foreswear this oath. (263.19-24K; 251.18-23P)

Both texts emphasize the spiritual relationship between master and pupil, with the master handing on his doctrines as one link in a chain of succession: Valens' student received (παρλαμβάνων - 294.1K; 281.14P) the doctrines and will pass them on, just as Hermes received (παρλαβών - *Poimandres* 1.26 in *CH I*, p. 19) doctrines from Poimandres and then becomes a guide to others who are worthy. Both Hermes' doctrines and Valens' are presented as an intellectual system (θεωρία, αἴρεσις; the philosophers and Hermes use γνῶσις) which brings with it a way of life characterized by secret knowledge and status as the elect of God. All this is popular Greco-Egyptian spirituality.

Also part of this popular spirituality is Valens' emphasis on astrology's ancient traditions, which he claims to be developing further. Besides consulting the astronomers Hipparchus and Apollonius, and the Babylonians, Soudines and Kidenas, whose data for the sun and the moon he claims to have used, Valens studied the "ancient astrologers," particularly King Nechepso and the sage Petosiris, legendary Egyptian astrologers, and Critodemus, who lived in the first century AD.⁸ His comments on these earlier astrologers are of two types: he lauds their dedication and skill; at the same time he criticizes their grudging and stingy attitude towards other adepts or students. Nechepso is the divine King, who "made his explanations with mystic intelligence. His wisdom is shown by his willingness to confess his earlier errors. He despised his kingship and his power compared with the loftiness of mystic knowledge. No

trickery caused by greed and the necessity for making a living affected him” (329.7-14K; 316.7-15P). Valens envied the King because he had lived in a time which “saw such a climate of free and ungrudging speech and inquiry,” a time when men “left the earthy sphere and walked the heavens” (241.9-15K; 231.3-8P). The other astrologer, Critodemus, laid the basis for Valens’ work (348.9K; 334.9P) and was very wise (329.18K; 316.16P).

Nevertheless, the Ancients laid themselves open to criticism: the wise Critodemus wrote in a “fantastical style, marvelous to the unlearned.” He claimed that his work contained great powers and prodigious deeds, and he exacted fearsome oaths from his students, but he locked up the truth of his teachings in infinite verbiage and useless bombast. If Critodemus’ reader could get through the bombast, the results were worthwhile (150.11-27K; 142.12-27P). The same cannot be said of other astrologers. Some waste the time of men and lead them astray, defrauding them (150.9-10K; 142.11P); they propound their art in a recondite fashion (301.21K; 288.20P); they perform a “concerto” of fine, enticing words and meter (260.27K; 249.18-19P). Even worse, some were “driven by envy to hide this art because of their vainglory,” or perhaps they “had not in fact grasped what Nature had created, prescribed, and bestowed abundantly on mankind,” but wrote nevertheless (272.7-11K; 260.3-7P). These rivals of Valens “bastardize this science with fancy words and complicated schemes and they lead the uninitiated astray.” They walk in the paths of deceit, not of truth (238.21-30K; 228.24-31P). Envy might even damage Valens’ own treatise, and to forestall the evil effects of this envy, he has not shrunk from repeating and amplifying his earlier pages (242.26-32K; 232.17-22P).

As a corrective for these shortcomings of his predecessors and rivals, Valens claims to have written in a simple manner, to have tested what he propounded, and to have given worked-out examples, of which he was quite proud (301.30K; 288.27P). (Indeed, his examples make the *Anthologiae* unique in ancient astrology.) Furthermore, he claimed to have revised his work in the light of his later experience, and this claim can be supported. He had, for example, described how to calculate by signs alone the distribution of the chronocrators (in Book III). Later, in VI 1, he spoke of the “intervals and contacts using the degree-positions, a method which I had treated obscurely before” (243.6K; 232.27P). In the preface to Book VI, he says that when he previously had read of some new method, in his enthusiasm he simply copied it and appended it to his treatise—this statement certainly applies to the sections from Critodemus in Book V. Later, however, he returned and reworked those those earlier appendices—and it is certainly true that the methods for critical periods are elaborated in Books VI-VIII (242.27-30K; 232.18-20P). The *Anthologiae* contain a record of his astrological researches.

Like any professional, Valens had students to carry on the tradition. One special student, Marcus, is named as the heir to his glory (293.24K; 281.2P, written in 163/4; cf. 359.13-20K;

344.16-22P). The death of a student (Marcus?) brought him great grief (157.28-33K; 149.23-27P, written in 169). His last horoscope is dated to 173. Presumably he died shortly thereafter in his mid-50's.

Valens was no creative genius; he was neither a systematizer like Ptolemy nor a scientist like Hipparchus nor a widely influential guru like Apollonius of Tyana—though he certainly would have liked to be all of these. Cumont's low opinion of him ("esprit borné, dépourvu de tout originalité" *L'Egypte* 18) has been repeated by Bara (*Anthologies* 16). His energy, however, cannot be faulted: he was able to write 300+ pages of astrological theory and practice over a period of more than 20 years, in addition to his professional work, whatever that was. Later astrologers had a more just appreciation of his talents. Salmasius in particular, who has been studied by Bara, thought it worthwhile to rewrite the *Anthologiae*. Moreover, even if we do not read him as a fellow professional, Valens embodies the popular spirituality of his age and is thus a valuable witness to his contemporaries and their concerns. He merits study for this reason, if for no other. But it is also for his mathematics, examples of which are given below, and for his usefulness as a source of earlier astrology that his works may be studied. No one can yet claim to have mined the *Anthologiae* for all its gold; this survey is only preliminary.

THE COMPOSITION AND CONTENTS OF THE *ANTHOLOGIAE*

Valens composed his *Anthologiae* over a period of at least 20 years. As mentioned above, internal evidence shows that he published the text in several sections or Books: VI 5 (252.3K; 240.29P) refers to a book, αἱ Ἐπικρατήσεις, *The Controlling Points*, our present Book III 1-13. Book VII 3 (272.30-31K; 260.24P—one of the latest sections of the *Anthologiae*) and VII 5 (279.14K; 267.2P) refer to his book Περὶ χρόνων ζωῆς, *On The Length of Life*, the fragments of which are found in the present Books VI to IX. The many horoscopes cited as examples in the text, which make Valens' work so valuable to the historian of astrology, provide further information for dating. The dates of death (or of some other significant crisis) of the persons whose horoscopes are given allow us to give a *terminus post quem* for the chapters containing those horoscopes.⁹

Appendix A lists the chapters which cite horoscopes containing the date of birth and of death (or crisis) which is under investigation; horoscopes for adults which give only birthdates are useless for determining a precise *terminus post quem*. From this information the various sections of the *Anthologiae* can be dated:

Books I-II – The early 150's or before. (I 5 is a later insertion.)¹⁰

Book III 1-13 – early 150's.

Book III 14-16 – 169/170 (an insertion).

Book IV 1-10 – 156; an introduction to the theory of chronocrators and critical times.

Book IV 11-30 – slightly later than IV 1-10; a different system of chronocrators.

Book V – 158; a continuation of the discussion of chronocrators and critical times.

Book VI – A late book (170?) with the majority of the extended similes and poetic quotations found in the *Anthologiae*.

Book VII 1-4 – 173; one of the latest sections, with the remaining poetic quotations.

Book VII 5 – 164/5

Book VIII – 167

Book IX – Fragmentary, with sections of various dates assignable to earlier chapters.

The figures listed above and in Appendix A, and the purpose for which the horoscopes are cited, divide the *Anthologiae* into two sections: 1) a general introduction to astrological studies, Books I to III 13 from the early 150's, and 2) length of life and critical year calculations, to which most of his text is devoted; this is Book III 14 to VIII, compiled from 156 to the 170's.

1) Much of Books I and II contain standard astrological doctrine: the nature and influence of the stars, signs, and terms, the influence of the Places/Houses, exaltations, and the standard aspects of opposition, trine, square, and sextile. These doctrines are illustrated by horoscopes of living persons and can be paralleled in Ptolemy and Hephaestion, as indicated in Appendix B. These same books, along with Books VIII and IX, contain unique passages showing how the astrologer calculated the positions of the planets and the Ascendant, and what type of tables he had at his disposal (samples in Appendix B).

2) Valens, however, considered as his main contribution the doctrines and methods of calculating critical periods and the length of life, and of determining the planetary ruler of any given period (=the chronocrator). With some digressions, these two topics fill Book III 1-13, which contains an early sketch of the control (ἐπικράτησις) and of the influence of the days of the week. They also fill Books IV, different methods of determining the chronocrator; Book V, critical and “operative” (χρηματιστικός) years; Book VI and VII, critical periods and length of life calculations; and Books VIII and IX, in which various tables are used to calculate the length of life. In this second section, specific numbers had to be cited from specifically dated horoscopes of persons who had died or barely survived a crisis. These critical dates calculated from the horoscopes show that our present text of Books I–VIII, though certainly disarranged here and there, is roughly in the order of original composition. Book IX can be viewed as a collection of notes or fragments.

The reader should skim Appendix B to get an idea of the contents of the *Anthologiae*. The topic developed at greatest length and with the greatest mathematical elaboration—including tables—is the length of life calculation. The underlying principle is not difficult: the life of any individual is cast like a dart on the rim of the zodiac, viewed as a wheel rotating with the universe. The place where the dart hits, the point representing the birthdate, is the starting point

(τόπος ἀφαιτικός). The place where the dart is knocked off, the day of death, is the destructive place (τόπος ἀναιρετικός). The starting point and the destructive place are no more than one-fourth of the circumference of the circle apart, usually the distance from the Ascendant to Midheaven. The number of degrees which the dart traverses, converted into degrees of right ascension, gives the length of life in years. Valens' elaboration of this scheme can best be seen in Books III 2-3 and VIII 1-7. (See the notes on these chapters in Appendix B.)¹¹

The differences between the *Anthologiae* and Ptolemy's *Tetrabiblos*, the best known ancient survey of astrology, are striking. Ptolemy's text is systematic, outlining first the stars' and signs' physical nature, which influences the earth's environment (Book I), then describing the effects of these influences on the earth as a whole (Book II), on the birth and overall character of persons (Book III), and on the separate events of an individual's life, e.g. marriage, occupations, personality (Book IV). All of these influences are derived from the basic "astrophysical" nature of the stars and signs, e.g. Mars = heat, the moon = moisture, Cancer (June/July) = heat, Capricorn (Dec/Jan) = cold, etc.

Nothing like this can be found in Valens, no physics, no systematic discussion of the causes of astrological influences, no description of the overall (καθόλου) influences on the earth's environment. Valens concentrates on individual men and their diseases, their rise and fall, their personalities, and their lifespans.

In the *Tetrabiblos* Ptolemy rarely uses numbers. As mentioned, his doctrines are based on the physical nature of the stars and signs, and "physics" for him and for his colleagues meant "qualitative description" with no numerical values.¹² Valens on the other hand was a *mathematicus* and used numbers constantly: his procedures require the use of tables, calculations, and the numerical distance in degrees from one star, sign, or critical point to another.

Finally, Ptolemy's discussion is entirely theoretical—in this respect he is unique among ancient astrologers. Ptolemy never mentions individuals, never cites horoscopes, never describes what an astrologer really does in his everyday business. Valens, on the contrary, cites some 125 horoscopes or birth dates of real persons and takes pains to describe the procedures by which an astrologer may cast and interpret horoscopes with accuracy, advise his clients, and raise his standing in his profession. In short, Valens was writing for the practicing astrologer, and his contributions, his length of life calculations and the description of how to perform these calculations, are aimed at a professional audience. One can imagine that the astrologer's clients, the middle class of urban Egypt, would have been wonderfully baffled by the astrologer's explanations of his forecasts.

QUOTATIONS FROM EARLIER ASTROLOGERS

Valens mentions and quotes from many earlier astrologers and astronomers, many of whose works have been lost. Following is a list:¹³

Abraham (Ἄβραμος) is quoted in Book II 28 and 29 on the factors which cause a nativity which is subject to travel—always an invitation to disaster. Valens considered Abraham’s work to be an original contribution: ὁ δὲ θαυμασιώτατος Ἄβραμος . . . δέδειχεν ἡμῖν ἄλλων δηλώσεις τε καὶ αὐτοῦ ἴδια - “The most amazing Abraham has opened to us the explanations of others and his own contributions” (96.9K; 91.27P). Book II 29 seems to be a summary of Abraham. His terminology is different from that of Valens: Abraham wrote ὁ κληρὸς ὁ περὶ . . . plus genitive case (δαίμονος, ἀποδημίας) instead of Valens’ usual ὁ κληρὸς . . . plus genitive case; Abram uses the unique word ἀφώτιστος – the Unlit Place (99.6K; 94.16P). Abraham used the system of chronocratorships (χρόνοι) which are held by certain stars which then transmit the year (ἐνιαυτός, ἔτος) to each other. Valens adopted this system in the *Anthologiae*.¹⁴

Apollinarios is mentioned in Books VI 11 and IX 12 as a compiler of astronomical tables. He correlated earlier observations and periodic intervals, but admitted that his tables were in error by 1° or 2° (250.26-29K; 239.24-27P). Valens claims to have used his tables with a correction factor of 8° (339.22P). An Apollinarios is cited for the length of the year (=365 8/45).¹⁵

Aristarchus is cited for the length of the year (353.11K; 339.7P).

Asklaton, otherwise unknown, is mentioned as a bombastic writer. Cumont identified this Asklaton with the ‘Askletario’ mentioned in Suetonius *Domitian* XV 3.¹⁶ Accused before the emperor of practicing magic, he did not deny the charge, but boasted of his skillful predictions. When asked what his own end would be, he answered that he would soon be torn by dogs. Domitian then ordered him to be executed immediately and to be buried with care, in order to refute the forecast. However, when a storm came up and extinguished the pyre, the dogs did rend the body. The story disturbed Domitian, who was shortly thereafter to die. The implication is that the astrologer had foreseen—and was foolish enough to mention that he had foreseen—Domitian’s end, and was for that reason denounced. The long sections in Valens describing the methods for forecasting the length of life indicate that Asklaton/Askletario was simply practicing a well-known, if dangerous, art.

Asklepios is cited as a compiler of the system of the XII Places (334.13K; 321.7P).¹⁷

Critodemus is cited at least 10 times, and his work, the “Ὅρασις (*Vision*) is mentioned twice. His style is called obscure and fantastic. Critodemus is cited for two doctrines: the determination of the starting point (ἀφετήρ) of the vital sector (ἄφεισις), i.e. the point at which the quadrant representing the lifespan begins (III 7-8), and the determination of the length of life (χρόνοι ζωῆς) using the method outlined in the note on VIII 6–7 in Appendix B—at least he began the development of this method which Valens completed (348.10K; 334.9P). His contemporary Balbillus employed the same methods (CCAG 8.4 235–9). In addition, the “Forecasts of the Terms: from Critodemus” (CCAG 8.1 257–61), is similar to I 3 “Concerning Terms,” and a partial table of contents of a book by Critodemus (CCAG 8.3, 102) roughly corresponds to *Anthologiae* IV 17-24. The frequency with which Critodemus is mentioned indicates his importance for Valens, who may have taken more from Critodemus than he explicitly acknowledges.¹⁸ Nevertheless it is difficult to see the differences between Valens’ work and Critodemus’. Critodemus is mentioned as the author of the Πίναξ in Hephaestion II 10.41.

Euctemon - see Meton.

Hermeias is cited in the title of IV 27 as an authority on the determination of the ruler of the day, month, and year, or the operative (χρηματιστικός) day, month or year (IV 27–29).¹⁹ Hermeias is directly quoted: ...ς παρατηρησάμην ἐγὼ Ἑρμείας - “as I myself, Hermeias, observed” (205.13K; 195.14–15P) and thus it appears that IV 27-29 are verbatim quotations from him. Hermeias had his own terminology: περίπατον - “transmission” (205.10,15K) instead of ἄφεισις or ἐπιδιαίρεισις; κατὰ πάροδον - “in transit” for a star’s position at the time of the inquiry. (Its position at the nativity is κατὰ γένεσιν). In a closely parallel passage in V 4 Valens uses the phrases ἀπὸ τοῦ παροδικοῦ Ἡλίου and ἢ κατ’ ἐκτροπήν Σελήνην (214.4–5K; 203.20–21P). Hermeias’ methods are repeated in different words in V 4, and a similar procedure can be found in a horoscope from Rhetorius.²⁰ (This citation may be due to the fifth-century redactor, in which case this Hermeias may be the commentator who mentions Hermes Trismegistus—and thus may have dabbled in the occult—in his scholia on Plato’s *Phaedrus*.²¹) An otherwise unknown Seuthes is mentioned in the title to VI 27.

Hermippos is cited in the title to II 29 “Concerning Travel, From Hermippos.” The chapter is actually from Abram (see above).²²

Hipparchus - Valens claims to have used Hipparchus’ figures for the sun (354.4K; 339.20P). The important chapter concerning the methods for calculating lunar positions is called a

Hipparcheion (I 19K; I 17P). Does this chapter represent Hipparchus' methods—at least in his calculations of the five planets?²³

Hypsicles, well-known as a geometrician, is cited for a table of erroneous rising times (157.12K; 149.8P). An *Anaphorikos*, or *Table of Rising Times*, which may be Hypsicles' work, is cited 8 times.²⁴

Kidenas the Babylonian - Valens claims to have used Kidenas, Soudines, and Apollonius for the moon (354.5K; 339.21P).²⁵

Meton the Athenian, Euctemon, and Philip are cited for the length of the year (365 1/5 1/19) (353.10K; 339.6P).

Nechepso the King and Petosiris are frequently cited as the “Ancients” or as the “King.” They were model astrologers: steeped in their art, they despised wealth and power when compared to mystic knowledge; they were inventive discoverers. Most of the fragments of their work, which dates to the late first century B.C., comes from Valens, who cites Petosiris' “*Όροι* (*Terms*) and the thirteenth book of Nechepso, the King.²⁶ Thrasyllus (first century AD—see below) is the first witness to their existence (*CCAG* 8.3, 100.19-20).

An unknown Orion is cited in III 2 for the doctrine of the four angles: the Ascendant, Midheaven (MC), the Descendant (D), and Lower Midheaven (IC; see diagram B). One-third of the arc between, for example, the Ascendant and IC will be powerful, two-thirds will be inoperative (ἀχρημάτιστοι). Another system: of the same arc, the first third will be beneficial, the middle third will be of moderate influence, the final third will be harmful. This system is the origin of the values attributed to each of the XII Places. Orion is said to have published all this “in his book” (135.36K; 128.26P). An Orion is mentioned in E. Maass, *Comm. in Aratum* 47, as writing on eclipses and the seven klimata.

Philip - see Meton.

Seuthes - see Hermeias.

Soudines - see Kidenas.

The *Sphaerica* (τὰ Σφαιρικά) is cited for the stars which rise at the same time (συνανατέλλει) as a given point on the ecliptic. The work cannot be identified with the treatises on the sphere written by Aratus, Eudoxus, or Hipparchus.²⁷

Thrasyllus is cited as the discoverer of a method for forecasting the length of life: determine the distance in rising times from the sun to the moon; adjust the Ascendant of the nativity using this distance; then forecast the length of life (352.7-27K; 338.3-20P). This method is similar to that used throughout Book VIII (see note on VIII 6-7 above). Thrasyllus was Tiberius' astrologer, and his son predicted Nero's rise to power.²⁸

Timaios is cited as an obscure and fantastic writer, along with Critodemus and Asklaton (329.22K; 316.19P).²⁹ He is quoted for the interpretation of horoscopes relative to parents, a section which follows immediately upon the chapters on travel from Abram. Timaios' vocabulary is distinctive: ἐπιδεκατευόμενοι (102.27K; 97.23P) for καθυπερτηρούμενοι - "to be in superior aspect;" the unique ἐπιδεκατείαν - "superior aspect" (102.33K; 97.27P); φθοροποίοι (102.31K; 97.26P *et al.*) for κακοποίοι - "malefic stars;" καταπονούμενος - "afflicted stars" (only at 103.6K; 97.34P); the unique οικοδοχεύς (102.24K; 97.20P) for οικοδεσπότης - "house ruler." Perhaps φθείρεσθαι "to be depressed" instead of the usual ταπεινοῦσθαι is Timaios also (119.13K; 113.24P), in which case most of II 37-38 would be from Timaios.

Zoroaster is cited as a riddling author of a method for finding the vital sector (ἄφεις) from the zones of the stars. He assigned periods of 9 (years/months/days/hours) to each star in the order of its distance from the earth: first the moon, then Mercury, Venus, the sun, Mars, Jupiter, and Saturn (337.3-8K; 323.18-22P).

Valens cited none of the earlier astrologers whose works have survived (Dorotheus, Manilius, Aratus, Eudoxus), nor does he cite his contemporary, Ptolemy.

THE ASTROLOGER'S CLIENTS

What can be learned about life in Greco-Roman antiquity from the astrologers, particularly from Vettius Valens? Many investigators have been optimistic in this regard. Franz Cumont, in *L'Egypt des Astrologues*, attempted to sketch the government, society, occupations, and spiritual world of Ptolemaic Egypt on the basis of the astrologers' testimony. Even before Cumont, Thorndike had used Firmicus Maternus as a historical source: "In trying to predict the future

the astrologers really depict their own civilization.”³⁰ More recently MacMullen has studied ancient society as reflected in astrology.³¹

Several considerations should forestall a naive view of the astrologers as reflectors of their own society. 1) The astrologers all borrowed from each other; their language is stereotyped and reflects an earlier period (see LANGUAGE AND STYLE below). The fact of this borrowing and the conservatism of the astrological tradition is the basis of Cumont’s thesis that astrology reflects the realities of Ptolemaic Egypt, not of the Roman Egypt from which our texts really come. 2) On the other hand, the imaginative world of the astrologers has much in common with that of the novelists, the dream interpreters, and the declaimers, and while this world overlaps the real world, it is not identical to it.³² For example, Although Egypt, the home of astrology, swarmed with peasants and small farmers, these people are never mentioned in astrological forecasts. In fact, references that can be localized in Egypt alone (metropolitan Greek office titles, local gods, even the Nile and its floods) are rare, or (in Valens) nonexistent. I would suggest that what might be references to Ptolemaic Egypt are really references to the world common to the novelists and declaimers, a world derived from the imaginative descriptions of Egypt written by Hecataeus, Hellanicus, Manetho, Timotheus, Phylarcus, and others.³³

These texts are full of kings and magnates by whom the client will be benefited and raised to high status as the master of life and death or by whom he will be condemned to prison, exile, or a miserable death. The client thus lives his life subject to ἀνωμαλία, ups and downs, certainly not tied to a peasant’s parcel of land. In this very point we can see the parallels between astrological forecasts and the ancient novels, with their heroes and heroines falling from high status to slavery, then back to nobility and happiness.³⁴ I suppose this is natural enough: people do not go to fortunetellers today in order to hear humdrum predictions that they will continue working in the post office until retirement, after which they will live 4.3 years, then die of a heart attack.

Nevertheless, many chapters of the *Anthologiae* present data from which to sketch ancient life: those chapters which contain lists of horoscopes as examples (see Appendix A; the horoscopes themselves are translated in *GH* 78-130) and those which outline the influences of the stars and signs are most important.³⁵ These two sources, the horoscopes and the theoretical chapters, were written for different purposes and only vaguely resemble each other. Some horoscopes in the *Anthologiae* were cast in order to make length of life predictions, and in these nothing is said about the events of the client’s life. Other horoscopes were written to expose the factors which control the subject’s way of life, his fate, his diseases, his misfortunes—and these horoscopes illuminate the astrologer’s methods, if not his view of ancient life. Such horoscopes for the most part simply state the salient fact about the client: of low birth, he attained high rank, but fell into vicissitudes and trouble; afflicted with vice, he came to a bad end;

and so on (complete translations in *GH*). In this reticence Valens' horoscopes are like those found in the papyri, which simply give planetary positions, with little interpretation or detail.³⁶ One may presume that the astrologer gave verbal, not written, forecasts. The details outlined in the theoretical passages (listed in footnote 35 above) are much more complete, much more circumstantial, and from them a sketch of the client's life can be made, as follows.³⁷

The client is a man of Greek culture, consulting Valens about what will happen to him.³⁸ He may be of average/mediocre (μέτριος) fortune: a small landowner, a steward or supervisor of another's property (37.16K; 36.24P), a secretary who receives pay (39.15K; 38.21P), or someone involved in buying and selling, a base occupation (40.8K; 39.20P). This person of moderate fortune will be concerned about employment possibilities (πράξεις) or how he will make a living (βίος). He may succeed through education, may become an accountant, a secretary, a teacher (39.13-14K; 38.18-20P). He may become a scholar and an initiate into the mystery religions (40.14K; 39.24-5P)—not that this promises happiness, because he may go too far and become a devotee of magic and the curious arts, a brazen and inquisitive person (42.32-34K; 42.9-11P). The most commonly foreseen method of gaining a livelihood is by winning the favor of the great. By these magnates he may be thought worthy of gifts and honors (189.14K; 179.18P), jewelry and slaves (189.27K; 180.1P), and other “unexpected” benefits (190.6K; 180.15P)—probably no one expected somebody of his status to win them. This favor, however, will not last; success will be fleeting (41.5K; 40.22P). The great have the nasty habit of elevating someone, only to ruin him later (45.14K; 44.22P). Indeed, hostility from the great is a constant worry (38.18K; 37.21P).

These men of moderate fortune may also make progress through legacies (37.15K; 36.23P)—a common source of gain, even though they usually bring with them lawsuits—194.9K; 184.19P), from adoptions (37.15K; 36.23P), and from treasure troves (39.16K; 38.22P). These men, however, always meet obstacles and rebuffs (196.8K; 186.19P), setbacks and hostility from the great (189.8K; 179.12P). They may fall into debt, resort to forgery, and have to flee the law (40.30K; 40.12P).

Alternatively, Valens' client may be of high rank, and his opportunities are greater: he may become a tyrant, founding cities and sacking them, looting and pillaging (63.25K; 62.10P). He may live with great spectacle and show (φαντασία), even if he is in reduced circumstances (38.26K; 37.29P). His high status is visible in his insignia of office (crowns and garlands) and in his preeminence and dignity, his slaves and his jewelry (194.17K; 184.28P). He becomes a governor or a high official in the royal court.

Do not be envious of this person's high rank. Like the Dallas oilman's, his wealth and power is accompanied by public scandal (49.2K; 48.10P), by popular envy and hatred (48.17K; 47.25P), and by upset in the family. In fact, high rank and family happiness seem inversely

related (39.24, 30K; 38.29, 39.5P). His family is riven by quarrels (37.20K; 36.28P), divorce (38.11K; 37.14P), and instability of all kinds (39.10, 23K; 38.14, 29P). Entanglements with base-born women bring harm and scandal (38.4K; 37.9-10P). Indeed, women are a constant source of trouble, disorder, and scandal to men, and men are trouble for women (197.24-7K; 188.6-7P). In short, the client's happiness consists of wealth and the visible symbols of office and rank, but he is plagued by annoyance, trouble, and mental and physical anguish.

The client is surrounded by villains; he may be robbed or swindled (200.17-18K; 190.28-9P). He may suffer betrayal, an ever-present danger (45.21K; 44.28P). He also faces dangers arising from his own villainy: ambition may lead him to abandon his own family and to consort with strangers (43.4K; 42.14-5P); he may become a poisoner (if he is not poisoned himself), a homosexual, a fickle person (39.35K; 39.10P. 43.28K; 43.3P). He may repent (48.28-9K; 47.34P), if he does not first commit suicide or go insane from his many troubles (201.15-6K; 191.25-6P). His actions may lead him into lawsuits, trials, and imprisonment (43.16K; 42.25P).

Sometimes the client must travel: he may fail at home but succeed abroad. He may also fail abroad, be abused there, suffer shipwreck and typhoons (200.4-5K; 190.19P). Generally speaking, travel is to be avoided (see II 29 *passim*).

The gods are no consolation. A client may be a scholar devoted to the mystery religions. He may also worship the gods with a bad conscience (37.28-9K; 37.4-5P). He may even curse the gods because of his miseries (44.4K; 43.9P), sometimes with justification, having fallen into debt because of religion (43.31K; 43.6P).

Love is no consolation either. The client's disturbed family life was mentioned above. Women trouble him because of their jealousy and their constant illnesses (196.21K; 186.30P. 197.9K; 186.23P), although they may be of great help when they are of high rank. Indeed, many men are helped by high-born women (38.32K; 38.4P). They fall in love with the client, and their love may even be reciprocated (201.28K; 192.5-6P). The astrologer, however, says little about the client's feelings. His reading of the chart concerns what happens to the client, not what he does to others or what he feels about others. Rarely does the astrologer mention that the client may accuse others of the villainy which he has committed himself (200.19K; 190.31P).

LANGUAGE AND STYLE

The *Anthologiae*, rich in poetic terms, astrological vocabulary, and religio-philosophical bombast, combines utilitarian language—the literary *koine*—with frequent purple patches. What follows is a small selection of examples; for extended studies see Warning, *De Sermone* and Kroll, “Mantissa” 143-154.³⁹

His language is the popular *koine* with variants and with the poetic touches common in popular texts:

He writes ἀρσενικός and ἀρρενικός, θαρσελέος and θαρραλέαν, περισσότερος and περιττός. For the earlier forms in -αρχος, Valens writes -αρχης: δεκαδάρχης, ἑκατοντάρχης, πολεμάρχης. For the earlier νίκη, he writes τὸ νῆκος, as in the LXX and N.T.

Valens adds μᾶλλον to a comparative form: μᾶλλον φυσικότεραν, μᾶλλον ἀπρακτότερος (Rydbeck 80-85).

He uses many perfect participles as adverbs: πεφυλαγμένως, ἐφθονημένως, ἐπισταμένως.

In verb forms, Valens often substitutes first aorist for second aorist endings, as is common in the *koine*: εὔραμεν and εὔρομεν; προείπαμεν and προείπομεν; ἀφείλαμεν. The older contract futures are rare: Valens usually writes ἀποτελέσει, not ἀποτελεῖ; ἀπολέσει, not ἀπολεῖ. The four main -μι verbs usually maintain their old forms, but ὄλλυμι, and δείκνυμι compounds have become -ω verbs: ἀπολλύουσι, παραδεικνύει.

In syntax, Valens uses ἕως and ὅτε + subjunctive, as well as ὅς ἐάν, both features of pre-atticist prose (Rydbeck 182-3).

However, the most striking feature of Valens' style is his large vocabulary. Even omitting the technical terms of astrology, his contribution to the Greek lexicon is large. One reason for this is his listing of occupations, social activities, and individual syndromes, much like those in the medical writers and physiognomists. His lists of diseases and injuries also add new words. Warning, *De sermone*, lists Valens' unique words.

A number of Valens' words and poetic phrases seem to be common to all astrological writers:⁴⁰

ἀνώμαλος, ἀνωμαλία, ἀνωμαλίζω - "(to be) subject to ups and downs" are frequent in the *Anthologiae* (more than 60x) and occur in Manetho I 270 and Firmicus Maternus, "inaequalitatem vitae" I 103.16, 119.2.

The phrase συνοχῶν καὶ καταιτιασμῶν πεῖραν λαμβάνοντες - "experiencing prison and accusations" (43.16K; 42.25P) can be compared to Manetho II 283 (ἐν συνοχῆσι γέγοντο), III 203, IV 486, and to Ptolemy *Tetr.* II 9.5.

Valens says men may be ἀλλοτρίων ἀγαθῶν ἐπιθυμηταί - "covetous of others' goods" (10.23K; 10.14-15P). Manetho says ὄλβου τε ποθήτορας ἀλλοτρίοιο (IV 120); Firmicus "Alienas res...desiderabit" (I 115.32).

Valens' clients encounter ἀπειλὰς μυστικῶν καὶ παλαιῶν πραγμάτων ἔνεκα - "threats due to religious and old matters" (163.20K; 155.2P). Manetho says Νείκεα καὶ κρισίας γραπτῶν χάριν ἢ παλαιῶν ἔργων ἰσχοῦσιν (III 161).

The client's appetites may lead him astray: οἱ δὲ καὶ ταῖς τῶν ἀδελφῶν ἢ ἐπιστατῶν ἢ ταῖς τῶν πατέρων ἢ καὶ μητριαῖς τὰς ἐπιμιξίας ποιοῦνται - "Some lie with the wives of brothers, guardians, or fathers, or with their stepmothers" (75.14K; 72.22P, also 115.18-29K; 109.29-30P). Manetho has ἢ καὶ μητρειῶσιν ἑαῖς ἢ παλλακίδεσσιν σφωιτέρου γενετῆρος ὁμὸν λέχος εἰσανέβησαν (II 189); Firmicus "Aut enim cum sororibus aut filiabus aut fratrum uxoribus coire coguntur" (I 153.8).

The noble client may experience ὄχλων ἐπαναστάσεις - "revolts of the masses" (59.8K; 58.3P *et al*; cp. *Tetr.* II 9.11; Firmicus I 111.10) and ψύξεις or καταψύξεις τῶν πράξεων - "chilling of activities" (42.17K; 41.26P; cp. *Tetr.* IV 4.12; Firmicus II 46.23 "tempus frigidum").

These examples of common phrasing and matter, which could be multiplied at length, show that many of the forecasts associated in all ancient astrologers with given planetary configurations have been borrowed from earlier texts and perhaps go back ultimately to the lost work of Nechepso and Petosiris.⁴¹

Like St. Paul, with his "Bad companions corrupt good morals," Valens had had the usual school education with its tags of poetry influencing his writing:⁴²

ἀκάματος - "untiring," epic and tragic (331.21K; 318.18P)

ἀοίδιμος - "sung of," Pindaric (3x)

ἄτη - "delusion," epic (285.28K; 273.15K)

εὐσταθής - "tranquil," epic (3x)

λυσσώδης - "raging," epic and tragic (356.5K; 341.16P)

ὀλετής - "a destroyer," epic (303.17K; 290.11P)

τρυχηρός - "tormenting," tragic (109.1K; 103.22P)

ὕφηγητής - "a guide," Sophoclean (222.12K; 11.16P)

He also adds a poetic/literary color to his text with quotations from the poets and philosophers, and with extended similes. Homer is quoted nine times.⁴³ Fragment 527 of Cleanthes is quoted several times, once wrongly attributed to Euripides (VI 9; 250.14P). An anecdote about Euripides and a youthful critic is related (276.25-30K; 264.18-23P). Orpheus is quoted on the nature of the soul (330.24-30K; 317.19-26P). Valens confesses that he has a collection of such passages (347.28-29K; 333.29-30P); indeed, Manetho V 18 quotes the same

verse about Fate (*Iliad* 6.488). His extended similes are perhaps more original and seem to have become more elaborate as his magnum opus progressed. Two are particularly worthy of note because of their reference to contemporary life. In VI 1 he compares man's life and the stars' influence on that life to the game of *latrunculi*, a chess-like game played on a board with black and white pieces.⁴⁴

The [celestial] system might be compared to the game of white and black pieces—for life is a game, a pilgrimage, and a fair. Competitive men devise wicked traps for each other, move their pieces along the many straight rows, and put their pieces down in certain places when summoned to a skirmish. As long as the place happens to be unguarded, the piece moves unchecked according to the will of the player: it flees, stays, pursues, attacks, wins, and loses in turn. If it is surrounded by the opposing pieces (as if caught in a net) and finds the straight rows to be blocked, it is intercepted and captured. In this way, of the two players, one finds momentary pleasure and enjoyment for himself, the other momentary mockery and pain—momentary because the one who had been in despair suddenly comes back into the game by means of some stratagem and gives back the burden of despair to the [other player] who had just now laid it on him. The stars' effects should be viewed in the same way... (245.34-246.13K; 235.16-29P)

Immediately following the simile just quoted, he compares the quality and influence of each star to the colors used by painters (VI 2; 237.21P). In V 9 he compares the two types of astrology students, the diligent and the careless, to two vintages of wine or to the fruit from different trees of the same species:

A distinction is made among those who encounter this art: some are true, some insubstantial, some uncomprehending. It is like this: several earthenware amphorae receive a single crop of precious wine from one farm. After a time, some of the amphorae give the wine back perfect, filled with flavor and enjoyment for those who entrusted the wine to their keeping. Other amphorae, however, allow the measure of the wine's volume to diminish, are not able to contain the new wine, and allow it to foam over—these amphorae did not entirely alter the flavor or cause the savor of the wine crop to disappear, but they do cheat the vintner in both respects, for the taste does not last any time nor does it keep its real nature, but immediately changes. (We can see the same thing occur in other plant growths: from one tree the fruit is sweet and ripe when it is gathered; the fruit from another tree is hard and wild; of another the fruit is bitter and

rotten or harmful to its consumers.) Just so are the minds of those who encounter this art: one student does his lessons to the end with eagerness and determination and has pleasure in it. The unscientific and ignorant students get only a taste of the introductory portions, spend no time on these studies because of their lack of diligence, study with no legitimate teachers, and bring the charge of ignorance on themselves and reproaches upon the instructors of this art. (221.26-222.14K; 210.32-211.17P)⁴⁵

Other comparisons: Valens passes on his last words like a dying father (257.11K; 246.9P); the searcher for truth is like a man who hikes through the valley and up the mountain to come upon a temple adorned with gold and silver and ivory, and he worships the gods in great splendor (263.13K; 251.12P); those who expect a great future are sometimes disappointed, like the heirs of a (supposedly) rich man, who find that his wealth is tied up in litigation (270.31K; 258.20P); the stars' influence continues through the years like the echo from a sounding gong (275.3K; 262.29P—these four comparisons come from the latest sections of the *Anthologiae*); the searcher for truth is like a man walking unknowing on the spot where treasure is buried (352.3K; 337.31P).

MATHEMATICAL EXPRESSIONS

Valens offers some unusual mathematical expressions. Like all Greek mathematical writers, he never uses formulas or equations, but describes his operations, even the simplest, in words.⁴⁶

ἀναλύω εἰς - “to transform into”: [τὸν χρόνον] εἰς ἡμέρας ἀνέλυσσα - “I transform [the remaining period of months] into days” (253.32K; 242.27-8P). ταῦτα [ρπ'] ἀναλύω ἕως τῶν ξ' - “I transform this [180] into sixtieths” (296.24K; 283.22P). Compare *P. Mich.* 145 III v.2: ἀνάλυσσον τὰς β' ἡμισυ εἰς ἡμισυ, ε' - “Reduce 2 1/2 to halves, =5.” A similar expression in Ptolemy's *Handy Tables*: εἰδὲν...τὰς καιρικὰς ὥρας ἀναλύειν θέλωμεν εἰς ἰσημερινὰς - “If we want to transform seasonal hours into equinoctial hours” (Ptolemy, *Opera Minora* 161.20).

ἀνατρέχω - “to count back” (cp. ἐκβάλλω below): ἀναδραμῶν ἀπὸ τῆς γεννητικῆς ἡμέρας - “counting this [amount] back from the date of birth...” (51.36K; 51.9P).

ἀπολύω - “to count off,” usually with καταλήγω - “to end”: ταύτας [νη'] ἀπέλυσσα ἀπὸ Ἡλίου· κατέληξε Παρθένω - “I counted this amount [58] off from the sun's position; [the count] ended in Virgo” (19.25K; 18.30P).

ἀφαιρέω - see under ἐκκρούω.

γίνεται - “equals” followed by the answer, *passim*.

διεκβάλλω - “to begin, then continue, counting”: δεήσει ἀπὸ Ἡλίου καὶ Σελήνης καὶ ὠροσκόπου διεκβάλλειν τοὺς ἐνιαυτούς - “It will be necessary to count off the years from the sun, the moon, and the Ascendant” (174.23K; 165.14-15P). *P. Ryl.* 27.11 and Ptolemy (*Op. Min.* 165.17, 166.5 *et al.*) use διεκβάλλω in the same sense.

εἰσέρχομαι εἰς ὄργανον - “to consult the astronomical table”: εἰσῆλθον εἰς τὸ προκειμένον ὄργανον εἰς τὰς ἰδ' μοίρας τὰς ἐν τῷ πρώτῳ στίχῳ... - “I consulted the attached table at 14° in the first column...” (20.12K; 19.17P).

ἐκβάλλω - “to count off”: τὰ καταλειφθέντα ἐκβαλλε ἀπὸ τῆς Σελήνης τῆς κατὰ γενέσιν - “Count off the remainder from the moon’s position at the nativity” (204.25–26K; 194.29–30P). The astrologer of *P. Mich.* 149 used ἐνψηφίζω in the same sense: ἐνψηφίζε δὲ τὰς μοίρας ἕως ἔλθης... - “Count off the degrees until you come to...” (vii 6–7). ἐκβάλλω and διεκβάλλω are confused in the manuscripts; δεῖ ἐκβάλλειν is written for διεκβάλλειν several times in Book IV 11.

ἐκκρούω ἀνά - his usual word for “divide by”: τὰ ἔτη πλήρη ἀναλαβῶν ἐκκρουε ὁσάκις δύνῃ ἀνά λ' - “taking the full years, divide them by 30,” literally “cast out as many 30’s as you can” (33.31–2K; 33.4–5P). Occasionally he uses ἀφαιρέω in the sense “to cast out”: ἀφαίρει τοὺς κύκλους ἀνά τξ' - “Cast out/subtract 360° circles.” (28.27–8P) Note ἀνά meaning “at the rate of” as in commercial language (*P. Mich.* 145 III iv.1) and ἄρον ἀνά κέ' - “divide by 25” (*P. Ryl.* 27.1).⁴⁷

λοιπογραφέω - Two senses: “to discard the remainder” (i.e. to use integer division) and “to deduct.” μερίσεις εἰς τὸν γ', μὴ λοιπογραφῶν τὸν ἀριθμὸν ἀλλὰ κατέχων - “divide by 3; do not discard the remainder but keep it” (31.16K; 30.16–17P; the remainder is the important factor for the succeeding calculation). “This will happen...καὶ μηδεὶς τῶν ἀναιρετῶν ... λοιπογραφῆση τὸ πλῆθος τῶν ἐτῶν” - “if...none of the destructive stars deducts from the number of years [in the client’s lifespan]” (136.19K; 129.9P).

ὅρος - “a factor,” “a coefficient”: τριῶν ὀρῶν ὑπαρχόντων - ἐλαχίστου τε καὶ μέσου καὶ μεγίστου - “There are three factors: the minimum, the mean, and the

maximum...” (50.8K; 49.16P; the figures referred to here are the coefficients for calculating the date of conception: 258, 273, 288.) For a similar use of this word, see Ptolemy, *Op. Min.* 181.18.

πολυπλασιάζω (38x) and πολλαπλασιάζω (5x) – “to multiply” *passim*.

προσβάλλω - “to add a factor”: τὴν πρόσθεσιν τῷ ζητουμένῳ ἔτει προσβάλλων - “adding the addition-factor to the year in question” (31.15K; 30.16P).

προσλαμβάνω - once meaning “to assign for each month”: ἐκάστου μηνὸς προσλαβὼν ἀνά β' ἥμισυ - “Assign 2 1/2 for each month” (33.19P; different reading in K). For ἀνά see under ἐκκρούω above.

προστίθημι - “to add” *passim*. Occasionally συντίθημι is used in the sense “to combine” = “to add together more than two numbers”: ἐκάστου μηνὸς Αὐγουσίου ἀνά μοῖραν ἀ'λεπτά λε', ἐκάστης δὲ ἡμέρας λεπτά γ'συνθείς - “having combined 1° 35' for each Egyptian month and 3' for each day [with the previous number]” (28.26–7P)

σύνδεσμος - in addition to the usual sense “lunar node,” σύνδεσμος also means “a sequence” of planetary positions or of figures in a table: τὸν Ἥλιον εὐρίσκομεν ἀπὸ Κρίου τὴν ἀρχὴν ποιούμενον. . .καὶ. . .τὸ μέγεθος τῆς ἡμέρας ἐπαύξοντα, ἐν δὲ τῷ διαμέτρῳ Ζυγῷ τὸν σύνδεσμον λύοντα καὶ εἰς τὸ μειοτικὸν χωροῦντα - “We find the sun to be beginning in Aries and increasing the length of the day [from that date], but in the opposite sign, Libra, breaking the sequence and turning to a reduction [in daylength]” (163.5–9K; 154.22–25P). In IV 5, συνδέσμου λύσις “breaking the sequence” refers to the moment when one chronocrator (a star which rules for a given period) passes the rule to another star (163.28,31K; 155.9,12P). With reference to tables: Valens describes a table (now found at the end of Book VIII) with the figure 2 entered at Libra 1°, 4 at Libra 2°, 6 at Libra 3°, 8 at Libra 4°, 10 at Libra 5°, and 12 at Libra 6°. He continues: τουτέστι παραύξησις [μοιρῶν] β' εἶτα ἀπὸ τῆς ζ'μοίρας συνδέσμου λύσις, παραύξησις προσθέσεως [μοιρῶν] ιδ' - “i.e. a progressive increase of 2; then [at Libra 7°] the sequence is broken and an additional factor of 14 is added” (295.6–7K; 282.6–7P).⁴⁸ Perhaps the same meaning in *P. Ryl.* 27.8: ἐπὶ τῶν συνδέσμων - “If a connection is made.”

MANUSCRIPTS AND EDITIONS

The *Anthologiae*, like most astrological texts, was used and consulted by later astrologers. Pingree has emphasized the importance of this fact for establishing the history of our present text.⁴⁹ As our study of the chronology of the *Anthologiae* has shown, the text, with the exception of Book IX, is in its approximate order of composition, but with many short insertions and glosses. It also has several sections appended in antiquity, with horoscopes dating to 431 (365.3K; 350.9P) and 419 (365.29K; 351.4P). The fifth-century version of the *Anthologiae* was the archetype of all later Greek mss, and it was used by Rhetorius and the Byzantine astrologers of the tenth through the twelfth centuries, who tried to make sense of Valens' rules and procedures.⁵⁰

Valens' posthumous fame was great. To him was attributed the horoscope for the city of Constantinople.⁵¹ He also had quite a vogue among Arab astrologers. Mash'allah (died ca. 815 AD) knew ten books of his (CCAG I 82). The *Fihrist* of Ibn al-Nadim reports the titles of nine books of "Walis." This Walis has long been identified with Vettius Valens, and the supposition has been that his *Anthologiae* were translated into Arabic, possibly from an intermediate Persian translation, with additional stories about the author and additional works ascribed to him.⁵² From this Arabic tradition anecdotes about Valens re-entered the Greek tradition. At the request of the king of Persia, Valens interpreted a horoscope: "This man will be exalted, will rule lands, and will be called blessed by many men." Little did Valens know that he was interpreting the horoscope of the very man, Mohammed, who was then threatening Persia. The Persian king became angry and threw Valens in jail, from which he was saved by God's mercy.⁵³

The renaissance scholar Claude Saumaise (Salmasius) rewrote much of the *Anthologiae* in his *De annis climactericis* (1648), but the first modern edition of the complete text was by W. Kroll (1908), the second by D. Pingree (1986). An edition with French translation and extensive commentary on Book I has been published by Bara. This edition presents the best introduction to the topics, terminology, and methods of the astrology of Book I; unfortunately Valens' main interest, length of life calculations, is not discussed in that book. All modern editions are based on very few manuscripts: *Vaticanus graecus* 191 (V, written ca. 1300) and its copy, *Arch. Selden B. 19* (S, ca. 1520), in the Bodleian Library. S supplies the text for the quires lost from V after S was copied. Another manuscript, *Marcianus graecus* 314 (M, ca. 1300) supplies much of the text for *Anthologiae* I and II. V and M are descended from a common Byzantine archetype.⁵⁴

Pingree's text differs relatively little from Kroll's: both are editions of the Byzantine Greek manuscripts only. As mentioned in footnote 3 above, there seems to be another tradition for Valens' work, the traces of which can be found in the *Fihrist*, in the Arab compilers al-Qasrani

and al-Saymari, and in several late Greek texts. This Eastern tradition of the *Anthologiae* is kin to the mass of Arabic texts derived from Dorotheus, Rhetorius, and Antiochus, and must be discussed in conjunction with them.⁵⁵ This tradition, however, has not significantly influenced the current text, although parts of it appear in the lengthy appendices to Pingree's edition (369–455P). Pingree's improvements to Kroll's text are due to his detailed studies of the mss and to a half-century's work on the techniques of ancient astronomy carried out by O. Neugebauer and his collaborators, the immediately relevant parts of which were published in *GH*. Thanks to this work, the horoscopes of the *Anthologiae* can be dated and many of Valens' procedures can be explained.⁵⁶

There is still much to do in reconstructing the text: the mss omit tables which may be reconstructible;⁵⁷ the text may be restored to its original order, with the fragments of Book IX assigned to their proper places; many glosses and lacunae remain to be identified. Particular techniques remain obscure, especially the use of lunar and solar gnomons in Book VIII. The study of the vocabulary and techniques of the different sections of the *Anthologiae* may allow the recovery of fragments from other astrological writers.

Appendix A: chapters which contain horoscopes whose time of *casting*, as opposed to time of *birth*, is dateable. All dates are AD.

Book I: no horoscopes are cited.

Books II-III: these early chapters are a general introduction to astrology. Valens had not yet developed his special interest in the topic, length of life, and no dates other than birth dates can be calculated. Some horoscopes were reused at later dates which can be calculated.

Book II 21: this chapter cites examples of horoscopes for living people and describes the astrological reason for their fortunes. No dates of death are given—hence the date of casting cannot be determined; no date can be assigned to this chapter. Later, however, three of the horoscopes were reinterpreted after the subjects had died or had suffered a crisis. The years were 143/4, 152, and 153 for the later reuse. This chapter must antedate 143/4.

Book II 26: no final dates can be determined.

Book II 30: Valens' own horoscope, interpreted to show why his mother had predeceased his father. Valens was born (if the surmise is correct) in 120; this passage must have been written or revised after his mother had died in 155.

Book II 37: these horoscopes concerning disease mention no deaths or critical times. One (112.5K; 106.24P) is cited again in 287.22K; 256.16P, with a critical date of 154. Presumably II 37 was written before that time.

Book II 41: all of this chapter's horoscopes are for violent death, but no dates can be calculated.

The following Books contain the horoscopes with dateable deaths or crises.

	<u>Date of Birth</u>	<u>Date of Death or Crisis</u>
Book III 6:	75	144 (134.9P)
	110	161 (134.21P)
Book III 10:	114	143 (139.22P)
	127	139 (140.1P)
Book III 13:	74	144 (146.1P)
	115	147 (146.10P)
Book III 14:	75	151 (148.1P)
	135	169 (148.8P)
Book III 16:	82	152 (149.11P)
	102	169 (149.15P)
	102	169 (149.19P) This chapter is to be dated to 169/170. The horoscope of birth date 82 is cited from earlier records (Book II 21).

Book IV 8:	75	145 (154.19P)
	Date of Birth	Date of Death or Crisis
Book IV 10:	152	156 (161.13P)
Book IV 11:	120	155 (165.1P)
Book V 1:	121	156 (200.3P)
Book V 10:	120	154 (216.6P)
	134	157 (216.16P)
	111	157 (216.33P)
	107	158 (217.15P)
	135	157 (217.22P)
	112	157 (217.29P)
	110	157 (218.22P)
	153	157 (218.26P)
	102	154 (218.29P)
	120	156 (218.33P)
	122	157 (219.4P)
	114	158 (219.13P)
	123	155 (219.22P)
	113	133 (220.12P) This horoscope is cited later for the date 161. This chapter was completed by 158.
Book V 11:	37	68 (222.15P) This horoscope is cited from Critodemus, an astrologer of the first century. The date 11 June 68 is being investigated for a client who was born 15 Dec 37.
Book V 12:	104	158 (227.25P)
Book VI 5:	132	184 (242.3P) The latest horoscope in <i>Anthologiae I-IX</i> ; ten years subsequent to any other investigation date, this must have been misdated or added by a later investigator.
Book VII 2:	120	162 (255.17P)
	114	153 (255.30P)
	122	159 (256.4P)
	118	138 (256.16P) From II 36; also in VII 5

	117	157 (257.1P)
	74	143 (257.29P)
Book VII 3:	173	173 (261.5P)
	159	169 (261.16P)
	162	173 (261.25P)
	122	172 (261.34P)
Book VII 4:	122	166 (263.5P) This is one of the latest sections of the <i>Anthologiae</i> , completed in 173.

Book VII 5:	124	159 (268.18P)
	134	161 (269.8P)
	108	160 (269.22P)
	110	164 (270.1P)
	113	162 (270.12P)
	129	159 (270.24P)
	102	142 (271.3P)
	105	153 (271.23P)
	158	161 (271.31P)
	111	158 (272.26P)
	114	155* (274.14P)
	120	155* (274.22P)
	118	155* (274.30P)
	127	155* (275.3P)
	122	155* (275.9P)
	133	155* (275.14P)
	142	165** (276.7P)
	120	160 (277.28P) The single-starred nativities were almost shipwrecked in 155. This is the critical date under investigation. The double-starred nativity is interpreted in the text up to the subject's 23rd year (164/5), with a brief forecast for the future: "There will be troubles and expenses, or there will be independence..." (277.17-18P). I judge from these comments that this passage, and perhaps the whole chapter, was written in 164/5.

Book VIII 7: this chapter and the one following explicitly gives the date of birth and the length of life, from which the dates of death have been "calculated":

54	127 (291.23P)
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79	151 (292.14P)
114	156 (292.28P)
115	155 (293.12P)
127	154 (293.22P)
69	150 (293.32P)
113	114 (294.10P)
142	145 (294.18P)
152	152/3 (294.27P)
157	158 (295.4P)
105	127 (295.13P)
125	156 (295.27P)
131	151 (296.11P)
67	153 (296.26P)
109	154 (297.7P)
83	154 (297.28P)
85	150 (298.6P)
79	157 (298.20P)
151	157 (299.1P)
121	153 (299.12P)
119	152 (300.1P) Several fragmentary, undatable

horoscopes follow.

A slightly later section of Book VIII 7 continues:

	102	167 (303.17P)
	75	144 (304.9P)
	134	168 (304.24P)
	151	163/4 (305.3P)
Book IX 19	118	(not cited here)

APPENDIX B: ASTROLOGICAL TOPICS

I append notes describing Valens' own procedures when these have no obvious parallel in Ptolemy or Hephaestion, as well as sample translations.⁵⁸

Books I and II present a general introduction to astrological forecasting:

I 1: The influence of each star.⁵⁹ A sample passage:

Saturn makes those born under him petty, malignant, care-worn, self-depreciating, solitary, deceitful, secretive in their trickery, strict, downcast, with a hypocritical air, squalid, black-clad, importunate, sad-looking, miserable, with a nautical bent, plying waterside trades. Saturn also causes humblings, sluggishness, unemployment, obstacles in business, interminable lawsuits, subversion of business, secrets, imprisonment, chains, griefs, accusations, tears, bereavement, capture, exposures [of children]. Saturn makes serfs and farmers because of its rule over the land, and it causes men to be renters of property, tax farmers, and violent in action. It puts into one's hands great ranks and distinguished positions, supervisions, management of others' property, and the fathership of others' children. Of materials, it rules lead, wood, and stone. Of the parts of the body, it rules the legs, the knees, the tendons, the lymph, the phlegm, the bladder, the kidneys, and the internal, hidden organs. Saturn is indicative of diseases and injuries arising from cold and moisture, such as dropsy, neuralgia, gout, cough, dysentery, hernia, spasms. Of syndromes, it rules possession, homosexuality, and depravity. Saturn makes bachelors and widows, bereavements, and childlessness. It causes violent deaths by water, strangulation, imprisonment, or dysentery. It also causes falling on the face. It is the star of Nemesis; it is of the day sect. It is like castor in color and astringent in taste. (1.24-2.20P)

The parallel chapters of the *Tetrabiblos* specify the physical nature of the stars: Saturn is cool and dry, Mars hot and dry, etc. In these chapters Ptolemy mentions none of the stars' influences on occupations, character, and fate.⁶⁰

I 2: The nature of the 12 signs, the fixed stars to be found in each sign, and the geographical areas ruled by each sign (this is the science of *chorography* -cp. *Tetr.* II 2-4). Close parallels in Hephaestion I 1.⁶¹

I 3: The terms, the degrees in a sign ruled by each planet. Compare *Tetr.* I 20-21.⁶²

The first 6° of Gemini belong to Mercury: temperate, with fine weather, intelligent, versatile, skilled, effective in his work, poetic, prolific. The next 6° belong to Jupiter: competitive, temperate, with fine weather, prolific, luxuriant, beneficent. The third term, 5°, belongs to Venus: blossoming, artistic, addicted to plays and mimes, poetic,

much-honored, popular, cheerful, prolific. The fourth term, 7°, belongs to Mars: much-burdened, with no brothers, having few children, a wanderer, with a good income, destructive, bloody, inquisitive. The last 6° belong to Saturn: temperate, a procurator, having possessions, intellectual, with a wide knowledge, distinguished, noted for intelligence, an arranger of great matters, most famous. (14.15-23P)

I 4-20 covers various methods for calculating important zodiacal or planetary positions: the Ascendant (I 4),⁶³ Midheaven (I 5), rising times (I 7), new and full moons (I 9), the week (I 10), the moon's phases and its astrologically significant positions on the third, seventh, and fortieth days after the birth (I 13-15), the nodes (I 16-18), and the planetary positions on any given date (I 19-20). Valens' procedures for calculating Saturn, Jupiter, and Mars are translated here:

Saturn is to be calculated as follows: take the full years since Augustus and cast out as many 30's as possible [=divide by 30]. Multiply the remainder of the division by 12°. Multiply the result of the division by 30 (=cycles of Saturn) by 5°. For each month from Thoth to the date of birth add 1°, and for each day 1/30°. Having totaled all this, count from Cancer in the direction of diurnal motion, giving 30° to each sign. The star will be wherever the count stops.

Jupiter as follows: divide the full years since Caesar by 12. Multiply the remainder by 12° and add this number to the result of the previous division by 12, one for each cycle of Jupiter plus 1° for each month and 2' for each day. Add them together and count the sum from Taurus, giving 12 to each sign.

Mars as follows: take the number of years from Augustus to the year in question, divide by 30, and note whether the remainder is odd or even. If it is even, start counting from Aries; if it is odd, start from Libra. Having found this number, double it and add to it 2 1/2 for each month after Thoth. If the result is more than 60, count off the amount over 60 from Libra or Aries, giving 5 to each sign.

Wherever the count stops, make note of the sign and examine which sign the sun is in. If the sun is found to be west of the star, the star will be behind [=to the west] its calculated sign; if the sun is found to be east of the star, the star will be ahead [=to the east] of its calculated sign. In other words, in each case, place the star nearer the sun than the sign in which you have calculated it to be. The rest of the stars, especially Venus, show the same peculiarity when they are moving near the mean position of the sun. (33.31-34.25K; 33.4-27P)⁶⁴

I 21-22: The astrological influence of the stars in combination, first by two's, then by three's, e.g. Saturn, Jupiter, and the sun together:⁶⁵

Saturn, Jupiter, and the sun are unsteady and insecure with respect to possessions, friendships, and other business enterprises. They cause loss of possessions. They cause some to fall into invidious accusations. These stars, having indicated help from unexpected sources or from the deceased, and having increased someone's reputation, bring ruin and accusation, along with sudden danger and plots. They do cause preeminence, guardianship of others' business, tribute, and salaries, for the sake of which men endure disturbance and crises, but these stars make the basis [of the preeminence] insecure and worrisome. (41.8-16K; 40.26-41.6P)

The information in these chapters can be used to sketch a client's career. See the section of this paper THE ASTROLOGER'S CLIENTS.

I 23-24: Determining the date of conception and the length of the gestation period.

Compare Hephaestion II 1.

Book II describes the system of the XII Places ("Houses" in modern terminology) and of the Lots, astrologically significant points on the zodiac.⁶⁶

II 1-2: The four triangles (Aries Leo Sagittarius; Taurus Virgo Capricorn; Gemini Libra Aquarius; Cancer Scorpio Pisces) and their influence. Cp. *Tetr.* I 18, Hephaestion I 6.

II 3-4, 17, 19, 20, 27: the Lot of Fortune. It is found by determining the distance from the sun to the moon, then measuring an equal distance from the Ascendant (see diagram B) and is mentioned in most horoscopes. The other Lots are found by measuring to and from the other stars in much the same fashion. See *Tetr.* III 11.5.⁶⁷

II 5-15: The system of the XII Places. Each chapter describes the influence of each Place. (The I Place is the 30° arc beginning at the Ascendant, the II Place is the next 30° arc, and so on; see diagram B.) Ptolemy, for whom the Places are not important, mentions only five of them (*Tetr.* III 11.3-4).⁶⁸ Valens also uses a scheme of Places relative to the Lot of Fortune: the 1st Place is the 30° arc beginning at the Lot, and so on. (The 8th Place from the Lot is the Place of Death.) This scheme is not used outside Book II.

II 16: The influence of the geometric configurations of opposition, trine, square, and sextile; a long section transcribed from earlier astrologers, with sources common to Firmicus Maternus. See *Tetr.* I 13.

II 18: The Lot of Fortune and its astrological significance. See *Tetr.* I 19.⁶⁹

II 23-25: Other Lots: of Debt, Deceit, Rank.

II 29-41: Standard methods of answering traditional astrological questions: travel (29), parents (30-33), free or slave nativities (34), injuries and diseases (36; this long chapter includes a *melothesia*, the assignment of the parts of the body to the signs and planets with illustrative horoscopes⁷⁰), marriage (37-38), childlessness (39), brothers (40), violent death (41). Similar interrogations are covered in Hephaestion II 1–25 and *Tetr.* III–IV.⁷¹

Book III begins the elaboration of Valens' specialty, the determination of the critical periods (κλιμακτῆρες), years during which the client will suffer a crisis, and the determination of the client's length of life (χρόνοι ζωῆς):

III 1: the Control (ἐπικράτησις), the point of the zodiac which controls the length of life. Various configurations at the nativity change the Control. This chapter contains an early discussion of a method as yet undeveloped.

III 2-3: The vital sector (ἄφεις), the arc of the zodiac which determines the length of life. One point is fixed as the "starter" (ἀφότης), usually the sun, the moon, or the Ascendant; another is fixed as the "destroyer" (ἀναίρετης), and the distance between them (not more than 90°) represents the length of life. In the following sample passage, the destroyer is the point 90° from the starter:

Therefore in casting a nativity, it will be necessary to determine if it does or does not have a houseruler, and if the sun, the moon, or the Ascendant is the ἀφότης. If the sun or moon are in the aphetic place, then it will be necessary to figure the total rising times (in the klima of the nativity) from the position of the apheta to the point square with it. Having found the total time, you can forecast that the native will live as many years. This forecast will be accurate if the houseruler is in its own terms or is configured appropriately, has contact or is in aspect with the apheta, and if no ἀναίρετης applies its rays and deducts from the number of years. If the houseruler is not in aspect with the controller, but is otherwise found to be favorably configured (i.e. in the Ascendant, at MC while rising), it will allot the full span of years. If it is not at one of the other angles, it will deduct a segment of the arc proportional to its relationship with the rest of the horoscope, but will allot the remainder as the length of life. (129.1-14P)

A similar passage in Book V 11:

The aphetic points of the years are operative when starting from any star, but the following aphetic points are most effective: for day births the sun, for night births the moon, especially when they are at the angles. Next in effectiveness is the Ascendant. If the vital sector beginning at the Ascendant, the moon, or the sun passes to one of the stars in the nativity, then use it for forecasting. (220.21-26P)

This procedure is also described in *Tetr.* III 11.⁷² Valens went on to develop more complex methods.

III 4-5: The exaltations, depressions, and sects of the stars. Cp. *Tetr.* I 12, 19.

III 7, 10: The vital sector and length of life. (See note on III 2–3 above.)

III 8-9: The terms, an interpolation. (See note on I 3 above.)

III 11: The critical periods determined according to the day of the week and the ruler of the day. This chapter uses a 7-day week and 9-day week. The purpose of these weeks is to enable the astrologer to determine the planetary ruler of the day, and hence the particular influences operative on that day (explanatory matter in []):

Saturn will be the beginning of the 7-day-week because of the sun and moon; Mars will be the beginning of the 9-day-week because Capricorn and Aquarius (which are Saturn's houses) are in opposition, in the seventh place, to Cancer and Leo [houses of the sun and moon], and Aries [Mars' house] is the ninth sign from Leo [=sun], and Cancer [=moon] is the ninth sign from Scorpio [Mars' house]. But it would be more scientific to derive these from the exaltation of the moon in Taurus: the beginning of the 7-day-week would be Mars, because of Scorpio; the beginning of the 9-day-week would be Saturn, because of Capricorn.

An example: the nativity was in Hadrian year 3, Athyr 27 in the Alexandrian calendar [23 Nov. 118]. I wish to investigate the subsequent date Antoninus year 17, Phamenoth 11 [7 March 154]. I take the full years, 35, plus the 3 remaining days in the birth month [Athyr 27 to 30], plus 2 days for each month from Choiak to Mechir, [3 months. The total is 44.] With the 5 whole weeks [=35 days] subtracted, the remainder is 9. Now add the 11 days of Phamenoth (total 20), plus the 8 intercalary days. The grand total is 28. Therefore Phamenoth 11 will be a critical day in the 7-day-week system. [4x7=28, so Phamenoth 11 begins a week.] According to the sequence of days, Phamenoth falls in Scorpio [a sign of Mars, the ruler of the first day of the week]. Examine which stars are in aspect with this sign and with the moon.

The 9-day-week is found as follows: I multiply the full years by 5 1/4, since each year contains forty 9-day-weeks with 5 1/4 days left over. For each month I add 3, since each month has three 9-day-weeks with 3 days left over. Then I divide the number of days remaining until the day in question by as many 9's as possible [=divide by 9]. I make sure that the remainder is less than 9. Now the result will be the number of the critical day, just as in the 7-day-week system. (141.11-31P)

These periods of seven and nine are also mentioned in Firmicus Maternus as the "ebdomaticis et enneaticis annis" (II 41.18).⁷³

Book III 12-14: The length of life with methods for determining the Ascendant (see note on VI 9 below). III 14, with an introduction claiming independent discovery, was written several years after III 13.

Book III 15: Critical years. (See note on V 2 below.)

Book III 16: The period of each star. In standard astrology each star had a certain period associated with it: Saturn 30, Jupiter 12, Mars 15, Venus 8, Mercury 20, Sun 19, Moon 25.⁷⁴ Valens uses these figures as well as several others. Various schemes for adding these figures to the rising times of the signs yield the length of life for the client. Two sample horoscopes:

Another example: sun in Taurus, Mercury in Taurus, moon in Pisces, Saturn in Scorpio, Jupiter, Mars, Venus in Aries, Ascendant in Gemini. The rising time [of Gemini] in the second klima is 28. Mercury in Taurus adds its [Taurus'] rising time, 24, plus Mars in Aries, 15. He died in his 67th year.

Another example: the same configuration of stars [as in the preceding horoscope] for a different nativity, except that the Ascendant was in Capricorn, the Lot of Fortune in Pisces. The rising time [of Pisces] in the second klima is 20, plus the period of Jupiter, 12. Since Jupiter is in Aries, we add its rising time, 20, plus the period of Mars, 15. The total is 67. He lived that long. (149.15-22P)⁷⁵

Rising times are added to rising times, periods to periods, periods to rising times, anything required to derive the correct length of life.

From Book IV to Book IX the exposition is not systematic. These books were written over a period of 20 years and deal with a variety of topics centered on the determination of the length of life, with some attention to the related topic of critical periods.

Book IV 1-5: This section, written at one time, describes how each star rules for a given period, then transmits (παράδιδωσι) its control, or chronocratorship (χρόνοι = years), to another.⁷⁶ As a result each period of time will show the predominant influence of the star which is its chronocrator and the influence of the various transmissions from and to other stars. The Lots may be considered as transmitters also. Sample passages:⁷⁷

For new-moon naticities, the star located immediately after the new moon begins the vital sector [=is the first chronocrator], then the other stars as they come in order.

For full-moon naticities, the star following the full moon serves in the the same capacity. It is necessary to examine how the star is configured and which stars are

in aspect. Also determine if the other stars that receive the chronocratorship are at angles or precede angles, or are rising or setting. Determine the sequence of their transits and their sympathies and antipathies. After the 32 year 3 month period is completed, the second cycle is begun starting with the next aphetic star [=chronocrator] of the one-fourth period.

Make the distribution of days as follows: if Saturn is found to be the overall ἀφέτης [=the first chronocrator], it assigns 7 1/2 years. Now since it is necessary to include all the stars in this 7 1/2 year period, we will make the allotment as follows: multiply the 85 days of Saturn by 7 1/2 to get a total of 637 1/2. This is the amount Saturn will allot to itself from its 7 1/2 years. Now let us find Jupiter: since it governs 34 days, multiply this 34 by 7 1/2 (since Saturn is the ἀφέτης), for a total of 255. Jupiter will have this number [of days] after Saturn's chronocratorship. Next in order Venus receives the chronocratorship: since it controls 22 2/3 days, we will multiply this amount by 7 1/2, and we will find the total to be 170. Venus will control this amount after Saturn's chronocratorship. And so on with each star; if we multiply its days by 7 1/2, we will find its allotment. If the moon, on the other hand, controls the vital sector, we multiply each star's days by 6 1/4 to find its distribution. Similarly for the rest. (150.18-151.15P)

Valens then suggests another method in which the vital sector is counted from the Lots of Fortune or Daimon:

Let's say that the Lot of Fortune or Daimon is located in Aries. The overall houseruler of Aries is Mars. Let Mars' successors be determined, then see if they are or are not configured properly. Mars itself allots 15 years first, and from this period it assigns itself 15 months. Next (because of Taurus [the next sign—see diagram A]) it assigns 8 months to Venus, next (because of Gemini) 20 months to Mercury, next (because of Leo) 19 months to the sun, next 20 months to Mercury, next 8 months to Venus, next (because of Scorpio) Mars assigns itself [again] 15, next (because of Sagittarius) 12 to Jupiter, next (because of Capricorn) 2 years 3 months to Saturn. Next it assigns to Aquarius the remaining 11 months to fill out the 15 years. Now Venus receives from Mars the overall chronocratorship for 8 years and assigns years to each sign as already illustrated. Because of Gemini, Mercury receives 20 years after Venus and assigns the years to each sign. Next is the moon with its 25 years, then the sun with its 19. It is necessary to assign the years in the order [of the stars] to whatever date the nativity extends [i.e. to the date of the casting of the horoscope or to the date of death]. (153.8-22P)

IV 6-10: The same topic with examples.

IV 11-25: A new section with an autobiographical introduction. In IV 11, after the introduction, a new method is described for determining which star is chronocrator: given a year (e.g. age 35), divide by 12 and note the remainder ($35/12=2$, remainder 11). The stars which are 11 signs apart will be transmitting the chronocratorship to each other. For this nativity, the same results will occur at age 23, 47, 59, and 71. In general, similar things will happen in a 12-year rotation: “The same transmissions are indicated every 12 years, but they will not have the same causative influences” (168.1-2P).

IV 12-25: Various transmissions: in the XII Places (12), in the exaltations (13), at phases (14), in the III or the IX Place (15), to or from each star and Lot (16-25). A sample will give the tone of these chapters (for the Places see diagram B):

An example: if Saturn or Mars is in the Ascendant and is either transmitting or receiving, we can say that during this year there will be bodily troubles, danger, or bleeding. If these stars are in the VII Place from the Ascendant, there will be a turn to the worse because of a wife, or danger to a wife, or an upsetting crisis because of marriage. If they are in the IX Place from the Ascendant, there will be hazardous travel, trouble abroad, or betrayal at the hands of foreigners. If they are in the XII Place, there will be grief because of slaves or enemy revolts. In other words, the star will activate those matters which each Place influences. (170.24-171.1P)

IV 26-30: Miscellaneous methods quoted from other astrologers, including Critodemus and Hermes.

Book V continues the topics of chronocrators and critical times:

V 1: The Crisis-Producing Lot.

V 2: The critical years (κλιμακτῆρες). These are dangerous periods, in later astrology at 7- and 9-year intervals, with the sixty-third year ($=7 \times 9$) being particularly fatal. Such intervals are not important in the *Anthologiae*.

The critical year is found from the transmission or reception of malefics in relation to the luminaries, the Ascendant, and each other—in general it is found thus. In specific cases, it is necessary to count off the years from the sign in the Ascendant. If the current year is found to be in the sign of the new or full moon, or in the sign in square or opposition [unfavorable aspects] to the new or full moon sign, the year will be critical and troublesome, especially if (under these circumstances) Saturn [a malefic planet] is found to be passing through the four places which just preceded the angles at the nativity, and if the basis of the nativity is in accord: death will

follow, bodily weakness, bleeding, dangerous diseases, hidden troubles, falls, sudden dangers. Sometimes the critical point affects matters of livelihood and rank, if the bodily state is helped by an aspect of benefics.

In addition, determine the distance from Saturn's position at the nativity to the ruler of the new or full moon, then count that distance from the Ascendant. When Saturn is at that position, or in opposition or square with that position, death will occur, or a grave crisis to health or business. Likewise the critical year will occur if Saturn is at the ascending or the descending node, or the points square with these. If someone takes to his bed ill while the sun is passing through the ascending or descending node, or through the points square with them, and if a malefic beholds the sun, then the bout of disease will be dangerous and hazardous. (200.14-201.3P)

V 3: Initiatives (κατάρχαι), whether to begin an action or activity.⁷⁸ Valens has only a brief discussion of this topic to which Hephaestion devoted Book III, Περὶ καταρχῶν, of his *Apotelesmatica*. Of course Valens' methods for determining the critical periods would apply to Initiatives as well.

V 4-7: The operative (χρηματιστικός) day, month, and year; "operative" seems to be equivalent to "critical."

V 8: The inclinations (πρόσνευσις) of the moon, i.e. the sign of the zodiac to which the moon "inclines" at its phases. The significance of the inclination is not discussed here. The inclination of the moon at eclipses is part of Ptolemaic theory (*Alm.* VI 11, the *Handy Tables* in *Op. Min.* 178.24-181.9), but I see little similarity between Valens' doctrine and Ptolemy's. See *HAMA* 141-144, 997.

V 9-10: Reflections on the value of astrology. A review of the method for the chronocratorship described in IV 11, with examples. The following chapters outline similar, purely numerological, methods.

V 11: A review of the vital sector, the transmission of the chronocrators.

V 12: Another method for the vital sector, using the distance (in signs) between stars. If, for example, the astrologer is investigating the client's twentieth year, he factors 20, for a result of 4 and 5. He investigates the stars that are 4 or 5 signs from the moon, and he interprets the events of that year in light of that transmission. This method is similar to the method of IV 11 and can also be found in the *Liber Hermetis* (ed. Gundel, 1935).

Book VI begins a new section with an introduction describing Valens' personal devotion to astrology. The topics covered in this book are again the critical periods and the length of life.

VI 1, 4-6: Propitious and impropitious periods and the distribution (=transmissions) of the chronocrators. Valens claims to be simply refining his earlier methods, transforming them from a sign-basis to a degree-basis. Book VI 6 includes a table of factors for each star.

VI 2-3: The qualities (=colors) of the stars.

VI 7: The ruler of the current day.

VI 8: A new section begins with reflections on the necessity for combining different astrological systems. Valens prided himself on his eclecticism: “Every method (ἀγωγή), when combined and critically compared with every other, brings forth the scientific (φυσικήν), precise system (θεωρίαν)” (257.23-25K; 246.19-21P). A review of the vital sector follows.

VI 9: How to determine the Ascendant and the moon’s position retroactively after birth. This was necessary in order to fix the beginning of the vital sector. The Ascendants reported in the horoscopes were calculated, not observed, and several methods for such calculations are described in the *Anthologiae*:

After we calculate precisely the positions of the stars on the birth date in the current year, we will find the Ascendant as follows: while the sun is still in the natal sign, we examine when, at what hour, the [moon] will come to the exact same degree where it was at the nativity, and we call that point the Ascendant. (213.23-28K; 203.10-14P)

The sign in the Ascendant is found (for day births) by counting the number of the sun's degree-position from the sun's sign, giving 1° to each sign. The sign where the count stops is in the Ascendant. (340.18-20K; 326.31-327.2P)

The appended table [not extant] is constructed so as to give the sign in the Ascendant and the required, scientific time of day. It resembles the roughly accurate table which was constructed (in a puzzling manner) by the King, and used by him starting with the sun at conception. I have constructed a precise table, starting with the month Thoth (which is odd because it is month #1), then with Phaophi (which is even because it is month #2), then Athyr (likewise odd), then Choiak (even). Then in sequence you must examine the remaining months one by one. Enter the appended table at the day or night in question and at the operative month, and we will find for day or night births the hour of the nativity on that line. (361.9-18K; 346.9-19P)

As is clear from this last example, the astrologer had tables at his disposal to make his task easier. For these methods of calculating the Ascendant, see *Tetr.* III 3.

Book VII starts a new section devoted to the same topics: critical periods and length of life. VII 1-5: Propitious and impropitious times using the periods of the stars and the rising times of the signs, or a fraction (1/2, 1/3, 2/3) thereof:

Now if, as we have already said, the chronocratorship of a configuration coincides with the time under investigation, when calculated from the total of the rising time of the sign and period of the star, then use the preceding rules. Then, because these combined chronocratorships coincide to produce what will be predicted, attend to and determine the outcome using the positions of the angles and the stars preceding or following the angles, the positions of the Lots, and the new and full moons, considering all of these according to the proper aspects or oppositions of the stars. If the chronocratorships of the aspects are combined, the results will come to pass in one-half, one-third, or two-thirds of the time, provided each one does not hold the chronocratorship alone. (267.25-268.6P)

A sample horoscope as an illustration:

Another example: sun, Mercury in Capricorn, moon, Mars, Ascendant in Taurus, Saturn in Scorpio, Jupiter in Cancer, Venus in Pisces, klima 6. In his thirtieth year he escaped slavery, committed many robberies, avoided capture for a short time, but was caught in the same year. Both sets of signs in opposition were operative [Taurus/Scorpio, Cancer/Capricorn]: they both total 60, one-half of which is 30. Also 28 for Capricorn, 20 for Mercury, plus 12 for Jupiter total 60, one-half of which is 30. Also 30 for Saturn plus 15 for Mars, two-thirds of which is 30. Also 25 for Cancer [=moon], 12 for Jupiter, plus 8 for Venus (which is trine) total 45, two-thirds of which is 30. Because of the benefics, he seemed destined to escape danger for a short time and to live comfortably from the takings of his robberies, but because of the malefics, he fell. (270.24-271.2P)

Book VIII starts a new section which uses two tables found at the end of Book VIII to find the length of life.

VIII 1: The construction of table 1. Following is the column for Libra:⁷⁹

Degrees	Star Factors	Years	Months	Days	
1	sun	2	6	1	15
2		4	12	3	
3		6	18	3	
4		8	24	4	
5		10	30	3	15
6	Mars	12	36	7	
7		26	78	0	
8		28	84	0	
9		30	89	11	
10		2	6	0	
11	Jupiter	4	11	9	
12		6	17	1	
13		20	59	11	
14		22	64	5	15
15		24	70	6	
16	Saturn	26	76	8	
17		28	81	3	
18		30	87	4	
19		14	40	11	
20		16	46	9	
21	Mercury	18	51	5	
22		20	57	11	
23		22	62	5	15
24		24	68	8	
25		8	22	9	
26	Venus	10	28	5	15
27		12	33	11	
28		14	39	5	
29		16	44	10	15
30		18	50	4	

VIII 2: The construction of table 2.

VIII 3-4: How to determine the Ascendant retroactively after birth. (See the note on VI 9 above.)

VIII 5: How to use tables 1 and 2 (this translation refers to the portion of the table printed above):

For example: the number 2 is entered next to Libra 1°. Two is one-thirtieth of 60. One-thirtieth of 180, the magnitude of Libra 1° [=total rising time of the arc beginning with Libra 1°], is 6. Now Libra comprises 30°. If we calculate with this many years, the 30°[of Libra] will allot 180 years, an impossible length of life for a person. So if we take one-sixtieth of 180, we will get 3 as the amount which 1° of Libra will allot. Three times 30° is 90: we can say that Libra allots a maximum of 90 years, according to the applicable degree of its magnitude.

Likewise for the rest of the signs: we multiply the magnitude entered next to each degree by 12, then take 1/60 [=one-half of the original factor] of it to find the minimum or the maximum years. Each degree of each sign has a different time in the table's progressive increase, and for this reason the seconds and the minutes of the hours and the rotation of the degrees have great effect. (300.25-301.2K; 287.23-288.3P)

VIII 6-7: The calculation of the lunar and solar gnomons and their use in forecasting the length of life. In these chapters Valens used the rising times of the signs. If, for example, Aries (rising time 20) is in the Ascendant, the astrologer assigns 0;40 (=2/3, or 20 rising times allotted to 30°) to each degree of Aries. The number of degrees in Aries is the first factor. The second factor is in Taurus, the next sign. Taurus rises in 24, so each degree of Taurus will have 0;48 (=48/60, or 24 rising times allotted to 30°), and the number of degrees in Taurus will be added to the 20 of Aries. If the vital sector extends from Aries 1° to Taurus 1°, the length of life would be 20;48 years (=20 years 8 months). If the vital sector extends to Taurus 30°, the length of life would be 20 in Aries plus 24 in Taurus = 44 years. If the vital sector extends into the third sign, then the astrologer calculates a third factor, in Gemini. Gemini rises in 28, so each degree has 0;56. If the vital sector extends from Aries 1° to Gemini 1°, the length of life would be 44;56 years; if to Gemini 30°, 72 years, the maximum, since the vital sector extends over no more than 3 signs (290.28-291.11P).

As a corollary to this, a native born in signs of long rising time (e.g. Leo, Virgo, Libra) will theoretically live longer than one born in signs of short rising time (e.g. Aquarius, Pisces, Aries), although Valens admits this is rarely possible (315.28K; 302.21P).⁸⁰

In the cited horoscopes, Valens used either the "first factor" (=one sign), the "second factor" (=all of one sign plus part of another), or the "third factor" (=all of two signs plus part of a third). Occasionally he adds two of the factors to arrive at the length of life, which—it must be remembered—he already knew; these are retrospective calculations.

In order to use this method the Ascendant must be known to the degree, which cannot be done from observation alone. To determine the Ascendant, the astrologer consults a table (not extant) of sign equivalents. If, for example, the sun is in Scorpio 10°, the moon in Aquarius 30°, and the Ascendant in Sagittarius (no degree-position), the astrologer searches for some equivalent of Scorpio 10° and finds it in Libra. He finds Libra entered in his table at Sagittarius 14°/15°. These degrees will be the *solar gnomon*. He carries out the same procedure for the moon, and finds that Sagittarius 1°/2°/3° is the *lunar gnomon*. In his table there are four rows between Sagittarius 1°/2°/3° and Sagittarius 14°/15°, and so he adds 4° to the solar gnomon, for a result of Sagittarius 18° as the Ascendant to the degree (305.3-20K; 291.23-292.8P). Having determined the Ascendant, he then looks at the table of *apogonia* for Sagittarius 18°, and for the third factor he finds a total of 73 years. The subject of this horoscope died at age 73 (305.20-22K; 292.9-11P).⁸¹ This method of gnomons and factors fills most of Book VIII and seems to be the culmination of Valens' ingenuity. A similar method is used in the fifth-century addition (365.29K; 351.4P).⁸² VIII 8: The terms. The end of Book VIII is fragmentary. VIII 6-8 is the latest section of the *Anthologiae* (see Appendix A); VIII 7 is the utmost elaboration of Valens' pet scheme.

Book IX begins a new section. This Book is fragmentary; many sections belong with earlier chapters. The chief topic is again the length of life calculations.

IX 1: A general review of astrological forecasting.

IX 2: A review of the XII Places.

IX 3: Propitious and impropitious periods.

IX 4: The critical years derived from the factors of numbers. For example, Jupiter's period is 12 years. The factors of 12 are 3 plus 4 plus 5. A period controlled by Jupiter will come every 3 years: "Jupiter acts as a benefic and brings high rank every 3 years: 3 plus 4 plus 5 total 12" (338.28K; 325.10-11P).

IX 5: Initiatives. (See note on V 3.)

IX 6, 10, 18: How to determine the Ascendant retroactively. (See note on VI 9.)

IX 7: Miscellaneous topics: malformed births, determining the Ascendant.

IX 8: A new section begins with an introduction on the value of astrology. The use of a table of *apogonia* (see note on VIII 6-7) to make forecasts. The method is similar to that in VIII 6-7.

IX 9, 13, 15, 17: Fragmentary methods for the length of life using the sun and the moon.

IX 11: The source of Valens' astronomical knowledge. He "used Hipparchus for the sun, Soudines, Kidenas, and Apollonius for the moon" (354.4-5K; 339.20-21P). Astrology makes men submissive to Fate.

IX 14: Conception (a fragment).

IX 19: How to determine the moon's exact position using two appended tables, now lost.

Valens describes a graphical method for finding the moon's longitude and phase.⁸³

Both tables indicate the longitude of the moon and its phase. If we want to know the moon's longitude at a nativity with reference to its hourly motion, we calculate in this way: first it is necessary to enter the table of klimata, holding the compass with legs apart. Having determined the length of the hours in the night hemisphere (at the current longitude of the sun), we place one leg of the compass right there. Then we open the compass until the other leg reaches the hour in question. The 12 hours of the night are so arranged as to allow this. If the nativity was during the day, note the extension of the compass legs in the night hemisphere and extend it to the hour in question of the day.

Now, having measured out the total number of hours in the way described, move the compass [viz. without changing the extension of the legs] to the lunar table. Set one leg of the compass at the number in the chart approximately equal to its daily motion, then see what longitude the other leg touches. The degrees will be evident from the chart of its motion, and these must be added (if the nativity is after sunset) to the degrees previously determined for the moon; add the difference due to klima as well. Having done so, consider this to be the moon's longitude. (362.13-31K; 347.16-33P)

The fifth-century addition to the *Anthologiae* gives examples of critical period and length of life calculations, using the methods and tables of Book VIII.

Abbreviations:

AG - A. Bouché–Leclercq, *L'astrologie Grecque* (Paris 1899)

CCAG - *Catalogus Codicum Astrologorum Graecorum* (Brussels 1898-1953).

CH - A.D. Nock and A.–J. Festugière, *Corpus Hermeticum* (Paris 1983).

DSB - *Dictionary of Scientific Biography*

EAT - O. Neugebauer and R. A. Parker, *Egyptian Astronomical Texts I-III* (Providence R.I. 1960-69)

GH - O. Neugebauer and H.B. Van Hoesen, *Greek Horoscopes* (Philadelphia 1959)

HAMA - O. Neugebauer, *History of Ancient Mathematical Astronomy* (Berlin and New York 1975)

RE - Pauly–Wissowa, *Realencyclopädie der Klassischen Altertumswissenschaft*.

The *Anthologiae* is cited either by the book and chapter number of Kroll's edition, followed by the page number in Pingree's edition—e.g. Book III.5 (133.31P), or by the page number in Kroll's edition followed by the page number in Pingree's edition—e.g. 141.17K; 133.31P. All chapter and page references in the scholarly work on Valens since 1906 refer to Kroll's edition.

Several passages contain fractions expressed in sexagesimal notation: 0;30 = 1/2, 0;40 = 2/3, 0;50 = 5/6, 2;30 = 2 1/2, etc.

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¹ The writing took place in the middle decades of the second century (see below); the table of kings in I 19 was extended into the fourth century; several long chapters were appended in the fifth century; titles and marginal notes were added at various times; in 1648 Claude Saumaise rewrote parts of the *Anthologiae* in his *De Annis Climacteris* (1648). For the use of the text in the thirteenth century see Pingree, “Byzantine Tradition,” 540.

² Although Valens and Ptolemy were near contemporaries, Valens shows no signs of familiarity with Ptolemaic astronomical methods, which were based on precise calculations of arcs and radii and on the theorems of plane and spherical trigonometry. Valens’ methods (illustrated in the note on I 20 below) were purely arithmetical, like those of their Babylonian predecessors. Ptolemy recognized the difference between his methods and those exemplified in the *Anthologiae* (*Alm.* IX 2; Heiberg I 2, p. 211).

³ There appear to be two distinct traditions about Valens: one consists of the *Anthologiae*; the other consists of stories and references to Walis al-Rumi (as he is called in the *Fihrist* of Ibn al-Nadim), who wrote treatises called *The Sultan, Rains, The Revolution of the Years of the World*, among others, and who had various colorful adventures, one of which is related in the section MANUSCRIPTS AND EDITIONS below. This paper is devoted solely to the author of the *Anthologiae*; a scholar at home in the Arabic tradition must sketch the career of this (other?) Walis.

⁴ His name and home are given in the mss ascriptions. For the conjectured date of birth see Pingree in the introduction to his edition, p. v. The predecease of his mother is mentioned in the horoscope quoted at 101.32K; 96.28P (a passage written in the early 150’s—see Appendix A), the work abroad at 227.21-7K; 216.10-12P, the adventure at sea in 287.35-288.3K; 274.22-29P, the move to Egypt at 172.4K; 163.1P. The horoscope for Hadrian year 4, Mechir 13 = 8 Feb. 120 is cited at least 21 times, 12 times in Book I alone. The date of conception (Hadrian year 3, Pachon 11 = 13 May 119) is cited at 51.32K; 51.5P. The gestation period, 278 days, is used as an example in the text. This birth on 8 Feb. 120 was an important date and his stock example; hence probably his own. The *Anthologiae* was completed around 175 AD; the birthdate of 13 May 120 would give Valens a lifespan of about 55 years. His disappointment with his teachers is parallel with that of Plotinus (Porphyry, *Vita Plot.* 3) and the unhappy student of *P. Oxy.* 2190, quoted in N. Lewis, *Life in Egypt* 63-4: “...my prayers would be answered if I could find some worthwhile tutors and never have to lay eyes on Didymos [his former tutor] even from a distance.” Like Valens, Plotinus and the unhappy student lived in Egypt.

⁵ A translation of this passage in G. Luck, *Arcana Mundi* 349-350. Similar expressions of faith throughout V 9. See Bara, *Anthologies* 14ff.

⁶ Ptolemy's second argument for astrology's utility is that foreknowledge can allow us to prepare such defenses as cures for diseases and remedies for evils (*Tetr.* I 3.10). Valens never uses this second argument.

⁷ A.D. Nock and A.-J. Festugière, *CH* II 297. Many parallel examples could be cited from the *Hermetica*. Valens was steeped in Greco-Egyptian mysticism. See Garth Fowden, *The Egyptian Hermes* (Cambridge 1986) 155-195, for a description of the Hermetic milieu which presents many parallels to Valens' attitudes, if not doctrines. A.J. Festugière, *L'idéal religieux* 120-127 emphasizes Valens' view of astrology as a mystery, transmitted by tradition, through which the soul is raised to heaven, and becomes a participant in immortality. (Valens never mentions Hermes, a fact which would argue for a post second-century date for most of the *Hermetica*.)

⁸ For these astrologers, see below in the section "Quotations."

⁹ Statistics are cited in *GH* 176-179.

¹⁰ The horoscope dated in *GH* 130-1 to 188 AD has been redated by Pingree to 70 AD (93.13K; 89.8P).

¹¹ The clearest description of this scheme in ancient texts is *Tetrabiblos* III 11; see *AG* 411.

¹² The *Tetrabiblos* is physics; the *Almagest*, which simply describes the positions of the planets, not their physical nature, is mathematics, but even there the structure of the Ptolemaic system is based on geometry, not on arithmetic. For the distinction between physics and mathematics see Simplicius in his commentary on Aristotle's *Physics*: *In Aris. Physicorum Comm.* ed. Diels (Berlin 1882) 291.23-292.26; also Aristotle, *Physics* 193b23ff, and M. Riley, "Theoretical and Practical Astrology."

¹³ I have mentioned some of the special vocabulary used in the quotations, but more work is needed to demarcate one quotation from another and from Valens' own words.

Astrological terminology was not fixed, as a cursory comparison between Valens and, for example, the nearly contemporary *P. Mich.* 145 will show.

¹⁴ The book from which Valens quoted had been attributed to the patriarch, who was (according to Eusebius, *Praeparatio Evangelica* IX 16-17) the inventor of astronomy, who had studied in Phoenicia and in Egypt, and who had learned the science from Enoch (called Atlas by the Greeks). See *AG* 578; Gundel, *Astrologoumena* 52-4.

¹⁵ See Gundel, *Astrologoumena* 159 and A. Jones, "248-Day Schemes" 30ff for Apollinarios. Jones suggests that Apollinarios developed pre-Ptolemaic lunar tables. Also

see Jones *Ptolemy's First Commentator* 12ff. Apollinarios' distribution of the terms (see note on I 3 above) is mentioned in Porphyry's *Isagoge*, CCAG 5.4 (1940), 212 and in E. Maass, *Comm. in Aratum* 47.

¹⁶ Cumont in CCAG V.1, 205; Gundel, *Astrologoumena* 158-9.

¹⁷ A *De Horoscopo* of an Asklepius is known; DSB 11.245. *P. Mich.* 149 ix. 20 attributes a system of Places to Asclepius; this system matches Valens'. The name might be taken as a generic reference to Hermetic astrology, rather than to a specific individual; an Hermetic tractate *Asclepius* survives in Latin translation.

¹⁸ For Critodemus, see Boll, *RE* 11.2 (1922) 1928–1930 and Cumont's notes at CCAG 8.1, 257 and CCAG 8.3, 102; *GH* 185-186, which dates Critodemus to the first century AD, using the horoscopes in Valens' quotations; Gundel, *Astrologoumena* 106-7 dates him in error to the third century BC. A section from Critodemus begins at 117.21P.

¹⁹ The titles of each chapter are not necessarily Valens' own: the title to III 10 is ἐκ τῶν Βάλεντος περὶ ἀριθμίου κλήρου καὶ χρόνων ζωῆς... Other titles, hence other citations and indeed whole chapters, could have been added by later redactors, although the evidence for this is not strong. Hermeias then might be a later astrologer.

²⁰ CCAG 8.1, 232-234; *GH* 132-134. A geometrician Hermeias is a participant in Plutarch's *Quaes. convivialium* 9.2, 738, discussing the reasons for the number and order of the letters of the alphabet.

²¹ Hermeias of Alexandria, *In Platonis Phaedrum scholia*. ed. P. Cuvreur (Paris 1901), quoted in G. Fowden, *The Egyptian Hermes*. 184.

²² Gundel, *Astrologoumena* 108-9 hypothesizes that this Hermippos is the student of Callimachus and librarian at Alexandria. I consider this unlikely. The name may be a book title, not a person: a dialogue Ἑρμιππος ἢ Περὶ ἀστρολογίας defends astrology from a Christian standpoint. See Kroll, *RE* 8.1 854-857.

²³ Ptolemy describes Hipparchus' methods for the sun and moon (*Alm.* IX.2; H 2.210), but states that Hipparchus had not begun to describe the motions of the five planets by means of uniform circular motions, i.e. by the means used in the *Almagest*. Hence the arithmetical methods of *Anthologiae* may indeed represent Hipparchus' approach.

²⁴ See DSB 6.616-7; Hypsicles' treatise is available: V. de Falco and M. Krause, *Hypsicles. Die Aufgangszeiten der Gestirne* (Göttingen 1966), with an introduction by Neugebauer.

²⁵ Kidenas is Kidennu in cuneiform texts; see DSB 15.678.

²⁶ Edition of the fragments in E. Riess, "Nechepsonis et Petosiridis Fragmenta Magica." Additional fragments can be collected from CCAG. The best study of Petosiris (and

- Nechepso by association) is Pingree's in *DSB* 10.547-9; a long discussion in Gundel, *Astrologoumena* 27-36. The fourth century BC tomb of a Petosiris ("gift of Osiris") is described in G. Lefebvre, *Le Tombeau de Petosiris*. Lefebvre reports the attractive conjecture that this tomb is that of the original Petosiris: the tomb's inmate is called a sage (Lefebvre 9), the inscriptions of the tomb present a series of philosophical/religious texts with parallels in the *Proverbs* and *Psalms* of the *Old Testament* (Lefebvre 37-41), and the tomb was a place of pilgrimage for Greek-speaking Egyptians (Lefebvre 21-27). *EAT* 3.216 rightly doubts a direct connection between this Petosiris and the first century BC astrologer. I might suggest however that the astrologer owed his name to the earlier sage. Astronomers were known in fourth-century BC Egypt; see the inscription on the statue of an astronomer and snake-charmer reported in G. Daressy, "La statue d'un astronome," and *EAT* III 214.
- ²⁷ For details see F. Boll, *Sphaera* 59-72: "nach ihm (the writer of the *Sphaerica*) zu forschen würde keinen Sinn haben: es muß einer jener zahlreichen Schriftsteller gewesen sein die... populäre Traktate verfaßt haben."
- ²⁸ Gundel, *RE* 2er Ser. 6:1 581-4.
- ²⁹ Timaios wrote about "interrogations" (see note on II 29-41 in Appendix B) concerning runaway slaves and thieves; see Kroll in *RE* 2er Ser. 6:1 1228 and *CCAG* I 97; Gundel, *Astrologoumena* 111.
- ³⁰ L. Thordike, "A Roman Astrologer" 416.
- ³¹ R. MacMullen, "Social History in Astrology" 105-116. Cumont was preceded by W. Kroll, "Kulturhistorisches aus astrologischen Texten." Kroll dated Nechepso/Petosiris to the second century BC and Hermetic astrology to the Ptolemaic period, as did Cumont. These conclusions have been revised by later work. The *Liber Hermetis* (ed. Gundel) in particular has been dated to the ninth or tenth century AD by Pingree "Indian Iconography" 227.
- ³² MacMullen, "Social History" 105 recognized this problem.
- ³³ J. G. Griffiths, *Plutarch's De Iside et Osiride* 84-5 makes the point that even Plutarch's treatise seems to reflect early Ptolemaic Egypt, not the Roman Egypt of its composition date (second century AD).
- ³⁴ Chariton is an ideal example—and from the same milieu as the astrological forecasts! For a similar world of adventure, see the portrait of "Sophistopolis," the city envisioned in ancient rhetorical exercises, in D. A. Russell, *Greek Declamation* (Cambridge 1983) 22-39. For an early astrological forecast involving pirates, adultery, ransom, and triumphant vengeance, see *P. Mich.* 148, from the first century AD.

³⁵ The latter include:

I 1 - the stars (1.4-5.8P)

I 2 - the signs (5.21-13.26P)

I 3 - the terms, the degrees in each sign which are ruled by the individual stars (13.28-18.10P)

I 21 - combinations of two stars (36.22-40.23P)

I 22- combinations of three stars (40.26-48.29P)

II 2 - the triangles (55.14-58.12P)

II 22 - the Lots of Fortune and Daimon (83.12-86.14P)

II 36 - diseases and injuries (103.30-106.15P)

IV 17-25 - the transmissions of the stars to each other (179.10-192.34P).

Needless to say, other chapters contain theoretical data about the stars' and signs' influences.

³⁶ *GH* 162.

³⁷ The following sketch is derived from I 21, with some references to IV 17ff.

³⁸ Women are only occasionally the subject of forecasts: "When forecasting for women, daughters, or female individuals, start from Venus..." (205.16K; 195.19P); other forecasts for women at 71.5K; 68.24P (a queen) and 197.27K; 188.8P. Only two horoscopes are those of women (281.24K; 269.8P. 282.16K; 270.1P). A section on marriage prospects for women begins on 121.9K; 115.17P.

³⁹ *Indices verborum* can be found in both Kroll's and Pingree's editions, the latter of which is very comprehensive. On levels of style see L. Rydbeck, *Fachprose*. For an extensive treatment of Valens' astrological vocabulary see Bara, "Apotélesmatique et initiatives."

⁴⁰ See W. Kroll, "Mantissa" in *CCAG* 5.2 143-146. Firmicus Maternus is cited according to the volume (I, II) and page number in the edition by Kroll-Skutsch-Ziegler; Manetho from *Manethonis Apotelesmaticorum* ed. Koechly.

⁴¹ For these astrologers see "Quotations" above.

⁴² Many (all?) of the earliest astrological works are in verse: Dorotheus, Nechepso/Petosiris (?), Manetho's *Apotelesmatica*, Anubion (in P. Oxy. 464 and P. Berlin 7508), and the original text from which the *Ars Eudoxi* was derived (*HAMA* 686). Poetic words may derive from this tradition. Note, for example, βαστᾶζει (10.1K; 9.24P) in the Homeric sense "carry," not used in Attic prose; Valens elsewhere uses διαβαστᾶζει (2x). The passage containing βαστᾶζει must come from a poetic text.

⁴³ *Iliad* 6.488 (272.4K; 259.27P), 8.19 (347.9K; 333.12P), 13.730-3 (221.15-18K; 210.23-26P), 15.605 (347.18K; 333.20P), 19.128 (272.2K; 259.25P), and 22.213 (347.21K; 333.23P). *Odyssey* 4.73 (263.15K; 251.15P), 4.379 (257.17K; 246.24P), and 24.1-2 (346.22-23K; 332.28-29P).

⁴⁴ See *RE*, 23er Halbband (1924) 980-984 for the few details known of this game. It may have been played on a 9 x 9 board.

⁴⁵ The comparison of the mind to a jar is a commonplace in popular philosophy: Cic. *Tusc.* I 61, Plato, *Phaedrus* 235C, Plutarch *de Aud.* 39A, 48C. See Hillyard, *Plutarch: De Audiendo* 259.

⁴⁶ For interesting parallels to Valens' mathematical vocabulary, see F. E. Robbin's commentary to *P. Mich.* 145 in *Papyri in the University of Michigan Collection*, vol. 3 *Miscellaneous Papyri*.

⁴⁷ Valens rarely uses the customary word for "divide by" - μερίζω εἰς/παρά: ἐμέρισα εἰς τὸν γ' - "I divided by 3" (32.7K; 31.8P). Μερίζω usually has the sense "allot": ὁ τοιοῦτος εὐδαίμονησει περὶ τῆς ὑπὸ Κρόνου μεριζομένης πράξεως - "This type of native will be fortunate in the occupation[s] allotted by Saturn" (60.8K; 58.28P).

⁴⁸ μοιρῶν is an error in the text; these figures are not degrees but factors (ἀριθμοί) used in length of life calculations. See *GH* 174-5 for the construction of the table on 321-324K; 308-311P. Part of this table is reproduced on p. 00 below. Σύνδεσμος once refers to the star α Piscium, the "link" between the two fish in Pisces (14.9K; 13.24P).

⁴⁹ Pingree "Antiochus and Rhetorius" 203.

⁵⁰ Pingree "Byzantine Tradition" 537-540.

⁵¹ Details in *CCAG* 5.1, 118. See *RE* VIII A,2 1872.

⁵² See F. Sezgin 38-41, and the references there to earlier studies. The *Fihrist* is available in English in *The Fihrist of al-Nadim*. ed. B. Dodge; Walis is on p. 641. Apomasar attributed to Valens a work on the paranatellonta (simultaneously rising stars) for each degree of the zodiac (*CCAG* I 84). An example of Valens in Arabic in King (1989).

⁵³ The anecdote is in *CCAG* 5.3, 110, dated in Pingree "Byzantine Tradition" 537 to 939 AD, a date which does not fit the story.

⁵⁴ For details of the fairly simple manuscript tradition see Kroll's preface ix-xii, Pingree's preface vii-xiii, and Pingree "Byzantine Tradition" 532-541.

⁵⁵ Pingree "The Indian Iconography" 227 and his review in *Gnomon* 40(1968) 276-280 of Wilhelm and Hans Georg Gundel, *Astrologoumena*.

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⁵⁶ See especially *HAMA* 793-801 on the planetary calculations in I 20 and *GH* 174-5 on Valens' astronomical tables.

⁵⁷ Tables omitted in III 6 (145.22K), V 7 (233.23K), V 11 (restored by Pingree at 222.1-13P), VIII 5 (303.32K).

⁵⁸ A useful table of contents in Kroll's edition. In the following translations, brackets surround explanatory additions to the text; the parentheses are in Valens. The chapter numbers are those of Kroll's edition. The *Tetrabiblos* is cited from the edition by Boll-Boer (Leipzig 1940). A complete translation of Book I is found in Bara, *Anthologies*.

⁵⁹ *AG* 124-157; French translation in Bara, *Anthologies*, 27-29.

⁶⁰ *AG* 88-123. M. Riley, "Science and Tradition."

⁶¹ *AG* 124-157. The most thorough description of the values attributed to the signs is in W. Hübner, *Die Eigenschaften*.

⁶² *AG* 180-240, *GH* 12; translation in Bara, *Anthologies*, 79. A completely different system of terms in *P. Mich.* 149 vii 28-40. Valens never mentions the decans.

⁶³ See A. Jones, "248-Day Schemes" 28-29 for a discussion of this chapter. For Ascendant and Descendant see Diagram B.

⁶⁴ Translation in Bara, *Anthologies*, 169-171. Valens' methods in this chapter have been explained in *HAMA* 793-801 and in A. Tihon "la longitude de Vénus" 71-81 and A. Tihon "la longitude des planètes" 16-22. Their purely arithmetic character differentiates Valens, the older Babylonian texts, and even Hipparchus (in his description of the motions of the five planets) from Ptolemy's system, which was based on trigonometry and mean motions. For a discussion of Valens' procedures for the moon see Jones "248-Day Schemes" 27-30.

⁶⁵ Translation in Bara, *Anthologies*, 197. A similar description organized in groups of two and three stars is found in *Anonymi de Planetis* (CCAG 2.159-180), a section derived from Valens, who is named there.

⁶⁶ *AG* 276-288.

⁶⁷ *AG* 288-310, *GH* 8.

⁶⁸ *AG* 256-287, *GH* 7-8.

⁶⁹ *AG* 193-199, *GH* 7

⁷⁰ W. Hübner, "Eine unbeachtete Zodiakale Melothesia;" *AG* 319-326.

⁷¹ *AG* 458-486, *GH* 7.

⁷² See Robbins' note in his Loeb edition of the *Tetrabiblos* (Cambridge, MA, 1940) 286-289, and *AG* 404-422.

⁷³ For the astrological week see *AG* 476-486 and Boll, “Hebdomas” *RE* 7.2 (1912) 2556–2578, especially 2557–8 and 2572. Claude Saumaise devoted many pages of his *De annis climactericis* to the value of the numbers 7 and 9 for determining critical points. The 63rd year (= 7 x 9) is especially dangerous.

⁷⁴ For the origin and use of these periods, which have little astronomical meaning, see *AG* 408-410 and *GH* 10-11.

⁷⁵ For these two horoscopes see *GH* 100.

⁷⁶ *AG* 491-506

⁷⁷ In this section ἄφρσις - “vital sector” means the series of transmissions from the first star (the ἀφέτης) to the others in their order in the natal chart, i.e the sequence of chronocrators. In *II* 2-4, ἄφρσις had quite a different meaning: it was the quadrant of the zodiac which represents the length of life. The figures 7 1/2 and 6 1/4 are taken from a table in *IV* 1 (150.4-16P).

⁷⁸ *AG* 458-486.

⁷⁹ For the structure of these two tables, see *GH* 136-138, 174-5. The factors (ἀριθμοί) increment by 2, with a jump of 14 every 6 degrees, returning to 1 when 30 is reached (e.g. 28 + 6 = 4). The years/months/days increment by 6 years 1 month 15 days, with a jump every 6 degrees. The degree calculated to be the Ascendant (using the method described below in the note on *VIII* 6-7) is associated with the length of life given in the years/months/days columns according to the following scheme: the years/months/days figure, when divided by the factor in the same row, yield the length of daylight at the solar longitude in the same row. For example, Libra 8° is the autumn equinox in this system; 84 (the figure in the years column) divided by 0;28 (from the factors column) = 180°, the length of daylight at the autumn equinox, when the day and night are equal. (In decimal notation this is 84 divided by 0.466 = 180°. A similar calculation yields the same result for Aries 8°, the spring equinox.) Several obscurities remain: the significance of the star column and the accuracy of the figures in the months column, which could easily be corrected, but which might then not be what Valens wrote.

⁸⁰ The text has δυνατὸν in error for ἀδυνατὸν. The calculation of lifespans from the rising times in different klimas is found elsewhere. Pliny (*N. H.* 7.160) reports that Nechepso and Petosiris fixed the maximum length of life at 124 years in the latitude of Italy (*in Italiae tractu*), Epigenes at 112, Berossus at 116. These figures are the rising times of Leo, Virgo, and Libra (the signs of long rising time) in Italy, Alexandria, and Babylon respectively. See O. Neugebauer, “On Some Astronomical Papyri” 260.

⁸¹ The lost table of *apogonia* contained the three factors for each degree, but they can readily be calculated: take the rising time for all of Sagittarius (34;10) plus all of Capricorn (25;50) plus 18° of Aquarius (12;54 = 21;40 rising time x 18/30), which totals 72;54, or very nearly 73. The rising times are for klima 6, as specified in this example.

⁸² For a discussion see *GH* 136-138.

⁸³ For roughly similar graphical (γραμματικῶς – the mathematical procedures are ἀριθμητικῶς) procedures in Ptolemy's *Handy Tables* (*Op. Min.* 165.13-166.18, 167.23-169.5) see *HAMA* 990 and A. Jones "248-Day Schemes" 29-30. Ptolemy was using an instrument like an equatory. Valens' two grids, lined out with red ink (361.31K; 347.1P), must have been drawn to a common scale in order for his procedure to work. A papyrus in the Brooklyn museum is also lined in red; see O. Neugebauer, "Astronomical Papyri and Ostraca" 385.