

EGYPT IN TRANSITION

Social and
Religious Development
of Egypt in the
First Millennium BCE

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(editors)



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The Role of Egypt in the Development of the Horoscope

Dorian Gieseler Greenbaum – Micah T. Ross

Any discussion of the development of the horoscope depends on the definition of the term “horoscope”. This multivalent word contains several related, but divergent, meanings. “Horoscope” began as a technical term but has entered general use, and in so doing gained alternate usages. The varying definitions of “horoscope” alter the identification of horoscopes in antiquity, the modern publications in which they appear, and the historical conclusions drawn from these pieces of evidence. In fact, depending on which definition is used, the origin of the horoscope could have occurred in Babylon, Egypt or Greece. Consequently, an *a priori* stipulation of a specific definition of horoscope risks tautology: the definition may be too easily modified to fit the argument. Thus, for the sake of accuracy, the reductive model has been abandoned in favour of a historical recapitulation.¹

1. Towards a Definition of “Horoscope”

In 1888, J.N. Strassmaier published the first cuneiform horoscopic text.² Strassmaier encountered some difficulty in its identification: the publication contains an eclipse report misidentified as a horoscope, while the actual horoscopic text escaped his notice.³ In 1889, J. Epping neglected the former error but corrected the latter, although in so doing he misinterpreted the closing date as the beginning of a second, incomplete horoscope.⁴ In 1924, Kugler added a second horoscopic text,⁵ and in 1927 R. Campbell Thompson published a third horoscopic text, but identified the composition as an “astronomical note”, whereas the previous translators had identified the horoscopic texts as “horoscopes”.⁶ Thompson may be interpreted as either unfamiliar with the genre of horoscopes or as a herald of future debate.

In 1952, Abraham Sachs commented that Thompson “*came very close to the correct identification by cataloging [the text] as an ‘astronomical note’*.”⁷ Writing

¹ For a concise and clear summary of the relevant publications, see Rochberg, 1998, 3.

² For a transcription, see Strassmaier, 1888, 137. For a transliteration, translation and modern discussion, see Rochberg, 1998, 109–110 (Text 18).

³ For the subsequent publication of the eclipse report, see Sachs – Hunger, 2001, 72f. (= No. 25). Thanks are due to F. Rochberg for this reference.

⁴ Epping, 1889, 168–171.

⁵ Kugler, 1907–1935, II, 558–562.

⁶ Thompson, 1927, pl. 2.

⁷ Sachs, 1952, 49.

under the title of “*Babylonian Horoscopes*”, Sachs expanded the corpus of cuneiform horoscopic texts from three to twenty-eight tablets. Obviously, the tally of how many horoscopes exist depends on what type of text is accepted as a horoscope. Some identifications, such as Epping’s interpretation of a dating formula as an incomplete horoscope, may be explained to nearly universal satisfaction, but other identifications are more subtle.

When Otto Neugebauer and Henry Bartlett Van Hoesen collected the extant Greek horoscopes in 1959, they tacitly agreed with Sachs’ identification and analyzed Babylonian horoscopic texts, Egyptian horoscopes, and Greek horoscopes as equivalent documents.⁸ However, with the publication of *From Astral Omens to Astrology: From Babylon to Bīkāner*, David Pingree registered dissent with the identification of horoscopes in cuneiform sources, effectively reducing the number of cuneiform horoscopes to zero, and relocating the development of the horoscope to Hellenistic Egypt.⁹ The definition of “horoscope” advanced by Pingree has not been universally adopted. In 1998, Francesca Rochberg expanded the corpus of horoscopic texts in cuneiform from twenty-eight to thirty-two and supplanted Sachs as the authoritative publication, but she preserved his identification in her title: *Babylonian Horoscopes*. Within a year, Pingree responded. In his summary entitled *Astral Sciences in Mesopotamia*, under the heading “Proto-horoscopes”, Pingree stated, “[s]trictly speaking, [these texts] should not be called horoscopes”, but declined to repeat his objections, which were already known to Rochberg.¹⁰

Because different definitions of horoscope have been advanced, Pingree and Rochberg differ in their account of the development of astrology. In modern usage, a “horoscope” frequently refers to an astrological forecast. Some Babylonian horoscopic texts contain interpretations.¹¹ The use of horoscope as “forecast” derives from the astrological practice of “consulting a horoscope”. In this sense, “horoscope” refers to the positions of the planets and stars. By extension, the word “horoscope” also applies to a chart or diagram which records the celestial positions for a particular time and location. An astrologer could investigate these positions for the precise moment of a birth, marriage, or any other event considered conducive to astral interpretation. Precisely this meaning of horoscope has been adopted by Sachs and Rochberg.

The word “horoscope” also frequently appears on the charts or diagrams of celestial positions. In this case, “horoscope” serves not as a title or identification of the genre, but arises from the ancient Greek use of “ὥροσκόπος”, *hour-marker*. Clearly, the Greek word lies at the root of the English term, but the Greek root

⁸ Neugebauer – Van Hoesen, 1959, repr. 1987, 161–162, 169–170.

⁹ Pingree, 1997, 20, 22–24.

¹⁰ Hunger – Pingree, 1999, 26–27.

¹¹ Rochberg, 1998, 50 and n. 60, 56, 66–67, 79–80, 83–84, 139 (these are Texts 2, 5, 9, 10, 11 and 27 in Rochberg’s collection).

implies that the data of the horoscope was capable of changing in a brief period of time. As Rochberg notes, most planetary positions do not change hourly; furthermore, the Greek word has a technical meaning which refers to the portion of the ecliptic intersecting the eastern horizon at a given time.¹² Ancient, medieval and Renaissance astrologers called this point “the horoscope”, but modern astrologers favour the term “ascendant” because the original meaning of horoscope has been lost. Exactly this meaning of horoscope lies behind Pingree’s objection: no horoscopic text in cuneiform contains a reference to the ascendant. Finally, yet another technical meaning of “horoscope” derives from this technical usage. Ancient astrologers divided the sky into a system of twelve “places”, called τόποι in Greek. The first of these τόποι began at the intersection of the ecliptic and the eastern horizon. Consequently, this “place” has also been called “the horoscope”.

Before proceeding deeper into the debate and reconsidering the ancient evidence, the definitions and debates around the word “horoscope” may be summarized. At least three definitions pertain to the general practice of astrology: forecasts, astronomical data useful to such forecasts, and charts containing these data. In this respect, the cuneiform texts collected by Rochberg fit a definition of horoscope. These texts relate to personal astrology rather than planetary omens which treat wars, plagues, floods and large scale events pertaining to cities, countries and political regimes. Moreover, the cuneiform texts relate directly to births. The positions of all known celestial bodies are considered, although particular texts may omit specific planets. These cuneiform texts resemble the western astrological tradition in that they record the positions of these planets by means of zodiacal signs.

Alternatively, at least two definitions of “horoscope” preserve technical nuances communicated by the etymological origin of the word: the point where the ecliptic intersects the eastern horizon and the τόπος which contains this point. By these definitions, Babylonian astrologers displayed no interest in the horoscope. (A recent proposal holds that the ascendant may have been recorded as KI.GUB [*manzazu*] but this term may refer to “the place on the horizon above which a planet rises or sets”.¹³ The equation of KI.GUB with ascendant has not yet entered print and any objection is premature.) Notwithstanding the possible existence of a cuneiform term for the point where the ecliptic intersects the eastern horizon, no such element appears among the texts known as “Babylonian horoscopes”. By these definitions, derived from the technical but now archaic use of “horoscope” as ascendant, the cuneiform horoscopic texts share many elements of horoscopic astrology but do not constitute true horoscopes because they do not contain an ascendant.

¹² Rochberg, 1998, 1–2.

¹³ Reiner – Pingree, 1998, 18.

2. Pingree's Proposal

Rather than merely note that cuneiform horoscopic texts lack any reference to the ascendant, Pingree developed this difference to establish a cognitive division between Babylonian horoscopes and Greek horoscopes. He extended this differentiation to propose some conclusions about the origin of horoscopes: *"However, sometime in the late 2nd or early 1st century B.C. someone, perhaps in Egypt, invented genethliological astrology, which assumes an Aristotelian universe in which the earth at the center, consisting of the four sub-lunar elements, is surrounded by the eternally circling spheres of the seven planets in the so-called Hellenistic order (Moon, Mercury, Venus, Sun, Mars, Jupiter, Saturn)".*¹⁴

When presented with a collection of Demotic horoscopes, Pingree added the clarification that *"the horoscope is defined by the inclusion of at least one of the cardines"*.¹⁵ By "cardines", Pingree meant the angles denoting the rising (horoscopic) and setting points, and the upper and lower midheavens (no cardines of any kind are present in the extant Babylonian horoscopes). By making this differentiation, Pingree severs "Hellenistic" "genethliological" astrology from the earlier Babylonian kind, and in so doing, divorces "horoscopic astrology" from its roots in astral omens.

Pingree's definition, however, does not universally define natal astrology and can be countered by several objections. To take each criterion in turn:

a) *"someone...invented genethliological astrology..."*

"Invention" implies a system created suddenly and not subject to a lengthy development. This connotation contradicts what is known about the development of astrology in Mediterranean cultures. Astrological doctrines developed over a long period of time; the argument that Babylonian natal astrology is not "genethliological astrology" because it does not contain an ascendant or other cardines and is not founded upon "Aristotelian" principles sidesteps the textual parallels. The Babylonian charts give positions of the planets at the time of an individual's birth as well as other astronomical information. More importantly, some of these charts contain predictions about the future life of the individual, thus providing us with evidence of their purpose.¹⁶ Although the details are lacking, these charts represent an outgrowth of Babylonian celestial omens, particularly planetary ones.

Second, astrological doctrines are so varied they could hardly be the product of a single mind (or even a small group). Different techniques typically exist for the same doctrine. Many examples can be cited, including most major as-

¹⁴ Pingree, 1997, 26.

¹⁵ Ross, 2006, 30.

¹⁶ See Rochberg, 1998, 13–15.

trological doctrines: 1) different systems of terms (ὄρια), including Egyptian, Chaldean and Ptolemaic, adduced by different astrologers;¹⁷ 2) different systems of triplicity rulers, one described in Dorotheus and the other in Ptolemy;¹⁸ 3) three systems of decans co-existing in astrology, one purely Egyptian in nature, one based on planetary rulers and a third system with a *de facto* connection to elements in Manilius;¹⁹ 4) variant calculations of the Lot of Fortune, based on unclear and ambiguous wording in quotations ascribed to Nechepso–Petosiris, and subsequent variations in practice;²⁰ 5) different calculations for the same lots (e.g. the lots of Eros and Ananke); 6) four systems of melothesia, one correlating body parts to planets, another to zodiac signs, a third to the Lots of Fortune and Daemon and a fourth to decans.²¹ Undoubtedly, corrupt transmission of doctrines occurred, but such extensive distortion so soon after the conception of a “pure” genethliological astrology strains credulity.

Third, ancient astrology by nature tends to be conservative and agglutinative (as the previous paragraph demonstrates). Although an author may introduce a new technique, previous related techniques are seldom discarded; they merely become part of a chain of techniques which can be used or not at will.

b) “... in the late 2nd or early 1st century B.C....”

Ascribing such a date again divorces prior evidence of a natal astrology in both Babylon and Egypt from a presumably pure and scientific Greek astrology.²² As well as ignoring the elements of an astrological system in Babylon as discussed above, the stipulation of this date neglects Egyptian indications of a developing astrology, including the linkage of the decans with the zodiac (third century BCE) and Egyptian omen texts composed according to Babylonian models.²³

c) “...which assumes an Aristotelian universe in which the earth at the center, consisting of the four sub-lunar elements...”

¹⁷ See Ptolemy, 1998, I, 21; Robbins, 1940, repr. 1994, I, 20–21; Vettius Valens, 1986, I, 3; III, 6; Hephaestio, 1973, I, 1.

¹⁸ See Ptolemy, 1998, I, 19; Robbins, 1940, I, 18; Dorotheus of Sidon, 1976, I, 1–3.

¹⁹ See Rhetorius’s excerpt from Teucer of Babylon, CCAG VII, 193–214; also Gundel, 1936a, 416–417; Bouché-Leclercq, 1899, 224–225; for Manilius, see *Astronomica*, 4.298–362; Bouché-Leclercq, 1899, 217–219. Bouché-Leclercq says (221) that Manilius is the first to use the word *decanus* in relation to astrology.

²⁰ See Greenbaum, 2007.

²¹ See Bezza, 1995, vol. 2, 677, 680, 722–732, 741–744; for decanal melothesia, see Ruelle, 1908. For a possible Egyptian origin of decanal melothesia, see Quack, 1995.

²² See Pingree, 2001, 4, n. 3, which states that the charts called “Babylonian Horoscopes” by Rochberg “do not belong to the *science* of genethliology” (our italics).

²³ See Parker, 1959; Ross, 2007.

To assume that all Hellenistic natal astrology (and the astronomical calculation involved with other kinds of astrology) relies solely on Aristotelian principles unduly minimises not only Babylonian and Egyptian contributions, but also other Greek systems. Even if astrological texts show evidence of Aristotelian influence, they also often exhibit the influence of other non-Aristotelian philosophies and/or cosmologies (e.g. Stoic, Platonist and Hermetic). Manilius, whose *Astronomica* is the earliest extant text of a “Hellenistic” astrology, approaches the subject from a Stoic point of view,²⁴ but may also incorporate Egyptian elements.²⁵ Ptolemy, arguably the most Aristotelian in outlook, also displays Stoic and Platonic perspectives.²⁶ Vettius Valens draws from Stoic, Platonist and Hermetic traditions.²⁷ Even Pingree acknowledges a number of Babylonian contributions to Greek astrology,²⁸ a position which seems at odds with his prior statement.

Perhaps Pingree sought to emphasise the creation of a wholly new kind of practice of astrology derived from purely Greek, “scientific” principles, but the origins of many astrological practices arose outside of the Aristotelian milieu. Decans²⁹ and triplicities,³⁰ for example, originated respectively in Egypt and Babylon. Although these attributions are contested as pseudepigraphies, more astrological writers refer to the Chaldeans and Egyptians as originators of astrological technique than cite Aristotle.

As for the four elements, Manilius describes them in general terms,³¹ but follows Stoic rather than Aristotelian principles; he does not relate them explicitly to signs or planets. The four elements do not appear linked to zodiac signs or planets in a Greek or Latin astrological text until the second century CE, in Vettius Valens’ *Anthology*,³² where they are correlated to the triplicities.

d) “...surrounded by the eternally circling spheres of the seven planets in the so-called Hellenistic order (Moon, Mercury, Venus, Sun, Mars, Jupiter, Saturn)”.

Again, the details of astrological practice are more complex than Pingree admits. Several different planetary orders circulate in astrological literature. In addition to Pingree’s “Hellenistic order”, the so-called “Platonic order” gives the planetary arrangement of Saturn, Jupiter, Mars, Mercury, Venus, Sun,

²⁴ See Cumont, 1912, 85; Hübner, 1984, 234–236; Goold, in Manilius, 1977, repr. 1997, xxxvii.

²⁵ See Greenbaum, 2009, 51, 54, 114.

²⁶ See Taub, 1993.

²⁷ See Komorowska, 1995; Komorowska, 2004.

²⁸ Pingree, 1997, 27–28.

²⁹ See Gundel, 1936a; Neugebauer – Parker, 1960–1969; Quack, 2003.

³⁰ See Rochberg-Halton, 1984; Rochberg-Halton, 1988a.

³¹ *Astronomica*, 1.149–170.

³² *Anthology* I, 2 (Vettius Valens, 1986, 5–13).

Moon.³³ Attributions from Late Antiquity are often dismissed as spurious, but Macrobius acknowledges multiple planetary orders by mentioning both the Platonic order (which he called “Egyptian”) and the “Chaldean” arrangement (which corresponds to Pingree’s “Hellenistic” order).³⁴ Certain astrological techniques depend on planetary orders. For example, the planets which rule the decanic faces and the system of planetary hours follow the “Chaldean” order. The various systems of terms, however, employ different planetary orders; in some cases, these orders are easily explained, but others remain difficult to fathom.³⁵

Moreover, planetary order varies in both documentary charts (i.e., artefacts of astrological practice) and literary charts included in astrological treatises.³⁶ Some documentary charts list planets in the order of the zodiacal signs. Other charts begin with the Sun or Moon, followed by Saturn, Jupiter, Mars, Venus and Mercury (this arrangement governs most of the literary charts). Sometimes the Sun and Moon are listed last. A late variation starts with the ascendant (ὥροσκόπος), followed by the planets and then the luminaries. Planets in the same sign are often listed together, regardless of planetary order. Demotic charts mostly follow the patterns identified in *Greek Horoscopes*, but Babylonian charts list the benefic planets (Jupiter and Venus) first, followed by neutral Mercury, and end with the malefic planets (Saturn and Mars); the luminaries are placed either first or last.³⁷ These permutations demonstrate that planetary orders were neither consistent in ancient astrology, nor necessarily reflective of astronomical conceptions.

In Egypt, the earliest Egyptian chart, Ashmolean D.O. 633,³⁸ lists the planets in this order: Sun, Jupiter, Moon, Saturn, Mars, Venus (Mercury is missing from the somewhat corrupt text). The Sun and Mars are both in Taurus but are listed separately. The other planets are all in different signs. Perhaps a standard planetary order for written charts had not yet been established. Some other Demotic charts also do not follow a consistent planetary order. The charts from Medinet Habu described by Neugebauer display a standardized composition entirely independent of planetary order.³⁹ These documents first list the Sun and Moon, then the cardines and other regions of astrological concern. Absent damage to

³³ Plato, *Republic* X.616e and *Timaeus* 38d.

³⁴ *Commentary on the Dream of Scipio*, I, 19.2; for an astronomical discussion, see Beck, 1988, 4–8.

³⁵ E.g., see Rochberg-Halton, 1988b; Houlding, 2007.

³⁶ Documentary charts are preserved singly or in groups on papyrus, ostraca, etc. Literary charts, found in astrological manuals, are often actual charts used as examples. For an overview of these arrangements, see Neugebauer – Van Hoesen, 1959, 163–165.

³⁷ Rochberg-Halton, 1989, 106; Rochberg, 1998, 9–10.

³⁸ Neugebauer – Parker, 1968 (called “O. Ashmolean”). Our thanks to Helen Whitehouse for verifying the present number of the ostrakon.

³⁹ Neugebauer, 1943.

the text, the planets appear when the zodiacal signs containing them are first mentioned.⁴⁰

Pingree's definition of "horoscope" and historical proposition to the contrary, these critiques suggest that "Hellenistic" astrology was not "invented" but developed as an amalgam of elements drawn from disparate sources. "Hellenistic" astrology combined elements from Egypt and Babylon (and perhaps other cultures such as Persia) into a system which grew and flourished in the Mediterranean world of the Hellenistic and Greco-Roman eras. The vector language of "Hellenistic" astrology was Greek, but the components of its doctrines originated not only in Greek, but also in Egyptian and Babylonian milieux. Through adherence to a narrow etymological definition of ὠροσκόπος, Pingree has necessitated the ascendant as a prerequisite of a natal astrology that was, by his lights, purely Greek in nature. Thus, the existence of an ascendant in a non-Hellenistic context suffices to overturn Pingree's proposal. The absence of an ascendant from the Babylonian horoscopic texts indicates that Babylonian personal natal astrology differed from Greek practice, but some evidence supports an Egyptian origin for the ascendant. An Egyptian origin for the ascendant not only invalidates Pingree's proposal, but strengthens the argument that "Hellenistic" astrology arose from a union of the astrological cultures of Egypt and Babylon.

3. Possible Egyptian Origins for the Ascendant (ὠροσκόπος)

Although no ascendant appears in the corpus of extant Babylonian horoscopes, this lack does not negate the cuneiform birth charts as examples of natal astrology. The earliest evidence connects Egypt to the introduction of the ascendant in astrological practice. Balbillus, whose antecedents were probably Egyptian,⁴¹ provides the earliest non-Babylonian literary charts containing cardines in Greek. Balbillus wrote in the first century CE, but his charts were cast for 72 BCE and 43 BCE.⁴² The earliest documentary chart containing cardines, Ashmolean D.O. 633, appears in a Demotic context and astronomically corresponds to 38 BCE.⁴³ The date of composition was probably some time after this date. Barring lacunae, however, subsequent Demotic charts generally contain at least an ascendant. Greek charts follow this standard of composition. In pOxyrhynchus 235, the diagram for a chart dated between 15 and 22 CE contains perpendicular horizontal and vertical lines which divide the circular form of the diagram into quadrants (Fig. 1). The author clearly labelled the ascendant, midheaven and lower midheaven angles; though the horizontal line indicates the setting cardine, there is no label for it.⁴⁴

⁴⁰ Neugebauer, 1943, 116–117, 120 (Os. 1–4, 5 respectively).

⁴¹ Cramer, 1954, repr. 1996, 108, 113–115.

⁴² Neugebauer – Van Hoesen, 1959, 76–78.

⁴³ Neugebauer – Parker, 1968, 231–234 and Pl. XXXVI.2.

⁴⁴ Neugebauer – Van Hoesen, 1959, 18 and fig. 9.



Fig. 1 Diagram in pOxyrhynchus 235.

Because of Balbillus's probable origins, the Demotic context of Ashmolean D.O. 633 and the Egyptian provenance of pOxyrhynchus 235, the cardines display an early and strong connection to Egypt. In fact, the cardines – specifically the most important cardines, the ascendant and midheaven – relate to known Egyptian astronomical practices. A first century CE chart which equates the decans with “36 bright horoscopes” (ἄς λάμπροι ὠροσκόποι) hints at the practices which may have prompted astrological interest in these positions.⁴⁵ Before discussing this chart, along with other texts which call decans “horoscopes”, a brief overview of the decan system in Egypt, in particular the origin of rising and transit decans which correlate best with the astrological chart, will be useful.

The Origin of the Decans as a Fundamental Division of Time

The decans are very old.⁴⁶ Their names first occur in the funerary realm, in reference to gods who allowed the deceased to keep track of time, but the decans themselves also had a protective aspect.⁴⁷ In addition, deities associated with decans relate to underworld spirits in the Old Kingdom Pyramid Texts and Middle Kingdom Coffin Texts.⁴⁸

⁴⁵ pLondon 98; see Neugebauer – Van Hoesen, 31–32.

⁴⁶ Neugebauer – Parker, 1960–1969, I, 4–21, 109–113; III, 156–157; Kákosity, 1982, 163; Leitz, 1995, 58–112; Quack, 2003, Section 1.2.1.

⁴⁷ Kákosity, 1982, 163.

⁴⁸ Kákosity, 1982, 182.

Astronomically, decans are stars or star groups which were first used to mark the hours of the night. They rose on the eastern horizon at 10-day intervals (thus leading to the Greek name δεκανός). Decans govern the Egyptian star clocks found on coffin lids beginning in the Ninth or Tenth Dynasty (c. 2150–2100 BCE).⁴⁹ Every ten days a new decan would appear on the eastern horizon at sunset, and during the night a new decan would rise at each “decanal hour”, which corresponds to a seasonal (unequal) hour. These early decans constitute the category of “rising” decans – that is, the decans mark the hour when they rise over the eastern horizon. Because the astrological ascendant marks the point on the eastern horizon where the ecliptic and horizon meet, the indigenous Egyptian observational system used with these decans demonstrates an astronomical interest in a position roughly analogous to the ascendant.

The rising decans did not remain the only kind of decans used to measure the hours. In the New Kingdom *Book of Nut*, appearing first in the cenotaph of Seti I at Abydos but better preserved in the tomb of Ramses IV, the decans no longer mark the hours of the night by their rising, but rather by their culmination at the meridian.⁵⁰ Neugebauer and Parker called these “transit decans”.⁵¹ Combined with the rising decans, transit decans permit more precise measurements of the hours. The continuity of this tradition is shown by a Hieratic and Demotic commentary on the *Book of Nut*, found in pCarlsberg 1 and 1a, dated to the second century CE.⁵² Because the astrological midheaven represents the point where the meridian intersects with the ecliptic, the “transit” decans establish an Egyptian astronomical concern with this position. Just as the rising decans provide a precursor to the ascendant, the “transit” decans presage the astrological mid-heaven, the secondmost important of the cardines after the ascendant.

Scholars have grouped the decans into families which mostly have the same function, either as rising or transit decans. The Seti I C family of decans probably served as rising decans,⁵³ while the Seti I B family functioned as transit decans.⁵⁴ The Tanis family of decans contains features of both kinds

⁴⁹ Neugebauer, 1955, 47–48 (repr. in Neugebauer, 1983, 205–206); Neugebauer – Parker, 1960–1969, I, 4–9, 16, 31; III, 1.

⁵⁰ Neugebauer – Parker, 1960–1969, I, 113; Clagett, 1995, II, 56.

⁵¹ Neugebauer – Parker, 1960–1969, I, 115.

⁵² For discussions of this material see Neugebauer – Lange, 1940; Neugebauer – Parker, 1960–1969, I, 36–94 (Pls. 36–42); Barta, 1983; Quack, 2000; von Lieven, 2007.

⁵³ Neugebauer – Parker, 1960–1969, III, 15: “The list of Seti I C is the prototype for the third family of rising decans...”; see also 129–133; 156: “The family headed by Seti I C is so similar to that of Seti I A, with only two decanal changes, and so different from that of Seti I B, the transit family, that we must surely conclude that it consists of rising decans also and most probably is a contemporary variant of the Seti I A revision”. Also 174: “...the rising decans of the Seti I C family”.

⁵⁴ Neugebauer – Parker, 1960–1969, I, 83–86, 113–115; III, 14, 133–140. (At 14: “Seti I B serves to name a family of decans in transit, since it is the oldest list presently known....”).

of decans, and may be a composite list.⁵⁵ Alexandra von Lieven has proposed a *“dritte Reihe”* of decans. This tradition of decans combined elements of the Seti I B and Tanis families, inspired the later decanal iconography, and appear in astrological contexts.⁵⁶ Shortly after the zodiac came into Egypt from Babylon in the Hellenistic period, the decans were aligned with it. Eventually each of the zodiac signs contained three decans of 10 degrees each, and the system passed into horoscopic astrology. The decans were far removed by this time from their earlier origins, yet the *de facto* families of rising and transit decans were still employed. As noted above, the two main systems of decans – rising and transit – stress the same points, at the eastern horizon and on the meridian, which become integral to the development of the astrological chart, and provide an orientation for the planets and zodiac signs placed within that chart.

Decans and the Zodiac

The association of the decans with the zodiac, which occurred in Egypt in the third century BCE, constitutes an important and necessary intermediate step in the development of the astrological ascendant from rising decans and the derivation of the mid-heaven from transit decans. The first evidence of the zodiac in an Egyptian context appears on an ostrakon (Strassburg D 521) around 250 BCE.⁵⁷ The combination of decans with the zodiac began almost at the same time. For example, the temple at Esna, built during the reigns of Ptolemy III and IV (ca. 246–205 BCE), features an astronomical ceiling which combines the decans with the zodiac. Likewise, the temple of Hathor at Dendera contained a first century BCE example of decans in combination with the zodiac. Such combinations do not represent a mere artistic syncretism; the connection between the two systems of dividing the sphere of fixed stars entered the literary realm, as evidenced by the undated pCarlsberg 66 & pLille described by Michel Chauveau as containing a list of decans presented as subdivisions of zodiac signs.⁵⁸ When constructing these combinations with the zodiac, the Egyptian scribes relied primarily on the Seti I B and the Tanis family of decans.⁵⁹

In the first century CE, the Egyptian astrologer Anubio referred to the decans as “six and <thirty> hour-regulators” (ὥρονόμοι), and said: “*You should observe, in others’ bounds and their own, the three-in-one-zodiac-sign which are called de-*

⁵⁵ Neugebauer – Parker, 1960–1969, III, 140–149; 156–157: “*There remains the Tanis family and here we have a problem. ... we hesitate to classify it with certainty as a list of either rising or transit decans, though our inclination is to the latter*”.

⁵⁶ von Lieven, 2000a.

⁵⁷ See Spiegelberg, 1902; Neugebauer, 1943, 121–122.

⁵⁸ Chauveau, 1992.

⁵⁹ See Neugebauer – Parker, 1960–1969, III, 174; Quack, 2003, Section 1.7.

cans".⁶⁰ He also referred to the ministers associated with the decans that "*obtain rising as their portion in the zodiac sign*".⁶¹ Here, Anubio does not use the term "ὥροσκόπος" (hour-marker) for the decans, but prefers "hour-regulator", which retains their time-keeping function, and he furthermore stresses the rising of the decans. Anubio combines the indigenous time-keeping function of the decans with the thirds of each zodiac sign. Anubio's use of the term ὥρονόμοι for the decans suggests he was writing during a transitional phase in the astrological development of the decans, when components of the old Egyptian system which associated the decans with hourly rising co-existed simultaneously with the new system which recognised three decans per zodiac sign. Presumably, the change in terminology reflects this transition from an hour-regulating decan to an hour-marking ascendant. When Anubio refers to the ascendant, he again uses the word ὥρονόμος.⁶² Another Egyptian astrologer, Manetho (b. 80 CE),⁶³ used this same term consistently for the ascendant in his astrological poem.⁶⁴ Likewise, the Greek fragments of Dorotheus favour this term as well.⁶⁵ Since all these authors are first or early second century CE, this two-pronged employment of ὥρονόμος for decans and for the ascendant reflects the tradition of decans which "regulate" hours being applied to ascendants which "mark" them.⁶⁶

Finally, a number of examples of astrological boards (πίνακες) from the Greco-Roman period and Late Antiquity correlate decans with zodiac signs. Astrologers probably used these boards to set out charts for their clients.⁶⁷ Though geographically far from Egypt and dating to the second century CE, the tablets found at Grand, in France, prominently display the decans on the outside of the circle, including their Egyptian names and clearly Egyptian illustrations of the divinities associated with the decan.⁶⁸ Other examples which prominently feature decans include the Roman *Tabula Bianchini* of the second or third century CE⁶⁹ and the glass disc found in the Kharga Oasis (third-fourth century CE).⁷⁰ These πίνακες

⁶⁰ Anubio, 2006, Fr. 1, ll. 6–7: "ἀ[θ]ρήσει δ' ἑτέροις εἰν ὀρίοις θ' ἰδίοις / τρεῖς ἐν [ἐ]νὶ ζώῳ οὗς δὴ καλέουσι δεκανοὺς".

⁶¹ Anubio, 2006, 25, Fr. 1, ll.11–12: "περὶ γὰρ τὸ {ι} ζώ'διον / οὗτοι ἑννέα λειτουργοὶ [ἀ]ντολίην ἔλαχον".

⁶² Anubio, 2006, 24, Fr. 2, ll. 1, 8.

⁶³ He describes his own birth chart, which can be dated to 28 May 80 CE; see Neugebauer – Van Hoesen, 1959, 92.

⁶⁴ E.g. Manetho I, 30, 58, 262, 339, 347, etc.; see Lopilato, 1998.

⁶⁵ For the Greek fragments, see Dorotheus of Sidon: 342.13; 373.27; 378.11; 386.11; 393.16; 396.2, 5; 397.4, 11, 15; 398.33; 399.32; 405.19; 434.25.

⁶⁶ Obbink, 1999, 78, note to line 13 also remarks on the double usage: "*An astrological writer, and a fortiori an astrological poet, might allow himself the licence of using the same word for two distinct astrological concepts*".

⁶⁷ See Evans, 2004.

⁶⁸ Abry, 1993.

⁶⁹ Boll, 1903, 299–305 and Taf. V. See also Evans, 2004, 7–9 and fig. 2.

⁷⁰ Nenna, 2003.

show that the importance of decans did not wane in the delineation of charts in the early centuries CE. Among literary sources, decans and *πίνakes* appear in the astrological portion of the *Alexander Romance* which popularised the Egyptian astrologer Nectanebo.⁷¹ In documentary sources, the earliest chart containing decans dates to 81 CE;⁷² six charts from Oxyrhynchus also mention decans.⁷³

Decans as “Horoscopes”

Further evidence that the Egyptian decans functioned as a precursor to the astrological ascendant and midheaven can be found in texts where decans are called “horoscopes” or otherwise equated with them. Astrological texts demonstrate this equivalence most forcefully, but some magico-religious and medical texts also call decans “horoscopes”.

a. pLondon 98, verso, dated 95 CE.⁷⁴ This documentary astrological chart is one of the most comprehensive ancient charts. It includes all planetary positions and all four cardines. Especially noteworthy is a Coptic portion appended to the Greek, indicating the bilingual nature of the enterprise.⁷⁵ In some cases, the scribe even relied on Demotic signs to spell the names of the decans.⁷⁶ Because of the bilingual context and the passages relating to the decans, this text connects more strongly to Egyptian astrology than other purely Greek language charts. The chart employs two sets of decans, one called “decans” and the other “36 bright horoscopes” (*ἄς λάμπροι ὠροσκόποι*).

Chart No. 95 in *Greek Horoscopes*, pLondon 98 recto: date ca. 13 April 95 CE

line text

48 φωσφορους τον [της] αφροδιτης ευρισκομεν την κεινη
49 ειν ποιουμενον ε[ν ταυρ]ωι [μοιρων . .] οικωι ἰδιωι νηωματι
50 εεληνην οριοις δ[ιος ου το δωδεκατημ]οριον ενληγει εν
51 υδρηχοι μοιρων γ οικωι [κρονου οριοις ερ]μους των λζ λαμ^π
52 ωροσκοπων ου ονομα χω [. δεκαν]ος α ου ονομα αρου >

We find Phosphorus the [star] of Aphrodite moving in Taurus [...degrees], in her own house, exaltation of the Moon, bounds of Zeus, whose dodekatemorion leaves off at 3 degrees of Aquarius, house of Kronos, bounds of Hermes; of the 36 bright horoscopes the one whose name is Cho, decan 1 whose name is Arou.

Table 1 Sample Text from pLondon 98.⁷⁷

⁷¹ Pseudo-Callisthenes, 1926, 4.17, 19–20; 5.1 (I, 4.5): “he brought out an astrological board...divided into three bands, which had in the first circle the 36 decans, in the second the 12 zodiac signs, and in the middle the Sun and Moon...” – “...προενεγκάμενος πίνακα...τριχάρακτον ζώναις, ἐπὶ μὲν τοῦ πρώτου κύκλου δεκανοὺς ἔχοντα τοὺς λζ’, ἐπὶ δὲ τοῦ δευτέρου ζώδια τὰ ιβ’, ἐπὶ δὲ τοῦ μέσου ἥλιον καὶ σελήνην...” For the Egyptian sources in the *Romance*, see Jasnow, 1997.

Planet & Cardine positions	36 Bright Horoscopes	Decans
MC Υ 10,30		
$\odot$ Υ 11]	$\chi\epsilon\nu[\dots] = \hbar nt(t) \hbar rt/\hbar rt$ or $\hbar nt(w) \hbar rw/\hbar rt$	
ζ Υ [20]	$\chi\epsilon\nu\alpha[\dots] = \hbar nt(t) \hbar rt/\hbar rt$	
	or $\hbar nt(w) \hbar rw/\hbar rw$	2: κατ' κουατ' = κd
ϕ $\varnothing$ [21]	$\chi\phi[\dots] = \hbar \acute{z} w$	1: αρου> = ϵrt
$\odot$ II 6	αρου> = ϵrt	1: ρεμενααρε = $rmn \hbar ry$
ASC $\odot$ 25	ρεμεναχ = $rmn \hbar ry$	2: κνουµε $\hbar\rho\alpha\kappa\nu\omicron\mu = knmt + \hbar ry$ ($\hbar pd$) $knmt$
$\hbar$ III 1	$\epsilon t d\epsilon = \hbar \acute{z} t d \acute{z} t$	2: [...] $d\hbar$ βικωτ = $w\acute{s}\acute{z}ti bk\acute{z}ti$
II III 8	φουτ $d\epsilon = p\hbar wy d \acute{z} t$	[..]: αρωι αρωι = dittography?
IC $\simeq$ 10,30		
D [$\swarrow$ 26]		
DESC $\searrow$		

Table 2 Bright Horoscopes and Decans in pLondon 98 v.⁷⁸

Neugebauer and Parker proposed that the “decans” derive from the Tanis family of decans, while the “bright horoscopes” are the decans of the Seti I C family.⁷⁹ Joachim Quack has challenged Neugebauer and Parker’s identification of the Seti I C family and proposed that the bright horoscopes derive from a modification of the Seti I B family.⁸⁰ Quack’s scheme moves each decan in the Seti I B series down two places in the zodiac, thus displacing each decan by twenty degrees. For example, the Egyptian decan for the first decan of Cancer (in this case, *spdt*) moves to the third decan of Cancer, the second decan moves

⁷² Neugebauer – Van Hoesen, 1959, 21–28.

⁷³ Jones, 1999, 2, 382–383 (no. 4245, gives decan of each planet); 2, 420–425 (no. 4277, gives decans for planets, angles and lots); vol. 2, 428–429 (no. 4280, is too fragmentary to say what decan is given); vol. 2, 432–433 (no. 4283, is too fragmentary to say what decan is given); vol. 2, 434–435 (no. 4284, gives decans for Lots of Fortune and Daemon); vol. 2, 434–435 (no. 4285, is too fragmentary to say what decan is given). All these charts are “deluxe” (in Jones’s terminology).

⁷⁴ Neugebauer – Van Hoesen, 1959, 28–38.

⁷⁵ Neugebauer – Van Hoesen, 1959, 32–34; Černý – Kahle – Parker, 1957.

⁷⁶ Neugebauer – Van Hoesen, 1959, 29.

⁷⁷ Neugebauer – Van Hoesen, 1959, 30.

⁷⁸ Table after Neugebauer – Van Hoesen, 1959, 37 (Table 11), but with decan assignments as in Neugebauer – Parker, 1960–1969, III, 171–172.

⁷⁹ Neugebauer – Parker, 1960–1969, III, 174.

⁸⁰ Quack, 2003, Section 2.1.14, Tables 12 and 13.

to the first decan of the next sign, Leo, and so on. Although his creative modification has some advantages, it does not completely resolve the anomalies presented by the decans used for the bright horoscopes; furthermore, Neugebauer and Parker's assignments to the Seti I C family⁸¹ are not wholly without merit. Quite likely, any assignment of one family or the other to this set of decans presents irresolvable problems. In fact, such an endeavour may represent a misguided anachronism, since the families themselves are scholarly constructions, and by the time the author of pLondon 98 correlated the bright horoscopes with the decans, the original groupings of the decans may no longer have been pertinent. Despite this uncertainty, the suggestion by Neugebauer and Parker that the author incorporated both rising and transit decans in pLondon 98 displays considerable insight.

Furthermore, according to the decan list presented by Neugebauer and Parker, all of the decan names for the bright horoscopes represent both rising and transit decans, with one interesting exception.⁸² The decan for the ascendant, ρεμεναχ = *rmn hry*, occurs *only* as a rising decan, and appears in all groups except Senmut.⁸³

In regard to the thirty-six horoscopes, Neugebauer and Parker made the following observation: *"The correct explanation of the thirty-six horoscopes we now believe to be quite a simple one, once we recall that we have been dealing with two types of decanal families. One, of transit decans, we have seen to be attached to the zodiac. The other type is of course made up of families which consist of rising decans. Now an important datum in any horoscope is the point on the ecliptic which is rising at the given time, known as the Horoscopus. The transfer of this name to the thirty-six rising decans so that they become 'the 36 bright horoscopes' is a natural step to take".*⁸⁴

Here Neugebauer and Parker have made the right connections, but present them exactly backward. It is not because the ascendant was known as a "ὥροσκόπος" that the decans were called ὥροσκόποι; it is because the rising decans were "ὥροσκόποι" – literal "hour-markers" – marking the time of their passage over the eastern horizon that the idea of an ascendant known as a ὥροσκόπος "marking the hour" could emerge and be conceived of as important in astrology.

The ascendant marks the moment of birth within the circle of zodiacal signs, and orients the chart in time and space. The connotation of the decans during

⁸¹ Neugebauer – Parker, 1960–1969, III, 174; note that Quack is substantially in agreement with Neugebauer and Parker regarding what Egyptian names correspond to the bright horoscope decans.

⁸² Neugebauer – Parker, 1960–1969, III, 160–163, nos 6, 9, 45, 47, 50, 51, (54), 58. In addition, these decans are popular, appearing in many groups.

⁸³ Neugebauer – Parker, 1960–1969, III, 163, no. 58. This assumes the more obvious correlation to ρεμεναχ, *rmn hry*, rather than *rmn hry* (no. 54), though the latter cannot be definitively eliminated from consideration (it is both a rising and transit decan).

⁸⁴ Neugebauer – Parker, 1960–1969, III, 173.

the Ptolemaic period, when they were correlated to the zodiac, contributed to the astrological importance of the ascendant for delineating the native's life. Babylonian astrologers had already created individual birth charts with the positions of planets, the cycles of stars or planets, and occasionally the time of day or night based on Babylonian watches.⁸⁵ The use of decans to pinpoint the part of the sign which was rising, a practice further refined to the degree of the ascendant which marks the moment of birth by the degree on the eastern horizon, conforms with and enhances the Babylonian practice of *individual* birth charts. This once-astronomical concern permits a further development of the Babylonian birth charts: it makes the chart more personal because it shows the (relatively) unique time and place of birth.

The fact that the "bright horoscopes" are clearly decans is important, since decans are connected with marking specific units of time. In this phrase, "horoscopes" indicates that the decans serve as hour-markers, and "bright" is a common Greek adjective for the fixed stars in astronomical and astrological texts.⁸⁶ Egyptian texts also describe stars as "bright". Alexandra von Lieven noted that *h3b3s.w*, "shiners", functions as an epithet for the decan stars, in the sense of "bright" (helle).⁸⁷ Naturally all stars shine, as well as planets,⁸⁸ but the correspondence of the epithets provides one more hint that λαμπρός distinguishes decan horoscopes from the ascendant horoscopes. Although this parallel demands further research, the "bright" degrees found in Rhetorius and in the *Liber Hermetis* seem to match various bright stars in constellations. Moreover, the interpretations of these "bright" degrees appear linked to the decans and their *paranatellonta*.⁸⁹

Thus, when Neugebauer and Parker wrote that "[t]he transfer of this name to the thirty-six rising decans so that they become "the 36 bright horoscopes" is a natural step to take", they did not consider the modifiers "36" and "bright". These ad-

⁸⁵ Rochberg, 1998, 35–39.

⁸⁶ A search of the *Thesaurus Linguae Graecae* online finds the adjective λαμπρός used of fixed stars in 22 examples ranging from Hipparchus, Antiochus and Ptolemy to John Philoponus and Nicetas Choniates.

⁸⁷ von Lieven, 2007, 149; see also von Lieven, 2000b, 166–169.

⁸⁸ The traditional "Egyptian" names for the planets (in Greek texts) are all various "shining" words: see Cumont, 1935.

⁸⁹ See Rhetorius, Par. gr. 2425, fol. 173r; also *Liber Hermetis*, in Feraboli, 1994, xix, 79–132 (Chapter XXV), also 57 (Chapter XVI, 27.107–110): "In qualibet quidem nativitate oportet quaerere significationes decanorum ad planetas et stellas fixas quae oriuntur cum eis secundum Teurum Babylonium, facies eorum et terminos lucidos signorum". Stated slightly differently in Rhetorius (in CCAG, VIII/4, 124.14–17): "καθ' ἐκάστην γένεσιν δεόν ζῆτεῖν καὶ τὰ ἀποτελέσματα τῶν δεκανῶν πρὸς τοὺς ἀστέρας καὶ τοὺς παρανατέλλοντας καὶ τὰ πρόσωπα τῶν δεκανῶν καὶ τὴν λαμπρομοῖριαν τῶν ζῳδίων" or "For each nativity one must also seek the outcomes of the decans in relation to the stars and those [constellations] co-rising [with them], and the faces of the decans and the degree-brightness of the zodiac signs". Our thanks to Stephan Heilen for sending scans of fol. 173r of Par. gr. 2425.

jectives distinguish the 36 bright horoscopes from another use of horoscope, namely the horoscope as ascendant. This differentiation does not mean that the decans took on the name horoscope from the ascendant; it means that in first century CE Egypt, the concept of rising, hour-marking decans, and an hour-marking degree called the horoscope, still had different connotations. In this chart, the appellation of “36 bright horoscopes” for the decans indicates an attempt to differentiate between the decans as horoscopes and the ascendant as “the” horoscope. This conflation of meanings echoes not only the double meaning for ὠρονόμοι in Anubio, but also the different definitions of Pingree and Rochberg.

b. Asclepius 19. This Hermetic text explains that the “36 called Horoscopes (*Horoscopi*), that is, the stars fixed in the same place, have as their head or οὐσίαρχης the one called Παντόμορφος or *Omniform*, who makes different forms for different kinds”.⁹⁰ Another Hermetic text enumerates the “36” decans,⁹¹ and this number commonly describes decans in other texts like the *Liber Hermetis*.⁹² The appellation “Παντόμορφος” recalls the fact that Egyptian decanic deities have different shapes and names. In this way, *Asclepius 19* deviates from the Greek astrological technique which assigns one of the seven heavenly bodies (the five visible planets plus the Sun and Moon) to rule each decanic face.

The Gnostic text *Marsanes* also refers to “36 Horoscopes”,⁹³ translated directly as “decans” by Birger Pearson⁹⁴ and James D. Turner.⁹⁵ This text is a third or fourth century CE Coptic translation of a Greek original.⁹⁶

c. Galen refers to “sacred plants of the decans and daimons”, and the “36 sacred plants of the *Horoskopoi*” in his medical text *De simplicium medicamentorum temperamentis ac facultatibus*.⁹⁷ Associations of plants with decans also appear in the *Sacred Book of Hermes to Asclepius*, an iatromathematical text.⁹⁸ Tradition linked

⁹⁰ *Asclepius 19*, in Nock – Festugière, 1945–1954, II, 319.1–3: “XXXVI quorum vocabulum est *Horoscopi*, id est, eodem loco semper defixorum siderum, horum οὐσίαρχης (vel princeps) est Παντόμορφον (vel *Omniformem*) vocant, qui diversis speciebus diversas formas facit”. (See translations of Scott, 1926, I, 324; Copenhagen, 1992, repr. 2000, 78).

⁹¹ *Stobaei Hermetica* 6.1: “...περὶ τῶν τριάκοντα ἑξ δεκανῶν...”, in Nock – Festugière, 1945–1954, III, 34.

⁹² See Feraboli, 1994.

⁹³ Nag Hammadi X, 42* 6–7: ΠΜΑΛΒ[ΕC]Ε ΝΖΩΡΟ / ΣΚΟΠΟ[C...], in Pearson – Giversen, 1981, 328.

⁹⁴ Pearson – Giversen, 1981, 329: “the thirty [-six] Decans (ὠροσκόπος)”.

⁹⁵ Turner in Meyer, ed., 2007, 647: “or the thirty-[-six] decans”.

⁹⁶ Turner in Meyer, ed., 2007, 629; see also Pearson – Giversen, 1981, 227.

⁹⁷ Galen, 1964–5, vol. XI, 797.9–10: “...καὶ δεκανῶν καὶ δαιμόνων ἱερὰς βοτάνας...”; 798.5–6: “...τὰς λστ’ τῶν ὠροσκόπων ἱερὰς βοτάνας...” (as cited in Gundel, 1936a, 345).

⁹⁸ See Ruelle, 1908; Festugière, 1950, repr. 1989, 2006, I, 139–143.

decans with both the causes and cures of diseases.⁹⁹ Even into the third century CE, decans were still associated with *daimones*, and Origen describes the tradition of decanal melothesia which assigned parts of the body to various decans: “...the Egyptians say that the body of man has been put under the charge of thirty-six daimons, or ethereal gods of some sort, who divide it between them, that being the number of parts into which it is divided (although some say far more). Each daimon is in charge of a different part”.¹⁰⁰

d. **Porphyry**, in his *Letter to Anebo* 2.12b, revisits the doctrines of pLondon 98, discussing the decans in two ways, as “decans” and as “horoscopes”: “For Chaeremon and the others do not hold that there is anything prior to the visible worlds, placing first in order the gods of the Egyptians, and that there are no other gods except the so-called planets, and the stars that fill up the zodiac and those which co-rise with these; and both the divisions into decans, and the horoscopes and so-called mighty leaders, whose names are also contained in the *Salmeschiniaka* along with their curing of diseases and their risings and settings and indications of future events”.¹⁰¹

Although doubt surrounds any late reference to Egyptian doctrine, Porphyry parallels the evidence from Egyptian sources, including the two guises of astrological decans, as Egyptian-inspired star groups and as decanic faces.¹⁰² Perhaps the “divisions into decans” in the *Letter* refer to these faces, and the horoscopes are the Egyptian decan deities (“mighty leaders”) who cure diseases and indicate the future by their risings and settings. Here Porphyry presents an account not of the astrology of his day, in which the horoscope would commonly be the ascendant. Rather, his comments recall an archaic Egyptian astrology which, when coupled with the explicit reference to Egypt, lends credence to Porphyry’s astrological statement about Egypt.

e. **Hephaestio of Thebes**. Though he does not specifically call the decans “horoscopes”, Hephaestio incorporates Egyptian decans in several ways into

⁹⁹ E.g. Firmicus Maternus, 1897–1913 (*Mathesis*, IV, 22).

¹⁰⁰ Origen, 1967–76, vol. IV, 306.3–6 (*Contra Celsum*, 8.58.3–6): “...Αἰγύπτιοι λέγουσιν, ὅτι ἄρα τοῦ ἀνθρώπου τὸ σῶμα ἐξ καὶ τριάκοντα διειληφότες δαίμονες ἢ θεοὶ τινες αἰθέριοι εἰς τοσαῦτα μέρη νενεμημένον—οἱ δὲ καὶ πολλὸν πλείους λέγουσιν—ἄλλος ἄλλο τι αὐτοῦ νέμειν ἐπιτέτακται”. Trans. (slightly modified) Chadwick, 1965, 496.

¹⁰¹ Porphyry, 1958, 2.12b (= Eusebius, *Praeparatio Evangelica* III, 4.1): “Χαιρήμων μὲν γὰρ καὶ οἱ ἄλλοι οὐδ’ ἄλλο τι πρὸ τῶν ὁρωμένων κόσμων ἡγοῦνται, ἐν ἀρχῇς λόγῳ τιθέμενοι τοὺς Αἰγυπτίων, οὐδ’ ἄλλους θεοὺς πλὴν τῶν πλανητῶν λεγομένων καὶ τῶν συμπληρούντων τὸν ζῳδιακὸν καὶ ὅσοι τούτοις παρανατέλλουσιν, τὰς τε εἰς τοὺς δεκανοὺς τομὰς καὶ τοὺς ὠροσκόπους καὶ τοὺς λεγομένους κραταιοὺς ἡγεμόνας, ὧν καὶ τὰ ὀνόματα ἐν τοῖς Σαλμεσχινιακοῖς φέρεται καὶ θεραπείαι παθῶν καὶ ἀνατολαὶ καὶ δύσεις καὶ μελλόντων σημειώσεις”.

¹⁰² Porphyry, *Introduction to the Tetrabiblos*, in CCAG, V/4, 220.4–5: “Περὶ τῶν λς’ δεκανῶν καὶ τῶν παρανατέλλοντων αὐτοῖς καὶ προσώπων”.

his *Apotelesmatica*. In Book I, 1 he describes and delineates the Egyptian decans rising at birth, thus linking the importance of the ascendant with its associated decan. The delineations cover physical appearance, happiness and grief during life, character descriptions and whether the circumstances at death are good or bad.

In Book II, 18, quoting Antigonus, Hephaestio discusses decans in terms of their temporal cycle: “*And collecting material from books of the Salmeschiniaka, he [Antigonus] speaks, as it is there, in this way: one must also observe the decans, since the first [decan], of the Horoscope, is taken (as operative) for childbirth, but the 28th decan from it, which culminates in the forenoon, is taken for manner of living; but the 25th, which culminates at midday, is taken for bad health; but the [1]9th, which rises/emerges in the east late in the day, is taken for injuries; but the 17th, which rises in the western regions, is taken for marriage and wives; but the 8th, door of Hades, is taken for children, and the one in the lower midheaven is taken for death. These are the places which the ancient Egyptians use for every nativity. Therefore let so many be set out for soul, and manner of living, and prosperity; but we shall begin in the same way on another subject as follows*”.¹⁰³

First, Hephaestio refers to the *Salmeschoiniaka*, just as Porphyry had done earlier. Elsewhere, Hephaestio accurately reports on foreign traditions, including Babylonian astrology incorporated into Egyptian astrology.¹⁰⁴ Here, Hephaestio (or Antigonus) connects the decans to the daily cycle and primary motion, with an emphasis on rising, culminating, setting and anti-culminating. He cites the Egyptians as the originators of the doctrine associating each decan with certain areas of life. In Book I, 1 Hephaestio gives the Egyptian names for the decans rising with the ascendant (Neugebauer and Parker established matches with both the Seti I B series and the Tanis series).¹⁰⁵ Thus, both ways in which Hephaestio uses the decans for delineation maintain their Egyptian connections.

¹⁰³ Hephaestio, 1973, vol. 1, 167.1-14 (II, 18.74-77): “Καὶ ἐκ τῶν Σαλμεσχοινιακῶν δὲ βιβλίων ἀναλεξάμενος ὡς ἔστιν ἐκεῖ οὕτως λέγει. σκοπητέον δὲ καὶ τοὺς δεκανοὺς ἐπειδήπερ ὁ μὲν πρῶτος τοῦ ὅροσκόπου χρηματίζει περὶ τοκετοῦ, ὁ δὲ ἀπὸ τούτου δεκανὸς κη', δς μεσουρανεῖ πρωΐ, χρηματίζει περὶ βίου, ὁ δὲ κε', δς μεσουρανεῖ μεσημβρίαν, χρηματίζει περὶ ἀρρωστίας, ὁ δὲ <ι>θ', δς ἀνατέλλει ἐν τῷ ἀπηλιώτῃ ὀψέ, χρηματίζει περὶ σίνου, ὁ δὲ ιζ', δς ἀνατέλλει ἐν τοῖς λιβυκοῖς, χρηματίζει περὶ γάμου καὶ γυναικῶν, ὁ δὲ η', Ἄιδου θύρα, χρηματίζει περὶ τέκνων, ὁ δὲ ἐν τῷ ὑπὸ γῆν χρηματίζει περὶ θανάτου. οὗτοί εἰσιν οἱ τόποι οἷς χρώνται ἐπὶ πάσης γενέσεως οἱ παλαιοὶ Αἰγύπτιοι. τοσαῦτα μὲν οὖν ἐκκείσθω περὶ ψυχῆς καὶ βίου καὶ προκοπῆς, ἐτέρου δὲ σκέμματος κατὰ τὸ ἐξῆς ὁμοίως ἀρξώμεθα”. For the same source in service of the speculation that the inventor of the dodecatopos used an elaborate system of topic decans, see Pingree, 1978, vol. 2, 219ff.

¹⁰⁴ See Hephaestio, *Apotelesmatica* I, 21–23, 25, and analysis in Williams, 2008.

¹⁰⁵ Neugebauer – Parker, 1960–1969, III, 170–171. See also von Lieven, 2000a.

4. The Transition from Decan to Ascendant

In addition to the texts which call decans “horoscopes”, other textual evidence connects decans with the ascendant as the moment of birth. The Hermetic text *Corpus Hermeticum* XVI, 13 assigns troops of δαίμονες to groups of stars: “The sun sets in array the troop or, rather, troops of daimons, which are many and changing, arrayed under the regiments of stars, an equal number of them for each star. Thus deployed, they follow the orders of a particular star...”.¹⁰⁶ These groups of stars are generally taken to mean the decans. The text continues (XVI, 15): “The daimons on duty at the exact moment of birth, arrayed under each of the stars, take possession of each of us as we come into being and receive a soul. For these stars intersect at the point [of birth], not staying in position but moving by rotation”.¹⁰⁷

Thus, the decans rising at the time of birth combine with the quicker movement (κατὰ στιγμήν) of a single degree crossing the eastern horizon (that is, the ascendant). Though the text could refer either to a rising decan or an ascendant degree, the phrase κατὰ στιγμήν suggests the latter arising from the former.

Confusion of meaning

During this transitional period when the definition of horoscope passed from decan to ascendant, the meaning of the term “horoscope” can sometimes be difficult to ascertain. For example, PGM XIII.708-14 reads: “And you inquire, ‘Master, what is allotted for me?’ And he will tell you about your star and what kind of daimon you have and your horoscope, as well as where you may live and where you will die. But if you hear something bad, do not shriek, do not howl, but beg that he expunge or treat it. For this god can do all things”.¹⁰⁸

A key similarity between this text and CH XVI 13 and 15 is the doctrine that the personal daimon which comes with the soul into life depends on what is rising at the time of birth. When Porphyry discusses this passage into life (see

¹⁰⁶ *Corpus Hermeticum* XVI, 13.1-5, in Nock – Festugière, 1945–1954, II, 236: “ὕπὸ τούτῳ δὲ ἑτάγη ὁ τῶν δαιμόνων χορός, μᾶλλον δὲ χοροί· πολλοὶ γὰρ οὗτοι καὶ ποικίλοι, ὑπὸ τὰς τῶν ἀστέρων πλινθίδας τεταγμένοι, ἐκάστῳ τούτων ἰσάριθμοι. διατεταγμένοι οὖν ὑπηρετοῦσιν ἐκάστῳ τῶν ἀστέρων...”. (Trans. [slightly modified] Copenhagen, 1992, repr. 2000, 60.)

¹⁰⁷ *Corpus Hermeticum* XVI, 15.1-5, in Nock – Festugière, 1945–1954, II, 236.18-22: “γενόμενον γὰρ ἡμῶν ἕκαστον καὶ ψυχωθέντα παραλαμβάνουσι δαίμονες οἱ κατ’ ἐκείνην τὴν στιγμήν τῆς γενέσεως ὑπηρεταί, οἱ ἑτάγησαν ἐκάστῳ τῶν ἀστέρων· οὗτοι γὰρ κατὰ στιγμήν ἐναλλάσσονται, οὐχ οἱ αὐτοὶ ἐπιμένοντες ἀλλ’ ἀνακυκλούμενοι...”. (Trans. Copenhagen, 1992, 60, modified. For ἐναλλάσσω here and below, we borrow the translation of James Wilberding, in press).

¹⁰⁸ PGM XIII.708-14, in Preisendanz, 1973–1974, vol. 2, 119): “σὺ δὲ πυνθάνου· ‘δέσποτα, τί μοι εἴμαρται;’ καὶ ἐρεῖ σοι καὶ περὶ ἄστρου καὶ ποιός ἐστιν ὁ σὸς δαίμων καὶ ὁ ὁροσκόπος, καὶ ποῦ ζῆσι καὶ ποῦ ἀποθανεῖσαι. ἐὰν δέ τι φαῦλον ἀκούσης, μὴ κράξης, μὴ κλαύσης, ἀλλὰ ἐρώτα, ἵνα αὐτὸς ἀπαλείψῃ ἢ μεθοδεύσῃ. δύναται γὰρ πάντα ὁ θεὸς οὗτος”.

below), he enhances the connections between birthchart, ὥροσκόπος and guardian daimon. H.G. Gundel believes that ὥροσκόπος here refers to a decan,¹⁰⁹ but a definitive judgement is difficult. As the zodiacal representative of the moment of birth, the ascendant is integral in determining how the planets and signs are placed in the chart, and thereby provides the means for ascertaining the circumstances of life and death. In standard Greco-Roman astrology, the ascendant is a crucial component of the chart, while decans are not as critical to interpretation. In this spell, it is not clear whether the transition has been made from the horoscope as the 10-degree stretch of a decan (by this time the decans in astrology were firmly entrenched as 10-degree segments of the zodiac) to the single degree of the ascendant. By the early fifth century CE, Hephaestio of Thebes maintains a clear distinction between the degree of the ascendant and the rising decan, even though he incorporates the original function of the decans to determine information about life and character. Hephaestio explicitly states that these delineations apply to the decan rising at birth.¹¹⁰

In his commentary on the *Myth of Er* in his essay *Περὶ τοῦ ἐφ' ἡμῖν* ("On What is Up to Us"), Porphyry presents an astrological connection between the moment of birth and the guardian daimon. In so doing, he seems to employ the word ὥροσκόπος in two different contexts: "...one could say, I think, that he [sc. Plato] [took these doctrines] from the Egyptian sages designating the lives from the horoscopes [i.e. decans] and the disposition of the stars [i.e. planets] in the nativities in relation to the stars in the zodiac, in conformity with the rising of the horoscope [i.e. ascendant]. That such a disposition of the configurations necessarily determines such lives for the souls going into birth through the horoscopic [i.e. ascendant] degree..."¹¹¹ Shortly after this statement, in a passage about souls choosing lives based on the temporal point of the ascendant in the chart, Porphyry even uses the phrase "κατὰ στιγμήν" as in the Hermetic quotation (CH XVI, 15): "...but having chosen the things intersecting in the revolution at the point in time of the ascension of the Horoscope, they must necessarily fulfil what has been written".¹¹² The emphasis on στιγμή, a very small point or moment in time, buttresses the argument that the horoscope here means the ascendant.

¹⁰⁹ Gundel, 1968, 20, 68 n. 14.

¹¹⁰ E.g., Hephaestio, 1973, vol. 1, 5.14-15 (Book I, 1.13): "the first decan marking the hour", "...τοὺς μὲν ἔχοντας ὥροσκοποῦντα τὸν πρῶτον δεκανὸν..." et sim.

¹¹¹ Porphyry, *Περὶ τοῦ ἐφ' ἡμῖν*, in Stobaeus, 1884-1923, II, 170.1-6): "...φαῖν ἄν, οἶμαι, ὅτι <παρὰ> τὼν παρ' Αἰγυπτίοις σοφῶν τοὺς βίους ἐκ τῶν ὥροσκόπων σημειουμένων καὶ τῆς ἐν ταῖς γενέσεσι τῶν ἀστέρων πρὸς τὰ ἐν τῷ ζῳδιακῷ ἄστρα διαθέσεως, <ὥς> ἀκολουθοῦς τῇ τοῦ ὥροσκόπου ἀνατολῇ. Ἀναγκάζειν μὲν τὴν ποιὰν διάθεσιν τῶν σχηματισμῶν ποιοὺς εἶναι τοὺς βίους ταῖς διὰ τῆς ὥροσκοπούσης μοίρας ἰούσαις ψυχαῖς εἰς τὴν γένεσιν..."

¹¹² Porphyry, *Περὶ τοῦ ἐφ' ἡμῖν*, in Stobaeus, 1884-1923, II, 170.13-15: "ἐλομένας δὲ τὰ ἐν τῇ στροφῇ κατὰ στιγμήν τοῦ χρόνου (55) τῆς ἀναφορᾶς τοῦ ὥροσκόπου ἐναλλαττόμενα ἀνάγκη ἐκτελεῖν τὰ γεγραμμένα".

Though these examples show the difficulty in ascertaining the meaning of horoscope when context indicates decans may also have been intended, they do illustrate the close connection of the decans with the ascendant. However, the ancient meanings of horoscope are not yet exhausted.

5. The Τόποι: A Division of Space

So far, the analysis has considered only one of the two definitions of “horoscope” which preserves the technical details of the term: the decans have been equated with the horoscope as ascendant, the point where the ecliptic intersects the eastern horizon. The other technical definition of horoscope – horoscope as the τόπος which contains the ascendant – demands consideration. Because “horoscope” is a multivalent term, it could be argued that, despite the connection of the decans with the points where the ecliptic intersects the meridian and the horizon, these observations had no more to do with the development of the “horoscope” than the codification of the zodiacal signs had to do with the cardines. Like the zodiacal circle, the decans represent a fixed division of the celestial sphere. The intersection of the ecliptic with the horizon (as in the case of the ascendant or descendant) or with the meridian (as in the case of the mid-heaven and the lower midheaven) constitute basic astronomical concerns analogous to left and right, or top and bottom. In some sense, the ascendant and descendant had been anticipated by both Egyptian and Babylonian concerns with horizon phenomena, namely heliacal risings and settings. By this argument, the “horoscope” and the associated cardines merely represent a metonymy for the τόποι, or “places”, known from Greek astrology. By this argument, the advent of the horoscope again moves to a Greek context. In order to assess this argument, the Greek system of τόποι demands further examination.¹¹³

From an astrological perspective, the full importance of the ascendant emerges only in relation to the τόποι, literally “places”. In antiquity, several terms referred to the τόποι: Greek used the word τόπος but Demotic used either *dni.t* (“lot”, possibly connected with the Greek term κλήρος) or one of two terms for “house”: *pr* and ⲩⲱⲩ.¹¹⁴ More recently, medieval, Renaissance, and modern astrologers have generally referred to these “places” as “houses”. Unfortunately, like the word “horoscope”, “house” can embody multiple astrological meanings, including the τόποι (places), the οἶκοι (domiciles), and even the ζῳδία

¹¹³ See also the discussions in Bouché-Leclercq, 1899, 269–288; Gundel, 1936b, 306–313; and Neugebauer – Van Hoesen, 1959, 7–8.

¹¹⁴ In 1943, Neugebauer read ⲩ in conformity with Wb. I, 159, s.v. ⲩ, but Demotists conventionally read the word as the dual ⲩⲱⲩ, although the writing possesses no dual strokes. See Erichsen, 1954, 52–53, s.v. ⲩⲱⲩ; Johnson, 2008, vol. a, 6–17, s.v. ⲩⲱⲩ. Although read as dual, in some cases this form can appear with plural strokes as ⲩⲱⲩⲱ. For the astral uses of the term, see esp. Johnson, 2008, 11–12.

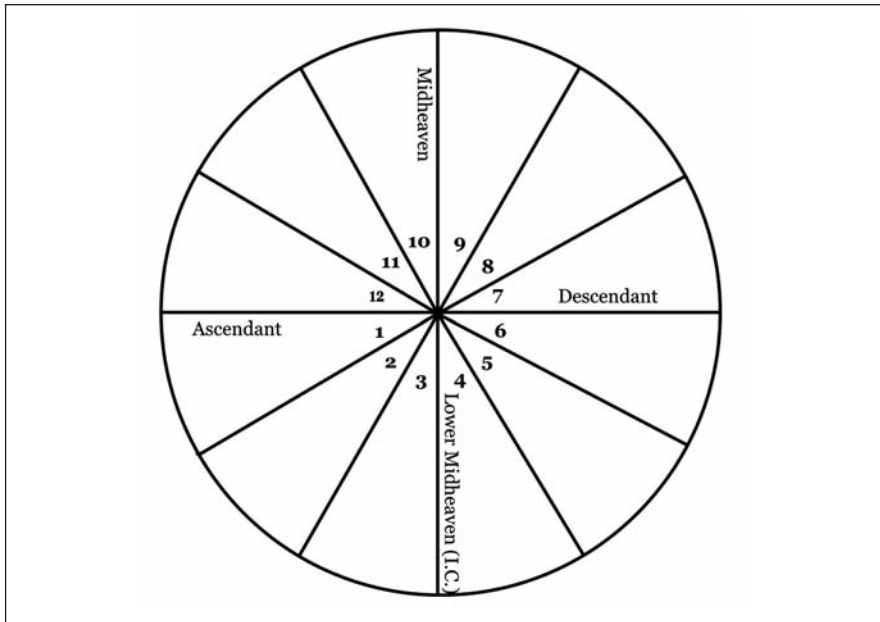


Fig. 2 Idealised System of Τόποι with Cardines Labelled.

(zodiacal signs). Like modern sciences, technical jargon permeates ancient astrological texts. At one extreme, the cuneiform, Demotic, Greek, Latin and Arabic terms may simply represent direct translations, but at the other extreme the same author may use multiple terms to expound the same doctrine. Modern historians of astrology must carefully distinguish varied meanings and usage, as well as be precise in their own use of terms. For the sake of clarity, in this article the τόποι or “places” will always refer to a twelve-part division of the sky which (unlike the zodiacal signs) always occupies the same space.

The τόποι represent a fundamental spatial division of the cosmos, delimited by the path of the sun and the eastern and western horizons (Fig. 2). Six τόποι always stand above the horizon, and six τόποι are hidden beneath the earth. The sun, the moon, the planets and the zodiacal signs pass through all twelve of the stationary τόποι in twenty-four hours. Here, again, the τόποι have strikingly similar Egyptian antecedents.

The Book of Gates: A Spatial Division of Time

First appearing in the tomb of Horemheb (1292 BCE), the *Book of Gates* chronicles the nocturnal voyage of the Sun. The nocturnal journey begins with the Sun at the western horizon and concludes with the Sun at the eastern horizon.

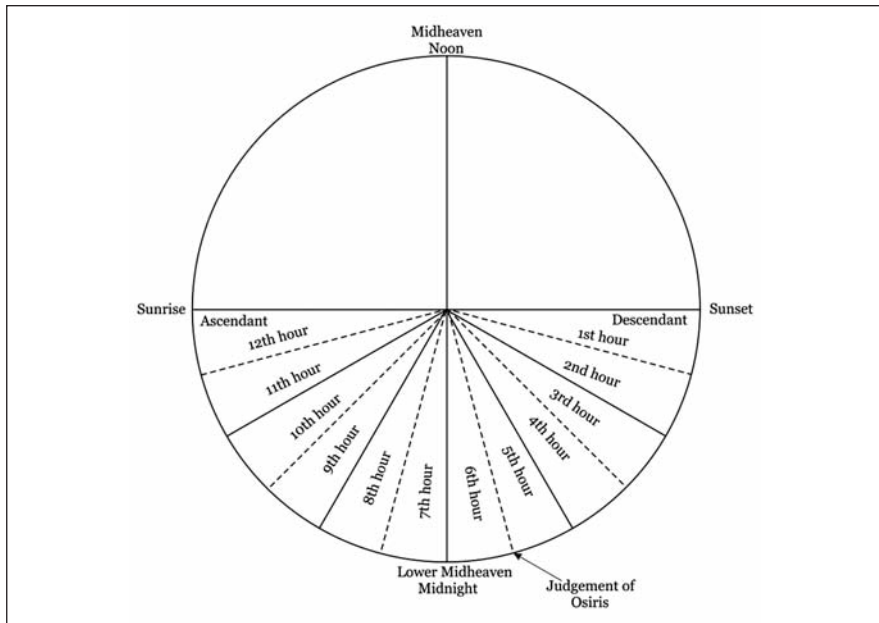


Fig. 3 Hours of the *Book of Gates* superimposed on the Τόποι.

This voyage contains twelve divisions, identified as the hours of the night. The *Book of Gates* describes these “hours” in both geographical and temporal terms. Thus, the Sun passes through specific places and meets with specific inhabitants of the afterworld during each hour. A vignette titled “The Judgement of Osiris” interrupts this “hour-by-hour” composition. “The Judgement of Osiris” falls after the end of the fifth hour and before the beginning of the sixth hour. In order to understand when and where the climax of the *Book of Gates* occurred, the vignette must be related to the Egyptian system of hours.

As noted briefly in the discussion of decanal hours, the hours used in Egypt were seasonal – that is, diurnal hours were longer in the summer than the winter and nocturnal hours were longer in the winter than the summer. Thus, the “geographical” boundaries of the regions of the netherworld which correspond to the hours remained constant throughout the year, although the Sun passed through them at different rates. The constancy of these “borders” and the variable rate of the Sun resulted in a continuity of the geographical regions of the netherworld throughout the year. Given that the “Judgement of Osiris” happened one hour before the absolute middle of the night, the Sun could not stand exactly on the meridian at this time. However, when placing the meridian within the system of τόποι, the meridian forms only the eastern border of the

fourth τόπος – the western border fell 30° (or 2 equinoctial hours) before the meridian. Thus, the “Judgement of Osiris” occurred not at the meridian (i.e. midnight, the beginning of the seventh hour), but rather in the middle of the fourth τόπος (i.e. preceding the sixth hour).

The Book of Caverns: A Precursor to the Nocturnal Τόποι

Admittedly, more than a millennium separates the hours of the night described in the *Book of Gates* from the first appearance of the Greek τόποι and the two methods of dividing the path of the subterranean passage of the Sun differ considerably. The *Book of Gates* lays out twelve divisions, whereas the corresponding semi-circle of τόποι comprises six distinct areas. However, another Egyptian composition does divide the night into six portions. The *Book of Caverns*, a composition roughly contemporary with the *Book of Gates* and which first appears in the Osireion at Abydos built during the reign of Seti I (1294–1279 BCE), contains a system for dividing the nocturnal journey of the Sun. These places are identified with six caverns through which the Sun passes during the night. No surviving system divides the diurnal journey of the Sun into six portions, but the similarities between the system described by the *Book of Caverns* and the τόποι of Greek astrology are striking. Admittedly, the names associated with the Greek τόποι do not appear in the *Book of Caverns*, but both the caverns and the τόποι represent subterranean geographical locations fixed with reference to the horizon. Secondly, although the dimensions of any individual cavern cannot be determined, both systems divide this subterranean passage into six places. Perhaps the system resulted from an adaptation of the Akkadian *bēru* (double hours) to the indigenous Egyptian division of the night, but the final result corresponds with the divisions produced by the Greek τόποι.

Thus, Egyptians of the first millennium used a system of nocturnal divisions which could have served as the forerunner of the τόποι. An investigation of the word used to describe these caverns, *ḳrr.t*,¹¹⁵ reveals an unexpected link to astrological vocabulary. *Ḳrr.t* presents a much more restricted range of possibilities than τόπος and only refers to caverns or subterranean burrowing. In fact, the word *ḳrr.t* meaning “cavern” seems not to have survived into Demotic. In Demotic, the same root yields *qrr*, meaning “lot”, and is used to translate the Greek word κλήρος.¹¹⁶ Because Greek astrological texts use κλήρος to expound the astrological doctrine of lots, perhaps some transposition of terms occurred in antiquity. In fact, Firmicus Maternus seems to have inverted the transposition, idiosyncratically referring to the κλήροι as *loci* (“places”). Although such identification is tempting, the doctrine of lots differs substantially from the theory of the τόποι and the linguistic relationship remains mere speculation.

¹¹⁵ Piankoff, 1954, fig. 144, inter alia.; Wb. V, 62, s.v. *ḳrr.t*.

¹¹⁶ Johnson, 2008, vol. q, 63, s.v. *qrr*.

6. The Cardines: A Division of Time

If the τόποι can be described as a division of space, the cardines can be considered a division of time. As noted previously, the cardines consist of four points: the ascendant and descendant (defined by the intersection of the ecliptic with the horizon) and the midheaven and lower midheaven (defined by the intersection of the ecliptic with the meridian). At first glance, these points seem to be determined spatially, but neither the ecliptic nor the meridian can be observed directly. Thus, ancient astrologers determined the position of the sun along the ecliptic by the month and day, while they found the distance of the sun from the meridian by counting the number of hours after rising or setting, and converting these hours into time-degrees. (These methods, described as early as Vettius Valens (second century CE),¹¹⁷ correspond well with the documentary evidence of the birth notes, which list the regnal year, month, day, and hour of day or night.)

From a modern perspective, the meridian remains constant, but the points of the zodiacal circle at the ascendant and descendant shift according to the latitude and time of year. Consequently, modern astrologers find the point of the zodiac at midheaven first, and then adjust the other cardines according to the latitude and time of year. Because they used a temporal system, ancient astrologers determined the degree of the zodiac in the ascendant first and determined the other cardines from this point. Just as earlier Egyptians once needed to know which “decade” of the year was valid before consulting the table of decans, later astrologers needed to know the portion of the zodiacal sign which was valid before consulting the table of rising times. Perhaps the fact that Ptolemy recorded his tables of rising times in 10-degree segments of the zodiac represents more than a handy approximation; perhaps this division represents the last gasp of the decans as an astronomical system.¹¹⁸

The Book of Nut: Decans in the Cardines

According to Alexandra von Lieven, the *Book of Nut* records a specific connection between the cardines and the decans. Although this work was first composed around 1279 BCE, the version which von Lieven edited demonstrates that this tradition remained current through the second century CE. She identifies the ascendant, midheaven, descendant, and lower midheaven with the Demotic terms *r^c-h^c*, *p³ šy*, *r^c-h^{tp}*, and *šy dw³.t*, respectively, and declares that “*what is lacking in the Book of Nut are merely the valuations of the single segments of the sky linked with the [τόποι]*”.¹¹⁹ Although the *Book of Nut* certainly tracks the passage of the decans through the cardines, an explanation other than oversight

¹¹⁷ Valens, *Anthology*, I, 4.

¹¹⁸ Boyer – Merzbach, 1968, repr. 1991, 166–167.

¹¹⁹ von Lieven, 2007, 146: “*Was im Nutbuch fehlt, sind lediglich die mit der Dodekatropos verknüpften Wertungen der einzelnen Himmelssegmente...*”.

can account for the fact that the system of τόποι are largely absent from the text. In fact, the *Book of Nut* seems to bridge two systems of temporal division: the first based on the indigenous Egyptian system of the decans and the second based on the astronomical definition of the cardines.

The multiple meanings of astrological terminology again confuse the issue. In addition to the previous astronomical definition of the cardines, astrological texts also identify the cardines as four specific τόποι, sometimes identified by the numbers 1, 4, 7, and 10, but also called the ascendant, lower midheaven, descendant and midheaven. An astronomical definition of the cardines relied on the quadrants formed by the ecliptic, the horizon and the meridian. By this system, the cardine of the midheaven could fall in τόπος 9, 10 or 11, depending on which zodiacal sign the sun occupied and which sign crossed the ascendant. Both systems of cardines appear in the literary compositions of ancient astrologers: Paulus Alexandrinus (fourth century CE) indicates that the midheaven can fall in 3 different τόποι,¹²⁰ and Vettius Valens (second century CE) acknowledges the equation of the cardines as τόποι of more or less than 30°, which later became known as the Porphyry house system.¹²¹

Von Lieven does not specify which system of cardines underpinned the composition of the *Book of Nut*. The traditional astronomical use of the decans conforms better to the astronomical definition of the cardines, but von Lieven's explanations rely on the τόποι. Moreover, in an image to the text which equates the cardines with the τόποι, von Lieven moves the boundaries of the traditional τόποι 15° in the direction of the daily solar motion. The paucity of citations from ancient sources prevents an identification of the origin of this system, but these altered τόποι seem to derive from a tacit acceptance of a weak, unidentified citation by Bouché-Leclercq.¹²²

Cardines in Documentary Horoscopes: A Confirmation

The hypothesis that two different traditions of cardines existed in Egypt runs the danger of fitting the evidence to the argument. Fortunately, the relatively few documentary horoscopes from Egypt make ample discussion of the cardines. As noted above, Ashmolean D.O. 633 contains planetary positions for 38 BCE and represents the first documentary evidence for hour-precise horoscopy grafted on to the Babylonian tradition of personal planetary natal divination. As might be expected from the historical precedents, this ostrakon contains not only mention of the ascendant, but also several cardines. This ostrakon records the cardines as degrees of the zodiac: 19 Pisces crossed the eastern horizon, while 19 Virgo crossed the western horizon; 25 Sagittarius tran-

¹²⁰ Paulus Alexandrinus, 1958, 81.6-82.10 (ch. 30).

¹²¹ Vettius Valens, 1986, 127.17-128.3 (III, 2).

¹²² Bouché-Leclercq, 1899, 269-270.

sited the meridian. The ostracon does not explicitly state that the τόπος corresponds to the entire zodiacal sign. In fact, no τόποι appear among the data recorded on the ostracon. The composition of this ostracon conforms completely to the astronomical definition of the cardines.

Furthermore, the first documentary evidence for a fully developed system of τόποι comes from Egypt, albeit slightly outside the first millennium BCE. A series of five horoscopes from Medinet Habu represent planetary positions as early as 18 CE. The strikingly homogenous composition of the horoscopes merits consideration. First, in contrast to the proposal that “Hellenistic” planetary order is a prerequisite for a horoscope, these ostraca merely note the planetary positions as they occur among the cardines and τόποι. The texts begin with a date and time, list the position of the Sun and Moon, then determine the signs (but not the degrees) of the cardines. After the cardines, several mysterious places – three *swšp* and two *twr* – appear, perhaps representing other astrological traditions. Finally, the ostraca end with an ordered listing of the τόποι, from which the ascendant has been excluded.

Date
Position of Sun and Moon
Cardines (I, VII, X, IV)
<i>Swšp</i>
<i>Twr</i>
Τόποι (II–XII)

Table 3 Composition of Medinet Habu Horoscopes.

The composition of the Medinet Habu texts indicates that, for the astrologers, the cardines and the τόποι began as separate traditions. The two traditions eventually coalesced when the beginning τόπος was pegged to the sign rising on the eastern horizon. The τόπος system begins with the sign of the ascendant and includes its whole sign within the τόπος, with each subsequent place also including the whole zodiac sign. Such a theory of two traditions which later united explains why the ancient system of τόποι fixed the ascendant and descendant, but required the midheaven to oscillate within the ninth, tenth and eleventh τόποι and necessitated that the lower midheaven vacillate among the third, fourth and fifth τόποι. Not only is the existence of two traditions of cardines and τόποι supported by documentary evidence, the theory also explains a statement by Olympiodorus concerning difference and ambiguity of the τόποι according to ancient astrologers.¹²³

¹²³ See Olympiodorus, 1962, 75.23-76.8. He remarks, “There has come to be a certain amount of difference and ambiguity for the astrologers concerning the division and separation of such twelve places”, “Περὶ δὲ τοῦ μερισμοῦ καὶ τῆς διακρίσεως τῶν τοιούτων δώδεκα τόπων πολλή τις ἐγένετο διένεξις καὶ ἀμφιβολία τοῖς ἀστρολόγοις”.

Egyptian Antecedents for the Cardines: Recapitulation

Each of the τόποι equated with a cardine reflects an astral concern indigenous to Egypt. The ascendant and descendant (τόποι I and VII, respectively) form an obvious pair. Although the midheaven (τόπος X) appears later in the chronological development of Egyptian cosmologies, the Egyptian counterpart to this τόπος appears in the long-standing Egyptian tradition of the decans. The remaining cardine, the lower midheaven (τόπος IV) occurs earlier in the historical record, but the context of this cardine demands closer consideration. Of course, some evidence may not have survived, but Egyptian sources permit several key identifications.

1. *Ascendant.* The astronomical use of the decans as a nocturnal clock implies that by 2100 BCE Egyptian astronomers had developed an interest in the portion of fixed stars which rose above the eastern horizon, a point roughly correspondent to the first τόπος. An interest in the regular, hourly appearance of particular stars does not necessarily indicate a conceptualization of some portion of the sky as the ascendant. Observations of Sothic risings had been made since the Twelfth Dynasty with no implication of an “ascendant”. Risings and settings constitute easily observable phenomena; the Babylonians had observed similar phenomena since the reign of Ammisaduqa.¹²⁴ In both cases, the first records of these observations represent pure astronomy, unconnected to astrology. Eventually, in Babylon, a system of omen literature relating to the appearance of planets at their rising was developed, but these omens never entered the horoscopic texts from Babylon. The introduction of the ascendant into personal astrology first occurred in Egypt.

2. *Descendant.* The existence of a fixed number of decans, valid for each night and used in rotation, implies a comprehension of setting in the west. The phenomenon of setting stars occurs in the seventh τόπος, but this position receives little discussion in the earliest texts. Instead, Egyptian sources more prominently address the setting of the Sun than the setting of stars. The situation concerning the descendant is analogous to the ascendant: the event of rising or setting is limited to a specific location on the horizon and does not establish an intellectual division of the sky. Again, Babylonian scribes had developed a system of omen literature concerning the settings of planets, but no derivatives of these omens appear in the cuneiform horoscopic texts.

3. *Midheaven.* As for the midheaven, evidence for observations of stars crossing the meridian comes from the decans. According to Neugebauer and Parker’s interpretation of the Seti I B family of decans, Egyptian astronomers

¹²⁴ Reiner – Pingree, 1975.

had begun making observations of culminations on the meridian by the death of Seti I (1279 BCE). Although this position corresponds with the midheaven, or tenth τόπος, the details of these observations remain obscure. While observations made at the culmination are not subject to obfuscations caused by clouds or dust storms, the difficulty of determining exactly when a star culminates increases because the midheaven stands far from easily-measured reference points on the horizon. Perhaps Egypt provided the observational model for the slightly later Babylonian *ziqpu* stars first recorded in MUL.APIN.¹²⁵ However, these culminations never appear in Babylonian personal astrology.

4. *Lower Midheaven.* Finally, the fourth cardine, or the fourth τόπος, falls beneath the earth. The fact that this point is unobservable nearly precludes any consideration by Babylonian sources. Although Babylonian astronomers were capable of predicting unobservable events (such as the diurnal position of planets), Babylonian astrologers focused on observed but unpredictable phenomena, including colors, clouds, winds, rains and lightning. In fact, Babylonian astrologers seem particularly reluctant to consider unseen events as ominous.¹²⁶ Thus, the appearance of a point which corresponds to this cardine in an Egyptian source merits attention. As noted above, the position of the “Judgement of Osiris” in the *Book of Gates* falls in the middle of the fourth τόπος, not at the middle of the night.

7. Conclusion

In conclusion, absolute proof of historical development of astrological doctrines remains elusive, in part because astrological authors exhibit a propensity to conflate terms, in part because they focused on relating useful information rather than on recording historical ponderings, and in part because so few texts survive. However, against Pingree’s arguments, horoscopic astrology could have developed in a non-Hellenic context through the combination of fifth century BCE Babylonian personal natal astrology with indigenous Egyptian astral concerns. Egyptian astronomers exhibited an interest in the ascendant since the development of decanal clocks. Likewise, the Egyptian tradition of astrology from the first millennium BCE also serves to clarify the development of the Hellenistic tradition, particularly the difference between the cardines and τόποι. Because the cardines appear separately from the other τόποι in the Medinet Habu horoscopes, the cardines and the τόποι may represent different elements of astrological development and interpretation. Moreover, several elements of “Hellenistic” astrology – decans, τόποι, cardines – have clear Egyptian an-

¹²⁵ For a bibliography of the sources and introduction to the *ziqpu* stars, see Hunger – Pingree, 1999, 84–90.

¹²⁶ Hunger, 1992, 14 (Text 21, “Full Moon on the 14th Day” lines 1-2); 162 (Text 293, “Full Moon on the 14th Day” passim).

tecedents, and the development of “Hellenistic” astrology may be explained as a fusion of Babylonian natal astrology with Egyptian techniques.

How and when Egyptian scribes became aware of Babylonian personal natal astrology raises further questions. Astrological doctrines could have been communicated between the two cultures after the conquest of Alexander III and Greek might have been the means of transmission. Alternatively, the cultures might have communicated directly without a Greek intermediary. Greek sources indicate that much of Egyptian astrological doctrine was developed by the king Nechepso and Petosiris. Like many epigraphies, the value of this citation has been contested. The earliest Egyptian astrological text, pVindobonensis D. 6286, contains eclipse omens and calendrical material which indicates the time of composition fell between 627 and 484 BCE. This span of dates agrees with the Nechepso–Petosirian tradition: the reign of Necho II (610–595 BCE) falls within the range of likely dates for this adaptation of Babylonian eclipse omens to an Egyptian audience. Because of the early date of this adaptation, a Greek intermediary can be ruled out, but the means of transmission demands closer scrutiny.

The approximate date for the introduction of Babylonian astrology into Egypt provides marginal confirmation of the epigraphies preserved by Greek authors.¹²⁷ Of course, the name of a king might indicate little more than the approximate era of his reign. At least one individual by the name of Petosiris can be confirmed to have been in Assyria at about the time of the reign of Necho II.

The earliest administrative records from Nineveh represent the reign of Sargon in 721 BCE, but these records continued until the destruction of that city in 612 BCE.¹²⁸ Among these tablets, the name Petosiris occurs at least once, written as ^m*Pu-ṭi-ši-ri* LÚ.mu-ṣur-a-a: Putiširi, an Egyptian man.¹²⁹ The redactor of the list mentions only the nationality of “Putiširi” and neglects his activities, but he was not the only Egyptian counted among the temple personnel. In another list, a body of “three Egyptian scholars” (PAB 3 *har-ṭi-bi*) include ^m*x-gúr-ši-i*, ^m*Ra-a-si-i* and ^m*Ši-bu-u*; and three “Egyptian scribes” (PAB 3 A.BA.MEŠ *mu-ṣur-a-a*) include ^m*Hu-u-ru*, ^m*Ni-mur-a-u* and ^m*Hur-u-a-šu*.¹³⁰ The compiler of the list included these Egyptian scholars alongside Assyrian astrologers, exorcists, and diviners. The administrative records inventory not only people, but several tablets also list books – including polyptychs and tablets of Enuma Anu Enlil and other divinatory manuals.¹³¹

¹²⁷ Nechepso – Petosiris, 1892.

¹²⁸ Fales – Postgate, 1992, XIV.

¹²⁹ Fales – Postgate, 1992, 10 (5. “List of Officials at Court”, Reverse, I, ln. 20).

¹³⁰ Fales – Postgate, 1992, 5 (1. “List of Experts at Court”, Reverse, I, ln. 12 - II, ln. 7). The first and fifth names cannot be identified, but the second, third and fourth names represent *R'-wd3*, *dd-hr*, and *hr*, respectively. The sixth name renders *hr-wd3*. For parallels, see Bongenaar – Haring, 1994.

¹³¹ Fales – Postgate, 1992, 62–64 (49. “Inventory of Tablets and Writing Boards”).

This appearance of Egyptian scribes, in particular Petosiris, may fall short of the strictest standards of prosopography, but the circumstantial evidence is tantalizing. The Petosiris of legend should have survived into the reign of Necho II (610–595 BCE). Although this date excludes the earliest tablets, the palace at Nineveh was active until 2 years before this span. Unfortunately, neither the Greek tradition nor the Assyrian tradition preserves any patronyms, matronyms or regional descriptors, but this lack of evidence cannot disqualify Putiširi from being the Petosiris of legend. Likewise, the name Petosiris is quite common, but the presence of an Egyptian as a resident in Assyria is notable. This foreign residency helps establish a context in which Putiširi might be a likely advisor to a king – a context which conforms to the Greek tradition. This context grows even more specific with the consideration that Putiširi resided in a center of astrological study. As usual, certitude remains elusive, but as more Demotic fragments of the stories of Nechepso and Petosiris emerge, an interesting bellwether will be whether the names of the scholars and scribes appear in the astrological narratives.

Even if Petosiris gained astrological knowledge from Nineveh as the visitor Putiširi during the reign of Nechepso, the doctrines he learned there seem unlikely to have contained personal natal astrology. As stated in the opening of this article, the earliest cuneiform horoscopic texts date to 410 BCE – nearly a century too early to fully confirm the citations of Greek astrologers. However, the ancient writers might have been generally right to pay homage to their Mesopotamian and Egyptian forebears. The horoscope may have developed through a reworking of Mesopotamian personal natal astrology to incorporate Egyptian traditions. However, in one important sense, “Hellenistic” astrology remains undeniably Greek – without Greek as the vehicular language, horoscopic astrology would neither have entered Sanskrit nor would it have survived in Europe. Once recorded by Greek authors, the practice of casting a horoscope – by any definition – found a wide audience and entered the western tradition.

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