DOI: 10.1111/rec3.12318

ARTICLE

WILEY

Mesopotamian astrology

M. Willis Monroe

University of British Columbia

Correspondence
M. Willis Monroe, University of British Columbia, Vancouver, BC V6T 1Z2, Canada.
Email: willismonroe@gmail.com

Abstract

Divination in the Ancient Near East took many forms. One of the most important practices, however, was astrology—the art of observing the sky and weather for signs. The first written evidence for this began in the late third millennium BCE, but it probably existed even earlier. Throughout the early and middle centuries of the second millennium BCE, there are glimpses of astrology preserved in letters and other texts. It was not until the end of the second millennium that the practice began to be codified and written down in standard works. During the Neo-Assyrian period (911–609 BCE) astrology gained a new level of importance in the royal court with scholars (employed by the court) constantly watching the sky and writing to the king. Finally, during the latter half of the first millennium BCE (the Neo-Babylonian, Achaemenid, and Hellenistic periods), astrology underwent a period of innovation alongside the continued use of standard practices. Throughout its history, Mesopotamian astrology functioned together with other forms of divination. The examination of an animal's liver, for example, was often used to check the results of an astrological observation. Astrology was one of many ways the messages of the gods could be decoded in the Ancient Near East. It developed a complicated series of texts and skilled practitioners and had a great impact on the fate of its adherents.

Abbreviations: ARM 26, Archives Royales de Mari, *Archives Épistolaires de Mari* I/1, (Durand, 1988); SAA 10, State Archives of Assyria volume 10, *Letters from Assyrian and Babylonian Scholars*, (Parpola, 1993); SAA 8, State Archives of Assyria volume 8, *Astrological reports to Assyrian Kings*, (Hunger, 1992)

1 | INTRODUCTION

In the modern urban setting, it is hard to appreciate the vastness and visual complexity of the night sky. Prior to the rapid onset of light pollution, it was an almost universal source of study. Early observers were confronted by a vivid night sky (weather permitting) and through the natural process of witnessing its configurations night after night were well aware of the subtle movement of bright celestial bodies. The cyclical nature of this movement has long been recognized; the sun approached and hid certain stars at regular intervals aligned with the seasons, planets moved across the sky in relation to the fixed stars, reversed their course, or disappeared only to reappear at a later point. While the regularity was one area of study, the overall configuration at play behind the movement of all of the bodies in the night sky also held significance beyond the ability to tell time. Planets could appear within a constellation at a certain time of year, the crescent moon could seem to encircle a particular star, weather patterns could affect the light from the moon in interesting ways. There was meaning in the movement of the heavens and people have long watched to figure out the patterns and to ascribe divine messages to the astral signs.

To put it another way, astrology is the derivation of interpretable connections between the human experience and celestial phenomena. The sun's rays warming your skin are a clear and stable effect related to its position in the sky, just as dark nights are associated with the lack of light from the new moon. Interpretable relationships include the location of a planet affecting the length of the reign of a king or the fate of the kingdom. These relationships could be ascribed meaning and combined in a variety of ways. In Mesopotamian astrology, what could be considered significant was the appearance, disappearance, movement or lack thereof, and visual characteristics of objects in the sky and above the earth (interestingly, this also includes earthquakes). As for which bodies in the sky attracted the attention of astrologers, the sun and moon were most significant because of their constant presence and brightness. However, more omens concern the moon than the sun, because the moon appears both during the day and at night and has a wide variety of appearances. Also, precisely because it is less bright than the sun, planets are visible alongside it in meaningful configurations. Finally, the planets were considered especially significant because they were often brighter than the background stars and moved across the heavens and through constellations unlike the fixed stars.

It is important to note that the development of astrology in Mesopotamia cannot in any way be divorced from the development of complex (or mathematical) astronomical methods. There was little distinction in Mesopotamia between the two types of scientific analysis that we now consider quite separate. Subtle differences in terminology marked different types of texts, but scholars who studied the heavens were both astronomers and astrologers, able to predict (with great accuracy) the appearance of a planet in a certain section of the sky, while also interpreting the significance of the location or context of its appearance. In fact, the early evidence of predictive astronomy, the synodic periods of planets, is found squarely in texts that also include the meaning of planetary appearances. These early texts should make it clear that the development of (what we would call) astronomical knowledge was only part of a long ongoing project to understand the movement *and* meaning of heavenly bodies. By the latter half of the first millennium BCE both astronomy and astrology had been practiced for nearly two thousand years in Mesopotamia and both had reached a high level of complexity.

2 | EARLY ASTROLOGY (THIRD THROUGH SECOND MILLENNIUM BCE)

Gudea, the ruler of the city of Lagaš at the end of the third millennium BCE, was faced with the important task of rebuilding the E-ninnu, the temple sanctuary of his patron god Ningirsu. This god revealed the new sanctuary to Gudea in a dream and told him of the stars that would guide the building project. When Gudea awoke from his dream, he immediately sacrificed a young goat in order to verify the results of his dream by looking for signs on its organs, through a divinatory practice called extispicy. The omens read from the goat's liver confirmed the truth of the contents of the dream and Gudea got to work on rebuilding the sanctuary.

This passage from a literary text known as Gudea Cylinder A (Edzard, 1997, pp. 69–88) illustrates the interwoven relationships between various forms of divination and their importance in decision making at the highest levels of

government in Mesopotamia as early as the third millennium BCE. It was not only the meaning behind the astrological signs that could influence the results of decision making, but the involvement of astrology itself that lent credence to these decisions as well. An earlier dream of Gudea's includes a figure who is seen reading from a tablet containing propitious stars. This image is later interpreted by Gudea's mother as the goddess Nisaba, who would have known the appropriate star under which to begin the building project. While this practice does not exactly resemble our later image of astrologers watching the sky for celestial signs, it does show the importance of the stars in the communication of divine messages.

But where did the idea of messages from the gods encoded in the stars come from? There are multiple cosmologies that describe the creation of the heavens, but probably the most common story from the latter half of the second millennium through the first millennium was the account of creation in the *Enūma Eliš*. This epic describes the rise of the god Marduk to the head of the pantheon and his creation of the earth and heavens from the body of the slain monster Tiamat.

> He fashioned heavenly stations for the great gods,
> And he set up constellations, the patterns of the stars.
> He appointed the year, marked of divisions,
> And set up three stars each for the twelve months.
> After he had organized the year,
> He established the heavenly station of Nēberu to fix the stars' intervals.
> That none should transgress or be slothful
> He fixed the heavenly stations of Enlil and Ea with it.
> Gates he opened on both sides,
> And put strong bolts at the left and right. (Lambert, 2014, p. 99)

This creation story emphasizes the role that the celestial bodies had in the telling of time and the demarcation of the months and year. Specifically, it sets up the gods as the ones who created and organized the heavens. For this reasons, the celestial bodies were imbued with divine meaning.

The imaginative references to astrology in the mythology and royal literature leave out the day-to-day practitioners of astrology who were constantly watching the sky for signs to report. The work of practitioners is preserved in the epistolary corpus from the second millennium BCE onwards. One astrologer from the town of Mari on the middle Euphrates in the middle of the second millennium reports one of the earliest references to an eclipse deemed significant through divination:

> *To my lord speak, thus (says) Asqudum your servant:*
> *On the 14th day an eclipse of the moon occurred, and the appearance of this eclipse is a bad sign, I have taken the oracles for the health of my lord and the health of the upper district, the oracles were sound. (ARM 26 81, lines 1–13)*

This letter from Asqudum to the king of Mari shows that eclipses could be observed and their meaning interpreted by diviners. This particular case is also interesting because it shows how other forms of divination were intertwined with observations in the heavens. Asqudum, after observing the eclipse, takes additional oracles (and in fact later in the same letter urges the king to do the same) to ascertain the exact meaning of the eclipse. In addition to watching and reporting on auspicious events, these astrologers recorded events and wrote and compiled texts used in their craft. A fragmentary text from Mari lists months of the year and suggests possible outcomes for an eclipse during that month:

> *In the month of Nenegar (V) an eclipse occurs: the harvest prospers, the troops of the king are sent on a good mission.*

In the month of Kin-Inana (VI) an eclipse occurs: famine occurs, and many troops fall. (ARM 26 248, lines 3′–4′)

Around the end of the second millennium and the beginning of the first, an important astrological text was composed called MUL.APIN ("Plough star"). This text, comprised of only two tablets, was a compilation of a wide range of astronomical knowledge but also includes some astrological material (Hunger & Steele, 2018). It contains long lists of stars in the sky, important rubrics for figuring out the date based on rising stars, as well as computational methods for intercalation (the process of inserting a leap month to rectify the solar and lunar year), and mathematical schemes describing the lengths of shadows and duration of daylight. Illustrating the combined nature of astronomy and astrology in Mesopotamia, the text ends with a section of astrological omens covering a wide range of celestial phenomena.

If a star passes from the West to the East: for three years the land will experience evil.
If a star flares up from the middle of the sky and sets in the West: a heavy loss will occur in the land. (Hunger & Steele, 2018, p. 161)

Astrology in the second millennium was a mix of traditions that over time coalesced into what we recognize as the form of astrology practiced in the Neo-Assyrian court. As early as the Old-Babylonian period, lists of celestial omens were being compiled into reference works that would later be brought together into the canonical series of astrology (Rochberg-Halton, 1988, p. 19–20). However, the paucity of texts does not attest to a widespread systematic practice during the early third and second millennia, albeit historical records and early compositions hint at the importance of astrology for the king and its relevance for the public good. The few letters from astrologers give evidence of the daily practice of those trained to watch the sky for auspicious signs and make clear the way in which astrology was intertwined with other forms of divination, chiefly extispicy.

3 | NEO-ASSYRIAN ASTROLOGY (911–609 BCE)

In the Neo-Assyrian Empire, the kings employed a wide variety of scholars and advisors in their court to help with the day-to-day running of the government. The cuneiform tablets found in Assurbanipal's library, in the capital of Nineveh, attest to the frequent and extensive correspondence between these trusted officials and their monarch. Many of the letters report on affairs outside the core of the empire, troop movements, levels of supplies, or information about local peoples, but a large number of the letters deal with the interpretation of ominous events. These letters are written by diviners practicing a variety of forms of divination. Some were watching for ominous events in the city or countryside or relaying events witnessed by local people; others were reading the entrails of animals to confirm previous predictions or answer specific queries. In all cases, the results of divination were presented with an interpretation by the scholar based on their extensive training. Playing an important role in the divinatory apparatus of the state were the court astrologers who watched the sky both in the capital cities and in the far flung corners and areas. They would write frequent reports on ominous conjunctions or appearances of celestial bodies and give their professional interpretations and recommendations for rituals and procedures to avert a potential negative prediction. In the words of the Neo-Assyrian king Essarhaddon, they were instructed to "keep my watch, and report everything you know" (SAA 8 316). The following text is a typical example of an astrologer's report to the king:

If in Ab (5th month) Adad thunders, the day is cloudy, it rains, lightning flashes: water will become scarce at the source. If Adad shouts on a day without clouds: there will be darkness, variant: famine in the land. The king my lord need not worry about this illness. This is a seasonal disease; all the people who were sick are well now. Further, the king my lord who is one who reveres the gods and prays day and night to the gods – can really anything happen to the king my lord and his offspring? God disposes; and that is good.

> *Somewhere it is said as follows: "He is doing very well – his days will be short; he keeps falling ill – his days will be long." From Issar-šumu-ereš. (SAA 8 1)*

This report is quoted in full to convey the full scope of what the astrologers wrote. They often started their letters with one or more predictions of future celestial events and their potential significance. This was usually sufficient, but those closer to the king might also respond to particular questions or queries from the king regarding other affairs. In the case above, Issar-šumu-ereš is telling Esarhaddon not to worry about his current illness, as it is probably nothing more than a seasonal cold.

Astrologers were not only watching the sky for auspicious events, they were also trained in predicting the movement of planets. In the previous section, the text MUL.APIN was shown to have both lists of stars, computational astronomy, as well as astrology. Evidence of skill in predicting the appearance and occurrence of celestial bodies and events is shown in this excerpt from Rašil the Older, where he demonstrates his ability to use astronomical methods to forecast an eclipse:

> *On the 14th day the moon will make an eclipse. It predicts evil for Elam and the Westland, good for the king my lord. Let the king my lord be happy. (SAA 8 388, lines 1–6)*

In this excerpt Rašil, the Older predicts a lunar eclipse and explains the potential meaning behind it. The evil during an eclipse was thought to occur over specific areas of the world depending on the passage of the shadow across certain areas of the moon's surface. In a second letter, Rašil the Older shows his competent knowledge of planetary motion by describing on what day Mars will leave a certain constellation in the sky:

> *Mars, which stands inside Scorpius, is about to move out; until the 25th of Tammuz it will move out of Scorpius; and its radiance is fallen. Let the king my lord be happy; the king should be very glad, but until Mars goes out, let the king guard himself. (SAA 8 387, lines 3–r. 6)*

These two letters show the skill of the astrologers in the court in both interpreting the meaning of events but also predicting what events might occur and when. It might seem paradoxical to be able both to forecast the occurrence of signs and to interpret their meaning in the context of an unknown future. But the prediction of celestial signs was a crucial part of preparing for the rituals that were needed to counteract negative omens. These rituals, called *namburbû*, were performed in order to ward off the evil portend by a particular sign in the heavens. In the worst case, a particularly severe lunar or solar eclipse, a "the substitute king" ritual would be performed. This would involve the king shedding the appearances of kingship and becoming the "farmer," meanwhile a low ranking replacement was installed on the throne in order to catch the evil intended for the real king. After 100 days had passed, the substitute was killed (in order to fulfill the evil omen) and the real king returned to the throne.

At times, these scholars offered differing interpretations of events in the sky and would provide evidence to back up their claims. By using the texts at their disposal, they could support a particular interpretation of celestial events or the astronomical prediction of the appearance of a planet. They sometimes resorted to slandering each other if the opposing scholar was making an unfounded prediction or observation:

> *He who wrote to the king, my lord, "The planet Venus is visible, it is visible in the month Adar," is a vile man, an ignoramus, a cheat! … Venus is not yet visible! (SAA 10 72, lines 6–14)*

One output of this large group of scholars working together in service of the king was the collection and production of a large corpus of scholarly literature about astrology. These cuneiform tablets form the bulk of our understanding of the practice of astrology in the first millennium BCE. From this period, we have the best evidence for the traditional handbooks and compendia of astrological practice. This mainly takes the form of a large group of tablets known by the title *Enūma Anu Enlil* (EAE) but also includes commentaries on this and other texts, such as the series *Sîn ina tāmartīšu*.

The connection between celestial and terrestrial signs is evinced by a text known as the Diviner's Manual from the Neo-Assyrian period (Oppenheim, 1974). This text contains an introductory section that lists the incipits (or opening lines) of a series of terrestrial omens with a short summary, followed by a list of celestial omens with another summary. Like many divinatory texts, the Diviner's Manual offers a range of interpretative tools including that signs in the sky are similar to signs on earth, and that there is an underlying connection between them.

> *line 24, "The signs in the sky just as those on earth give us signals."*
> *line 38–40, "... The signs on earth just as those in the sky give us signals. Sky and earth both produce portents though appearing separately, they are not separate (because) sky and earth are related." (Oppenheim, 1974, pp. 203–304)*

The celestial omen series *Enūma Anu Enlil*, mentioned above, offers us an important look into the wide range of astrological omens available for interpretation and the types of phenomena and predictions that were provided to the Neo-Assyrian king by his court astrologers. The introduction to the text lays out a brief cosmological account of the creation of the heavens in two languages:

> *When An, Enlil and Enki, the great gods, by their firm counsel established the very nature of heaven and earth, they caused the boat of Sîn (the moon god) to be seen, the waxing of the crescent Moon, the renewal of the month, the sign of heaven and earth.*
> *When Anu, Enlil, and Ea, the great gods, by their decision laid down the design of heaven and earth, and assigned to the great gods their functions, to create the day, to renew the month for mankind to behold, they saw Šamaš (the sun god) in his gate, they made him appear regularly in heaven and earth. (Verderame, 2002, pp. 9–13)*

The bilingual introductory section, in Sumerian and Akkadian (respectively), gives a brief summary of how three of the high gods created the world and laid out the celestial landscape so that it would function regularly and predictably. The series itself was composed from an earlier traditions of celestial omens and was exported from Mesopotamia during the second millennium as far afield as Hattuša in Anatolia and Elam in Iran (Hunger & Pingree, 1999, pp. 7–11).

A typical group of omens from this series is quoted below concerning the appearance of Venus and the interpreted fate of the land. Notice in particular the use of "ditto" to mark the repetition of "rises."

> *If Venus in winter rises in the East and does not set: obedience and peace.*
> *If Venus in winter rises in the West and does not set: the counsel of the land will change.*
> *If Venus in summer* ditto *in the East: the counsel of the land will change, the Lamaštu demon will seize infants.*
> *If Venus in summer ditto in the West: obedience and peace, people will fill their granaries. (Reiner & Pingree, 1998, p. 49)*

4 | LATE BABYLONIAN ASTROLOGY (SIXTH C. BCE–FIRST C. CE)

While we might not have the copious records of correspondence between scholars and the king from the Neo-Assyrian period cited above, the latter half of the first millennium still offers us a wealth of astrological texts. These tablets, found mostly in southern Iraq from the sites of Babylon and Uruk, give us a picture of a complex science built upon centuries of earlier knowledge. The new texts written during the Achaemenid and Hellenistic periods often draw on astrological ideas from earlier periods but associate them in new ways or apply them to other types of knowledge. At the same time, scholars were using and copying new tablets from well-known earlier texts. The compendium of celestial omens *Enūma Anu Enlil* was recopied during this period, as well as commentaries on its contents

and other divinatory texts. Despite the existence of new astrological methods, the older texts were still important to the astrologers of the time.

The scholars during this period began to shift away from employment within the royal court to positions mostly within the temples in the major cities of southern Mesopotamia. Within the extensive bureaucratic and cultic structure of the temples, they held positions such as *kalû* "cultic singer," *ašīpu* "exorcist," and *upšar* (or "scribe") of *Enūma Anu Enlil* the term for an astronomer/astrologer. These positions were most often passed down from father to son over many generations, and training was restricted to a small number of families with the ancestral pedigree (Clancier, 2011). It is important to note that the particular position held by the members of the family did not necessarily restrict the type of textual material they worked on. Astrological texts were written, copied, and edited by a wide range of scholars holding different official titles within the temple hierarchy.

A major development during this period in both the fields of astrology and astronomy was the demarcation of the twelve signs of the zodiac (see Table 1). These signs, still in use today, were formed by identifying twelve important constellations located within the band of sky in which the planets, sun, and moon travel (the ecliptic). By dividing the ecliptic into twelve equal segments (30° each) a circle of 360° was created which assisted with calculation and computation both in astronomy and astrology. Each segmented was named after a nearby constellation, thus producing the sequence of signs of the zodiac.

One example of the application of these new developments in astrology is the practice of astral-medicine, which is highly dependent on the signs of the Zodiac. This practice connected diagnosis and treatment to the significance of celestial occurrences. There is some evidence that the practice of *melothesia* is preserved on some cuneiform texts. This term refers to assigning the organs of the body different to zodiac signs so that afflictions and treatments can be understood in terms of their celestial significance. A late-Babylonian text preserves a series of omens concerned with astral-medicine, each omen gives the diseases associated with the moon when it appears in a certain zodiacal sign:

> *If (the moon is) in the region of Gemini, seizure or epilepsy; Gemini and Great Twins (Lugalurra and Meslamtaea).*
> *If (the moon is) in the region of Cancer, migraine, dribbling, cramp; alternatively Cancer, a lunar halo, Ningirsu of Anu = Adad. (Geller, 2014, pp. 80–82)*

As Geller has shown in his treatment of this corpus, these texts are often very abbreviated and few make sense out of context. Yet, taken as a whole, the selection of astrological texts from the late-Babylonian period gives a very

TABLE 1 Table of the Sumerian logographic writing for the signs of the zodiac, adapted from (Koch, 2015, pp. 202–203) and (Rochberg-Halton, 1984, p. 119)

Zodiacal sign	Written form(s)	Babylonian name
Aries	LU_2.UN.GA; UN; LU	Hired man
Taurus	GU_4.AN.NA; MUL_2.MUL_2	Bull of heaven, the Stars
Gemini	MAŠ.TAB.BA.GAL.GAL;MAŠ.MAŠ	Great twins
Cancer	AL.LUL; ALLA	Crab
Leo	UR.GU.LA; A; UR.A	Lion
Virgo	AB.SIN_2; ABSIN	Furrow
Libra	RIN_2; ZI; *zibānītu*	Scales
Scorpio	GIR_2.TAB	Scorpion
Sagittarius	PA.BIL.SAG; PA	Pabilsag
Capricorn	SUUR.$MAŠ_2$; $MAŠ_2$	Goat-fish
Aquarius	GU.LA; GU	Great One
Pisces	KUN.MEŠ; ZIB.MEŠ; IKU	Tails, Field

detailed picture of the various ways in which the signs of the zodiac held sway over the analysis of disease and treatment.

Parallel to the usage of astrology by the rulers of Mesopotamia was an interest in future events by everyday people. While much of our evidence from earlier periods does not attest to astrologers working for non-royal clients, by the latter half of the first millennium BCE, it is clear that astrology was now in use outside of the palace. The best evidence we have for this practice is birth horoscopes preserved on tablets from Achaemenid and Hellenistic Babylonia (Rochberg, 1998). These small tablets can be roughly divided into two distinct types of documents. The first records only the date and time of birth for the individual; the latter records the configuration of heavenly bodies at that point in time. Both forms attest to the use of mathematical astronomy to convert the date and time of birth into configuration of planets in the sky. The final interpretative result, that is, the meaning behind the locations of the planets, is, unfortunately, rarely preserved. Alongside these individual horoscopic texts are other pieces of paradigmatic astrology that connect the birth of an individual in certain months to the presence of demons and other synchronic practices. The horoscopic texts mark a new development in the history of astrology, in that they reorient the focus of prediction on the lives of everyday people.

5 | CONCLUSION

From its earliest beginnings, preserved as tantalizing hints in the late third millennium BCE and letters from the second millennium, to a flourishing and highly structured practice in the first half of the first millennium, Mesopotamian astrology was focused almost exclusively on the fate of the king and the state. Other forms of divination could answer questions about daily life, for instance, the appearance of animals in the house could impact the life of the owner, or the liver of a sacrificed sheep could pertain directly to questions posed by a client. Yet astrology, perhaps through the significance of the medium (the heavens above), remained mostly out of reach of everyday Mesopotamians. It was only in the latter half of the first millennium BCE that astrology began to be used for forecasting the lives of private individuals.

As the slow, gradual waning of cuneiform writing trailed into the first century CE, the scribes in Babylonia were writing new texts in ever fewer numbers. However, the renown of Babylonian astrologers was already firmly fixed in the historical record. In the historical imagination of the Roman and Greek writers, the term "Chaldean" became synonymous with Babylonian scholars. Classical figures like Ptolemy of Alexandria adopted methods and data from the Babylonian traditions. As an example, Cicero in his critique of divination, *De Divinatione*, mentions the antiquity of astrology, naming both the Assyrians and Babylonians ("Chaldeans") as early experts in the field:

> *First of all—to seek authority from the most distant sources—the Assyrians, on account of the vast plains inhabited by them, and because of the open and unobstructed view of the heavens presented to them on every side, took observations of the paths and movements of the stars, and, having made note of them, transmitted to posterity what significance they had for each person. And in that same nation the Chaldeans—a name which they derived not from their art but their race—have, it is thought, by means of long-continued observation of the constellations, perfected a science which enables them to foretell what any man's lot will be and for what fate he was born. (Cicero,* De Divinatione *1:2 [Falconer])*

The figure of the Mesopotamian astrologer remained mythical up until the decipherment of cuneiform in the mid-nineteenth century. Since then our knowledge of cuneiform script and its many languages as well as extensive archaeological excavations have filled out the picture so that the mythical Mesopotamian celestial sage is now firmly rooted in reality. As shown above, we can now read their texts, reports to the various monarchs, and disagreements with each other, as well as their handbooks and theoretical works.

Throughout most of Mesopotamian history, astrologers kept watch and reported on auspicious appearances, conjunctions, disappearances, and other events in the sky. The general principles of their science was that the messages

of the gods were written out in the movement of bodies in the heavens. The sun and especially the moon were of chief importance, followed closely by the planets, all of which were placed on a backdrop of important constellations and stars that had their own associations and meaning. Over time, accepted parameters evolved out of normal practice; certain planets were considered to be beneficent or malevolent, and directions in the sky or of the wind were generally associated with geographical areas in and around Mesopotamia. These conventions formed a backbone of accepted practice that was augmented by an extensive literature that built up over time (Koch-Westenholz, 1995, pp. 97–99). Through the preservation and translation of clay tablets from ancient Iraq, we now can see how aspects of our modern practice of both astronomy and astrology borrow from elements of thinking and writing that took place in the royal court and temple schools of ancient Assyria and Babylonia.

ORCID


M. Willis Monroe https://orcid.org/0000-0002-9126-2991

REFERENCES

Cicero, M. T. (2007). *De Senectute; De Amicitia; De Divinatione*. Translated by W.A. Falconer. Cambridge (Massachusetts): Harvard University Press.

Clancier, P. (2011). Cuneiform culture's last guardians: The old urban notability of Hellenistic Uruk. In K. Radner, & E. Robson (Eds.), *The Oxford handbook of cuneiform culture*. *Oxford Handbooks*. (pp. 752–773). Oxford; New York: Oxford University Press.

Durand, J. M. (1988). *Archives Épistolaires de Mari I/1*. Archives Royales de Mari 26. Paris: Editions Recherche sur les Civilisations.

Edzard, D.O. 1997. Gudea and his dynasty. Royal Inscriptions of Mesopotamia, Early Periods, 3/1, DOI: https://doi.org/10.3138/9781442675551.

Geller, M. (2014). *Melothesia in Babylonia: Medicine, magic, and astrology in the Ancient near East* (Vol. 2). *Science, Technology, and Medicine in Ancient Cultures*. Boston: De Gruyter.

Hunger, H. (1992). *Astrological reports to Assyrian kings*. *State Archives of Assyria 8*. Helsinki, Finland: Helsinki University Press.

Hunger, H., & Pingree, D. (1999). *Astral Sciences in Mesopotamia*. HdO. 44. Leiden: Brill. https://doi.org/10.1163/9789004294134

Hunger, H., & Steele, J. (2018). *The Babylonian astronomical compendium MUL.APIN*Routledge. https://doi.org/10.4324/9781315168722

Koch, U. (2015). *Mesopotamian divination texts: Conversing with the gods: Sources from the first millennium BCE*. Münster: Ugarit Verlag.

Koch-Westenholz, U. (1995). *Mesopotamian astrology: An introduction to Babylonian and Assyrian celestial divination*. *CNI Publications 19*. Copenhagen: Museum Tusculanum Press, University of Copenhagen, Carsten Niebuhr Institute of Near Eastern Studies.

Lambert, W. G. (2014). *Babylonian creation myths*. Winona Lake: Eisenbrauns.

Oppenheim, A. (1974). A Babylonian diviner's manual. *Journal of Near Eastern Studies*, *33*(2), 197–220. https://doi.org/10.1086/372353

Parpola, S. (1993). *Letters from Assyrian and Babylonian scholars*. *State Archives of Assyria 10*. Helsinki, Finland: Helsinki University Press.

Reiner, E., & Pingree, D. (1998). *Babylonian planetary omens. Part 3*. Groningen: Styx.

Rochberg, F. (1998). *Babylonian horoscopes* (Vol. 88) (p. i). Philadelphia: American Philosophical Society. https://doi.org/10.2307/1006632

Rochberg-Halton, F. (1984). New evidence for the history of astrology. *Journal of Near Eastern Studies*, *43*(2), 115–140. https://doi.org/10.1086/373070

Rochberg-Halton, F. (1988). *Aspects of Babylonian celestial divination: The lunar eclipse tablets of Enūma Anu Enlil*. *Archiv Für Orientforschung 22*. Horn: Verlag F. Berger.

Verderame, L. (2002). *Le tavole I-VI della serie astrologica Enūma Anu Enlil*. Nisaba 2. Messina: Dipartimento di scienze dell'antichità, Università di Messina.

AUTHOR BIOGRAPHY

Dr. M. Willis Monroe works on cuneiform documents from the Achaemenid and Hellenistic period in Mesopotamia. He studies the history and transmission of cuneiform scientific knowledge, generally within the genres of astrology and astronomy. His principle interest is in the structure and format of types of knowledge and the way in which ancient scribes transmitted their expertise between texts. Recently, his work has focused on primarily on Babylonian astrology and multi-modal documents. He completed his doctoral work at Brown University in Providence, Rhode Island. He is currently based in Vancouver, Canada, as a post-doctoral researcher at the University of British Columbia.

How to cite this article: Monroe MW. Mesopotamian astrology. *Religion Compass*. 2019;13:e12318. https://doi.org/10.1111/rec3.12318