

Francesca Rochberg, *In the Path of the Moon: Babylonian Celestial Divination and Its Legacy* (Studies in Ancient Magic and Divination 6; Leiden: Brill, 2010). Pp. xxii, 445. € 152.00 / US \$ 216.00. ISBN 978-90-04-18389-6

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Famous for her research into Babylonian celestial divination, Rochberg enlarged and deepened the modern understanding of this particular aspect of Mesopotamian civilization. Her masterly edition of tablets 15-22 of the *Enūma Anu Enlil* cuneiform series with a detailed commentary deserves much praise and admiration (*Aspects of Babylonian Celestial Divination: The Lunar Eclipse Tablets of Enūma Anu Enlil*, 1988). Her further research has focused on the philosophical aspects of celestial divination and its compatibility with modern understanding of science. Additionally, she edited cuneiform horoscopes (*Babylonian Horoscopes*, 1998) and pointed to Babylonian origin of several elements present in Greek astrology. The breadth of learning and depth of insight that she brought to this particular field of modern research allowed for a better understanding of Babylonian celestial divination and a more profound appraisal of the impact this particular element of Babylonian tradition exerted on Greco-Roman cultures. The reader interested in the multifaceted presentation of the problems related to the explanation of Babylonian celestial divination and well equipped with the knowledge of Akkadian will certainly be rewarded by the study of Rochberg's latest publication.

The present volume is a collection of Rochberg's articles that appeared elsewhere in the course of the last thirty years or so. The twenty one articles are presented in the chronological order of their appearance in other publications, but the original page numeration has not been preserved. The introduction (pp. 1-18) constitutes a learned overview of traces of Babylonian celestial divination in Greek and Latin sources in order to establish a broader historical and cultural context for the Mesopotamian celestial sciences. The traces discovered in these sources reflect sometimes imprecise or exaggerated attributions of ancient scientific knowledge to Babylonians, but some information is precise and can be traced to cuneiform evidence, like, for

example, the daily motion of the moon in chapter 18 of Geminus' *Introduction to Phenomena*, the 360° zodiac attested in Hypsicles and Hipparchus in the 2nd century B.C., and other lunar parameters ascribed by Ptolemy to Hipparchus. The overview of the articles collected in Rochberg's publication briefly presents main results of her research in this field of ancient Babylonian culture.

In her first article ("Fate and Divination in Mesopotamia", pp. 19-30) presented in this collection Rochberg analyzes the concept of *šimtu* derived from the verb *šāmu* "to decree" or "to determine". The Akkadian noun appears in a number of contexts where it denotes the nature of things. In mythology the gods are said to decree the destinies, that is they established the nature and pattern of things both in heaven and earth. On the personal level the concept refers to an individual's lot in life, but such an order of things is not unalterable but remains subject to change. In a similar way, Babylonian omen texts assume that events are prearranged in accordance with some interpretable design, which, however, is susceptible to the forces of magic.

The impact of Babylonian celestial divination on Greek astrology ("New Evidence for the History of Astrology", pp. 31-63) can be proven on the basis of BM 36746 from the Persian or Seleucid period. The tablet contains celestial omens, in which the protases indicate the positions in the zodiac of the eclipsed moon and the planets that form a schematic arrangement of four groups of three zodiacal signs each. Such a disposition into four groups of the zodiacal signs of the moon, Saturn and Mars makes part in Greek astrological terminology of the theory of aspects and here specifically one such group of three signs is a trigon or triplicity.

The next article ("Canonicity in Cuneiform Texts", pp. 65-83) discusses the process of text standardization discernible in the official series (*iškaru*) containing the scientific disciplines of divination, medicine, and magic. In the Kassite period a kind of literary stabilization of these texts took place while a different stream of tradition produced texts termed in Akkadian *aḫû*, which is sometimes translated as "non-canonical". The common understanding of the term "canon", however, that originally stems from Christian classification of the sacred texts can hardly correspond to the historical process of editing and redacting cuneiform divinatory texts, which do not contain evidence for selectivity and an interest in producing authoritative and immutable texts characteristic of the biblical canonization.

Rochberg presents the edition of an extraneous source (*aḫû*) of the *Enūma Anu Enlil* astrological series (*iškaru*) and the comparison of the protases of this source with the protases of the series ("The Assumed 29th *Aḫû* Tablet of *Enūma Anu Enlil*", pp. 85-111). The edited *aḫû* text contains lunar eclipse

omens. In the following publication (“TCL 6 13: Mixed Traditions in Late Babylonian Astrology”, pp. 113-133) she edits a Seleucid tablet from Uruk (TCL 6 13). A diagram depicted on the reverse presents a circle within which 12 points are related to one another by means of four triangles that connect points 120° apart in the circle. Each point has a month and a planet assigned to it, and although the diagram is structurally identical with the Greek astrological doctrine of trine aspect, the designation of planets and months around the circle is unclear and thus any connection with Greek astrology uncertain.

A Seleucid tablet from Uruk (TCL 6 13) contains explicit references to the benefic and malefic natures of the planets in Babylonian astrology and astronomy (“Benefic and Malefic Planets in Babylonian Astrology”, pp. 135-142). Jupiter, Venus, and Mercury are represented as benefic, while Mars and Saturn as malefic. The standard Seleucid arrangement of the planets is slightly different: Jupiter, Venus, Mercury, Saturn and Mars. Babylonian horoscopes mostly enumerate the planets according to the Seleucid order, but they do not connect them with malefic or benefic influence. The planets were presented also in astronomical and non-astronomical texts according to the convention that was originally shaped by an underlying astrological schema identifying planets as either benefic or malefic.

There existed two ways of dividing the day in ancient Mesopotamia: the 12 *bēru*, meaning “double hour” of 30° duration used for computation with respect to the period from sunrise to sunrise, and the 12 *simanu*, meaning “(seasonal) hour”, whose duration varied according to the seasons of the year, used for reporting the time with respect to the periods of daylight or night (“Babylonian Seasonal Hours”, pp. 167-187). Some Babylonian horoscopes provide an example of actual application of the seasonal hours, when they occasionally state the particular seasonal hour of birth.

Only a small number of Babylonian horoscopes from the Achaemenid, Seleucid, and Arsacid periods is known today (“Babylonian Horoscopy: The Texts and Their Relations”, pp. 189-209). The horoscopes adduce the longitudes of the moon, sun, and planets (Jupiter, Venus, Mercury, Saturn, Mars) with respect to the names of the zodiacal signs on the date of birth. The longitudes of the planets, compared against those computed by modern methods give striking evidence for the excellence of the methods which underlay the Babylonian data. These data suggest that the horoscopes depended on texts in which astronomical phenomena are predicted, that is, almanacs, diaries, and possibly ephemerides.

The literary motif of the transmission of kingship from the gods to the king-sages in the antediluvian times harmonizes well with the scribal

derivation of the *Enūma Anu Enlil* series from the god Ea and of all the celestial portents from Anu, Enlil, and Ea (“Continuity and Change in Omen Literature”, pp. 212-222). The divine origin of the *Enūma Anu Enlil*, and therefore the revealed character of its knowledge, made the text fundamentally unalterable.

The Mandaean Book of the Zodiac adopts Greek astrology and the Aristotelian-Ptolemaic cosmology necessitated by astrological doctrine (“The Babylonian Origins of the Mandaean Book of the Zodiac”, pp. 223-235). However, it also contains what appears to be a partial translation of Akkadian omens from the hemerological tradition found in the Babylonian *Iqqur īpuš* series. Other parts of the Book show contacts with the lunar eclipse sections of the astrological series *Enūma Anu Enlil*.

The term *tupšar Enūma Anu Enlil* was freely translated by Erica Reiner as “expert in celestial matters” (“Scribes and Scholars: The *Tupšar Enūma Anu Enlil*”, pp. 237-256). Since the sources are scarce, it is difficult to precisely describe the role and function of those who bore that title. The profession “scribe” (*tupšarru*) applied generally to specialists in scholarly divination, both celestial and terrestrial as well as the hemerological omens. The title was used by the *āšipu* and *kalû* in the Persian and Seleucid periods.

Cuneiform horoscopes included the lunar data for the first day of the month, the day of opposition, and the last appearance before conjunction (“Lunar Data in Babylonian Horoscopes”, pp. 257-270”). These data contributed to the overall interpretation of the heavens on, or near, the date of a birth.

A rising time is the time required for one zodiacal sign to cross the eastern horizon (“A Babylonian Rising Times Scheme in Non-Tabular Astronomical Texts”, pp. 271-302). During the interval of sunrise to sunset, 180° of the ecliptic will have crossed the horizon. In a group of non-tabular late Babylonian astronomical texts, rising times of twelve micro-zodiac “portions”, each representing 2 1/2° of the ecliptic, are given, as are totals for the sign as whole in a number of instances.

The earliest collections of celestial omens emerge in the Old Babylonian period, and reflect a purely Akkadian genre (“Old Babylonian Celestial Divination”, pp. 303-315). The most extensive and best preserved of the Old Babylonian celestial omens (BM 22696 and BM 86381) deal with lunar eclipses. The idea of signs in the heavens was already current at Lagash in the late third millennium.

In cuneiform sources the gods are referred to as celestial bodies, or, conversely, the celestial bodies are referred to as gods, that is as worldly objects that manifest divine agency and give perceptible form to certain deities (“The Heavens and the Gods in Ancient Mesopotamia: The View

from *A Polytheistic Cosmology*”, pp. 317-338). Both cases assume an anthropomorphic notion of deity.

The heavenly waters “above the firmament” (Gen 1:6-8) are rooted in an extra-biblical mythology of the Near East, which testifies to the origins of the waters above the heavens in the mythological *topos* of a conquered deity whose nature was watery (“A Short History of the Waters Above the Firmament”, pp. 339-354). It is therefore not the mythic battle itself but its result, namely, the formation of heaven literally from a body of water, that forms the lasting contribution of the Mesopotamian cosmogony transmitted to the Bible.

The goal of Babylonian astronomy was not the determination of the motion of a planet, much less the distinction between real and apparent motion such as characterizes Greek cinematic astronomy, but rather, the date and position of individual phenomena (“Periodicities and Period Relations in Babylonian Celestial Sciences”, pp. 355-371). Where a single cycle would yield a fractional quantity, the Babylonians favored larger cycles and integral periods, as in the Saros, where 1 eclipse possibility occurs every 5 + a fraction months but 38 eclipse possibilities occur exactly every 223 months.

On a formal analysis, the omens appear to have a greater affinity with statements of material implication ($P \rightarrow Q$), and in fact, first-order logical statements of the form “P implies Q” are the equivalent of the conditional statement “If P then Q” (“Conditionals, Inference, and Possibility in Ancient Mesopotamian Science”, pp. 373-397). The scientific, that is, logical and systematic, character of ancient Mesopotamian divination appears to be one important consequence of the use of the conditional as its form and mode of expression.

An omen statement can be seen as a relationship between two propositions (P and Q) which function as premise and conclusion (“If P, Then Q”: Form and Reasoning in Babylonian Divination”, pp. 399-409). The basic scheme of inference (If P, then Q. P. Therefore, Q) applies to all Babylonian omens. Analogic connections made between particular elements of the protases and apodoses justify the inferential character of Babylonian omens. Ancient divination, astrology, and magic should not be classified as “superstitions”, but as sciences, on the grounds that some characteristics of science are considered to be continuous over the course of the history even while its content or aim is discontinuous.

In Babylonian prognostication divine decisions were conceived of as being inscribed in or on the world and the learned elite scholars who were trained to read and interpret the divine script thereby had access to knowledge of future events (“Divine Causality and Babylonian Divination”, pp.

411-424). Physical signs are not themselves causes but rather convey divine decisions about what will happen. Divine causality is effected not only through speech in the form of judicial verdicts, but also through a kind of writing on the tablet of the world in the form of the ominous phenomena themselves.

Corrections:

- p. 35 n. 14: εἰμαρμένη correct to εἰμαρμένη
- p. 35 n. 17 “Besprechungskunst and Astrologie...” correct to “Besprechungskunst und Astrologie”
- p. 43 ἐξάγωγον correct to ἐξάγωγον
- p. 196 “underly the Babylonian data” correct to “underlay the Babylonian data”
- p. 217 kg of Sippar correct to “king of Sippar”
- p. 230 *Iqqur īpus* correct to *Iqqur īpuš*
- p. 408 “something of an obstacle” correct to “something of an obstacle”.
- p. 428 “Teil 2. Dei beiden ersten Donnertafeln” correct to “Teil 2. Die beiden ersten Donnertafeln”