MESOPOTAMIAN ASTROLOGY

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MESOPOTAMIAN ASTROLOGY

An Introduction to Babylonian and Assyrian Celestial Divination

BY

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FOREWORD

This book is intended to serve as a general introduction to Mesopotamian astrology, both its outward phenomena and its inner structure. It is my aim that it may be of interest and use to researchers in fields outside of Assyriology, such as theologians, classical scholars, and anthropologists. Nevertheless, I hope that even the specialists on Mesopotamian astrology may find something of value in my work.

I have tried to sketch the history of traditional astrology in Mesopotamia, from its origins in the third millennium to its transformation during the latter half of the first millennium; but the main emphasis has been placed on the Neo-Assyrian period, especially on the period of the Sargonid kings, since this is the time when classical Babylonian astrology seems to have been at the height of its importance. Anyway, it is the best documented period.

The scholarly literature has been utilized, as far as I could, up to 1993; but the oversights may cover a century or even more. I have not been able to take fully into account S. Parpola, *Letters from Assyrian and Babylonian Scholars, SAA 10* (1993) and *Die Rolle der Astronomie in den Kulturen Mesopotamiens, Grazer Morgenländische Studien 3* (1993).

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Copenhagen, August 1994 *Ulla Koch-Westenholz*

CHAPTER 1

INTRODUCTION

Divination is a well-nigh universal phenomenon, found in some form or other in practically all human societies, modern and ancient. It is potentially a rich source for the social and moral values[1], as well as the intellectual endeavour, of many a culture – a source that in the case of Mesopotamia has only been partially tapped.

The classification of divinatory genres in use today[2] is basically the same as the one introduced by Cicero (or his source) to describe Hellenistic divination. Cicero distinguished between "artificial" and "natural" divination (*De divinatione* 1.11, 2.26). "Natural" divination is direct, inspired communications from the gods that "the mind seizes from without", e.g. dreams and oracles. "Artificial" divination includes everything where "computation and constant observation" is necessary to ascertain the gods' will. Bottéro applies the same distinction to Babylonian divination under the terms: *divination inspirée* and *déductive*.[3] While inspired divination certainly is attested in Ancient Mesopotamia, it appears to have been of minor importance,[4] and the bulk of our sources, the omen compendia, concerns deductive divination. In the following, I shall deal exclusively with the latter.

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1 See P. M. Peek, "The Study of Divination, Present and Past", *African Divination Systems, Ways of Knowing* (1991) p. 1 ff.

2 For a survey and critique, see Devisch (1985).

3 Bottéro (1974), p. 87 ff.

4 So-called "prophecies" and "oracles" are known primarily from Old Babylonian Mari and Eshnunna, see most recently D. Charpin, "Le contexte historique et géographique des prophéties dans les textes retrouvés à Mari", *Bulletin of the Canadian Society for Mesopotamian Studies 23* (1992), p. 21 ff; M. deJong Ellis, "The Goddess Kititum Speaks to King Ibalpiel", *MARI 5* (1987), p. 235 ff. Considering that both Mari and the Diyala region were under heavy Amorite influence, the relative importance of direct communications from the gods through inspired "prophets" may reasonably be regarded as West Semitic tradition. Some of the messages sound almost like the Old Testament in Akkadian, e.g., the one from Adad of Aleppo to Zimri-Lim edited by J.-M. Durand, *MARI 7* (1993), p. 43 f.

Within this deductive divination, it is practical to distinguish between two genres, provoked and unprovoked omens.[1] Provoked omens are actively sought by ritual, e.g. extispicy and lecanomancy; unprovoked divination is the interpretation of occurrences that, so to say, appear without being asked for, e.g. astrology. It should be noted that both provoked and unprovoked omens are interpreted according to known rules – there is no place within the systematized divination for the inspired oracle, or the ad-hoc spectacular event. It is true that ominous signs from astrology and extispicy are valid also when seen in dreams (Oppenheim *Dreambook* p. 205), but the rules for their interpretation are the standard ones.

Our distinction between provoked and unprovoked divination does indeed correspond in some measure to ancient reality. The two divinatory disciplines were practiced by different experts: the *bārû*, diviner, whose main field was provoked omens, extispicy and lecanomancy, and the *ṭupšarru*, scribe/scholar, whose expertise included unprovoked omens and exorcism. Some of the latter even bore the prestigious title *ṭupšar Enūma Anu Enlil* (see below, Chapter 3). The unprovoked omens are also often said to belong to the field of the *āšipu*, exorcist[2] – the scribes of *EAE* known from late Uruk (see chapter 8) were sometimes also exorcists or descendants of the exorcist Ekur-zakir or the *kalû* Sin-leqe-unninni.[3] The Assyrian astrologers also attest to the close relation of the two disciplines.

Further, the distinction should not distract us from the basic similarities of the divinatory practices in their basic theory, interpretative principles and schemata. The basic theory is that event *y* correlates with sign *x*: if *x* appears then *y* is its correlate. The interpretative principles are rarely set forth as such, but some rules are made explicit in the last chapter of the liver divination series (*multābiltu*)[4] and to some extent also in the

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1 This distinction is applied by many writers, e.g., Meissner (1925) II p. 246 ff; Finkelstein, *PAPS 107* (1963) p. 464 fn. 10, using different terminology. Starr, for example, uses *impetrita* and *oblativa* (1990, p. xxxii).

2 Ungnad, *AfO 14* p. 251. Unprovoked omens are included in the compendium of the exorcist attributed to Esagil-kin-apli, see *KAR* 44 r16.

3 Neugebauer, *ACT* p. 13 ff.

4 Cf. U. Jeyes (1991-92) p. 36 ff.

astrological commentaries like *Šumma Sîn ina tāmartīšu* (see p. 105 ff). A simple rule that is common to all kinds of Babylonian divination is of almost mathematical rigour: within the same omen, a good sign combined with a good sign has a good prediction; good combined with bad means bad; bad combined with bad means good. Expressed algebraically, the rule is also familiar to us: + + = +; + – = –; – – = +. An often quoted example of this rule is found in the astrological texts: if a well-portending planet is bright: favourable (+ + = +); if it is faint: unfavourable (+ – = –), if an ill-portending planet is bright: unfavourable (– + = –); if it is faint: favourable (– – = +). But the rule might also be illustrated from texts of extispicy or lecanomancy as early as Old Babylonian.

The provoked omens are signs deliberately sought to answer specific questions formally addressed to the gods. By their very nature, such signs are always sent by gods. Unprovoked omens may likewise be regarded as willed divine communications or they may be seen as "signs" (*ittu*) without any sender, like our black cat crossing the street, or what we would call "symptoms". This ambivalence between a theistic and a mechanistic world view permeates much of Babylonian thought and is duly reflected in the astrological texts. The concluding paragraph of the last tablet of the lunar (eclipse) section of the series *Enūma Anu Enlil* states all the omens contained in the preceding tablets to be "answers of Sin" (see below p. 99f). The stars and planets were the celestial manifestations of gods, but also seem to have been gods in their own right (e.g. Saturn, see below p. 124f). Sometimes evil omens from a planet were seen as the expression of anger of the god whose celestial image the particular planet was (e.g., *LAS* 268, Jupiter = Marduk), so that particular god had to be appeased. In this way, messages could be sent directly from a god to the king, as in *SAA 8* 27 where Ištar-šum-ereš interprets auspicious Venus omens as an expression of the love Ištar holds for the king. The signs were not always sent by a god through his particular planet. Sometimes the gods are seen to manipulate the celestial bodies as they please, as in *SAA 8* 430, where an auspicious omen makes Nabû-iqbi exclaim, "Aššur, Shamash and Marduk have granted to the king, my lord, a stable throne forever, for long days!" Similarly, Nabû-ahhe-eriba writes (*SAA 8* 63): "The gods have opened the ears of the king my lord. If anything should

[happen] to the king, so that he should become worried [. . .], [the gods] would forthwith send a sign from the heavens saying [. . .]."

At the same time, the relation between ominous events and their interpretations could be regarded as part of a purely mechanical scheme of things. An interesting example is found in a report, *SAA 8* 250, from Nergal-eṭir to Esarhaddon. Predicting an eclipse of the moon in Addaru (January 673 B.C.), he does not think it will pertain to the king – which in the event it did not, since it was a partial eclipse covering the quarters of the moon pertaining to Elam and Amurru – but Jupiter and Venus were not visible as he probably is aware of.[1] He continues (r3 ff):

> 'If you make (the observation) for the well-being of the king, the city and its people, they will be well. In the beginning of the year a flood will come and break the dikes.' When the moon has made the eclipse, the king, my lord, should write to me. As a substitute for the king, I will cut through a dike, here in Babylonia, in the middle of the night. No one will hear about it!

So Nergal-eṭir proposes to avert the flood by fulfilling the apodosis on a small scale himself, on behalf of the king. After a total lunar eclipse, Munnabitu (*SAA 8* 316) suggests that the king remove a leader (*rubû*) from the Chaldeans or Arameans from office and thus let these people bear the brunt of the portended disaster. This also seems an attempt to carry out the portended evil on a manageable scale – rather than performing the prolonged *šar pūhi* ritual, which otherwise had the same effect of offering a substitute for the king. An apotropaic ritual was always an option. In *LAS* 35, Balasî says the king should not worry unduly about an earthquake, since "he (Ea) who made the earthquake also made an apotropaic ritual (*namburbû*) against it . . . the god has opened the ears of the king." In fact, most bad omens could be averted mechanically by performing the appropriate *namburbû*. This is a far cry from the gods ruling the universe by their immutable will.

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[1] Hunger restores l. 5: ⌈NU? GUB?⌉ meš.

Parpola (*LAS II* sub *LAS* 35) says that in "Sargonid Assyria omens were – just as in contemporary Israel – given a moral content and understood as signs of divine pleasure or displeasure with the *conduct of the king*. . . . . But performing [the apotropaic] rituals (which always involved prayers and offerings) was by no means *enough*: the king was also supposed to *revalue* his way of life" (Parpola's italics). I believe this is rather an over-interpretation of the last passage of the letter under discussion (from Balasî, concerning an earthquake): "The god has 'opened the ears' of the king. He should spread his hands to the god (in prayer) and perform the *namburbû* and be on the alert." Very rarely were omens sent to warn of moral failings;[1] but when that happened, there is no mention of apotropaic measures. And only exceptionally were omens sought to elucidate the cause of misfortune.[2] Essentially, Babylonian divination was concerned with the future, not the past.

An Empirical Basis of Babylonian Divination?

According to the Babylonians themselves, divination was once long ago revealed to mankind by the gods (see p. 74). But it shares some of the defining traits of modern science: it is objective and value-free, it operates according to known rules, and its data are considered universally valid and can be looked up in written tabulations. So perhaps it is not surprising that alone among the countless divinatory systems of the world, Babylonian divination has been saddled with an empirical background.[3] The so-called "historical" omens have often been taken to prove that divination indeed had an empirical basis,[4] and some have even seen them as forerunners to historiography.[5] The usual format of such "historical" omens

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1 An instance is found in *SAA 8* 502, to Esarhaddon, describing the misdemeanors of the Babylonians. The omens portending the gods' displeasure and impending punishment were gleefully repeated by Esarhaddon in his inscriptions (see Chapter 7).

2 *Ludlul* I 49-54; *SAA 3* 33 ("Sin of Sargon").

3 E.g., Weidner (1928-29) p. 226; Bottéro (1974) p. 144 ff.

4 E.g., Bottéro (1974) p. 149.

5 Finkelstein (1963); to some extent also Grayson (1966) p. 69 ff.

is as follows: "If the fetus is like a lion: omen of Naram-Sin who ruled the world".[1]

The discussion has focused mainly on the Babylonian divinatory discipline *par excellence*, extispicy. The argument is that protasis, the ominous phenomenon, was linked to apodosis, the signified event, by "circumstantial association". The details of the entrails of a sheep, sacrificed, one must assume, for purposes unrelated to divination, put the person in charge of the sacrifice on the alert, so that he linked them with a contemporaneous historical event and recorded it for future reference.[2] This stage would be represented by the oldest known extispicy texts, the liver models from Mari[3] (ca. 1875 B.C.), and indeed, a number of these models seem to offer incontrovertible proof of the hypothesis: "when (this or that event took place), the liver looked like this". A similar origin has been proposed for astrology by P. Huber who suggests that lunar eclipses were linked to the death of certain Old Akkadian kings (see below p. 35). Such empirically established omens are what we call "historical" omens. Closely following the empirical stage, the argument goes on, came the theoretical stage when the omina were written down in long tabular compendia on tablets. At the same time, the empirical findings were "phrased in accordance with the code",[4] i.e., a set of general rules or a theoretical system, and remaining blanks in the system, for which no empirical data were available, could be filled out by interpolation.[5]

In some such manner, it is said, divination developed from a simple folk practice, capable of giving yes-or-no answers only to specific questions, to a systematized science, covering nearly all observable phenomena and permitting detailed predictions of unanticipated events, as well as giving detailed answers to queries. The technological advance

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1 *YOS 10* 56 iii 8 f.

2 Speiser, *The Idea of History in the Ancient Near East*, p. 61; cf. also Starr (1983) p. 9.

3 Published by M. Rutten in *RA 35* (1938) p. 36-52, see also J.-W. Meyer (1987) p. 190-217.

4 Thus Larsen (1987) p. 213 f, also p. 222, and cf. Bottéro (1974) p. 165. For a description of the code, see Starr (1983), ch. 2.

5 Starr (1983) p. 12, also the references in the preceding footnote.

that made the development possible was writing – only writing could store the immense amount of data for later retrieval.

In my opinion, the idea of an empirical background of Babylonian divination is very difficult to uphold. Various objections may be raised against it, and I shall mention a few briefly.

It is generally agreed by modern philosophers of science that knowledge about the world is rarely obtained by purely empirical observation, without some pre-existing theory to integrate the observed data.[1] In other words, the "circumstantial association" assumed to be the fountainhead of the historical omens, is in itself unlikely.

It is not explained by the proponents of the theory why the Sumerians never developed anything on the scale of Babylonian divination. In fact, a purely Akkadian origin has repeatedly been suggested.

The "historical" omens form a very small minority (about 1 to 2000) in the vast Babylonian divinatory system, with a carefully elaborated theory and systematization that has little to do with history. The fact that two or more different protases are related to the same historical event[2] might be taken to indicate that the relationship between an ominous phenomenon and its significance was not necessarily established by empirical means. The "history" embedded in the omens shows a remarkable agreement, not so much with historical fact as we know it, rather with the "historical tradition", i.e., the Old Babylonian sagas and the later chronicles about the third millennium, with their penchant for the bizarre and anecdotal.[3] In other words, the "historical" omens are no more and no less

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1 E.g., N. R. Hanson, *Patterns of Discovery* (1965), esp. chapter III: "Causality"; also K. Popper, *The Logic of Scientific Discovery* (1959) p. 38 fn. 3 and p. 423.

2 Glassner (1983), on Old Babylonian liver omina concerning Naram-Sin's conquest of Apishal.

3 See most recently Cooper, "Apodotic Death and the Historicity of 'Historical' Omens", *RAI 26* (1980) p. 99 ff, with previous literature. According to Cooper, the "historical value of the apodoses is nil".

historical[1] than the rest of the Old Babylonian historical tradition, and they must be accounted for in other ways.

The liver models from Mari, from about 1875 B.C., are not only the earliest known texts of Babylonian divination, but also a far greater proportion of them are "historical" omens, so it is no wonder that they have become the cornerstone of the "empiricism" hypothesis. These 32 liver models, all inscribed, were found together with tablets of various contents, written more than a century later, in a room in Zimrilim's palace.[2] Their inscriptions are in a mixture of the local Mari dialect and Early Old Babylonian,[3] but the subject matters are purely Babylonian, so they were presumably made in Mari on basis of Babylonian prototypes, most likely for purposes of instruction.

The inscriptions follow four basic patterns:

1) "Omen of (*amūt*) [royal name / place name / event]" (Nos. 1-6, 8, 9, 11b, 13a, 16, 17, 18a).
2) "When (*inūmî*) [event] happened, it looked like this" (Nos. 7, 10, 22)
3) "If (*šumma*) [event] happens" (Nos. 11a, 14, 15a, 18b, 21, 24-27, 30a, 31, 32). Four texts add "it will look like this" (12b, 19, 23, 29)
4) Event alone (Nos. 12a, 13b, 15b, 20, 25, 26, 28, 30b). This type simply correlates the shape of the liver with the event. It is timeless and may refer to the past as well as the future.

The graphic information on the Mari livers, i.e. the protasis as given in the shape and markings of the models themselves, can actually to a large extent be "read", using the same code that applies in the later liver models

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[1] Nobody ever claimed that there was any historical basis for the omens about Ammeluanna, Etana, or Gilgamesh. On what criteria is the distinction made between "real" historical omens and "legendary" ones? It might be argued that, unlike the legends, the omen literature knows all five Sargonic kings; but it is obvious that Rimush, Manishtusu and Sharkalisharri cannot all have been murdered by their courtiers with their seals. It is noteworthy that Gilgamesh and the Sargonic kings are the leading characters in most of the Old Babylonian literary works dealing with the country's history, and it would seem that what we have in the "historical" omens is basically the Old Babylonian literary tradition, supplemented with some names from the *Sumerian King List.*

[2] See Meyer (1987) p. 44 ff for details and references.

[3] Westenholz, *BiOr 35* (1978), p. 160 ff.

and divinatory texts.[1] It would seem, then, that the code was a well established tradition already in these early texts – and it would be bold to claim an empirical basis for the code!

Group 3 is clearly a forecast of how the liver will appear in association with a specified event. Group 2 would then be a reconstruction of what the liver would have looked like in association with spectacular (but partly legendary!) events in the past. Common to both is the basic assumption of the interconnection of sign and event: when x appears, y is its correlation, and so it is possible to conjecture what the liver would look like, in the past as well as the future. A similar reasoning probably underlies most "historical" omens. It could even be argued that the "historical" apodoses merely served the same basic purpose as other apodoses, namely to convey whether the feature described in the protasis was a favourable or an unfavourable omen.[2]

Finally, it may be asked why Babylonian divination would be essentially more empirical than any of the thousands of deductive divinatory systems known from all parts of the world. Renaat Devisch has suggested to understand African divination as part of a comprehensive semantic system, interlocking with all other areas of a people's experience.[3] He also criticizes attempts by others who take divination either as a sort of science, or as a "pre-scientific" anxiety-reducing device: "This argument is rooted in a Western pragmatic and positivistic philosophy and comfort ideology which presupposes that mastery over a desacralized, 'thing-ified' environment is a compelling goal for all societies. Lévi-Strauss (*La pensée sauvage*, 1962) and Sahlins (*Culture and Practical Reason*, 1976) question the

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1 Meyer (1987), p. 190 ff and 250. The latest instance of such "models" known to me is a bronze fish from Babylon with a fish-omen inscribed on it, L. Jakob-Rost, "Ein babylonisches Omen aus dem Jahre 592 v.u.Z.", *Forschungen und Berichte 5* (1962), p. 31 ff.

2 See Starr, "The Place of the Historical Omens in the System of Apodoses", *BiOr 43* (1986) p. 628-642.

3 Devisch (1985) p. 68 ff. "The object of this [semantic] approach is to see how people are constantly bringing meaning from out of themselves – their bodies, their gestures, their actions, their social, spatial, and historical contexts – by relating these significant phenomena to one another . . ." (p. 71).

universality of this assumption and ask whether the basic interest in some societies would not rather be semantic. Traditional divination cannot be said to be pre-scientific any more than any other authentic symbolic practice, nor can it be said to be contrary to a rational outlook: it is qualitatively different."[1]

However, there can be no doubt that to most Mesopotamians, including some of its practitioners, divination was nothing more and nothing less than a means to predict the future – not very reliable, perhaps, but the best they had. But this practical view of the craft does not preclude that Babylonian divination in its origin had other goals besides, perhaps along the lines suggested by Devisch. The text known as *The Diviner's Manual*, referring to the interconnection of signs in the heavens and signs on Earth, and the symbolic character of the code of liver divination,[2] suggest that to the thinkers, more was involved here than mere fortune-telling from cards. We should not confuse the engineer's mastery of materials and forces with the physicist's probings of the Universe, and most of what we have of omen texts belong to the engineer category – divination in its practical, applied form.

The legendary character of the "historical" omens, and the impossibility of some of the ominous events (such as the moon being eclipsed on the 20th day), strongly suggest that whatever was the basis of Babylonian divination, it was not empirical fact. Empirical observation may have played its part, but it was not fundamental. The solution must be sought elsewhere.

Our own natural sciences are based on a premise so simple that it is usually taken for granted: Things behave according to universally valid laws. It is our task to discover those laws, and the means to do so is observation, supported by the controlled experiment. In a similar fashion, Babylonian divination is based on a very simple proposition: Things in the Universe relate to one another. Any event, however small, has one or

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1 Devisch (1985), p. 55 f.

2 See Starr (1983), ch. 2.

more correlates somewhere else in the world. This was revealed to us in days of yore by the gods, and our task is to refine and expand that body of knowledge. The means to do so is mystical speculation supplemented by observation. There is no evidence that the Mesopotamian scholars ever attempted to verify the results of their speculations by experiment. Nevertheless, the Neo-Assyrian astrologers undoubtedly believed in their craft and found it confirmed by events. For example, in *LAS* 298, Akkullanu tells the king that "the series says in connection with this Nisan eclipse: 'If Jupiter is present in the eclipse, all is well with the king, a noble dignitary will die in his place.' Did the king pay attention to this? A full month has not yet passed (before) his chief judge lay dead!"

Once the correlation between the ominous sign and the event had become established as fact, it is only to be expected that momentous historical events and their accompanying "signs" would be recorded and enter into the omen tradition. In this way, we might account for the few omens mentioning kings from Old Babylonian to Neo-Assyrian times[1] – the exact reverse of the "empiricism" hypothesis!

Babylonian Astrology

Traditional Babylonian astrology differs in two important aspects from the other Babylonian divinatory disciplines: it is geographically oriented – many of its apodoses apply to specific countries, cities or nations[2] – and it is almost wholly concerned with the welfare of the state and the king as persona publica.

In a few cases, however, the apodoses of the astrological omens apparently concern the king as a private individual. The interests of the king and the land were not always the same, as appears from the omen quoted by Aplâ in *SAA 8* 363: "If the King-star approaches the moon and stands there: the king will live many days, the land will not prosper." Nergal-eṭir says about the same occurrence in *SAA 8* 283: "The sign

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1 See Weidner (1928-29), p. 238 ff; Wiseman, *Iraq 36* (1974) plt. 56:1-4; Starr (1985), on omens concerning Assurbanipal's campaign against Elam.

2 Cf. Weidner, "Astrologische Geographie im Alten Orient", *AfO 20* (1963) p. 117 ff.

which is evil for the king is good for the land, the sign which is good for the land is evil for the king." In a similar vein, *EAE* tablet 21[1] predicts: "If an eclipse occurs on the 14th Ululu . . . . revolt for the king. If the eclipse does not affect the king: Rains in the sky and flooding of the rivers will cease. There will be famine in the land, the people will sell their children." This conflict of interest between the king and his country did not exist in extispicy.[2]

Even though some concepts in Hellenistic astrology were of Babylonian origin, it is important to note the fundamental differences between the two.[3] Modern astrology is of course a development of Hellenistic astrology, and the techniques employed today have basically not changed since the Renaissance. Modern and classical astrology often takes the form of casting "horoscopes" which concern the fate and character of the individual. Classical Babylonian astrology does not concern the individual[4] but the public good of the state and the king, as already said. Hellenistic astrology presupposes a Ptolemaic, geocentric, cosmology, with the earth surrounded by the seven concentric planetary spheres. The terrestrial, sublunar, world was perceived as sharply separated from the celestial, superlunar, realm. In Hellenistic and modern astrology, the celestial bodies are believed to exert direct, physical, influence on the sublunar world and especially man by means of rays.[5] In Babylonia we have no evidence for

1 Rochberg-Halton (1988) p. 241.

2 Starr (1983), p. 85.

3 The difference has often been stressed, see e.g., Pingree 'Astrology' in *Encyclopedia Britannica.*

4 Other types of Babylonian divination of course do. Astrology may do so marginally as in the case of the stroke of lightning reported in *LAS* 38 and *LAS* 349 *LAS II* p. 363, interpreted (ad hoc?) to concern the owner of the field struck by the lightning and not the king. Celestial phenomena were included among popular forms of provoked divination, especially omens from shooting stars. *STT I* 73 (Reiner 1960) is a collection of prayers-cum-rituals for obtaining omens concerning recovery from illness or the success of an undertaking. The ominous phenomena included the movements of an ox and shooting stars. These omens must be considered provoked, observation of a shooting star can be accomplished within half an hour on a clear night. This form of divination probably fell in the sphere of the *āšipu*, exorcist (Reiner p. 28).

5 See e.g., Shumaker (1972) p. 7 ff.

a change from the ancient tripartite cosmology, where underworld, earth and heaven are closely interconnected. There is no evidence that the movements of the celestial bodies were ever envisaged as spheric, even in the latest and most advanced stages of Babylonian mathematical astronomy.[1] In Babylonian astrology, the celestial bodies and phenomena (including wind and weather) as such are not supposed to direct events or exert any influence through rays or otherwise – their movements, appearances and positions are regarded as "signs", *ittu*. These signs may be seen as communications from the gods, or as independent signs of the black-cat-crossing-the-street type.

As a rule astronomy and astrology have always been treated separately, while in fact they were never regarded as separate before the end of the Renaissance – and certainly not in Ancient Mesopotamia. What can be described as primarily astronomical texts known from the first half of the first millennium, the astronomical compendium *Mul.apin* (which also contains omina) and the star calendars, *mul.meš.3.ta.àm* (the so-called "Astrolabes"), were used as reference books by the astrologers and were an integral part of their learning.[2] For example, Ištar-šum-ereš (*LAS* 319) recommends that the astrolabe be drawn in a tablet of *Enūma Anu Enlil*, so that the king can ascertain for himself the correct interpretation of a particular observation. Rochberg-Halton[3] recommends that historians differentiate between the specific goals and methods of ancient astronomy and astrology. She points out that late periods separate genres of astronomical and astrological texts, and we should not attach too much importance to the fact that some copyists of ephemerids are called *tupšar Enūma Anu Enlil*. But she also stresses that "the training and interests of the scribes in both these areas very likely stemmed from one intellectual tradition".[4] A close link continued also during the evolution of mathemat-

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1 Neugebauer, *HAMA*, p. 5.

2 The *Mul.apin* is only mentioned once explicitly in the correspondence of the Neo-Assyrian astrologers (*LAS* 43), but, like *EAE*, it is often quoted without reference, e.g., *SAA 8* 254:7 ff (*Mul.apin* II iii 33), cf. also *LAS II* sub *LAS* 43.

3 (1987) p. 327.

4 This latter view is further stressed and elaborated on in her article (1993).

ical astronomy. The zodiac, which arguably was invented for astronomical purposes – it is used as a reference point in mathematical astronomical texts – was incorporated into astrology, both the new form, horoscopy, and in developments of old-fashioned omen texts. The shorthand forms of the names of planets and the zodiacal signs was used both in astronomical as well as in late astrological and magical texts.

With the rise of mathematical astronomy in the fifth century B.C., by which it became possible to calculate the movements of the planets and predict eclipses, it is hard to understand how such events could be seen as portentous accidents or willed communications from the gods. In fact, the whole discipline of astrology became fundamentally changed, both in its basic principles and its uses, as will be described below, Chapter 8.

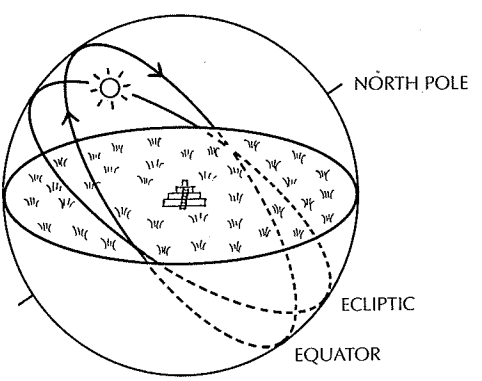
The Astronomical Background

Since the features of the night sky may be unfamiliar to a number of readers – those who dwell in cities hardly ever have a chance to acquaint themselves with planets and stars *in natura* – a few words on the astronomical background for Babylonian astrology may be in order.

The fixed stars. The fixed stars are called thus because they maintain a fixed position in relation to each other. To a Babylonian observer looking south, the stars will seem to move towards the right in circular orbits around the celestial north pole, from east to west. One point appears to stay immobile, the celestial north pole, the point of the celestial sphere directly above the Earth's geographic north pole. (The celestial South pole, invisible from Babylonia, is ignored here). The stars move parallel to the great circle at 90° distance from the north pole, the celestial equator. Different parts of the celestial sphere is visible from different positions on Earth. An observer in Babylonia would only be able to see those stars that then had a declination north of –58°. The appearance of the night sky changes over the centuries due to a phenomenon called precession. The Earth's axis does not remain steady but wobbles like that of a spinning top so that the celestial poles do not maintain the same positions among

the stars. The celestial north pole slowly moves around the pole of the ecliptic, and in 1000 B.C., the north pole was near β Ursæ min. At the same time, the equinoxes move towards the west on the ecliptic, 13° 50' in 1000 years. In 1800 B.C. vernal equinox was in Taurus, near the Pleiades (long. 52° 40'); in 1000 B.C. it had moved to Aries (long. 41° 33'). Two thousand years ago, the vernal equinox was still in Aries (long. 27° 45'), and to this day astronomers retain the name "the first point of Aries" as the zero point for celestial references, even though today vernal equinox is actually in the constellation Pisces. Today, the zodiacal *sign* Aries covers the zodiacal *constellation* Pisces. The precession means that while the latitude of the stars remain more or less the same, not only the longitude of the stars change but also their right ascension and declination.

Different stars are prominent at night at different seasons, so it is possible to use the heavens both as a clock and a calendar and correlate, e.g., the heliacal rising of certain stars with certain months, as done in the so-called *astrolabes*, or star calendars. This is because the sun appears to move in relation to the stars. The sidereal day (the time taken for one daily rotation of the celestial sphere) is 4 minutes shorter than the solar day. The stars perpetually seem to overtake the sun.



The Babylonians divided the fixed stars into three groups: the stars of Anu, Enlil and Ea.[1] To which group they belonged depended, for most of them, on where they rose on the Eastern horizon. The horizon was divided into the Paths of Anu, Enlil and Ea. The Path of Ea lies to the north, Anu is in the middle, and Enlil lies to the south. The boundaries between the Paths may be gleaned from the ideal calendar of *Mul.apin* II (Hunger and Pingree, *Mul.apin* p. 88 f), according to which the sun stands in:

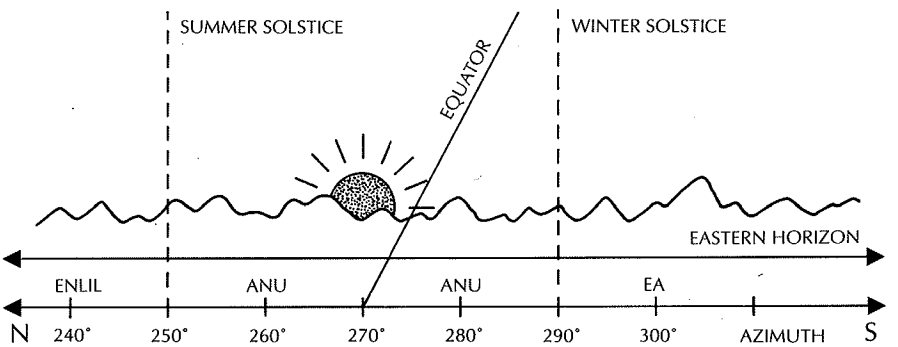
– the Path of Anu from the 1st of Addaru (XII) to the 30th of Ajjaru (II) (azimuth of the sun 290°-250°)
– the Path of Enlil from the 1st of Simanu (III) until the 30th of Abu (V) (azimuth of the sun 250°-240°-250°)
– the Path of Anu from the 1st of Ululu (VI) to the 30th of Arahsamnu (VIII) (azimuth of the sun 250°-290°)
– the Path of Ea from the 1st of Kislimu (IX) to the 30th of Šabaṭu (XI) (azimuth of the sun 290°-300°-290°).

(see illustration page 25)

The Sun. The sun, as also the moon and the five planets, take part in the daily east-west rotation of the stars, but they also move in relation to these as well as each other. They always stay within the zodiacal belt, 8° to either side of the ecliptic. The path of the sun, the ecliptic, is in the middle of the zodiacal belt. During the year the sun completes one full circle moving towards the left, i.e. contrary to the daily motion, through

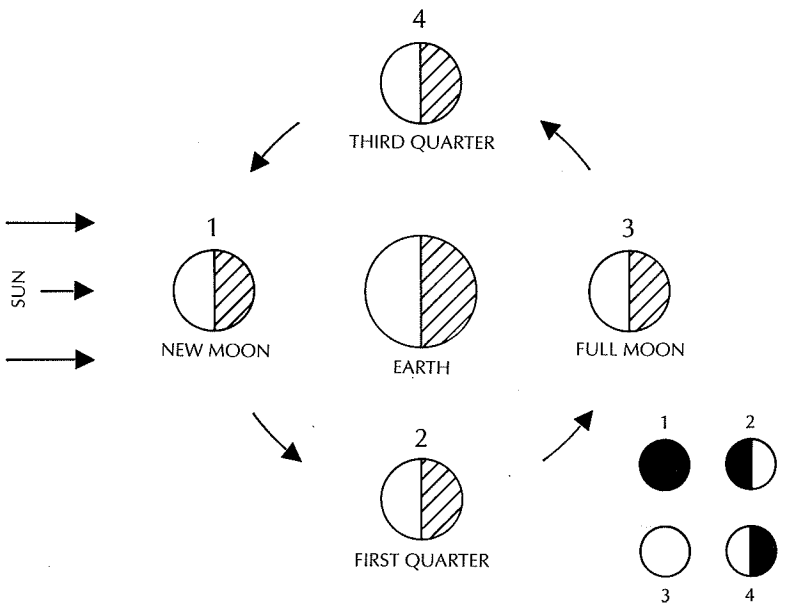
[1] The following is based on: J. Koch (1989) p. 14 ff and 119 ff. He suggests ((1989) p. 19) convincingly that the circular astrolabe was used as a graphic aide-mémoire. It was turned counterclockwise, the dividing line on the right side representing the eastern horizon. The stars of Enlil would rise in the north, those of Anu in the middle and those of Ea to the south, see Schott, "Das Werden der babyl.-ass. Positions-Astronomie und einige seiner Bedingungen", *ZDMG 13* (1934) p. 331. The eastern horizon was described as "the cattle pen". In *EAE 50* (*BPO II* p.42:22f) it is said: "The Cattle pen [is said for] dím.ma.an.na, for the entire sky . . . . The road of the sun at the foot of the Cattle pen is (the path) of Ea, the road of the sun in the middle of the Cattle pen is (the path) of Anu, the road of the sun at the head of the Cattle pen is the path of Enlil."

all the constellations of the zodiac. The plane of the ecliptic intersects with that of the equator at an angle of 23°27'. The two points of intersection are the equinoxes. Vernal equinox is the intersection between the ecliptic and the equator where the sun passes on its way to a northerly declination. Starting in the vernal equinox the ecliptic is divided into 12 parts of 30° each, the zodiacal signs. The zodiacal *signs* are a mathematical construction and do not correspond to the portion of the sky occupied by the zodiacal *constellations* whose names they bear.



The Paths of Anu, Enlil and Ea

The Moon. The moon travels through the zodiac in a little less than 30 days (*synodic month*). The new moon first becomes visible in the evening just after sunset. During the following 15 days (*šapattu*), the moon steadily moves away from the evening sun, waxing, until it is in opposition (full moon) and is visible all night. Then it approaches the morning sun, waning, until at neomancy it is again in conjunction and disappears in the rays of the rising sun. In the Babylonian lunar calendar, the month started at the first sighting of the new moon.

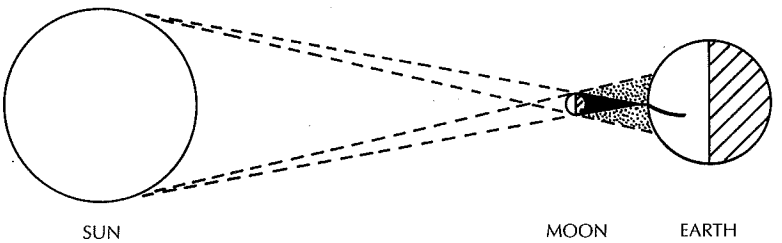


Phases of the moon as seen from the Earth during one synodic month.

The motion of the moon is very complicated indeed due to the elliptical form of the lunar orbit. The plane of the moon's orbit is inclined toward the ecliptic at an angle of about 5°, and the two points of intersection, the "lunar nodes", move along the ecliptic making a complete circle in 18 years and 6 months.

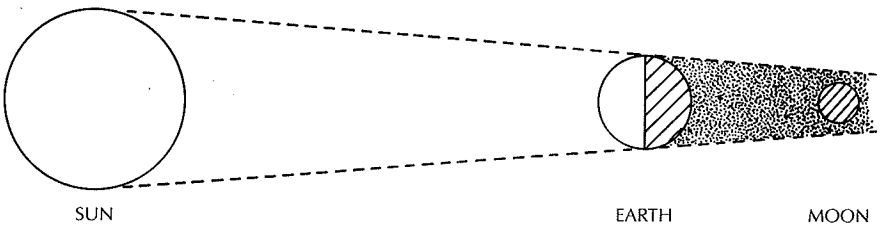
Eclipses. At a *solar* eclipse the moon stands exactly between the Earth and the sun. The shadow of the moon blocks out the sun's light for a small area on Earth. By coincidence, the sun and the moon appear to be of the same size, so the area covered by the moon's umbra, i.e., where the sun's disc is seen as completely covered by the moon (a total solar eclipse) is very small, about a hundred kilometres in diameter, and it moves across the surface of the Earth as the moon proceeds in its orbit and the Earth rotates. Obviously, this can happen only at new moon, just before the beginning of a Babylonian month. In any given location a *total* solar eclipse can be seen only once in 360 years.

At a *lunar* eclipse the moon enters the shadow of the Earth. Lunar eclipses can only occur when the moon is in opposition to the sun, that is, at full moon, around the middle of a Babylonian month. Eclipses of the moon are actually rarer than solar eclipses, but since a lunar eclipse is visible from more than half the Earth, lunar eclipses can be seen quite frequently in any given place.



Total solar eclipse. The dark shadow is the umbra of total eclipse and the shaded area is the penumbra of partial eclipse. The dark line is the area on Earth where the total eclipse is visible.

A lunar eclipse does not extinguish the light of the moon entirely. Since the Earth, unlike the moon, has an atmosphere, sunlight is refracted through the atmosphere into the shadow of the Earth. Seen from the moon (where the phenomenon would be registered as a solar eclipse) the Earth must appear as a black disc, four times the size of the sun, surrounded by a corona of the most brilliant sunset colours imaginable – a circle of fire against the black, starry sky. Seen from here, the moon takes on a reddish hue, varying from orange to a dull red-brown. During a lunar eclipse, the Earth's shadow can be seen to advance across the disc of the full moon from east to west. In some instances, the Earth's shadow covers only a part of the moon, a partial eclipse.



Total lunar eclipse.

The maximum number of eclipses in one calendar year is seven, five solar and two lunar or four solar and three lunar.

Planets. The planets may be classified in two groups, the inferior, or inner, planets: Mercury and Venus, and the superior, or outer, planets: Mars, Jupiter, and Saturn. The planets not only move steadily along the zodiac like the moon and the sun, but at irregular intervals seem to slow down in their courses, remain stationary and move westwards.

The inner planets have orbits around the sun inside that of the Earth, which means that they can only be seen within a certain distance (elongation) from the sun: Mercury is never more than 28° away and Venus 47°. This again means that they are only visible in the evening after sunset, or in the morning before sunrise. They are twice in conjunction with the sun: once when they stand between the sun and the Earth (inferior conjunction) and once when they are on the far side of the sun (superior conjunction), at which points they are of course invisible. As seen from the Earth, an inner planet will emerge from inferior conjunction and move to the west of the sun as a morning star and reach its maximum elongation, staying there for a short time (be stationary), then move back eastward to the sun toward superior conjunction, become invisible, and reappear as an evening star, move to the east of the sun toward its maxi-

mum elongation, stay there for a short time and then move back westward to the sun toward inferior conjunction.

The outer planets, on the other hand, having orbits outside that of the Earth, can be in opposition to the sun, visible all night. They not only move steadily towards the east along the zodiac like the sun and the moon but appear to slow down and remain stationary in relation to the fixed stars, then move backwards toward the west, stop again and move on eastward. An outer planet only becomes invisible once, near conjunction with the sun.

Mercury is difficult to observe. It is in itself fairly dim, and at its maximum elongation of 28°, it is only above the horizon for about an hour and a half before or after the sun. Most of the time it is invisible, hidden in the twilight of the sun or the mists of the horizon. It is the fastest-moving planet, with a synodic period of only 116 days.

Venus is by far the brightest celestial object, except for the sun and the moon. It is often visible even while the sun is above the horizon. Its luminosity does not vary much. Its synodic period is 584 days.

Mars has a distinctly reddish colour. Its luminosity varies greatly, according to its distance from the Earth, at its best it is almost as bright as Jupiter. Its synodic period is 780 days.

Jupiter is the brightest planet after Venus, of a brilliant white colour, not varying much in luminosity, and clearly the dominating feature of the midnight sky when in opposition to the sun. Its synodic period is 399 days, its sidereal period 11.86 years.

Saturn is much dimmer than Jupiter, with an almost constant luminosity of about one-fifth of Jupiter's. Its synodic period is 378 days, its sidereal period 29.46 years. It is thus the slowest-moving planet, which may be the reason for one of its Akkadian names, *kajjamānu*, "the steady one".

* * *

Acronycal rising: last visible rising in the evening just after sunset. The next evening the star will already have risen at sunset.

Azimuth: The distance along the horizon, measured in degrees, from due south towards the west.

Declination: the distance from the celestial equator, measured in degrees, southerly declination is negative.

Earthshine: around new moon, when the moon lies almost in line with the sun, light reflected from the Earth illuminates the otherwise dark part of the moon's hemisphere facing the Earth. This phenomenon is called Earthshine.

Ecliptic: the apparent path of the sun between the stars in the middle of the zodiacal belt. Eclipses can only occur when the moon is in or very close to the ecliptic.

Heliacal rising: first visible appearance of a star or a planet on the eastern horizon just before sunrise.

Heliacal setting: last visible setting of a star or a planet just after sunset. The next evening the star will already have set at sunset and is no longer visible at night until next heliacal rising.

Latitude: the distance from the ecliptic, measured in degrees. The latitude of the sun is always 0°.

Longitude: the distance along the ecliptic, measured in degrees, from vernal equinox towards the east. The longitude of the sun goes from 0° to 360° through the year.

Right ascension: the distance along the celestial equator, measured in hours, minutes and seconds (one hour is equal to 15°) towards the east, from the vernal equinox to the intersection of the equator with a great circle through the star and the celestial poles.

Sidereal period: the time it takes a celestial body to complete a revolution, e.g., a planet around the sun.

Synodic period: the time it takes two celestial bodies to reach the same relative position in relation to a third, e.g., the period from one opposition to the next.

Synodic month (of the moon): the time the moon takes to make the full circle of the zodiac, i.e. 29 days 12 hours 44 minutes and 2.8 seconds.

Zodiac: The ecliptic is divided into twelve equal parts, the signs of the zodiac. The zodiacal *signs* are a mathematical construction and do no longer corespond to the portion of the sky occupied by the zodiacal *constellations* whose names they bear. The zodiacal signs are: Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius, Pisces.

CHAPTER 2

A BRIEF HISTORY OF MESOPOTAMIAN ASTROLOGY

The Third Millennium

The Assyrians may credit Ea, god of wisdom, with the authorship of the divinatory series, including *Enūma Anu Enlil*,[1] but we are not quite so ready to accept this attribution of authorship – even if the origins of astrology are rather misty. In fact, if any deity in the third millennium deserves credit for being interested in the stars it would be Nisaba.[2]

Nisaba, goddess of grain and the scribal arts, was regarded as the supreme expert on accounting and the fair management of resources. She is said to measure heaven and earth, to know the secrets of calculation[3] and, together with Suen, to "count the days".[4] She was associated in some way with the stars already in the Fara period.[5] Her temple in Ereš was called the *é-mul-mul*, "House of the Stars".[6] Among many other tablets she had a lapis-lazuli tablet which is sometimes called the *dub mul-an*, "tablet with the stars of the heavens", or *dub mul-an-kù*, "tablet with the stars of the pure heavens".[7] It was kept in her "House of Wisdom",[8] and

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1 Lambert (1962) p. 64. This particular text, from Assurbanipal's library, is written in Assyrian dialect.

2 For this goddess, see Bendt Alster, "On the Earliest Sumerian Literary Tradition", *JCS 28* (1976) p. 110-126, esp. p. 116 ff, and Gebhard J. Selz, "Nissaba(k) 'Die Herrin der Getreidezuteilungen'," *Fs. Sjöberg* (1989) p. 491-497. In the following discussion, these two articles are cited as Alster and Selz, respectively.

3 Sjöberg *TCS 3* p. 49:541 (Temple Hymns of Enheduanna); Gudea *Cyl. A* xix 21.

4 *Lugal-e* 721, cf. the introduction to *EAE* (*ACh Sin* 1:1-8, see p. 77) and *Enūma eliš* V 12-24 (see p. 100f).

5 Alster, p. 117.

6 Sjöberg *TCS 3* p. 48 f (TH no. 42).

7 Gudea *Cyl. A* iv 26; Hallo *RAI 17* p. 134:31.

8 Hallo, *ibid.* line 29.

she consulted this tablet placing it on her knees, which suggests that it was fairly large. It is tempting to assume that this lapis-lazuli tablet was a kind of star-map or symbolic representation of the sky. In Gudea *Cyl. A* v 23 – vi 2 she is said to consult the tablet in order to tell Gudea with a bright star to begin the construction of Ningirsu's temple. This passage is cited by Falkenstein as an indication, however faint, of some interest in astrology.[1] But, for all we know, Nisaba may have directed Gudea to build the temple as the proper reflection of some cosmic structure writ large on the starry firmament, or simply indicated to him the proper calendar time for beginning the project. The passage which mentions a sign (*giskim*) which Ningirsu promises to give Gudea (*Cyl. A* ix 9-10) to build his temple, the bright star to call for his rites, may be understood in a similar way.

The decay of this tradition in Old Babylonian times is vividly illustrated in the hymn to Enlilbani (ca. 1900 B.C.), where it is said that Nisaba has endowed him with understanding and the ability to find justice for the land of Sumer from her lapis-lazuli tablet in the House of Wisdom (*é-geštug-*^{d}*nisaba-ka-ni*).[2] Two of Nisaba's characteristic traits: her lapis-lazuli tablet, originally associated with astronomy, and her management and fair distribution of agricultural products, originally associated with her other tablets and expressed in such epithets as "Enlil's chief scribe", have here been confused.

The overall impression given by the Sumerian sources is that Nisaba was mainly concerned with the management of agriculture and the timing of activities that were dependent on the yearly seasons. The knowledge of astronomy (not astrology!) attributed to her was used to correct the vagaries of the lunar calendar.[3] There is no trace of any real astrology in the Sumerian sources, and, consistent with this conclusion, the various Sumerian accounts of the origins of the world order have little to say

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1 Falkenstein (1966) p. 64-65. Similar statements are apparently the basis for the description of Nisaba as "Deuterin der Himmelschrift" by Selz, p. 496.

2 Kapp, *ZA 51*, p. 78:51 ff.

3 This is a fairly exact rephrasing in our terms of the statement in *Lugal-e* 721, "together with Suen, she counts the days".

about the stars, quite unlike the pronounced interest in celestial phenomena found in *Enūma eliš*.

The Sumerians undoubtedly watched the sky and defined and named some of the constellations and planets. Most of the names of celestial bodies were Sumerian throughout the later periods, and some of them at least must have Sumerian origins.[1] Some bilingual Sumerian-Akkadian astrological omen texts do exist,[2] but they are apparently all late translations which only attest to astrology's pretense to high antiquity.

Thus the origins of Babylonian astrology is not to be sought among the Sumerians – their perspective of the world was very much Earth-centered. This differs somewhat from the situation in extispicy, where Sumerian practice of the art is well attested, if only indirectly. It was performed by experts known since the Fara period as *máš-šu-gíd*, and its only known use was to select high cultic personnel acceptable to the gods.[3] Unlike Babylonian extispicy, it appears not to have been concerned with predicting the future.

Old Akkadian astrology?

Weidner suggested[4] that the omens mentioning Sargon[5] and Ibbi-Sin incorporated in the canonical series *Enūma Anu Enlil* may actually derive from contemporary observations and that, consequently, celestial omens

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1 Contrary to Weidner's statement in *RLA* "Fixsterne", no star list of the third millennium survives. The lists mentioned by him are of Old Babylonian date (re-edited in *MSL XI*). However, the occurrence of the star name *mul-^{d}šul-gi* in two of these lists (*MSL XI* 133 viii 41, 137 rev. ii 2', see the discussion by W. Horowitz, *ASJ 13* (1991) p. 411 ff), could point to an Ur III origin of at least some of the names. In *Shulgi Hymn B* 307-310 we hear that a star will be born in honour of the king.

2 Mentioned by Hunger courtesy E. Reiner, *SpTU I* p. 90.

3 See Falkenstein, *RAI 14* (1966), p. 45 ff; Biggs, *JNES 27* (1968), p. 146 fn. 2. The phrase *máš šu mu-gíd* is found in *IAS* 114 v 13 and duplicates.

4 Weidner (1941) p. 175 and fn. 19.

5 In the modern literature, Sargon of Akkade has even been credited with the initiative for the compilation of *EAE*, see Lacheman (1937) p. 4 and Bouché-Leclercq (1899) p. 37 n. 2, neither of whom give any references for this somewhat unlikely proposition.

were recorded already in the third millennium.[1] Understandably, Rochberg-Halton[2] finds this suggestion less than plausible. These omens are most likely to be treated like the "historical" omens in general, see above p. 15. It has been suggested[3] that some of the exceptionally detailed descriptions of lunar eclipses in *EAE* 20 and 21 may be based on observations. But, as pointed out by Rochberg-Halton,[4] some of these eclipses could not have occurred as recorded, and it seems a little problematic to pick out some of them for chronological purposes, as done by Huber,[5] ignoring the rest. Moreover, according to Huber's calculations, "no fewer than three(!) transitions of reign in [the Akkad] dynasty are immediately preceded by an eclipse that matches the description of the ominous Nisan eclipse presaging the death of the king of Akkad", and "who would not become superstitious if two very similar total lunar eclipses occur shortly before the deaths of two consecutive kings (Manishtusu and Naramsin), and then there is even a third instance?" Huber suggests to see in this most remarkable coincidence the very birth of Mesopotamian omen astrology.[6]

This seductive suggestion provokes a veritable hornet's nest of problems. The apodosis, "the king of Akkad will die", is found only in the "Assyrian" recension of *EAE* 20 – and there is no reason to consider that

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1 The name 'Sargon' is mentioned the commentary *II R* 39, 5 = Weidner *AfO 14* Tf. VII-VIII:3: [- - --] lugal *a-ga-dè* : lugal-du : gi : *ta-ra-ṣa.* He is also mentioned in *ACh Ishtar* 2:41-42, likewise in broken context. Ibbi-Sin is mentioned in *ACh 2. Suppl.* 67 r9, *ACh Sin* 19:4f = *Ishtar* 21:12f: diš mul.šudun *ina* è-*šú ana* ^{d}utu.è.a igi.meš-*šú* gar-*nu* igi an-*e* igi.bar-*ma* im *mim-ma* nu *i-zi-qa* su.kú gar-*an* bala nam.gilim.ma *šá i-bí-*^{d}30 lugal uri$_5$.ki *ka-mu-us-su ana an-ša$_4$-an*^{ki} du-*ku i-bak-ku-ú,* "If the Yoke Star in its appearance faces towards the west, you watch the whole sky, and if no wind stirs: there will be famine, a disastrous reign. (It is an omen) of Ibbi-Sin, king of Ur, who went to Elam in captivity, weeping."

2 (1988) p. 7 fn. 32.

3 J. Schaumberger, e.g., *AfO 17* (1954-56) p. 89; also Huber (1987a) p. 4.

4 *Ibid.* p. 176.

5 Huber (1987a).

6 Huber (1987a) p. 3 and 11.

more original than the "Babylonian" version.[1] The "king of Akkad" may refer to any Babylonian king and does not have to mean specifically the Sargonic dynasty. The remarkable coincidence only holds true if Sollberger's relative chronology of the Akkad dynasty is correct – and there is some reason to doubt that it is.[2] Most important: according to Huber, the three eclipses occurred 37 and 28 years apart, respectively – long enough that people would scarcely have remembered them, let alone recorded them in such detail, *unless the idea that celestial phenomena have portentous meaning, was there already.* However that may be, it is not very likely that astrology had origins separate from that of the other divinatory sciences.

The most cogent argument for a third-millennium origin of Babylonian divination, including astrology, would be its advanced state of development already in the Old Babylonian period. It was hardly born like Athena.

The Old Babylonian Period[3]

The earliest astrological omen texts known to date are Old Babylonian. The texts are already highly structured, as is indeed the case with most early omen texts.[4] The bulk of Old Babylonian celestial omen texts concern lunar eclipses, and Rochberg-Halton suggests that the eclipse

[1] "Assyrian" recension: Rochberg-Halton (1988) p. 179:7; "Babylonian" recension: *ibid.* p. 182:7.

[2] "Sollberger's relative chronology," mentioned approvingly by Huber (p. 9 and 11) without specific page reference, is presumably the one found on p. 45 f in *AfO 17*, which in turn reproduces without discussion Jacobsen's interpretation of the inconsistent evidence, see *AS XI* p. 110 ff. For a different assessment of the data of the Sumerian King List, see Foster, *USP* p. 152 ff. According to that, Naram-Sin may have reigned for 56 years, not 37.

[3] I am painfully aware of the preliminary character of this section. F. Rochberg-Halton is preparing a volume on celestial divination in the second millennium with an edition of Old Babylonian eclipse omens.

[4] The Old Babylonian *Šumma izbu* is uncommonly disorganized, see Leichty, *Šumma izbu*, *TCS IV* p. 23.

group may have "comprised the original core around which the rest of the series EAE was built".[1] Apart from the texts she mentions, there is a meneological lunar eclipse text from Mari.[2] But enough material is known to show that not only conspicuos phenomena like lunar eclipses attracted the astrologers' attention. The only text from Babylonia proper that has been published[3] concerns the weather and lunar phenomena other than eclipses. Rochberg-Halton mentions an unpublished tablet with solar and meteorological omens.[4] *KUB IV* 63, a tablet from Hattusas which to all intents and purposes is purely Old Babylonian,[5] contains solar omens. The "Venus tablet of Ammiṣaduqa",[6] which constitutes tablet 63 of *EAE*, should also be mentioned here, as the observations on which at least some of the protases were formed, were made in Old Babylonian times.[7] The apodoses are standardized in the form well known from astrological omens in general and give the impression of being later additions, rather than, for example, reflecting contemporary events.

The lunar eclipse texts, which are the only ones to have been studied in any detail so far, and whose development in the succeeding centuries

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1 Rochberg-Halton (1988) p. 7.

2 J.-M. Durand, *Archives Épistolaires de Mari I/1* (1988), no. 248 [A.1287]. (I am not sure whether this is identical with the text mentioned by Bottero (1950) p. 111)

3 V. Šileiko (1927), see also Bauer (1936). Another text, VAT 7525, which was mentioned by Meissner (1925) p. 245 as an astrological text, turned out to contain physiognomic omens. It was published by Köcher and Oppenheim in "The Old-Babylonian Omen Text VAT 7525", *AfO 18* (1957-58) p. 62 ff. The mistake was probably caused by the mention of stars and Šulpae (Jupiter) in i 12-13.

4 BM 97210, Rochberg-Halton (1988) p. 9 fn. 5.

5 Edited by Leibovici (1956). Both the sign forms and the orthography suggest an Old Babylonian origin of this tablet. It does not seem overly fanciful to assume that it was part of the booty carried from Babylon by Mursilis I in 1590. Its duplicates show Hittite sign forms.

6 Even though the name of Ammiṣaduqa is not mentioned in the text, it has been attributed to his reign since the name of the 8th year of his reign is contained in the tenth omen (Reiner and Pingree (1975) p. 33). It is possible that this omen originally was a report (*ibid.* p. 9).

7 See Huber et al. (1982) and Huber (1987b) p. 7. He argues that all the 21 years covered by the text stem from observations in Ammiṣaduqa's 21 years' reign, rather than just the first 8 (Reiner and Pingree (1975) p. 21 ff).

may be followed, reveal a complicated textual history, with variant traditions, and there does not seem to be a linear development from the Old Babylonian texts to the canonical *EAE*.[1] This is rather unlike extispicy, which was already organized in a large series that had the same arrangement as the late series *Barûtu* and comprised at least 90 tablets.[2]

As mentioned above, the lunar eclipse texts were already highly structured[3] and already include omens from events that cannot occur in reality in order to fit the schema (e.g., lunar eclipses on the 21st). They all contain omens arranged according to date, and two of the texts contain omens with other variables in addition. Apparently the variables always appear in the same sequence: 1) time of eclipse (according to the three watches of the night), 2) magnitude, 3) direction of eclipse shadow, 4) duration, 5) date of occurrence (the 14th – 21st day, only the 17th is never included). Some of these parameters were considerably expanded and elaborated in later editions of *EAE*, most conspicuously the days of occurrence, but also 3) where quadrants of the moon correlate with terrestrial geography (OB: South = Akkad, West = Amurru, North = Akkad, East = Subartu). Elam is included only once in direction omens, but appears in other contexts.[4] In the later texts the order in which the four quarters are listed is different, but the OB schema for interpreting the direction of the eclipse shadow remained unchanged, except for the inclusion of Elam (South = Elam, otherwise as before, see also below p. 107). All the variables are found in *EAE* and in much the same formulary, only the formulary of the protases concerning the date, which varies in the Old Babylonian texts, was streamlined in later editions.

The colophon of *KUB IV* 63 + duplicates says dub.1.kam an.ta.lù ^{d}utu, "First tablet of solar eclipses", but in fact it deals with various solar phenomena and even lunar eclipses, and indeed seems somewhat confused.

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1 Rochberg-Halton (1988) p. 23.

2 U. Jeyes (1989) p. 8 ff.

3 See discussion by Rochberg-Halton (1988) p. 19-23.

4 Rochberg-Halton (1988) p. 54.

For instance, it repeats the same omen in ii 29 and iv 5 with only variant spellings. As far as I know, this text has no direct parallels except for a few passages.[1]

As mentioned above, at least one astrological text is known from Mari. It deals with eclipses arranged according to month only, as does § 69 of the "série générale" of *Iqqur īpuš*, but with different apodoses. But celestial divination seems to have played no significant role in Mari. The famous diviner and official Asqudum reports a lunar eclipse on the 14th to the king.[2] The eclipse was somehow unsatisfactory (*naškun antallêm šāti marus*), so he took liver omens to make sure. Asqudum had access to Babylonian learning[3] besides the technique of liver divination, but apparently he did not know much of Babylonian astrology. On the other hand, it seems to have been standard procedure, at least at Mari, to elicit further information about the significance of an eclipse, or any other extraordinary event, by means of extispicy,[4] as was also done later (see below p. 49 and p. 111).

From this period we also have evidence that celestial bodies played a part in fields outside astrology proper. Especially the Pleiades may already have held a prominent position (cf. p. 133 f). On seal cylinders, from Protoliterate to Late Assyrian times, seven points often appear. At least in some instances, the Pleiades may be represented; but their significance on the seal cylinders is unknown.[5] Further, there are two Old Babylonian copies of a "Prayer to the Gods of Night".[6] It is to be recited at night,[7]

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1 E.g., protasis of *KUB XXX* 9 iii 9, 13, etc. = *KUB IV* 63 iii 28, resembles catchline of *EAE* 26, see Weidner *AfO 22* p. 67.

2 J.-M. Durand, *ARM 26/1* (1988) p. 221.

3 Scholarly tablets were found in his house (W.G. Lambert, *MARI 4*, p. 529 and D. Charpin, *ibid.*, p. 462), including one Babylonian list of gods.

4 See J.-M. Durand, *ARM 26/1* (1988), p. 483 ff.

5 See Frankfort, *Cylinder Seals*, p. 195 f; E. Douglas van Buren, "The Seven Dots in Mesopotamian Art and their Meaning", *AfO 13* (1939–41), 277 ff. Most of the clear instances of the Pleiades come from Assyria.

6 Dossin, "Prières aux 'dieux de la nuit' (AO 6769)", *RA 32* (1935) p. 179 ff; W. von Soden, *ZA 43* p. 305 ff.

Note 7 on the next page...

and 10 particular constellations are asked to make sure that the diviner obtains a true answer from the extispicy which he is going to perform. They seem to be regarded as gods in their own right, invoked when those normally in charge of decision-making have gone to sleep (l. 5 ff).[1] These "Gods of Night" perhaps do not include all stars since those listed by name remain much the same limited number of bright or conspicuous stars and constellations throughout the centuries.[2] Two further prayers in connection with extispicy are known,[3] both concerning the welfare of one Ur-Utu, the Chief Cantor of Annunitu in Dēr. One is addressed to Ninsianna, the other to Annunitu, both, be it noted, hypostases of Ishtar, who are asked to give him a favourable omen. These prayers bear some resemblance to *tamītu*-texts. E. Reiner suggests the first to be a prayer to Venus as a morning star since she is referred to in the masculine and is called "lord Ninsianna".[4]

The Old Babylonian sources for astrology are still few, which might indicate that astrology had a somewhat inferior status compared to extispicy and birth omina. But the characteristic "international" horizon of Mesopotamian astrology is already in evidence. Also, the apodoses are concerned with public affairs. Rochberg-Halton[5] takes this as an indication that astrology was "closer to the academic forms of divination, i.e., those forms requiring a specialized knowledge of the literature

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7 *ikrib mušītim* (l. 25). The ritual against assorted evil omens edited by Oppenheim in "A New Prayer to the 'Gods of Night'", *Analecta Biblica 12* (1959) p. 282 ff, was not performed before the stars invoked in the prayer (p. 286:103 f): "this ritual you perform before [divine name], what is said to him, you have said to god and goddess".

1 Reiner (1985) p. 591 suggests to see this ritual as an astrological authentication of the coming extispicy, a sort of counterpart to the use of extispicy to confirm a celestial omen.

2 J. Koch (1991) p. 63.

3 Meyer (1982).

4 Reiner (1985) p. 591. Ninsianna is known to be a bisexual deity (Meyer *ibid.* p. 275). According to one tradition, Venus was male as the morning star and female as the evening star; according to another it was the other way around, see below p. 125f. In this context may also belong *CT 42* 6, a trilingual Old Babylonian ritual which mentions mul.^{d}nin.si$_4$.an.na, mul.^{d}nin.pirig, mul.^{d}šul.pa.è.a, mul.^{giš}má.diri.ga ^{d}en.ki (iii 18 ff) and invokes the stars, heaven and earth, Anu and Enlil (iv 2-5).

5 Rochberg-Halton (1988) p. 9.

pertaining to the phenomena of interest", unlike such folksy things as oil or smoke divination. These latter could answer specific questions from individuals about their private affairs. This interesting suggestion, that "public" means "scholarly", and "private" means "folklore", which might have deserved some elaboration, does not quite carry conviction: Old Babylonian extispicy, undoubtedly a "scholarly" branch of divination, is frequently about private affairs.

The Middle Period

Our knowledge of the history of astrology during the later centuries of the second millennium is very meagre indeed, due to the well-known paucity of contemporary sources from Babylonia itself. We do happen to know that astrology was in actual use during the second dynasty of Isin at the court of Marduk-nadin-ahhe (1099-1082 B.C.) who received astrological reports.[1]

That astrology had indeed gained in importance might also be suggested by the following passage from the curses of a kudurru inscription:[2] ^{d}*i-gi$_4$-gi$_4$ in* an-*e li-na-ki-ru* mul-*šu* ^{d}*a-nun-na in* ki *li-is-si-hu man-za-as-su*, "May the Igigi-gods change his star on the sky, may the Anunna-gods tear away his position on earth". The symbolic decorations of the kudurrus, some of which probably represent the deities in their celestial aspects,[3] point in the same direction.

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1 *LAS* 110+300 quotes a report written by an otherwise unknown Ea-mušallim to Marduk-nadin-ahhe, perhaps concerning a solar eclipse in 1090, see Neumann and Parpola, *JNES 46* (1987) p. 178.

2 Sommerfeld (1984), col. v 9-15.

3 Cf. Hinke, *A New Boundary Stone of Nebuchadrezzar I from Nippur* (1907), chapter 9. Ursula Seidl (1971) has chosen to regard none of them as such, but to me it seems rather certain in the case of the moon, the sun and Venus, perhaps also Virgo, Hydra, Corvus, Taurus and mul.dingir.gu.la (Lyra/Aquarius). Virgo (mul.ab.sín) is depicted in a Late Babylonian text (Weidner (1967) p. 9 and pl. 9) as a woman holding an ear of corn. The ear of corn represented on the kudurrus might therefore be taken to represent Virgo. The same holds true for Hydra (mul.muš) and Corvus (mul.uga.mušen) which appear in the same text (as a snake and a bird respectively). Taurus (mul.gu$_4$.an.na) is depicted in the

Only one astrological text from Babylonia, presumably from Nippur,[1] dating to this period is published so far. This text could be a report since the meteorological phenomena listed could all have taken place in one day,[2] and the tablet was probably not much larger originally and is only inscribed on one side. To judge from the copy, it is possibly an *imgiddû*-tablet and so has the same shape that was used for reports in later periods. If this text is indeed a report, it is possible that astrology had already obtained some importance in official or public affairs.

Some form of the series *EAE* existed under that name already in the 13th century, as is shown not only by the famous fragment from Hattusas (see below p. 46) but also by VAT 9740+11670 (Source Z of tablet 20), a Middle Assyrian tablet which has traces of *EAE*'s title in the colophon. The series may of course have existed earlier.

It is an assyriological commonplace that the great series, including *EAE*, received more or less their "canonical" shape in the late second millennium. This is largely due to the fame of scribes and scholars from this period, many of whom are known to us by name from, for instance, the "Catalogue of Texts and Authors".[3] The redactor of *EAE* is also a well-known scholar, who must have been very industrious indeed if we are to believe the so-called "Exorcist's Manual" (*KAR* 44). According to the second list in that text, *Enūma Anu Enlil*[4] belonged to the exorcist's compendium ascribed to Esagil-kin-apla, who lived in the reign of Adad-apla-iddina (1068-1047 B.C.).[5] A remarkable text[6] describes how Esagil-

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Seleucid text *TU* 47. See also Koch, Schaper, Fischer and Wegelin, "Eine neue Interpretation der Kudurru-Symbole", *Archive for History of Exact Sciences 41* (1990) p. 93 ff.

1 Clay, *PBS 2/2*, 123. No registration number: "tablet was catalogued after being copied, and then lost sight of" (p.89)! Another Nippur text, unpublished, is described by Rochberg-Halton (1988) p. 25. It parallels the eclipse sections of *EAE* tablet 22 part II.

2 As suggested by Ungnad, "Ein meteorologischer Bericht aus der Kassitenzeit", *OLZ 15* (1912), 446 ff.

3 Lambert (1967) p. 9. See also Lambert (1957) and (1962), and Rochberg-Halton (1987) p. 327 with references.

4 *KAR* 44 r16.

5 On Esagil-kin-apla, see Finkel (1988).

6 Edited by Finkel *ibid.* p. 146 ff.

kin-apla worked on the series *SA.GIG* and produced a proper edition[1] out of the mess that confronted him, "twisted threads without duplicates". Whether he actually did the same work on *EAE* is of course impossible to say, but the subscript of one of the sources for the "Babylonian" recension of *EAE* tablet 20[2] states that it was written according to a writing board from the 11th year of Adad-apla-iddina, and might thus have been a part of an Esagil-kin-apla edition. Certainly the confused and contradictory state of the astrological omen tradition around the mid-second millennium, as known to us from the peripheral areas,[3] fits the description "twisted threads without duplicates".

The textual developments in the last centuries of the second millennium are difficult to follow. Most of the sources come from Assyria, and it has been claimed that an independent Assyrian tradition can be detected.[4] Even though the basis for that claim is slim indeed, there is evidence for Assyrian interest in astrology and perhaps even independent Assyrian contributions to the tradition, much as we may be loath to admit it.[5] At least part of the astronomical compendium *Mul.apin* is based on observations probably made in Assyria,[6] and transmission of texts from Assyria to Babylon is not altogether unheard of.[7]

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1 SUR.GIBIL = *za-ra-a*, most recently discussed by Lieberman (1990) fn. 182.

2 K 3561(+)6141, edited as source S for *EAE* tablet 20 by Rochberg-Halton (1988) p. 174 ff.

3 See Koch-Westenholz (1993) p. 236 f and Appendix.

4 See Rochberg-Halton (1988) p. 23 ff, but, as she says herself, this amounts to little more than conjecture.

5 Cf. Geller (1990) p. 210 f, on the Assyrian recensions of *Angim* and *Lugale*.

6 See Hunger and Pingree, *Mul.Apin* p. 10 and 141 f. Pingree suggests that the two lists of *ziqpu*-stars (*Mul.apin* I iv 1-30) fit Nineveh ca. 1000 B.C. Why Nineveh? Assur is barely 1° south of Nineveh and is also in other respects a more probable site of origin. See also M. Geller (1990). J. Koch (1989) p. 34–52) suggests that *Mul.apin* was compiled in Assur around 700 B.C. using material of varying age and place of origin, e.g., the list I iii 34–48 built on observations made around 1350 B.C. in Babylon, and the passage II i 34 in 1300 B.C. in Nineveh (*ibid.* p. 38).

7 One possible example is a portion of Assurbanipal's Coronation Hymn that was appended to a Babylonian text (*SAA 3* no. 11, see p. XXIV). Also the Middle Babylonian text BM 108874 (*CT 40* 48-49, *Šumma ālu*), a tablet dated to Melishipak (1186-1172) was copied from an original "from Subartu".

Once again, the eclipse section edited by Rochberg-Halton is the one studied in most detail. She distinguishes between two types of texts, the so-called transitional type and the *EAE* type. The "transitional" texts retain some of the characteristics of the Old Babylonian texts but also show the tendency known from the Neo-Assyrian texts to standardize the writing of the protasis with logograms. The "*EAE* type" is represented by three Middle Assyrian texts which are the immediate predecessors of *EAE* 15 and 20. In the Middle Assyrian eclipse texts are included elements not found in the Old Babylonian texts, such as wind. Apart from the eclipse texts, we have *KAR* 366, very fragmentary, protases mostly missing, which also concerns lunar eclipses. Further, there is VAT 10375, a manuscript of *Iqqur īpuš*, see Labat, *Iqqur îpuš*, and the so-called "Astrolabe B" (*KAV* 218) which contains a bilingual hemerology, a commentary on the stars of the three paths and ends with the "astrolabe" in tabular form. At least the last two of these texts come from a private library belonging to a family of scribes in Assur, evidently with a broad range of interests.[1]

The Peripheral Areas

Babylonian culture held an enormous attraction on the surrounding peoples who came into contact with it. During the second millennium, Babylonian literature and science spread throughout the Near East – divination, being a prominent feature of Babylonian tradition, included. Due to the regrettable paucity of sources from Babylonia itself, the neighbouring countries supply better and ampler evidence of the evolution of divination in the late Old Babylonian and Middle periods.

[1] Pedersén (1985) p. 36. This is the library M2, *ibid.* 31 ff.

Hattusas[1]

A large amount of tablets were found at Boghazköi, the ancient Hittite capital, among them many literary and scientific works including astrological texts. A fact that has often been noted is the high proportion of astrological omens as opposed to other Mesopotamian divinatory genres at Hattusas: the number of astrological texts almost equals the total number of texts from the other divinatory genres combined.[2] Presumably this does not reflect the comtemporary Babylonian distribution but is the result of a local preference. The divination texts are of course vastly outnumbered by the Hittite oracle texts (by 10 to 1).

The Hittite astrological texts most likely reflect Babylonian originals of varying dates, ranging from Old Babylonian to ca. 1300 B.C.,[3] even though most of the texts only exist in 13th century copies.

E. Laroche, *Catalogue des textes hittites*, nos. 531-535, lists all the texts known in 1972, but even though not much has been added since, a rapid survey may still be useful.[4] We have: –

- lunar eclipse omens, in Akkadian and Hittite;
- omens concerning other lunar phenomena in Hittite and Hurrian[5] + one Akkadian-Hittite bilingual;[6]

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1 For a fuller discussion of the Boghazköi materials, see Koch-Westenholz (1993).

2 Cf. Laroche *Catalogue des textes hittites* p. 91 ff.

3 See Koch-Westenholz (1993).

4 The late K. Riemschneider prepared an edition of all omina from Boghazköi, *Die akkadische und hethitische Omenliteratur aus Boğazköy*. It is still unpublished and I have not been able to take it into account.

5 For transliterations of the two very fragmentary Hurrian lunar omen texts, see Kammenhuber, *Orakelpraxis, Träume und Vorzeichenschau bei den Hethitern* (1976) p. 155 ff.

6 *KUB VIII* 6 and duplicates, see Otten, *KBo XIII* p. V. The text was edited with an unpublished join, given in transliteration and translation only, by H. G. Güterbock, "Bilingual Moon Omens from Boğazköy", *Fs. Sachs* (1988) p. 161-173. The join has since been published as *KBo 36* no. 48.

- an unusually well-preserved solar eclipse tablet in pure Old Babylonian,[1] as well as Hittite copies and translations of this text, and other solar omens in Hittite;
- fragments with omens concerning comets or meteors;[2]
- some lunar omens in combination with other texts, e.g. Hittite oracle texts,[3] *Šumma ālu*[4] and *Iqqur īpuš*.[5]

Last but not least: we have what is certainly the remains of a Hittite translation of the introduction to the canonical *EAE* followed by lunar omens, all of it too fragmentary for anything but mere identification.[6] But the Hittites did not utilize the serialization of the *EAE*. As far as I know, there is no mention of *EAE* in colophons or in the Hittite catalogues.[7] The compiler of the catalogues was evidently much more interested in the treaties and rituals, the astrological texts receive cursory treatment. We do *not* have – as far as I know – any texts dealing with planetary omens, and the fixed stars play a very minor role.[8]

The "Prayer to the Gods of Night", which concludes a ritual against insomnia (*KUB IV* 47 r42-48) should also be mentioned here since it is the earliest evidence for the paths of Ea, Anu and Enlil, as far as I know. It contains a star-list, partly in Hittite orthography, which names perhaps

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1 *KUB IV* 63, discussed above, p. 37.

2 *CTH* no. 535:1-3, listed as *signes astraux*. 535:4 is *Iqqur īpuš*, see Riemschneider *StBoT 9* p. 43 ff. The exact meaning of the protasis is uncertain. 535:5 is a fragment too small for identification, perhaps also from *Iqqur īpuš*.

3 E.g., *KUB VIII* 27.

4 Güterbock, *AfO 18* (1957-8) p. 78 ff.

5 H. Berman in *Fs. Güterbock* (1974) p. 57 ff.

6 *KUB XXXIV* 12:1, [*ma-a*]-*an* ^{d}*a-nu-uš* ^{d}[en.líl-*aš* - - -], "When Anu, Enlil . . ." The following 6 lines are too fragmentary for translation. After a division line the section is followed by omens of which only the first signs (*ták-ku* ^{d}3[0 - - -], "if the m[oon]") are extant.

7 The catalogues are given in transliteration and translation by Laroche in *CTH* p. 154-193.

8 The Pleiades and Ursa Maior seem to have enjoyed a special status and were incorporated into the state cult, see Kammenhuber, *Orakelpraxis* p. 45 ff and 56.

four of the planets and 13 constellations. The text ends with the invocation of the stars of the paths of Ea, Anu and Enlil.

Emar

Another relatively large group of astrological texts has been found in the recent excavations at Emar. All the Emar texts (those published at least)[1] are in Akkadian and date from the 13th century. They were part of the library of the temple M1, which seems to have been a kind of Pantheon. They were kept in a place of their own in the temple, together with other texts of Mesopotamian learning.[2] The distribution of the divinatory genres is more orthodox than among the Boghazköi texts (15 astrological, 60 other divinatory genres). Here again the omens mostly concern the moon and the sun – only two fragments (nos. 655 and 660) are about stars.

Two tablets[3] seem to be a long and a short version of the same text. They parallel the Hittite-Akkadian bilingual (see p. 45 fn. 6) and perhaps *EAE* tablet 5, of which unfortunately not much more than the colophon is known.[4]

No. 652 is a parallel to *EAE* tablet 21/22. It is written not too meticulously, for instance the month of Addaru appears in the place of Dumuzu (l. 17, according to copy). The text from Qatna (see below) is closely related, their common apodoses for Simanu are not found in the canonical *EAE*. It ends with a passage (80-82) which parallels most closely the Sumerian introduction to the canonical version of *EAE*, see below p. 77:

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1 Arnaud, *Emar VI/4*, nos. 650-665. Apparently, the only divinatory genre translated was *barûtu*, several large tablets and fragments in Hurrian have been excavated, see E. Laroche, 'Documents hittites et hourites' in: *Meskéné - Emar, Dix ans de travaux 1972-1982*, ed. Dominique Beyer, Paris, 1982.

2 Arnaud, "Traditions urbaines et influences sémi-nomades à Emar, à l'âge du bronze récent" in J. Cl. Margueron (ed.), *Le Moyen Euphrate. Zone de contacts et d'échanges* (1989), p. 247 ff, and M. Dietrich, "Die akkadischen Texte der Archive und Bibliotheken von Emar", *UF 22* (1990), p. 25-44.

3 Nos. 650 and 651, concerning the moon's cusps and other lunar phenomena.

4 See Weidner (1941), p. 310.

x *mim-ma an-nu-ú* [ud] an ^{d}en.líl ^{d}*é-a* dingir.meš <<>> gal.[ga]l *ina mil-ki-šu-nu* giš.hur [an-*e u* ki-*ti iš-ku-nu ù* zal]ag.ga *ana na-*[*ma*]*-ri* 30 *ú-ki-in-nu* u_4*-ma ba-na-a* iti *ud-du-šu* [- - - - *ma-g*]*u*$^{?}$*-ur* an-[*e*],

"All this (was decreed) when Anu, Enlil and Ea laid down the design of Heaven and Earth, and set up the moon as a light to behold, to create the day, to renew the month . . . . the celestial boat . . . . . ".

Evidently, the tradition for a mythological postscript to the lunar section of the *EAE* (see below, p. 99f) goes back to the second millennium.

Qatna. A mere fragment,[1] found in much disturbed context dating to the middle of the second millennium, represents the divinatory literature at this site. It is written in Middle Babylonian script and displays many syllabic spellings, among which the West-Semitism *sa-me-e*[2] stands out. For the months Dumuzu and Abu, line 9' onwards, it parallels *EAE* tablet 22 I § IV-V (Rochberg-Halton (1988) p. 256 f), but the traces of the apodoses of Simanu are closer to Emar (no. 652).

Nuzi. SMN 3180, Lacheman (1937), a complete *imgiddû*, is written in the characteristic Nuzi ductus but uses Babylonian month names and logograms seldom if ever found in other Nuzi texts. It contains two sections, both dealing with earthquakes. The first (diš ki *i-na* iti.bár.zag.-gar *i-ru-ub*, etc.) parallels *EAE* tablet 43 (*ACh Adad* 20:35-48) and § 101 of *Iqqur īpuš*, the second (diš *ri-bu i-na* iti.bár.zag.gar *i-ru-ub*, etc.) parallels the earthquake omens of *EAE* 22 part II § I-XVII (see Rochberg-Halton (1988) pp. 262 ff) and *Iqqur īpuš* § 100. Apparently, it is an extract copy – there is no colophon – made from a damaged original (*hi-pí*, lines 19 and 27).

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1 Bottéro (1950) p. 117, AO 12960.

2 Lines 12 and 19. Definitely *sa-*, not sa_5- as claimed by Bottéro and repeated by Rochberg-Halton (1988) p. 32. The spelling *sa-me-e* is well known from the Amarna tablets.

Alalakh. Two large fragmentary tablets, Wiseman, *AT* nos. 451 and 452, are extant (collated on photographs). They are badly written, apparently by the same scribe, and the sign AŠ is often used to indicate abbreviations (e.g., AN.AŠ for an.ta.lù). Both texts deal with eclipses arranged according to month, and according to its colophon, 452 was no. 4 or 5 of a series. They are related to the Qatna text and no. 652 among the Emar texts. A fresh edition might prove useful.

Ugarit. There is one fragment in Ugaritic containing lunar omina, probably lunar eclipses and phenomena around new moon.[1] It is probably a translation rather than indigenous tradition, but too little remains to allow comparisons. Further, there is the famous and often discussed report[2] which may contain the oldest dateable observation of a solar eclipse (May 3rd, 1375? B.C.).[3] The interpretation of the text by Dietrich et al. shows that the eclipse was not treated as an astrological omen to be interpreted according to the astrological omen series, but merely as an evil portent that had to be investigated by liver divination.

Other divinatory genres are slightly better attested at Ugarit. We have 21 liver models, four of them inscribed,[4] and at least one text with what seems to be Ugaritic translations of *Šumma izbu.*[5]

Elam. We have a fragment of a large tablet from Susa,[6] written in Akkadian and of uncertain date, but the many syllabic writings and the

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1 Bordreuil and Caquot, *Syria 57* (1980) p. 352 f, from Ras Ibn Hani.

2 *KTU* 1.78, see Dietrich-Loretz-Sanmartín (1974).

3 This text is treated most recently by T. de Jong and W.H. van Soldt in *JEOL 30*, 1987-88 (appeared 1989), p. 65-77. According to their interpretation of the text, Mars was visible during the eclipse, which excludes the date proposed by D.-L.-S. They suggest instead the date March 5, 1223 B.C. – Walker, *Nature 338* (1989) p. 204 f says that the eclipse can only be tentatively dated.

4 Meyer (1987) p. 217 ff.

5 *KTU* 1.103, 140, 145 (all fragments of the same tablet?), see P. Xella et al., *OA 18* (1979) p. 41-58. An Akkadian fragment (RS 7.001 = AO 18.892), though found almost 60 years ago, is still unpublished. See Xella, *ibid.* p. 41 fn. 6.

6 *MDP 18* 258, edited by Scheil, *RA 14* p. 139-142.

grammar suggest an Old Babylonian date. It contains some logograms peculiar to Akkadian texts from Elam. It is parallel to *EAE* tablet 22 part I § 1-2. Tablet 22 is unlike other tablets of *EAE*, it is more archaic and features some "Elamite" writings – even ones that the Susa fragment does not have (e.g., *3,20* for *šarru*, but the Susa text has lugal). Rochberg-Halton implicitly suggests[1] that the sources for tablet 22 (part I at least) may have come by way of Elam to the Neo-Assyrian redactors of *EAE* since there seem to be no Middle Period (or indeed Old Babylonian) manuscripts from Mesopotamia.

Furthermore, we have a pre-Achemenid meneological text in Elamite.[2] Sections 2 and 3 of the obverse contain a translation of *Iqqur īpuš* § 71-72, which concern lunar eclipses in the first and second watch of the night.

Taken as a whole, the documentation from the peripheral areas shows rather clearly that the *EAE* existed in a fairly developed state in the 14th century and that it was known and studied in Syrian centres (possibly excepting Ugarit). The texts from Emar, Qatna, Alalakh and Nuzi are written in an orthography that differs very little from contemporary Middle Babylonian, while the Hittite texts give the impression of being more old-fashioned. What might be called the "calendrical" section of lunar eclipses seems to have been especially popular, and fragments of this section have been found almost everywhere. They list omens according to month and date (14th, 15th, 16th, 20th and 21st – to this "classical" list of days is added the period from the 21st to the 30th, variously phrased). This is the pattern found in some form in *EAE* tablets 17, 18 and 22. Obviously, they are closely related and often show similar wording, but where enough of them is preserved (and legible) to permit valid comparison, a very muddled picture emerges. For instance, the Hittite *KUB VIII* 1 (+ duplicates) and *Emar VI/4* no. 652, month VI-VIII, follow

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1 (1988) p. 31 and 251-2. Farber (1993) discusses the problem of the origins and dissemination of *EAE* 22.

2 See Scheil, *RA 14* p. 29-59.

alternatively the wording of the canonical tablets 21 and 22, but do not agree with each other.[1]

The First Millennium

The first three centuries of the first millennium are covered by almost total darkness. Texts from Babylonia are scarce, and none of them throws any light on the developments of astrology. And there is as yet no evidence that the Assyrian kings before Sargon II took more than a marginal interest in astrology (see p. 152).

In contrast, the century from the accession of Sargon to the death of Assurbanipal (721-627) is by far the best documented period, at least in Assyria. A unique wealth and diversity of sources allows us to see not only the most developed phase of traditional Mesopotamian astrology but also its practical application in state affairs. The bulk of the sources for Classical Mesopotamian astrology, including the "canonical" versions of *EAE* is found in the Neo-Assyrian royal libraries, together with letters and reports from Assyrian and Babylonian scholars to the Assyrian king. References to astrological omens in the royal inscriptions testify to astrology's importance in decision-making at the highest level, freely acknowledged even in official promulgations. Chapters 3-7 are devoted to a closer analysis of this material.

However, even as traditional astrology reached its zenith, profound changes were taking place that eventually superseded it altogether. As usual, the beginnings of these developments are shrouded in obscurity, and so far we can only get a glimpse of the results, in the astrology of the Persian and Seleucid periods. The basic feature of this "new astrology" is the knowledge that the movements of the celestial bodies can be exactly calculated in advance. Consequently, celestial phenomena could no longer be regarded as willed communications from the gods, and the old idea, that "signs" in heaven correlate with events on Earth, was abandoned.

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[1] See Koch-Westenholz (1993), Appendix.

Instead, the planets and stars came to be seen as meaningful in themselves, imparting their characteristic qualities by their sheer physical presence at decisive moments of an individual's life, notably his birth. The uses of astrology also changed: from being mostly concerned with the welfare of the state, it was increasingly applied to predict the fate of the individual. Mathematics, more than divinatory lore, became the key to the secrets of the stars and the future.

Obviously, the ability to calculate the movements of the planets did not come about as a sudden inspiration or stroke of luck. It presupposes centuries of sustained observation and recording.[1] Especially the moon's orbit is notoriously complicated, and a large body of data are required to predict its movements accurately. We have here what may well be the earliest documented instance of a scientific revolution[2] – generations of scholars patiently collecting and recording data that, under the dominant theory, were unrelated to each other, in the end undermining the theory.

Concomitant with these developments, new concepts were introduced. From the 5th century onwards, if not earlier, the ecliptic was divided into twelve sections of 30° each, giving rise to the zodiac still in use today (see p. 163 ff). Each section might then be further divided into twelve equal parts. The concept of the "houses" of the planets (*ašar* or *bīt niṣirti*, Greek *hypsoma*, "exaltation") is attested already in the 7th century[3] and is used in the late horoscopes. It became an important ingredient in Hellenistic astrology.

Traditional astrology did not disappear overnight. At first, the gains in astronomical knowledge seem to have had little impact on the tradition.[4] The old texts continued to be copied down into the Seleucid period, though it is a moot question whether they were put to practical use by

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1 These records of observations are contained in the "astronomical diaries", the oldest specimens of which date to the seventh century.

2 Cf. T. S. Kuhn, *The Structure of Scientific Revolutions*, Chicago 1962.

3 The earliest evidence for the *ašar niṣirti*, secret place, of the planets are found in an inscription of Esarhaddon and in a contemporary Babylonian star list from Babylon or Sippar (see below p. 134 f, 155, and 157).

4 Rochberg-Halton (1988) p. 41.

anyone after Nabonidus, that confirmed traditionalist.[1] It must however have retained some prestige. Echoes of classical Babylonian omen astrology may be found in Egyptian,[2] Greek, Latin and Indian astrology[3] and even in Aramaic texts of the Byzantine period.[4] The parallels between Babylonian omens and Hellenistic popular astrology pertaining to earthquakes and thunder are striking.[5] Also the remarkably accurate transmission of *Enuma elish* down to about 500 A.D., as recorded by Damaskios,[6] testifies to the tenacity of Babylonian tradition. It is of course impossible to know exactly how and when the Babylonian tradition was transmitted, but is natural to assume that contact was established during the time of the Persian empire.

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1 *YOS 1* 45 i 8 ff. According to both his friends and his enemies, illiterate Nabonidus even claimed to be able to understand the *EAE* better than the scribes who had brought him a copy of the series from Babylon, see Verse Account v 12' ff (S. Smith, *Babylonian Historical Texts* (1924) p. 27 ff) and Lambert, *AfO 22* (1968) p. 1 ff, iii 2–5. See Berger, "Imaginäre Astrologie in spätbabylonischer Propaganda", *Grazer morgenländische Studien 3* (1993) p. 286, cf. also Berger, *AOAT 4/1* p. 388 and the discussion by Machinist and Tadmor, "Heavenly Wisdom", *FS Hallo* (1993), p. 146 ff.

2 R.A. Parker, *A Vienna Demotic Papyrus on Eclipse and Lunar Omina* (1959). Text A deals with eclipses, relating months to countries in the manner known from Babylonian astrology. The system is adapted to the Egyptian political perspective and the countries are: the Hebrew land, Amor, Egypt and Syria. There is apparently also a parallel to the paths of Anu, Enlil and Ea here called Northern: Hebrew Land, Middle: Crete and Southern: Egypt. Text B contains omens pertaining to lunar phenomena, halos?, partial eclipses, and occultations of planets.

3 Pingree (1982), Bezold and Boll (1911).

4 Greenfield and Sokoloff, *JNES 48* (1989) p. 201 ff.

5 Bezold & Boll (1911) p. 45 ff.

6 Damaskios: *Dubitationes et solutiones de primis principiis* § 125. It is evident that Damaskios is not quoting from Berossos – whose book, *Babyloniaka*, he probably did not know any better than we do anyway.

CHAPTER 3

THE NEO-ASSYRIAN PERIOD

The Sources

As already said, the Neo-Assyrian period, especially the time of the Sargonid kings, is the one best documented. From this period stem not only the many copies of the series *Enūma Anu Enlil* and the hemerologies from Assurbanipal's library but also a wealth of correspondence between Assyrian and Babylonian scholars and the kings Esarhaddon and Assurbanipal. The correspondence offers a unique opportunity, not only to see Mesopotamian scholarship in its practical applications, but also to understand some of its rationale: the scholars often try to explain their craft to an interested and important layman, their king and paymaster. Admittedly, these explanations must have been rather different from whatever discussions the scholars may have had among themselves, a subject we would dearly like to know more about.

The correspondence can be divided into two categories: letters and reports. This classification is no modern invention. Reports and letters were distinguished in antiquity physically as well as by contents. The letters were written on vertically oblong, one column, rather slim tablets called *egirtu*; the reports on horizontally oblong and often thick tablets called *u'iltu*. The reports are mostly short and to the point, citing observations and the relevant passages from *EAE* or the hemerologies, etc. They dispense with the introductory formula and greetings and give the name of the writer only at the end in the form "*ša* NN". Their character is illustrated by the phrase used by Balasî in *LAS* 324 r4: *u'iltu šanītu anassaha*, "I shall excerpt another report", i.e, excerpt from the series the pertinent omens. The letters always have the proper introductory phrases, blessings etc. and may deal with many different topics, but it is not uncommon that letters are short and concise like reports and reports talkative like letters. It seems that Assyrian scholars were more prone to using the letter format whereas the Babylonians mostly wrote reports.

Of the letters, only those from the Assyrian scholars can be found in an up-to-date edition: Parpola, *Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal I-II* (1970, 1983). In the following I refer to the Assyrian letters by their numbers in that edition as *LAS* xx. The Babylonian letters are to be found either in Harper, *ABL*, or in *CT 54*.[1] Most of the reports, both Assyrian and Babylonian, were first published by R. Campbell Thompson in *The Reports of the Magicians and Astrologers of Nineveh and Babylon I-II* (1900) (*RMA*). This edition was far from adequate, even by the standards of its time, and many texts were given in transliteration only. A new edition by H. Hunger, mostly in transliteration and translation only, appeared in 1992 as volume 8 in the series *State Archives of Assyria*. Since this work provides innumerable improvements on *RMA*, besides offering some additional material, I refer to the reports according to this edition as *SAA 8* xx.

Many of the letters and reports have been dated by Parpola on the basis of the astronomical data contained in them (see *LAS II* appendices I-J), and in the following, all dates assigned to them are Parpola's. For the chronological distribution of the letters and the reports, see Parpola *SAA 10* p. xxix and Hunger *SAA 8* p. xxii. The bulk of them were written around 670 B.C., toward the end of Esarhaddon's reign.

Most of the surviving text of the series *Enūma Anu Enlil* itself, including commentaries, extraneous material and parts of the hemerologies and *Iqqur īpuš*, was published by Jean Virolleaud in *L'Astrologie Chaldéenne. Le Livre intitulé "enuma (Anu) ^{ilu}Bêl"* (*ACh*). In *ACh*, Virolleaud dubbed the texts dealing with lunar omina "Sin", texts dealing with solar omina "Shamash", planetary omina "Ishtar" and meteorological omina "Adad", and edited them in this order which is not the same as the *EAE*. This terminology is often adapted for convenience in later literature.[2] Joins and parallel texts are scattered throughout other publications. This

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[1] I have been able to make only occasional use of the most recent edition of the letters, Parpola, *Letters from Assyrian and Babylonian Scholars, SAA 10* (1993).

[2] A commentary to *EAE* tablet 39+/- actually refers to combined solar and meteorological omina as (omina) of "Shamash and Adad", *ACh Shamash* 14:13, K 1902-5-10,9 (Meek, *RA 17* p. 193), see Weidner (1968) p. 70.

edition is not very reliable, and Erica Reiner and David Pingree are preparing a new edition (transliterations and part translations only), of which so far two volumes have appeared, *Babylonian Planetary Omens* (*BPO I–II*) 1975, 1981. Francesca Rochberg-Halton has edited the lunar eclipse tablets in *Aspects of Babylonian Celestial Divination: The Lunar Eclipse Tablets of Enūma Anu Enlil. AfO Beiheft 22,* 1988. In *ACh,* Virolleaud followed the then current practice of making composite texts, even to the extent of copying tablets written in Babylonian and Assyrian ductus as if they were one. This of course clouds the true structure of *EAE* and is very inconvenient if one wishes to trace any evolution or divergences between possibly different traditions. Weidner[1] tried to organize what survives of the series, an attempt he unfortunately did not finish, ending with tablet 50 (+/– x). The *Iqqur īpuš* is edited by R. Labat, also in composite form, in *Un calendrier babylonien des travaux, des signes et des mois (séries iqqur îpuš),* Paris 1965 (Labat, *Iqqur îpuš*). One of the astrologers' most important "reference books", the astronomical compendium *Mul.Apin,* which also contains some omina, has appeared in an up-to-date edition by Hunger and Pingree in *MUL.APIN. An Astronomical Compendium in Cuneiform. AfO Beiheft 24,* 1989. For the convenience of the reader, I offer in Appendix B a transliteration and translation of another reference book: the astrological compendium known as *The Great Star List.* The text is based on published material alone.

Dramatis Personae

In the following I will refer to scholars writing primarily on astrological topics as astrologers. Only one scholar, Šumaja, calls himself by the specific title *ṭupšar enūma Anu Enlil,* "scribe of *EAE*" (*SAA 8* 499). One, Ištar-šum-ereš, is Chief Scribe (*rab ṭupšarri*), and is listed as the first of the scribes of *EAE* in *ADD* 851 (= *SAA 7* 1), and Akkullanu is a priest of

[1] Weidner (1941-68).

Assur.[1] For the rest their titles are unknown. Experts in other fields, e.g. the cantor Urad-Ea[2] (*SAA 8* 181-183), or Bel-le'i the exorcist (*SAA 8* 461), may also send occasional astrological observations, and exorcists were familiar with the hemerologies.[3] The astrologers were versed in all the other fields of unprovoked divination as well.[4] Presumably they were all educated in *tupšarrūtu* and only specialized as the need arose, like Adad-šum-uṣur who started his career as a scribe and ended as the personal exorcist of Esarhaddon,[5] returning to astrology only when "out of work" at the accession of Assurbanipal.

The king seems to have taken an active interest in the education of his scholars. In *ABL* 954, the Babylonian author informs the king that "the apprentices whom the king, my lord, entrusted to me have now learned *EAE*". In the letter *LAS* 116, unfortunately fragmentary, Marduk-šum-uṣur, Naṣiru and Tabnî petition the king to authorize a change in the curriculum of apprentice scribes. The change aimed at a more job-oriented training by substituting two tablets of explanatory word lists with two tablets of extispicy! The general character of their education is illustrated by the lists of acquisitions to libraries in Nineveh[6] which throw light on private libraries. Where the names and titles of the donators are preserved, we see that not one of the tablets they give is in their own field of specialization. For example, the exorcist Arrabu from Nippur gives three tablets and five one-column tablets of *EAE*, two of lamentations, three of *The Dreambook*, in all 125 tablets. The Middle Assyrian library dubbed M2 by Olof Pedersén[7] also illustrates the broad interests of scribes. M2 might well have been the private library of the family of those

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1 See *LAS II* p. XV-XVI, cf. also *SAA 8* 112.

2 *ADD* 857 = *SAA 7* 5 i 51.

3 *LAS* 166 r5 ff: "one of the very first things I learned (*kī ša ṣehrūtemma iqbûne*, lit. "they told me as something for the very young ones") is: 'In *Enbu bēl arhi* ("The Fruit, Lord of the month", the royal hemerology) it is recorded as a favourable day'".

4 For instance, Balasî (*LAS* 39), consulted on *Šumma izbu*, promised to make and send a copy of the relevant tablet to the king and offered to come and explain it himself.

5 See *LAS II* p. XV ff.

6 Parpola (1983a) and *SAA 7* nos. 49-56.

7 Pedersén (1985) p. 31 ff.

ṭupšarru's who wrote many of the lexical lists and bilingual texts characteristic of this library, including "Astrolabe B". But even if they did not copy them themselves, they at least collected the textbooks of other specialists, for instance the diviner. The learned Nabû-zuqup-kenu copied extispicy along with the many astrological works for which he is famous.[1] In a letter to the king, Marduk-šapik-zeri describes a Babylonian scholar, Kudurru, as accomplished in the art of extispicy and familiar also with the *Enūma Anu Enlil*.[2] Oppenheim[3] suggests that this versatility should prevent us from calling them "astrologers" at all – that "they are simply experts in all those fields of divination which are outside extispicy", i.e. in non-provoked omens; but astrology actually seems to have been their main concern.

Even if specialization in one of the fields (provoked vs. unprovoked divination) did not exclude knowledge of the other, the two fields of divination were simply too large for one person to master. Apart from that, practitioners of the two fields of divination were undoubtedly clannish. According to *BBR* 24:19 ff (see Lambert (1967) p. 132) a diviner should be of ancient pedigree (*zēru dārû*), offspring of Enmeduranki, and he had to satisfy some requirements of a cultic nature: be perfect in body and limbs.

Both astrology and extispicy flourished in the Sargonid period, and the two branches of divination supplemented each other. By its very nature, extispicy gave the kind of information that could not be obtained by astrology. It offered the means to corroborate and clarify other omens and could provide answers to specific questions. Nevertheless astrologers were probably the more highly esteemed diviners. In a list of scholars attached to the court, dated 650 B.C., the names of seven scribes of *EAE* are listed before nine exorcists and five haruspices.[4]

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[1] See Hunger, *Kolophone* no. 297 (lung compendia) and 294, also *CT 41* 12 (behaviour of the sacrificial lamb), for a survey of the scope of Nabû-zuqup-kenu, see Lieberman, *HUCA 58* p. 204 ff.

[2] *barûti ile'e iškar Enūma Anu Enlil iltasi* (*CT 54* 57 r15-16).

[3] Oppenheim (1969) p. 97 and 99.

[4] *SAA 7* 1 (= *ADD* 851) = *LAS II* Appendix N, 26.

The astrologers, and other scholars, sending letters and reports to the king, can be divided into two groups. The first group are those who, by the amount and character of their correspondence, appear to belong to an "inner circle"[1] mostly residing in Nineveh but not actually at court, as references to invitations or summons to visit the king[2] – and indeed the necessity of written communication itself – seem to imply. But it was probably a privilege of the inner circle to attend audiences regularly,[3] and some of the astrologers seem to have visited the king fairly often to explain or amplify their written observations and interpretations.[4] The second group consists of scholars less favoured[5] and those who were stationed around the empire in Assyria and Babylonia to corroborate observations.

The reports and letters were probably read to the king by scribes with a lower training, clerks attached to the court, like the ones, both eunuchs and men, who are depicted in the Assyrian reliefs from the reign of Tiglath-Pileser on, and who never seem to hold superior rank.[6] Balasî, for one, had no illusions about the abilities of these court scribes: "Maybe the scribe who reads to the king did not understand. *Šumma izbu* is difficult!" (*LAS* 39:15 ff). This would also explain the king's rather frequent misunderstandings of passages in letters and reports. Munnabitu voiced similar doubts, cf. *SAA 8* 316: "I did not personally give the king, my

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1 As described by Parpola, *LAS II* p. XIV ff.

2 See *LAS II* p. XX and cf., e.g., *LAS* 349, from Nabû-ahhe-eriba, l. 12: "As to the king's writing to me: visit me (*ina pānīja erba*) on the first day I am not occupied".

3 Called *ina pān* (*šarri*) *uzuzzu*, e.g., *LAS* 122 r16. A scholar not employed by the king needed somebody to "take him by the hand and lead him into the presence of the king" (Parpola (1987) p. 262 r15), and that was probably not a service rendered for free.

4 Nabû-nadin-šumi quotes Balasî's suggestion that the two of them should have an audience with the king to explain further a certain ritual (*LAS* 205). Balasî himself offers to come and explain how to read a passage in *Šumma izbu* (*LAS* 39). *SAA 8* 338, from Ašaridu: "The lord of kings may say: 'what do you mean? the month is not over, and yet you have sent me good and evil (omens)?' *tupšarrūtu* can not be discussed in the market-place! May the lord of kings summon me on a day that suits him, so that I can explain to the king, my lord."

5 In *SAA 8* 157, Nabu-mušeṣi, not a member of the inner circle, has to ask for a passnote so he may enter the centre of Nineveh unhindered and supervise scribal work.

6 Cf. Reade (1972) p. 96 f.

lord, an account of the eclipse; instead I have now sent a written document to the king, my lord," and r14 ff: "I have sent good news to the king my lord, they should read it two or three times before the king." Many reports and letters are provided with dividing lines between paragraphs, and some even have word dividers and explanatory glosses. Oppenheim[1] thinks these were only meant for the scribes who read the reports aloud to the king, since Esarhaddon never even claims to be literate. But Esarhaddon probably was not altogether illiterate. The exorcist Marduk-šakin-šumi seems to flatter the king in *LAS* 198, saying that the scribe Kenî would envy the king's god-given talent for calligraphy.[2] Anyhow, we know that many of the letters and reports were written to Assurbanipal who may also have taken some interest in them as a crown prince, so it is at least possible that some of the glosses were made for his benefit. This is also supported by the fact that some of these glosses in reports written during his reign by scholars of the inner circle are so elementary that a professional scribe hardly would have needed them, for instance *SAA 8* 65:2 (Nabû-ahhe-eriba): ka un.meš : *pi-i ni-ši* – in one of the most common apodoses, at that.

It seems that at least Esarhaddon had a special routine for receiving reports, but perhaps it only applied to reports concerning eclipses due to their special significance. The procedure is described in the letter *LAS* 60:7-r10, from Nabû-ahhe-eriba to Assurbanipal:

> Regarding the report on the lunar eclipse about which the king my lord wrote to me: They used to receive and introduce all reports from astrologers into the presence of the father of the king my lord. Afterwards, on the river bank, a scholar whom the king, my lord,

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1 Oppenheim (1969) p. 119.

2 *LAS* 198 r4-9: *ina* ugu *šá-ṭa-a-ri ša* lugal *be-lí-já* ^{I}gin-*i ki-ma e-ta-mar ina mar-te i-mu-at* ^{d}en* *u* ^{d}pa šu.II sig_5 *a-na* lugal *is-sak-nu* "Concerning the writing of the King, my lord, Kēnî will die of envy when he sees it! Bēl and Nabû have given the king a beautiful handwriting." This might of course be understood as sarcasm, as suggested by Parpola, *LAS II* sub *LAS* 198 r8, but I find that difficult to believe. See *LAS II* sub *LAS* 198 r4 for further references to Esarhaddon's literacy.

knew would read them to the king in the *qersu* (a sacred area). Nowadays it should be done as it suits the king, my lord [. . . .]

Many of the authors of the reports, and to a lesser degree of the letters, were Babylonian – and some of these were probably resident in the capital, cf. *LAS* 4: Ištar-šum-ereš quotes the king's request that he consult Bel-naṣer and other Babylonians whom he knows. The Babylonians Bel-ušezib and Munnabitu might be among them, to judge from the passage quoted above and from the general character of their letters and reports which contain many direct communications to the king. These two might even have belonged to the inner circle, which otherwise consisted of Assyrians: Ištar-šum-ereš, chief scribe and *ummânu* of both Esarhaddon and Assurbanipal; Balasî, *ummânu* of Assurbanipal as crown prince; Nabû-ahhe-eriba, close associate of Balasî; Adad-šum-uṣur, personal exorcist of Esarhaddon; Akkullānu, astrologer and priest of Assur; Mar-Ištar, Esarhaddon's "special envoy" in Babylonia, whose duties included reporting astrological observations and their interpretations from Babylonia (*LAS* 278) – even if he did not make the observations himself. The *ummânu* of a king was important enough to be mentioned with him in lists of Assyrian and Babylonian kings, dating to ca. 640 B.C. The tradition of listing kings with their *ummânu*'s is attested also in a list from Seleucid Uruk, of a more fictional character, of antediluvian kings with their *apkallu*'s and historical kings with *ummânu*'s.[1]

Not surprisingly, the inner circle was a family affair – members of a few families jockeying for positions, and with scholarly traditions that could go back at least 250 years. For example, Ištar-šum-ereš was the grandson of the famous Nabû-zuqup-kenu whose own grandfather, Gabbi-ilani-ereš, was chief scribe of Assurnaṣirpal II.[2] They would obviously pass their learning on to their descendants. For instance Nabû-zuqup-kenu copied a part of the explanatory series, *i.NAM.giš.hur.an.ki.a*, for his grandson Ištar-šum-ereš, stating in the colophon that this was a strain to his eyes –

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1 Both texts quoted in *LAS II* appendix N,1. See further *RLA 6* (1980) pp. 87-135 sub King List 12, 14, 15 and 17.

2 See the stemma of the family of Gabbi-ilani-ereš *LAS II* p. XIX.

no wonder: when he wrote it in the 22nd year of Sennacherib, he must have been well over 70.[1] This did not imply that a son automatically inherited his father's place, nor could a scholar be certain of the same position with the new king as he enjoyed under his predecessor. This situation is illustrated by the fate of Adad-šum-uṣur who lacked "protektzia" and was afraid of slanderers,[2] but regained the position he had held under Esarhaddon and tried to secure the future of his son Urad-Gula by direct appeal to Assurbanipal.[3] It must have led to intense competition among eligible young scholars and encouraged interdisciplinary studies, as evidenced by the careers and correspondence of Urad-Gula, who was exorcist and physician but also made astrological observations (*LAS* 120), and Adad-šum-uṣur.

The astrologers of the inner circle were probably paid in the same way as we hear of the chief haruspex Marduk-šum-uṣur in *LAS* 114, who had been given a field of 20 acres and a farmer to tend it. In the petition *ABL* 1285, reedited by Parpola (1987), Urad-Gula describes the rise and fall of his fortunes and gives us some information of the payment of scholars. When employed as exorcist by Esarhaddon he received a mule or an ox and two minas of silver a year, and he shared in the leftovers from Aššur's table (l. 17 with commentary p. 275). He refers to the fact (l. 31 ff) that impoverished scholars (reading *ummâni lapnūti*) and their assistants receive mules and oxen, and that they get three or four of [some kind of provisions] two or three times a month, even an apprentice gets a sheep. But, according to a palace official, even the Chief Scribe's financial status

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1 Livingstone (1986) p. 28, also *LAS II* p. 451.

2 *LAS* 120 r1 ff: "Nobody has reminded (the king) about Urad-Gula, the servant of the king, my lord. He is dying of a broken heart and falling out of the hands of the king, my lord, shattered." *LAS* 121 r14 ff: "None of those who stay in the palace love me, I have no benefactor among them, to whom I could give a present, who would accept it and intercede for me".

3 *LAS* 125, Adad-šum-uṣur citing Assurbanipal: "I heard from my father that you were a reliable family, and now I have seen so myself." But the king's grace only extended to Adad-šum-uṣur himself and his nephews and cousins (*LAS* 122) and left his son destitute. Petitions are actually rare in the *LAS* corpus, see *LAS II* Appendix P,1.7; in the reports even rarer. Cf. also *LAS* 36, from Balasî who, harrassed by the chief cupbearer, turns to the king for help.

was not one to be envied: "the house of the Chief Scribe is miserable, a donkey wouldn't go in there!" (*CT 53* 14:9 f). The poverty of the most learned of scholars, if the Chief Scribe is the same as the *ummânu* of the king,[1] was proverbial.

The scholars were totally dependent for their positions and livelihood on the goodwill of the king, and this might lead to "humbleness and servile fear towards the monarch, and arrogance, hatred and contempt towards colleagues".[2] The Aramaic story of Ahiqar[3] gives a dramatic illustration of this milieu and could very well spring from this period – even if it may not be actual historical truth. Ahiqar is identified in the Seleucid king-list mentioned above (see p. 61) as the Aramaic name of a certain Aba-Enlil-dari, said to be the *ummânu* of Esarhaddon. In the Ahiqar story he is said to have worked for Sennacherib; and Esarhaddon, incited by Ahiqar's treacherous stepson who says that a wise scribe is dangerous, orders his death. Ahiqar is saved by the officer, Nabûsumiskun, sent to kill him, whom he had sheltered when *he* was in a similar predicament. Later the king regrets, and Ahiqar is reinstated.

The letters and reports certainly abound with flatteries such as comparing the king to the sage Adapa[4] or even to Marduk,[5] and the scholars often express their devotion and dependency in exclamations like "Who is my god, who is my lord? To whom should I be devoted but to the king, my lord!"[6] But the relationship between the scholars and the king and that of the scholars with one another was surely not as simple as that. Old and trusted servants – this is how the scholars refer to themselves, and indeed the best description of their relationship with the king[7] – seem to have enjoyed a certain license with the king. Balasî and Nabû-ahhe-eriba seem to show genuine concern for Esarhaddon's health

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1 Parpola (1987) p. 257.

2 *LAS II* p. XVIII.

3 Translation *ANET* p. 427 ff.

4 *LAS* 229, to Esarhaddon; *LAS* 117, to Assurbanipal.

5 *SAA 8* 333 (Ašaridu senior); *LAS* 125 (Adad-šum-uṣur, to Assurbanipal).

6 *SAA 8* 517 r6, from a Babylonian scholar, no name given.

7 See also *LAS II* p. XX.

in letters like *LAS* 51 and 143 where they try to persuade the king to stop fasting because it is unhealthy for him in his weak condition – the more remarkable as both men are astrologers. Of course, this appeal, like all the letters, is couched in the most polite terms. In *LAS* 38 (April 670), Balasî allows himself a little editing[1] of the relevant passages of *Šumma ālu* in the interpretation of a stroke of lightning in a field in Harihumba, about which Esarhaddon had inquired. He obviously deems the event irrelevant to the king and says so rather outspokenly: "Why does the king look (for evil), why does he look for it in the home of a peasant (*qatinnu*)? There is no evil in the palace, and when did the king ever visit Harihumba? Only if there is something wrong in the palace should the ritual "Evil of Lightning" be performed." Or *LAS* 35, also Balasî: "Was there no earthquakes in the time of the king's fathers and grandfathers? Did I not see earthquakes when I was young? The god wanted to open the ears of the king. He should pray, perform the *namburbû* and be on the alert".

The king might check observations and interpretations sent to him by one scholar with another. For instance, *LAS* 12 is the answer by Ištar-šum-ereš to an inquiry by Esarhaddon about an observation made by one of his colleagues (1-*en ina* ^{lú}*ki-na-ta-ti-ku-nu*). Ištar-šum-ereš rejects it, quoting the proverb "the unskilled frustrates the judge, the unlearned makes the mighty worry". Esarhaddon, having mistaken an omen quoted in this letter by Ištar-šum-ereš as an illustration for a real observation, then writes to Balasî and Nabû-ahhe-eriba in their turn to confirm this new supposed observation (*LAS* 65 and 66), still not giving the name of its author. Nabû-ahhe-eriba refutes the impossible observation in no uncertain terms, heaps insults and accusations on the unknown colleague and asks to be told who it is. Finally we hear from Balasî (*SAA 8* 83) that Ištar-šum-ereš and Nabû-ahhe-eriba quarrelled, then went to make observations and became satisfied – and presumably made peace!

The very knowledge that the king might thus check their statements – even if it was only to get a "second opinion" – must have prevented the

[1] Leaving out an apodosis or two, see *LAS II* sub *LAS* 38.

scholars from manipulating the evidence. The common idea of Machiavel lian "priests" stage-managing politics[1] is hardly true.

The relationship of the scholars with one another was also not quite so bleak as has been supposed. Practically all the examples cited by Oppenheim[2] of scholars discrediting their colleagues could very well be interpreted to have just the opposite meaning.[3] This hinges in two cases on the word *issurri* which Oppenheim here translates "Heaven forbid" but which actually means "surely", for instance the passage in a letter from Mar-Ištar (*LAS* 279:19ff): *i-su-ri* ^{lú}*um-ma-ni ina* ugu kur mar.tu *me-me-e-ni a-na* man en-*já i-qa-bi-i-u* kur *a-mur-ru-u* kur *ha-at-tu-u* . . . which Oppenheim reads: "Heaven forbid that some scholar (*ummânu*) should tell the king, my lord, something (wrong) about (the meaning of an eclipse which predicted the death of the king of) Amurru; Amurru is Hatti-land . . ." – the most important parts of his interpretation are actually in the brackets! The passage merely says: "Surely any one of the scholars can tell the king, my lord, about Amurru; "Amurru" means Syria . . .". Scholars might indeed refer the king to one of their colleagues, as Balasî does in *LAS* 40, where he tells the king that Akkullanu will read and explain the report on a lunar eclipse to the king.

Apparently, Esarhaddon was particularly eager to know about any ominous events[4] and for instance asks Balasî (*LAS* 41): "There must be something you have observed in the sky!", having asked earlier about the possibility of a solar eclipse. Balasî assures him that he has seen nothing untoward and therefore has not written. The Babylonian Munnabitu, also writing to Esarhaddon, sees his duty differently (*SAA 8* 316 r12 ff): "The

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1 This seems to be a very tenacious notion. Cf. Oppenheim (1969) p. 120: "it appears that the practitioners of our "discipline" exercised a remarkable influence on royal decisions", followed by Lieberman (1990) p. 326 f.

2 Oppenheim (1969) p. 118.

3 Or not be intended as discrediting. In *SAA 8* 101, Akullanu writes: "Of course, someone may write to the king my lord . . . (two evil omens) . . . these omens are false, the king should not take them to heart!" In my opinion he only wants to stress that the two omens in question do not apply in the specific celestial circumstances.

4 This may be due to his severe illness, which Parpola *LAS II* sub *LAS* 246 proposes to diagnose as Lupus erythematosus, or at least some sort of rheumatoid disease.

king gave me the order: 'keep my watch and report anything that you know'. Now I have reported to the king everything that appears to me to be auspicious and that the safety of the land[1] with regard to the king my lord is good". His Babylonian compatriot Zakir again is perhaps a little overzealous, conscientiously sending a report (*SAA 8* 307) with an omen of Scorpio and the moon explaining that "the omen is irrelevant (*ittum ul talappat*); but I reported it due to the watch of the king". But all the Sargonid kings presumably demanded to be given exact information in these matters, and it was considered subversive *not* to report. In a letter from Šamaš-šum-ukin[2] (see also below), we hear about three diviners (a haruspex and two astrologers) who do not communicate the results of their divinatory investigations. The two astrologers watch the sky day and night but do not report anything about the king and the crown prince and have joined cause with the rebels!

The king might write to ask the scholars to explain themselves better[3] or even question their observations, as the scholars were well aware. For instance, Nabû-iqiša (*SAA 8* 293) anticipates objections from the king and explains how he knows that the full moon occurred on the 14th even though the sky was overcast.[4] In *LAS* 14, Ishtar-šum-ereš safeguards against any suspicions the king may nurse against his observation. He suggests that the king get a eunuch with good eyesight to watch the moon if he does not believe what Ištar-šum-ereš reports. The Babylonian exorcist Bel-le'i names a gatekeeper as witness to his observation of an unnamed planet in Taurus, apparently a very ill-portending omen (*SAA 8* 459). In the letter *ABL* 1216[5], probably dating from the time of the accession of Esarhaddon (680 B.C.), it is said that the *ummânu* of Sennacherib secretly

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1 Reading *šá-lam* ⌈kur⌉ for Hunger's *šá-lam x*, collated.

2 Parpola (1972) p. 22.

3 Cf. one of the rare letters from the king (to Urad-Gula), *LAS* 226:11 f, šub-*ti* an-*e mi-i-nu šu-u ka-a-a-*[*ma-n*]*u* an-*e i-ba-ši* [- - -], 'Fall of the sky' – what is this? The sky exists forever!" The expression *miqitti šamê* probably refers to a comet. Also *LAS* 12:8 ff, Ištar-šum-ereš: "As regards the planet Venus, about which the king wrote to me: 'When will you tell me what 'Venus is stable in the morning' means?'"

4 Cf. *SAA 8* 21, Ištar-šum-ereš.

5 Cited *LAS II* sub *LAS* 41.

arranged with the scribes and haruspices that if an evil sign (*ittu lā banīti*) appeared, they should say that an obscure sign (*ittu ešīti*) had appeared. When the *alû*-disease came the king smelt a rat and blamed the scholars for not warning him. Since then they reported everything and "was not the king, your father, fully alive and did he not exercise kingship?" It was important to the scholars to stress that the king could trust them to inform him of good as well as bad omens,[1] and they frequently anticipated royal questions.

In my opinion, the king did not feel a "latent scepticism towards divination".[2] His many inquiries about particular observations and their correct interpretaion indicate rather the opposite. If the king felt any scepticism it was towards his experts. In a literary text called "The Sin of Sargon",[3] Sennacherib relates how he gathered his diviners to investigate the reason why his father had been slain in battle and why the body was never found. He explains how he let them inspect the same liver in groups of three and four, so that they could not discuss the matter with each other. The diviners all came up with the same answer, which surprisingly confirmed Sennacherib's suspicions – that Sargon had sinned by placing the Assyrian gods above the Babylonian. He advises later kings to follow the same procedure. That diviners might indeed manipulate the divinatory process is illustrated in the letter *SAA 10* 179. The exiled *barû* Kudurru reports how he was abducted by the chief cupbearer and other conspirators. They coerced him into performing lecanomancy to predict that the chief eunuch would become king. Now he swears that the divination was nothing but "sound and fury signifying nothing" (*šāru mehû*).

The king had luxury editions of *Enūma Anu Enlil*. One king at least[4] had both one in Babylonian and one in Assyrian characters, written on ivory writing-boards, joined together to form a polyptych, available in the

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1 E.g. the exorcist Marduk-šakin-šumi, *LAS* 199.

2 As suggested by Oppenheim (1969) p. 120 and (1977) p. 226 ff.

3 *SAA 3* no. 33.

4 Assurbanipal? See *LAS* 319 = *SAA 8* 19 (Ištar-šum-ereš). The copy mentioned here was written by him and presumably Balasî.

palace so that he might easily check references, or get his scribes to do it. In the letters, Assurbanipal is often encouraged to take a look for himself in the series. In the unfortunately rather fragmentary letter *LAS* 331 (revised text *LAS II* p. 513, no name), the king is invited to check passages in extraneous tablets and in tablets written in both Assyrian and Akkadian, i.e. Babylonian, ductus. Urad-Gula attempts to flatter Assurbanipal's vanity by referring obliquely to the king's knowledge of *EAE* (Parpola (1987) p. 264 r26 f). Sometimes tablets of *EAE* would be written especially for this purpose, as mentioned for example in *LAS* 319 (= *SAA 8* 19) by Ištar-šum-ereš. The omen quoted in this report is the very common one of full moon occurring on the 14th. Tablets with a specific theme may be extracted for the king's reading, such as the "tablet of the moon's halo" which Nabû-ahhe-eriba says he will send to the king (*LAS* 62), and *SAA 8* 535, a collection of omina pertaining to a lunar eclipse on Simanu 15.

Beside the scholars of the inner circle were the scholars less favoured and the ones situated around the realm in Assyria and Babylonia, even if we can not simply assume that all the reports written in Babylonian ductus actually came from Babylonia. I see no reason why the Assyrian king should not have imported Babylonian scholars,[1] just as he imported their tablets. Some Babylonian scholars introduced themselves and offered their services, as Marduk-šapik-zeri in *CT 54* 106:8 ff: "let me keep the watch of the stars of the sky and let me write to the lord of kings, my lord, when I have observed a sign". Others were recruited: Marduk-šapik-zeri sent, seemingly on request, two lists of Babylonian scholars "suitable for the king" (*CT 54* 57 and 106). The king certainly got reports from Babylonia. He might check the validity of these observations with his "inner circle", e.g. *LAS* 53 where Balasî answers the king's question about the possibility of the appearance of Mercury, which the king has heard

[1] At least Babylonian scribes seem to have been brought to Nineveh as political hostages or to learn the Assyrian way of life. Cf. *ABL* 447 (= *LAS II* app. N, 28), a memorandum on scribes working on texts for the library at Nineveh. Some of these scribes are certainly Babylonian, for example a certain Ninurta-gimilli, of whom we hear that he has completed the series on which he was working and has been put in fetters! The fragment *SAA 3* 49:2 mentions a scribe from Borsippa living in Assur and Arbela.

can be seen in Babylon. Mar-Ištar (the king's envoy in Babylonia) was ordered to observe a lunar eclipse and reported (*LAS* 278) that it was observed in Akkad,[1] Borsippa and Nippur. In the letter *RMA* 274 (= *ABL* 895):5 ff, Bel-ušezib writes: "Now there were clouds everywhere; we do not know whether the eclipse took place or not. The lord of kings should write to Assur and all other cities, to Babylon, Nippur, Uruk and Borsippa, perhaps it was observed in those cities." This suggests that the king did not automatically receive reports from cities in Babylonia. Many Babylonian scholars would report to the king's deputy in Babylonia, and during the reign of Šamaš-šum-ukin it is reasonable to suppose that some would report to him.[2]

Nevertheless, the king did receive reports from many Babylonian scholars, some of which can be located. Some Babylonian scholars describe themselves as "*mār* GN", i.e. as citizen of a certain city. Oppenheim[3] takes this to mean that the writer is also actually located in that city when writing to the king, and this seems quite probable – at least I have found no instance where it could be shown to be otherwise. Three such astrologers are known from Borsippa: Aplâ, Nabû-iqiša and Šapiku. The dateable reports of these scholars[4] suggest that they might have succeeded one another. Then there are Nabû-iqbi from Kutha,[5] Ahhešâ from Uruk, and Nabû-ahhe-iddina from Dilbat. No one identifies himself as *mār babili*, but from the contents of their letters and reports, some can be located to Babylon. In *SAA 8* 463, Bel-naṣir refers to a haruspex from Babylon and may therefore himself be in Babylon. Ṭab-ṣilli-Marduk calls

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1 Akkad may be an alias for Babylon, as argued by Landsberger, but it is also possible that Mar-Ištar actually was at the site of Akkad to supervise the reconstruction of Eulmaš; Akkad was certainly not an observatory and Mar-Ištar would only mention it because he had seen the eclipse there himself. See *LAS II* sub *LAS* 275.

2 Cf. the letter Šamaš-šum-ukin wrote to tell about two astrologers, Šamaš-zer-iqiša and Bel-eṭer, who treacherously stopped reporting and joined cause with the people who shipped Aššur-nadin-šumi off to Elam. No reports have been found from either of these astrologers at Niniveh. See Parpola (1972).

3 (1969) p. 101.

4 Nabû-iqiša *SAA 8* 289 (678 B.C.), and *SAA 8* 288 (679 B.C.); Aplâ *SAA 8* 363 (673 B.C.), and *SAA 8* 357 (675 B.C.); Šapiku *SAA 8* 491 (669 B.C.)

5 And Ašaridu, see *CT 54*, 538.

himself nephew of Bel-naṣir (*SAA 8* 447) and son of Bel-upahhir (*SAA 8* 445, 448). Bel-upahhir refers to orders from the king which he received in Kar-Mulissu (*SAA 8* 472). This seems like a family of scholars from Babylon, as pointed out by Oppenheim,[1] all faithful to the Assyrian king. Ṭab-ṣilli-Marduk may be identified with a certain Ṭabija, the writer of eight reports and co-author with Zakir of the report *SAA 8* 213; this Zakir must have been in Babylon because he writes not only on astrological matters but on political developments in Babylon as well. He also complains to the king about the persecution he endured from the rebellious Ṣillaja (*ABL* 702, written in 679 B.C., and *ABL* 416, of later date)[2] – we actually posses an answer from Esarhaddon (*ABL* 1256) stating that he will take care of the affair for him. But in 671 B.C., he must have moved to somewhere in the south, his fortunes still not too good. He writes in the letter *ABL* 137 which deals with the lunar eclipse of Dec. 27/28 671 B.C.[3] that "from the shore of the sea I lift my hands beseechingly to the king, my lord . . . . may Marduk and Zarpanitu intercede for me with the king, my lord."

Another Babylonian astrologer writing often on political matters is Bel-ušezib, who was in Nineveh[4] and not in Sippar as suggested by Oppenheim.[5] It is indeed strange that no scholar is known for certain to be located in Sippar since that city traditionally was one of the centres of Babylonian learning. There does not seem to be any political reasons – perhaps the astrologers there reported to Babylon?

I do not think that the astrologers in Babylonia reporting to the king were part of an organized network of observers – as seems to have been the case in Assyria (see below). The Babylonian astrologers write on all topics of astrology and quote *EAE* to their hearts' content, just as the members of the "inner circle". But when the king wanted to make sure

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1 Oppenheim (1969) p. 103.

2 Dietrich (1970) p. 40 and 42.

3 See *LAS II* sub *LAS* 279.

4 Fales and Lanfranchi, "ABL 1237: The Role of the Cimmerians in a Letter to Esarhaddon", *East and West N.S. 131* (1981).

5 (1969) p. 105.

getting observations from Babylonia, he would write to his agent Mar-Ištar. And perhaps others as well: *ABL* 1113 (no name) was written in answer to a question from the king: "Mars was seen, why didn't you write?". The scholars (and astrology) in Babylonia existed independently of what king or dynasty might reign, their relationship with the king was opportunistic. They expected, and often got, financial help (servants, *SAA 8* 456, 528; a share in the booty from Egypt, *SAA 8* 418; an occasional donkey, *SAA 8* 244 r7: "let them give me a donkey, so that I can rest my feet") and medical (*SAA 8* 463) and juridical assistance (Zakir, *ABL* 416 = *SAA 8* 309).[1] Nabu-iqiša from Borsippa (*SAA 8* 296) complains that he and his brothers were forced to do corvee-work, when they had been freed to keep the "watch of the king". We have more petitions from Babylonian than from Assyrian scholars – which might be taken to indicate a less stabilized relationship with the king than that of their Assyrian colleagues.

The Assyrian scholars tend to be those most worried – most prone to looking at the sinister side. One example among many is the reports *SAA 8* 100 (Akkullanu, Assyrian) and *SAA 8* 438 (Ṭabija, Babylonian). Both deal with the occultation of Jupiter by the moon[2], but while Akkullanu's report mostly predicts evil, Ṭabija's is all optimism, he omits one of the clearly relevant omens cited by Akullanu and edits away the word Subartu in another.

There were several observatories in Assyria as well, as we hear in *LAS* 323, probably from Ištar-šum-ereš: "[There were] clouds. We did not [see] the moon here, just because of the clouds. The king, my lord, should send messengers to Assur and Arbela [and Kalhu/Kalizi] to go and [to inform] quickly the king, my lord. [. . . . . .] from Kalhu".[3] I believe

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[1] With some exceptions, it seems! Cf. e.g. Ṭabija, *SAA 8* 442:3 ff.: "The king of the quarters my lord does not relieve me, daily I beg the king for sustenance, and now he has assigned me to the bricks, saying: 'make bricks!' May the king my lord not abandon me, and may I not die!"

[2] They refer to two different but close occurences: *SAA 8* 100, dated April 27, 676, and *SAA 8* 438, March 31, 676, see Hunger and Parpola (1983-84).

[3] The fact that Ištar-šum-ereš refers only to Assyrian cities, and Bel-ušezib in a similar situation (see above) to Babylonian cities, except for Assur, surely reflects the nationality and location of the writers. Parpola (*LAS II* sub *LAS* 323) assumes that the Babylonian

Ištar-šum-ereš only wanted to get the information as fast as possible – not that the king would not hear about observations made in these cities otherwise. In various Assyrian cities, teams of scribes seem to have been ordered to keep the watch of the king and report to him. *LAS* 93-99 and 352 (*LAS II* p. 252) are letters from Ištar-nadin-apli, foreman of the "collegium of ten" (scribes) of Arbela (lú.gal 10-*te šá* uru.*arba-ìl*). He reports on the appearance of the moon and the sun, conjunctions, oppositions and eclipses, often with date, never with an attempt at interpretation or citations from the scriptures. We even have three similar letters from Nabû-šum-iddina, foreman of the collegium of ten from Nineveh (*LAS* 77-79). There are two letters from the scribes of Kalizi writing collectively (*LAS* 85 and 86) merely reporting their observation of the full moon with a short version of the relevant apodosis. They also complain about not being able to keep the watch of the king and teaching their students because of corvee-work (*ilku* and *tupšikku*). We have 17 reports (*SAA 8* 126-142) and 6 letters from Nabûa of Assur, who was probably the foreman of the Assur team. One letter is particularly interesting because it mentions the mandate of the team (*LAS* 87:6): "Concerning the watch about which the king, my lord, wrote to me, we shall keep and we shall write." All the letters and reports are very short and report only equinoxes and oppositions and conjunctions of the moon and the sun, never quoting an apodosis. We have two letters (*LAS* 80 and 81) from Babu-šum-iddina from Kalhu, both brief, not so restricted in scope as the ones from Nineveh, Arbela, Assur and Kalizi, but without offering any astrological interpretations. In *LAS* 81 we hear that he has been ordered to watch out for an eclipse.[1]

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and Assyrian calendars were kept separate, due to the fact that the moon rose 5 minutes later in Babylon than in Nineveh. Could that slight difference really have mattered, if it were at all noticed?

[1] Oppenheim (1969) p. 106 suggests that Nabû-mušeṣi is another team foreman. His title in *SAA 8* 2 r6 is lú.a.ba é.dingir, which Oppenheim says should be understood as *rab ešerti*. This is not so, two persons of the name Nabû-mušeṣi are known – one a scribe of the Assur temple, the other assistant to the chief scribe (lú.II-*u* gal.a.ba), see also *LAS II* sub *LAS* 170. Apart from that, the character of the reports from Nabû-mušeṣi is different from that of the reports and letters from the teams.

It seems to me that all this points to an organized effort to obtain observations from the major Assyrian cities. The position of these scribes was very different from that of the scholars of the "inner circle" and those in Babylonian cities, who certainly did not have to do corvee-work. Their function was to corroborate observations which perhaps were mainly important to the regulation of the calendar but which of course also held astrological significance.

CHAPTER 4

THE RECEIVED TRADITION

According to one tradition, as found in a mythological-explanatory text from Nineveh, oil and liver divination was revealed to Enmeduranki by Shamash and Adad. *EAE* and *arâ šutābulu*, "mathematical calculation," are appended in what looks like an alternative version. Enmeduranki in his turn handed down his knowledge to the men of Nippur, Sippar and Babylon.[1] The text continues: "The learned scholar, who guards the secrets of the great gods, shall make the son he loves swear an oath by tablet and stylus before Shamash and Adad, and then teach him." The text is primarily concerned with liver and oil divination as befits Shamash and Adad. According to another tradition recorded in a catalogue of texts and authors, also found in Nineveh, Ea is credited with the authorship of *barûtu*, the technique and the texts of liver divination; *kalûtu*, the art and the repertoire of the lamentation priest; and *EAE*.[2] The idea of Ea as the author of the hemerologies, which of course are closely related to *EAE*, is also found in "Sargon's Eighth Campaign" i 6-7 where the wise Ninšiku, i.e. Ea, is said to have written on an ancient tablet (*ṭuppu mahru*) that the month of Dumuzu was suited for the gathering of armies and the pitching of camps.[3]

The divinatory *lore* itself was sanctioned by the gods but the *texts* were not. *EAE* had a human redactor, according to one tradition this was the mythic sage Adapa.[4] According to yet another tradition it was the scholar Esagil-kin-apla (11th century B.C.), who presumably tried to make order

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1 Lambert, "Enmeduranki and Related Matters", *JCS 21* (1967), p. 132. The similarity between this statement and *Pirqe Avot* I:1 is obvious, much less so the significance of that similarity: "Moses received the Torah on Mt. Sinai and handed it down to Joshua, and Joshua to the Elders, the Elders to the prophets, and the prophets handed it down to the men of the Great Assembly".

2 Lambert (1962) p. 64, text 1:1-4.

3 Similarly Lyon, *Sargon*, p. 9:57 f (Simanu, for brickmaking). Cf. also *The Diviner's Manual*, Oppenheim (1974) p. 200:72 ff.

4 Verse Account of Nabonidus v 12' and Lambert (1962) p. 64 i 5, 70, see Machinist and Tadmor, "Heavenly Wisdom" in *FS W.W. Hallo* (1993) p. 146 ff.

out of a continually expanding and evolving omen corpus (see above p. 42f). The same process of sifting various local traditions may be referred to in the subscript to one of the Babylonian traditions summarized in a hemerology from Assur, *KAR* 177 iv 25 ff: "Favourable days according to seven tablets, originals from Sippar, Nippur, Babylon, Larsa, Ur, Uruk and Eridu, the scholars excerpted, selected and gave to Nazimaruttaš, king of totality, ..." But even with the help of redactors and catalogues,[1] the text of *EAE* was never entirely fixed.

The question of the exact status of the "received tradition" in the first millennium has provoked much discussion.[2] The texts were certainly not "canonical" the way the Biblical text became in the last centuries B.C. It would seem that, by the end of the second millennium, there was what Oppenheim called "the stream of tradition" – a fairly well-defined corpus of texts that from that time onwards was transmitted only by being copied by scribes. The colophons, from the 11th century onwards, show that the scribes took great care in copying their manuscripts exactly from the originals. As far as can be judged from our present incomplete knowledge, the scribes only made minor changes, subtractions, or additions[3] to the corpus, and they evidently strove for textual stability. There was considerable leeway in the spelling of individual words, and to some extent also in the division of longer texts into tablets; but on the whole the "stream of tradition" remained fixed throughout the first millennium, in Assyria as well as in Babylonia. It has become received tradition in Assyriology to refer to texts belonging to the "stream of tradition" as "canonical", which seems reasonable enough. The scribes appear to have considered them authoritative, insofar as any part of human knowledge could lay claim to that. They did not consider their texts divinely inspired; nor is there any evidence that they regarded any one edition of a text superior to others.

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1 Two catalogues of *EAE* are known so far, one from Assur, the other from Seleucid Uruk. See Weidner (1941) Plt. I-III and p. 184 ff.

2 See, e.g., Rochberg-Halton (1984c) and S.J. Lieberman (1990). The discussion is to some extent futile, partly because the texts are so broken, partly because most of them are so poorly edited.

3 The most likely additions to the corpus would be the commentary texts and *ša pî ummâni* texts; but again, we have no idea how old they are.

Conflicting statements in the tradition were sometimes recorded side by side,[1] without any attempt at resolution. Copies of the series were prepared for the Ninevite libraries, but this was no attempt to create "official", normative, texts.[2] To judge from the letters from the Assyrian and Babylonian scholars, no edition had more authority than any other.

Within the "stream of tradition", the scribes distinguished three categories: the "series" (*iškaru*), "additional texts" (*ahû*), and "dicta" (*ša pî ummâni*)[3]. The criteria for this distinction remain unknown; but all three categories seem to have been considered equally authoritative.

There is much more cuneiform material than is needed for the reconstruction of *EAE*'s about 70 tablets alone. A huge amount of various kinds of scholia developed parallel to and around the canonical divinatory series, such as commentaries, excerpts and compilations from the series. Unfortunately we do not really know very much about the nature of some of the text genres listed below, to which much of the "extra" material must belong.[4]

The Texts

The following survey of genres of astrological texts is largely based on the list first compiled by Bauer (*ZA 43* p. 313 f) and elaborated by Weidner ((1941) p. 182 f), in the order: "series" (*EAE, Šumma Sîn ina tāmartīšu*), "dicta", and "*ahû*". To some extent the classification is artificial, the different kinds of commentaries are clearly interrelated, but so much work remains to be done.

I. *Enūma Anu Enlil*, "When Anu and Enlil". Properly speaking this is not the ancient name of the series at all; it is consistently quoted by the

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1 Variant traditions are normally indicated by *šanîš*, "otherwise". A remarkable case is *KAR* 177, cited above.

2 Against Lieberman (1990) p. 330.

3 Rochberg-Halton (1984c) 130 f.

4 See also *BPO II* p. 24.

incipit of its Sumerian introduction: ud an ^{d}en.líl.[1] The series opens with two short paragraphs, the first in the pseudo-Sumerian of the post-Old Babylonian period, the second in Akkadian, giving two slightly different mythological introductions.[2] The Sumerian introduction reads:

u_4 an ^{d}en-líl-lá ^{d}en-ki dingir gal-gal-la galga-ne-ne-ta me gal-gal-la an-ki-a má-gur$_8$ ^{d}zuen-na mu-un-gi-ne-eš u_4-sar mù-mú-da iti ù-tu-ud-da ù giskim an-ki-a mu-un-gi-ne-eš má-gur$_8$ an-na im-pa-è aka-a-dè šà an-na igi-bar-ra-ta è

When An, Enlil and Enki, the great gods, by their decision established the eternal order of heaven and earth and the boat of Suen, the new moon to wax, to give birth to the month and the sign(?) of heaven and earth, the celestial boat they caused to appear and to come forth in the heavens, to be seen.

The Akkadian reads:

ša-ni-iš e-nu-ma ^{d}a-num ^{d}en.líl.lá ^{d}*é-a* dingir.meš gal.meš *ina mil-ki-šú-nu* giš.hur.meš an-*e u* ki-*tim iš-ku-nu a-na* šu.meš dingir.meš gal.-meš *ú-kin-nu u_4-mu ba-na-a* iti *ud-du-ša ša ta-mar-ti a-me-lu-ti* ^{d}utu *i-na* šà ká *i-mu-ru qé-reb* an-*e u* ki-*tim ki-niš uš-ta-pu*(!)*-ú*

Otherwise: 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 Shamash in (his) gate, they made him appear regularly in heaven and earth.

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1 See Parpola (1972) p. 26 for variant writings.

2 *ACh Sin* 1:1-8, also King *STC II* pl. xlix 1-14, an unfortunately badly broken commentary to tablet 1.

This kind of introduction appears to be peculiar to the astrological omen series.[1] Its function is closely related to that of the prologue of the Codex Hammurabi, establishing the divine sanction of the laws, that they are part of a world order ordained by the gods: "When lofty Anum . . . . . at that time: If a man . . . ."

The series consisted of about 70[2] tablets, with 6500-7000 omina. This by no means makes it the largest omen series; *Šumma ālu* for instance had about 113 tablets. The compilation of the series can be seen to begin already in Old Babylonian times, and it may well be that the process was more or less completed by the 11th century. Interestingly, the so-called astrolabe and the astronomical compilation *Mul.apin*, which has been dated to around 1000 B.C.,[3] was used in the composition of tablet 51. On the other hand, *Mul.apin* tablet 2 contains omens from *EAE*.[4] This illustrates once again both the close connection between astrology and astronomy, and that the redaction of *EAE* was not yet finished by the beginning of the first millennium. But it is only from the the Neo-Assyrian royal libraries that we have solid evidence for the contents and division of the series. Tablets 1-14 contained omina pertaining to lunar phenomena (this subsection was called "sightings of the moon"[5]), tablets 15-22/23 dealt with lunar eclipses,[6] 23/24-39/40 contained solar omina,

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1 The lunar section ended with a mythological paragraph, see p. 100. *CT 33* 9, a Neo-Assyrian list of the stars of Enlil, Anu and Ea, also opens with a bilingual introduction, which seems, however, to give instructions for the use of the list.

2 Cf. the commentary *ACh Ishtar* 30:35, according to another tradition, only 68. See *BPO II* p. 23.

3 The exact dating of *Mul.apin* is also controversial, see above p. 43 fn. 6.

4 See Hunger and Pingree (1989) p. 9 ff.

5 igi.du$_8$.a.meš *šá* 30, according to the Uruk catalogue, see Weidner (1941) plt. I:14 and p. 187. See also the edition of tablet 14 by F.N.H. al-Rawi and A.R. George in *AfO 38/39* (1991/92) p. 52 ff.

6 There seems to have been two traditions, one which ended the lunar section with tablet 20, the other included tablet 22/23. The sources go on differently after the mythological paragraph, but in all cases it is followed by the Shamash section (see Rochberg-Halton (1988) p. 252). Rochberg-Halton ((1988) p. 18) describes it as a conclusion to the lunar eclipse omens and says that it points to *their* special status in the *EAE*, forming a series within the larger framework of the *EAE*.

40-49/50 meteorological omin, 50-70+ planetary and stellar omina (e.g., 53 the Pleiades, 56 udu.idim, 59-63 Venus, 64-65 Jupiter).[1] But the systematization was a rough one, and there are many inconsistencies, both in the numbering of individual tablets within the series and which omens different copies of the same tablet contain and in what order.

There are many difficulties in reconstructing the series. One is that in many cases only parts of *EAE* were acquisited to the royal library, and some tablets were more popular than others, as was also the case with literary texts such as the Epic of Gilgamesh. Not even the format of tablets was standardized throughout the series.[2] In the acquisition lists, or inventories, from Nineveh[3] are mentioned for instance: 45 tablets, 5 one-column tablets and 4 *asarru*'s (diagrams?) of *EAE*, or, in another inventory, 28 tablets and 10 one-column tablets of *EAE*, but no complete edition is mentioned. Complete editions were of course prepared at Nineveh specially for the library.[4]

In his ground-breaking study of the *EAE*,[5] Weidner organized the material of the first fifty-odd tablets of the astrological series. He[6] thought that it was possible to establish a more or less rigorous systematization and suggested that the many divergences between older and younger copies of the same tablet, between contemporary copies, and the inconsistent numbering can be traced back to different *Schulen*, namely: Babylon-Borsippa, Uruk, Assur, Kalhu and Nineveh. He appealed to an often-cited passage from Pliny[7] which mentions the doctrines of the Chaldeans from

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1 See *BPO II* p. 23-24.

2 Tablet 20 is written on one-column tablets, see Rochberg-Halton (1988) p. 174 ff.

3 *SAA 7* nos. 49-56.

4 Cf. *ABL* 447 (= *LAS II* app. N, 28), a memorandum of scribes working on copies of various series for the palace libraries; also *LAS* 318 and *LAS* 331.

5 Weidner (1941-68).

6 Weidner (1941) p. 181.

7 *Nat. Hist.* VI #123.

Babylon, Sippar or Nippur[1] (text: Hipparenum) and Uruk, and one from Strabo[2] which mentions only Uruk and Borsippa.

In his reconstruction Weidner used two catalogues, one from Assur and one from Uruk, and catchlines and incipits. The two catalogues are fragmentary and do not overlap. Only the incipits of tablet 1-26 are preserved on the Uruk catalogue, the catalogue is used as guideline for tablet numbers, even though the texts and their colophons are not always in accordance with the catalogue.[3] The Assur catalogue contains fragments of the incipits of tablet 39-58, and the two last incipits of 29 *ahû* tablets. Weidner sums up the differences between the Assur catalogue and what he reconstructs from Nineveh as follows:

	Assur	Niniveh	Assur	Niniveh
Tablet	39	44	50	56
	40	45	51	57
	46	52	55	62(?)
	47	55 / 51	58	61

The sequence at least is more or less the same. According to Weidner,[4] tablet "33" is the tablet with the most differing numbers. We have two copies from Nineveh, both written by Nabû-zuqup-kenu in Kalhu; in one it is called tablet 34 and in the other tablet 36! According to another text from Nineveh it is tablet 35, and according to one text from Uruk it is tablet 33. The numbering of individual tablets is not the only problem, but also their division of the text, e.g., between tablets 18 and 19.[5] The theory of *Schulen* seems somewhat difficult to substantiate. Rochberg-Halton distinguishes between a Babylonian and an Assyrian recension of tablet 20 of *EAE*. Recension **B** is known in manuscripts from Assur,

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1 See Oelsner (1971) p. 141 ff.

2 *Geography* 16,1,16 (i,7).

3 See the discussion of the sources for tablets 1-14 by Weidner (1941) and Rochberg-Halton (1988) p. 18.

4 (1968) p. 68.

5 Weidner (1941) p. 79.

Nineveh, Babylon, Uruk and Ur, and in Middle Assyrian copies from Assur, recension A is known from Assur, Nineveh, Kalhu and Uruk.[1]

Anyway, the redactors of the series applied various principles of systematization. To judge by the index of subjects of the lunar eclipse tablets (Rochberg-Halton (1988) p. 27-28), the different sections seem to have been collected and written down with no attempt at systematization. Tablets 20, 21 and 22, all on lunar eclipses, are arranged in reverse order from what might be expected, tablet 20 containing the more elaborate protases – unlike, e.g., tablet 4 (catchline: "If the moon in its appearance is dark") and 5 (catchline: "If the moon in its appearance is dark and its right horn is blunt and its left horn pointed").[2] A standard means of systematization is of course the months of the year, and the listing of omens concerning a certain phenomenon during the year may have to stretch over two tablets or more. These tablets then follow each other directly.

The exact wording of the protasis is of supreme importance. Two tablets dealing with the same phenomenon but described in different terms would follow each other. For example, tablets 31 (*ACh Shamash* 8) and 33 (*ACh Shamash* 10) both deal with solar eclipses in the months Nisan-Elulu, they follow the same schema (eclipses occurring on 1st, 9th, 11th, 13th-16th, 18th, 20th, 21st, 28th, 29th, 30th, 1st-30th, not at appropriate time, Venus and Jupiter present) and actually have the same apodoses, but their protases are phrased differently. Tablet 31 has: diš *ina* iti x ud-x-kam 20 an.mi gar, "If in month X on the Xth day the sun makes an eclipse," and 33(+): diš *ina* iti x ud-x-kam 20 KAxMI, "If in month X on the Xth day the sun is eclipsed." Tablets 32(+) and 35 have the same protases as tablets 31 and 33 respectively and deal with eclipses in the months Tashritu – Addaru II (but have different apodoses).[3]

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1 For the sources for tablet 20, see Rochberg-Halton (1988) p. 174 f. Another example is the two versions of *Enūma ana bīt marṣi āšipu illaku*: the manuscripts of one version come from Uruk and Sippar/Babylon, the manuscript of the other come from Uruk, Babylon, Dur-Šarrukin and Nippur, see A.R. George (1991a) p. 138 f.

2 See Weidner (1941) sub tablets mentioned.

3 See Weidner (1968) p. 67 for sources.

The material of individual tablets may be connected by a recurrent word in the protasis – for tablet 68 it is the term *adir* – a principle known from other omen series.[1]

To sum up, one is clearly dealing with a somewhat fluid tradition, and one cannot help wondering how they managed to find their way in it. They may have used:

II. *rikis girri Enūma Anu Enlil*, lit. "guide to *EAE*", collections of excerpts listing individual omens, probably to facilitate the easy survey of important omens. It is tempting to see it as a sort of index. *Rikis girri* was serialized as appears from *ACh Sin* 15:13, dub.6.kam *ri-kis gir-ri* ud an ^{d}en.líl. The *rikis girri* of *EAE* is mentioned by itself in the catalogue K 14067+:6'[2].

III. *Mukallimtu*, lit. "revealer", commentaries characterized in the texts as: *mukallimtu EAE šūt pî ša pî ummâni ša libbi* . . . "commentary to *EAE* according to the words of the scholars from . . . (catchline or tablet number of the tablet commented upon)".[3] They are factual commentaries in that they contain explanations, specifications and alternative interpretations of the protasis. In the commentaries the protasis commented upon is quoted together with its apodosis, sometimes in an abbreviated form. The *mukallimtu* comments on the tablets of *EAE* in proper sequence. Comments to more than one tablet of *EAE* may of course be written on one commentary tablet, e.g., *ACh Adad* 7 which contains comments on tablets 44[4] and 45, or *ACh Ishtar* 30 which first has a long commentary on tablet 69 and then a short one (only 14 lines) on tablet 70. The commentary may have the effect of identifying one star/planet with another, for example *ACh Ishtar* 5:16f: diš ^{mul}*dil-bat ana* mul.apin te bad_5.bad_5 gar-*an* diš ^{d}*ṣal-bat-a-nu* te-*ma*, "If Venus approaches the Plough-

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1 See *BPO II* p. 23.

2 *RA 28* (1931) p. 136, see Lambert (1976) p. 314.

3 See e.g., *ACh Ishtar* 3:7; 11:24; 22:7; 30:35,51; 34:20; 39:10; 40:8; *ACh Suppl.* 44:18.

4 The text gives incipits, the tablet numbers are according to Weidner *AfO 22* p. 72.

star: there will be defeat, (i.e.,) if it approaches Mars." What is preserved of *ACh 2. Supl.* 66 deals exclusively with identifications and does not even quote apodoses. A commentary may deal with the interpretation of single words, as in *ACh Ishtar* 2:6: "If Venus is steady in the morning: the people of all countries will eat plenty, hostile kings will be reconciled". The commentary says (lines 7-8, var. *ACh Suppl.* 34:10 and *ACh 2. Suppl.* 51:1 ff): "Venus rises in the stars of Anu; GÍD means to be bright, GÍD means to see, she is stable to see, her position is stable, she lights up in the west, 'morning' means to be bright, she shines brightly." In this way an omen which originally concerned Venus as a *morning star* has been extended to apply to her appearance as an *evening star*![1] It may make use of "contrived philology", *ACh Sin* 31:1 ff:[2] "'If the moon is early and is eclipsed in the evening watch (*ba-ra-ri*): the eclipse affects the king of Akkad': *ba-ra* means "not", *ri* means "period": an eclipse occurs not according to its period, i.e. on the 12th or 13th day." So the commentary "explains" the Akkadian word by the Sumerian meanings of the signs, generously stretched.[3] The *mukallimtu* also explains and gives a more explicit formulation of terms: *ACh Adad* 25:1-2: "If Adad roars out of season (*ina lā adannīšu*) [- - - - -], i.e., if he roars in Dumuzu, Abu and Elulu [- - - - -]." One Neo-Babylonian text, *LBAT* 1564, "from an old writing board of commentary (*mukallimtu*) lines of *EAE*" (r.7), starts with a list of the names of Venus in the different months during the year and ends as a normal *mukallimtu* commenting on omina.

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1 These passages are quoted in an abbreviated form by Ištar-šum-ereš in *LAS* 12:13 ff: "It is written like this in the commentary (*mukallimtu*): Venus is steady in the morning: 'morning' means [to be bright], it is shining brightly, 'its position is steady' means it lights up in the west." From this we learn that *ACh Ishtar* 2 is a *mukallimtu*.

2 Source a of *EAE* 15, see Rochberg-Halton (1988) p. 80 f and George (1991b) p. 383.

3 Exactly the same kind of hermeneutics were used in the explanation of Marduk's fifty names in *Enūma eliš*, see Bottéro (1977). Further examples may be found in Cavigneaux, "Aux sources du Midrash: l'herméneutique babylonienne", *Aula Orientalis 5* (1987), p. 243 ff and George (1991a) p. 139, where the disdainful term "contrived philology" was coined.

IV. The factual commentary (*mukallimtu*) *Šumma Sîn ina tāmartīšu*, "If the moon at its appearance". *EAE* is the only divinatory series to have a named and serialized commentary. Weidner[1] calls it "Die kommentierende Anschluss-Serie", which is an apt description since it does not just comment on individual omina, but also give general principles, e.g., tablet 4, of which one column of the reverse (*ACh 2. Suppl. Sin 19*) contains a list of the parameters to be considered in the interpretation of a lunar eclipse (see p. 105f). Its special status can also be seen from the fact that it was quoted frequently in letters and reports and by almost all of the scholars[2] with no special reference, just as was the *EAE* itself. Furthermore, it is not classified as a *pî ummâni* commentary – whatever that means. Unlike other commentaries, *Šumma Sîn ina tāmartīšu* does not appear to follow the order of the *EAE*, as far as I can see from the contents of its first tablet, known in one almost complete copy (*ACh Sin* 3), and what survives of tablet 2. Tablet 2 is organized in three columns: the first containing the protasis, the second the apodosis (sometimes left out), the third the explanation of the protasis. Due to the state of publication it is impossible to know if this arrangement was peculiar to tablet 2; probably it was not.

Like the *mukallimtu*s on individual tablets, it is a factual commentary and contains the same types of explanations of protases which are often imprecise or outright impossible. Loose language like "not at its appointed time", "not at the right time", "not in its season" is defined as exact dates in *ACh Sin* 3:25-33. It contains identifications: an impossible observation, "If the Goat-star (Lyra) reaches the Wolf-star (α Trianguli): in that year fall of cattle" is explained, "Venus reaches Mars".[3] *Šumma Sîn ina tāmartīšu* contains some direct parallels to other commentaries (e.g. tablet 2[4] r3',5'-14' = the commentary *ACh Suppl.* 50:4 ff), but the relationship between them is impossible to determine. As an example of the form and

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1 (1941) p. 182.

2 *SAA 8* 426 and 431 (Nabû-iqbi), 297 (Nabû-iqiša, Borsippa), 172 (Bamâ), 15 (Ištar-šum-ereš), 123 (Bulluṭu), 160 (Adad-šum-uṣur), etc.

3 Tblt 2:r18' (Borger (1973) p. 41).

4 Edited by Borger (1973).

use of the commentary I may quote the following passages: *ACh Sin* 3:62 ff, "'If the moon and the sun meet each other (*šutātû*), the king of the land will increase in wisdom' i.e.: the god is seen every month with the god, i.e. the sun; also Saturn is standing on the 14th day with the moon. 'If the disc of the sun stands above or below the moon: the foundation of the throne of the king of the land will be secure; ditto: the king will stand in his justice' i.e.: Saturn stands with the moon on the 14th day."

These passages are quoted in a digested form by Balasî in the report *LAS* 326 (= *SAA 8* 95):

> 'If the sun stays in the position of the moon: the king of the land will sit firmly on his throne.' 'If the disc of the sun stands above or below the moon: the foundation of the throne will be secure, the king of the land will stand in his justice.' 'If the disc of the sun and the moon confront each other: the king of the land will grow in wisdom.' Tonight Saturn approached the moon, Saturn is the star of the sun. Its interpretation is: it is good for the king, my lord, the sun is the star of the king.

But the omens did not only refer to conjunction of the moon with Saturn, but could equally well be applied to the opposition of the moon and the sun side by side with all the rest. For instance, *ACh* 3:62 is quoted by Akkullanu in *SAA 8* 110:8 ff.:

> 'If the moon and the sun meet each other: the king of the land will grow in widsom'. This means that on the 14th god was seen with god; or that Saturn stands with the moon on the 14th.

One of the aims of *Šumma Sîn ina tāmartīšu*, and to some extent the commentaries to individual tablets, might have been to streamline – or at least order – the confused terminology of omen protases, e.g. tablet 2: 25-28 (Borger (1973) p. 40), where four different protases are all explained as "it (the moon) is eclipsed on its right side" are listed. This is apparently characteristic of the factual commentaries of the extispicy series, *barûtu*.

U. Jeyes[1] suggests that one of the objectives of the extispicy *mukallimtu* was to actually determine which description of a phenomenon was to be preferred. During its long history, the terminology of extispicy certainly had become no less confused than that of astrology. Extispicy *mukallimtus* apparently often quote an omen protases followed by other protases, differently formulated, which warrant the same interpretation.

V. *Maš'altu*, "question". This kind of commentary belongs to the *ša pî ummâni*. It may originate in the school room as the teacher's answers to pupils' questions which were written down and thus passed into the written tradition.[2] The *maš'altu* could be a factual commentary like the *mukallimtu*: *ACh Suppl.* 52:25 (= Hunger Kol. 333) "Excerpted star-(omina) concerning *Nēberu* [- - - -] *maš'altu ša pî ummâni* according to [- - - -], written and collated according to its original, tablet (*u'iltu*) of Assurbanipal . . ." Unfortunately the last half of all the remaining lines are missing, so it is difficult to establish the character of the text, but what is left resembles a *mukallimtu*.[3] DT 77 (= *ACh Suppl.* 54) + K 2381 + K 11092[4], described in the colophon as a mixed *maš'altu*, gives identifications of various stars with one another.

VI. *Ṣâtu*, literally "what goes out", a kind of list which explains old and rare words and signs, both meaning and pronunciation. In the Neo-Assyrian catalogue K 14067+[5]:11 ff are listed the "extraneous" (*ahû*) series of *Enūma Anu Enlil* together with its *ṣâtu*, and the hemerologies *Iqqur īpuš* together with "extraneous" (tablets), *ṣâtu* and *mukallimtu*. But unlike the *ṣâtu* of *Šumma Izbu* which was the main commentary to this series and which is consistently in list form,[6] the *ṣâtu* of *EAE* is not too well-

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1 (1991-92) p. 35 ff.

2 See Elman (1975) p. 27 fn. 23, and George (1991a) p. 139 f.

3 *ACh Supl.* 52:17-18: "'If the Great Star stands in its (the moon's) center: one not of royal descent [will take the throne]' Jupiter stands in the center of the moon [- - - -]."

4 Join registered in *AfO 28* (1982) p. 368, colophon quoted in *CAD M* part 1 p. 355.

5 See Lambert (1976) p. 314.

6 See Leichty, *Šumma Izbu*, *TCS IV* p. 22 ff.

known, and was probably not standardized at all. The commentary is often described as a *ṣâtu* and *malsûtu*, "reading", e.g., BM 47447 (Rochberg-Halton (1988) Appendix 2.4). This is a late Babylonian commentary to *EAE* with the postscript *ṣa-a-tu u šu-ut* ka *mal-su-ti ša* ud ^{d}*a-nim* ^{d}en.líl.lá. It contains both "philological" and factual explanations of both protasis and apodosis, but does not try to explain the link between them, such as is known from commentaries to other texts.[1] According to its colophon, *SpTU I* 90 is a *ṣâtu* and *malsûtu* (to *EAE* 56), but it actually takes the form of a factual commentary (line 1: "'If a planet appears in Nisan': Jupiter : alternatively Mercury appears"). On the other hand, *SpTU I* 84, also described as a *ṣâtu* and *malsûtu*, is simply a glossary to astrological and physiognomic omens. Texts could also be described as *ṣâtu* and *mašaltu*.[2] The difference between *malsûtu* and *maš'altu* is difficult to see, and the striking semantic resemblance between *malsûtu* and Hebrew *targūm* may be misleading.

Undoubtedly, the word lists were consulted by the scholars, though not often mentioned explicitly. An instance of a *ṣâtu* used in the composition of *Šumma Sîn ina tāmartīšu* is *ACh Sin* 3:49-50: "[- - -] it is said in the mathematical table (*arû*) that the 22nd day equals the 14th, and the 25th equals the 15th; and it is said in the *ṣâtu* that the month of Abu (iti.ne) means this month (iti *šu-a-tum*), ne means *šuātu*."[3] Perhaps some of the glosses in the letters and reports stem from *ṣâtu*'s? In *LAS* 116 (from three diviners), the king is asked to authorize a change in the curriculum of apprentice scribes: two tablets of *ṣâtu* are to be removed in favour of two tablets of hepatoscopy.

VII. Excerpts of *EAE* and its commentaries, *liginnu* or *liqtu*, written on one-column tablets. They often concentrate on a single topic, quoting

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1 See Livingstone (1986) p. 49 ff, and George (1991a).

2 George (1991a) p. 152; *CAD M*/1, p. 355. Even though none of these are astrological, such texts surely existed.

3 The attempt to make sense of the impossible dates for a lunar eclipse is found in *i.NAM.giš.hur.an.ki.a*, see Livingstone (1986) p. 22. The quote from the *ṣâtu* is also found in a commentary to *EAE* 21, Rochberg-Halton (1988) p. 250, *EAE* 21 text a r4.

omens and commentaries from different tablets. One example is the unpublished text from Assur quoted by Weidner[1] which cites omens from various tablets of *EAE* all concerning Jupiter; another is *ACh 2 Suppl.* 7 r10: "21 excerpts of the *mukallimtu* of *Enūma Anu Enlil* from 'If the moon in its appearance is surrounded by a halo'".[2] They were used for educational purposes,[3] and some of them must have been made for specific situations. We know that tablets with omens relevant to particular celestial phenomena were written for the king (see p. 68). Such tablets must have been like *SAA 8* 535 (= Rochberg-Halton (1988) Appendix 2.1) which is simply a collection of omina concerning a lunar eclipse on the 14th of Simanu in Sagittarius. A different kind of excerpted texts are the "compilations", multicolumn tablets that contain sections of omens of unrelated subject matter.[4]

VIII. *Ahû*, "strange, what is outside". As has been argued by Rochberg-Halton,[5] this should be understood as "extraneous", not "uncanonical", in the sense that *ahû* texts represented a parallel, perhaps less well-known, but not an inferior or less standardized tradition.

We have references to an *ahû* tradition in catchlines, subscripts, catalogues and also from the letters and reports though these references are few. Apparently there were established *ahû* series of *EAE* and *Iqqur īpuš*.[6] The Assur catalogue published by Weidner[7] lists 29 incipits of *ahû* tablets of *EAE* (unfortunately, only the two last incipits are preserved). There is evidence for an *ahû* tradition of *EAE*, *Šumma ālu, Iqqur īpuš*, physiog-

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1 (1941), p. 183.

2 Or *ACh Adad* 25:27, mu.meš *mu-kal-lim-ta u šu-ut* k[a ....].

3 Cf. P.-A. Beaulieu, "New Light on Secret Knowledge in Late Babylonian Culture", *ZA 82* (1992) p. 103 ff.

4 Rochberg-Halton (1988) p. 174 fn. 3.

5 (1987) p. 337.

6 In a Neo-Assyrian catalogue (Lambert (1976) p. 314), or perhaps rather acquisition list, are mentioned the *Enūma Anu Enlil* éš.gàr bar.meš, "extraneous series," together with its explanatory word-list (*ṣâtu*) and the *Iqqur īpuš* together with its bar.meš, explanatory word-list and commentary.

7 (1941) pl. 3.

nomic omens and medical prescriptions,[1] i.e. what Rochberg-Halton calls scientific literature only; but it seems to extend also to ritual and magical texts. In *LAS* 185, the exorcist Marduk-šakin-šumi reports that he will spend the "evil day", when he can not perform his religious duties, looking up, collecting and copying 20-30 standard, (lit. "good", sig_5.meš), and *ahiūti* tablets. He does not explicitly state what the contents of these tablets are, but it is reasonable to suppose that they were prayers, *šu-ila*'s, and rituals since the rest of the letter deals with the performance of the *bīt rimki* ritual, and, as can be seen in *LAS* 173, the tablets needed in connection with a certain ritual were copied for the occasion.[2] In *LAS* 186 he says that he will "collect 30-40 canonical (sig_5.meš) tablets, as many as are relevant to the matter, as well as the *ahiūtu* that ever [are p]erformed (in this connection)." As the letter deals with rituals to be performed in connection with the therapy of Esarhaddon's mother, these rituals seem to have been of the *Maqlû* or *Šurpu* type.

Weidner[3] suggested that the term *šumāti ahûti* often stated in the texts to come from a *ṭuppu šanû* refers to tablets, or short series, which were extracted and composed from the *EAE*. Indeed, the *ahû* texts of *Šumma izbu* seems to be alternative *excerpts* from the series.[4] But in the case of astrological omens it seems to me that these terms both refer to the *ahû* tradition, i.e., texts different from *EAE*. K 139 r18 (Bezold, *Cat. I*, p. 36) mentions: 18-àm mu.meš *šá* šà-*bi ṭup-pi šá-nim-ma*, "18 omens from 'another' tablet." Nine omens from this tablet were published by Virolleaud.[5] These omens deal with meteors and, interestingly enough, differ from the normal Babylonian astrology in that they concern the undertakings of a private person, e.g., 1 ff: "If somebody starts out on an undertaking and a (shooting) star flashes from the right side of the man

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1 See Rochberg-Halton (1987) p. 328 f for references.

2 An example of such a tablet might be the tablet of *Utukku lemnūtu*, Hunger, *Kolophone* no. 332: *ana mul-te-piš-u-ti za-mar* [*nasha*], "quickly extracted for performance. Tablet of Assurbanipal, etc."

3 (1941) p. 183.

4 Leichty, *Šumma izbu*, *TCS IV* (1970) p. 22.

5 *BA IV* (1911) p. 125.

to his left side: favourable. If it flashes from left to right: unfavourable."[1] Unfortunately it is not clear from the available publications whether the statement about the 18 *ahûtu* omens refers to the lines just quoted. *ACh Sin* 19:15: "[- - - - -] mul.bir : *šá* ka *ṭup-pi* 2.kam kur lal-*ṭi* . . . .", "[- - - - -] the Kidney-star: according to another tablet: the land will grow weak . . . ." Here "another tablet" refers to an alternative apodosis, quoted in the middle of a tablet of *Šumma Sîn ina tāmartīšu*. In *LAS* 331 (revised text *LAS II* p. 513), no name, *ahûtu* tablets are mentioned together with tablets in Assyrian and Babylonian ductus, and a *ṭuppu šanûmma* is mentioned in connection with the (writing of ?) *ahûtu* tablets.

Chunks of extraneous omens were incorporated, or appended, to the canonical series. *EAE* 63 (*BPO I*) carefully distinguishes between the different sources for its sections with subscripts. Section IV is labelled "21 extraneous omens (*kiṣru ahûtu*) of Venus". But this section consists of omens from section I and III, rearranged in the order of the months instead of following the Venus cycle, but with the same wording (except that *uhhuru* is in the present tense in sections I and III, in the preterite in section IV). So strictly speaking, they cannot be called extrinsic to *EAE*, it is the arrangement that is *ahû*. Three manuscripts do not contain section IV, and at least two manuscripts contain only section IV. Either tablet 63 was divided into two tablets in one recension (*BPO I* p. 7), or two independent tablets were later combined.

EAE tablet 57 also included *ahû* omens: *ACh Ishtar* 23:31: "39 extraneous omens found in another tablet [- - - -]". This line is followed by the colophon stating that this is tablet 57 of *Enūma Anu Enlil*.[2] The omens concern fixed stars and planets and do not, as far as I can see, differ in style or terminology from what could be found in *EAE* itself.

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[1] The closest relatives to these omens are found in two collections of provoked divination of a more popular kind. *STT* 73:85-87 and *LKA* 138:2-4 both contain a prayer to Ninlil to send a shooting star from right to left, see Reiner (1960).

[2] Also *ACh 2 Suppl.* 68 r16: "12 extraneous omens from another tablet."

As mentioned, the explicit references to *ahû* in the letters are few[1] and are only made by the most important, and presumably the most learned, of the king's scholars. Probably many more *ahû* omens are quoted without source. Both Balasî (*SAA 8* 82) and Nabu-ahhe-eriba (*SAA 8* 49) quote without reference an omen concerning full moon on the 16th, only Ašaridu (*SAA 8* 327) says it comes from an [extraneous] tablet, see Appendix A.

The best basis for comparison between *ahû* and standard material is offered by the only *ahû*-tablet that has been identified so far, namely the 29th *ahû* tablet of *Enuma Anu Enlil*.[2] The 29th *ahû* tablet of *EAE* deals with eclipses of the moon, the topic covered by tablets 15-22 of the standard series. The protases of the *ahû* are arranged according to month and day, listing all the clauses (duration etc.) together, while *EAE* takes one at a time. From the comparison of protases made by Rochberg-Halton,[3] it emerges that they differ in the following respects: 1) Date of eclipse: *EAE* lists the 14th, 15th, 16th, 20th, 21st and "from the 1st to the 30th" day, *ahû* lists the 12th and 13th (14th); 2) Duration of the eclipse is expressed in different terms; 3) Colour of the moon during the eclipse: *EAE*: white, black, red, yellow and multicoloured/dark, *ahû*: red, yellow, black, or "BE" (perhaps blue) like sulphur fire, like lapis lazuli, like smoke or like a cloud. 4) Direction of the eclipse shadow: different terms: *EAE* "it (the eclipse) begins in the direction x and clears in the direction y"; *ahû* "it (the eclipse) covered (the moon) in the direction x and it cleared as it covered." 5) Prevailing wind during an eclipse: *EAE* uses the verbs *alāku, tebû* and *rakābu, ahû alāku* and *šâhu* (rise, grow). The *ahû* protases thus supplemented the standard series, eclipses are possible on the 12th – 16th.[4] Apodoses are couched in the same terms as those known from *EAE*.

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1 In addition to the examples quoted below, see also *SAA 8* 143 (Nabû-mušeṣi), unfortunately in broken context.

2 Edited by Rochberg-Halton (1987).

3 (1987) p. 331-337.

4 Cf. Rochberg-Halton (1987) p. 331. The dates for a lunar eclipse mentioned in the *šar pūhi* ritual (*CT 4*, 5 = *KB 6/2* pp. 42 ff) as not dangerous for the king are the 12th, 13th and 14th.

ACh 2. Suppl. Sin 19, the fourth tablet of *Šumma Sîn ina tāmartīšu*, contains a list of possible days for lunar eclipses which apparently includes the *ahû*-day the 13th (see p. 105 f). The extraneous material is thus incorporated in both the series and its commentary.

The *ahû* material is "extraneous", a direct translation of the Akkadian term, rather than uncanonical. The 29th *ahû* tablet is "canonical" in the same sense the standard series is. But perhaps "supplementary" describes *ahû* even better. Texts termed *ahû* fall clearly within the same tradition: they deal with the same topics as does *EAE*, often in exactly the same terms, and they enjoyed the same status as the standard series. The *ahû* series formed a part of the royal library, and it even had its own *ṣâtu* (see above) and was copied with the same scholia as normal, such as with variant readings inserted, and with the same care.[1] Furthermore, passages from *ahû* were quoted side by side with omens from the standard series, and some were even integrated in the series itself, in the obsession which the Assyrian and Babylonian scholars seem to have shared with Assyriologists of today: to collect all the pertinent references![2] To what extent "*ahû* constitutes a genuinely separate tradition from that of the Neo-Assyrian standard series" (Rochberg-Halton (1984c) p. 140) is difficult to say at present. Most likely, the term *ahû* describes more things than one,[3] and sources of different origin. Perhaps some of the *ahû* omens were composed after the *EAE* had been edited, as the need for omina with other protases arose – this could be the case with the 29th *ahû* of *EAE*. Others may be omina that merely had been left out by chance; or

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1 E.g., Rochberg-Halton (1987) r7, and *hipi eššu*, l.25.

2 In *LAS* 13, Ištar-šum-ereš quotes omens of Mars and Jupiter from *pî ummâni*, *ahīu* and the standard series in order to answer in the fullest possible form to an apparently sharp enquiry from the king: "[Why] have you never told me [the truth]? [When] will you say to me [what] it is?" The *ahīu* omen concerns Mars and is couched in the same terms as can be found in the series.

3 The text *CT 29* 49 which contains "47 extraneous (or strange?) omens concerning the overthrow of the land of Akkad. Copied according to its original and collated, tablet of Nabû-zuqup-kenu" seems to be a special case. This text is not astrological, but contains "omens from the reign of the king *kar-še-em-me-tum-bi*" that are indeed very strange: "A cut-off head laughs", and so on.

alternative interpretations of the same omens – sometimes only the apodoses of the standard and the *ahû* omen differ.[1]

IX. Hemerologies and menologies, particularly *Iqqur īpuš*. This series is found in two versions, dubbed by the editor "série générale", arranged according to subject of protasis, and "séries mensuelles", arranged according to month.[2] The menology is stylistically an omen text, and were regarded as such by the Neo-Assyrian scholars: quotations from *Iqqur īpuš* were referred to as *piširtu* like the omen-citations (*LAS II* sub *LAS* 7). Both series of *Iqqur īpuš* contain astrological omens, many of which are direct parallel to those found in *EAE*, e.g. the earthquake paragraphs of *EAE* tablet 22 part II and *Iqqur īpuš* "série générale" § 100 and *EAE* 63 section II and the omens from Venus' risings in *Iqqur īpuš* "séries mensuelles". The relationship between the astrological series and *Iqqur īpuš* is not clear. It is generally assumed[3] that the menology is secondary. The astrologers also used the hemerologies to determine which days were good for a specific undertaking, such as good days for taking oath (*LAS* 1 r.12 f, Ištar-šum-ereš: *ina bi-ib-la-a-ni ša* ^{itu}bár *šà-ṭer* "it is written in the Nisan hemerology"); a good day for the restauration of a temple (*LAS* 8, Ištar-šum-ereš), or a good day for the crown prince to visit the king (*LAS* 46, Balasî). The astrologers may send excerpts from hemerologies, for instance lists of auspicious days, see *SAA 8* nos. 231 ff.

X. Star lists. Among the several lists of stars, the most astrological is the so-called *Great Star List* (for a transliteration and translation, see App. B). This text is a motley of mythological and astrological data on planets and

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1 See e.g., p. 141, omen 2 is extraneous. Also *SAA 8* 147, where Nabû-mušeṣi quotes first three omens concerning Jupiter in the lunar halo, with the names sag.me.gar, *Nēberu* and gír.tab (Scorpio), stating that these omens are from the series. Then he quotes one with the third name of Jupiter, šul.pa.è.a, with exactly the same format as the preceding, noting that this is an extraneous omen (*annīu ahīu*). The standard omen is probably found in *ACh 2. Suppl.* 1a iv 12 ff, which according to Weidner (1941) p. 313 belonged to *EAE* tablet 8.

2 See Labat (1939) and (1965) *Iqqur îpuš*.

3 E.g., Rochberg-Halton (1988) p. 252.

stars, mixed with other materials. Much of it seems to have been assembled from blocks excerpted from other texts. For instance the section "Groups of Seven" (lines 150 ff) recurs in *KAR* 142 i 22-38; and the word lists that conclude the text includes much irrelevant information, such as all the values of the sign SI (*CT 26* 43 viii 2' ff), though only the first entry SI : *qarnu* is relevant to astrology. Its composite character indicates that the text is not very old. Probably it was meant to serve as a vademecum for the astrologers.

Normally the scholars do not give any references for their statements, and they certainly never indicate from which tablet of the series they quote. The envoy Mār-Ištar says he has extracted and quoted the omen "exactly as it was written on the tablet"[1] to stress its authenticity. The scholars might say so if they quote extraneous omens or (oral?) scholarly commentaries, *ša pî ummâni*, or specify which omen is standard (from the series, *ša iškarî*) and which is not, but such references are really very rare[2] and not consistent.[3] I know of only one instance of a reference to the *Enūma Anu Enlil* by name, unfortunately in broken context (*SAA 8* 248:7), "[it is writ]ten in *Enūma Anu Enlil* ", and one which is certainly a reference to an oral source, *SAA 8* 454, from Bel-ahhe-eriba: *ina pi-i* ad-*ia še-ma-a-ku*, "I heard it from my father" – he quotes a favourable omen for opposition on the 15th which is normally considered an evil omen (e.g., *SAA 8* 477). Generally they only give their sources if they are a little out of the ordinary. Akkullanu, for instance, shows the attitude of a true archive-mole and quotes with evident pride a report written in 1090 B.C. to a king of the Second Dynasty of Isin:

> As to the rains which have been so scanty this year that no harvests were reaped, it is a good omen for the life and vigour of the king,

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1 *LAS* 289 r11: *ki-i ša ina ṭup-pi šá-*[*ṭer-u-ni pi-šar-šú*]

2 E.g., *SAA 8* 147 r5: "these omens are from the series", r8: "this is extraneous." *SAA 8* 158:8: "this is from the series", r4: "this is from *pî ummâni* when Nebuchadnezzar shattered Elam".

3 For instance, the omen of Jupiter, quoted in *SAA 8* 170:3 and 115:1 with no specifications, belonged to the *ahû*-tradition. It is one of the remaining two incipits of *ahû*-tablets listed in the catalogue published by Weidner, (1941) plt. 3 ii 1'-2'.

my lord. Perhaps the king, my lord, will say: "Where did you find (this)? Tell me!" In a report by Ea-mušallim to his lord Marduk-nadin-ahhe, it is written: "If a sign occurs in the sky that cannot be cancelled, and if it happens to you that rains become scanty, make the king undertake a campaign against the enemy: he will be victorious wherever he goes and his days will be long."[1]

Geheimwissen

Some tablets are marked in the colophons with the so-called *Geheimwissen* formula. This formula is not altogether standardized. It states that knowledge of the contents of the tablet is reserved for the initiated, lit. "the one who knows", and that showing it to an uninitiated is a crime as bad as destroying the tablet itself. The formula sometimes contains an injunction to the initiated to show it to other initiates. In a sense, all astrology, including the series *Enūma Anu Enlil*, was certainly considered a part of the secrets of the great gods.[2] In general, these included divination and the scribal arts, *ṭupšarrūtu*, as a whole, as when Aššurbanipal claims to master the "art of the wise Adapa, the hidden secret lore (*niṣirtu*), the whole art of *ṭupšarrūtu*".[3] That the scholarly part of the scribal arts was a jealously guarded mandarin knowledge, not to be shared with people outside the scribal families is evident from a legal enactment from Uruk (541 B.C.). A certain scholar is reprimanded for teaching the temple slaves, and warned that if he persists he will do so on pain of the king's punishment.[4] One could imagine that while divination in a general way was "the gods' secret" or "mystery", the various commentary series, which were the key to understanding the divinatory series and the result of much scholarly work on them, were marked as the secret of the scholars by the *Geheimwissen* formula. Some such distinction is indeed

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1 *LAS* 110+300, see *LAS II* p. 375 f and 307 ff.

2 Cf. *SAA 8* 338, Ašaridu jr.: "Scholarship is not divulged in the market-place!"

3 See *RLA* "Geheimwissen" for references.

4 P.-A. Beaulieu, "New Light on Secret Knowledge in Late Babylonian Culture", *ZA 82* (1992) p. 98 ff.

found in the colophon of Ki 1904-10-9, 94:26-30 (= Hunger, *Kolophone* no. 519):

> *ta-mar-ti* dingir.meš gal.meš *ni-ṣir-ti* an *u* ki *ta-mar-ti mu-kal-lim-ti niṣ-ir-ti um-ma-a-ni*
>
> Reading of (what has to do with) the great gods is the secret lore of Heaven and Earth. Reading the commentary is the secret lore of the scholars. (Written according to an old original and collated. Tablet of Marduk-šallim-ahhe, the young student, the son of the scribe Nabû-mušeṣi).

But the text itself is apparently not very esoteric. On the obverse, some 20 lines with omens of the planet Mars remain.[1] The omens are not known from *EAE*, which of course does not say much given the present state of publication.

Some of the classified astrological texts are indeed scholia (e.g., *CT 26* 49, *5R* 46 1); but others are just ordinary omen texts like *ACh Adad* 34. Borger[2] wonders why some texts were considered secret or why certain texts, which were part of a series otherwise accessible to any literate person, were kept secret. One may also wonder why others, which seem very esoteric to us, were not (only one manuscript of *i.NAM.-giš.hur.an.ki.a* is classified).[3] Indeed in many cases the formula seems to have been rather arbitrarily applied; and most likely, it should not be understood in a too literal sense: a text could certainly not be said to be kept very secret if a "young student" (see above) could get to read and copy it. But at the beginning of his studies, even a young student presumably had sworn by tablet and stylus to guard the secrets of the great gods.[4]

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1 Obverse published in photograph in Bezold, *Cat. V* plate 3, the first five lines in copy, see sub Ki 1904-10-9, 94.

2 *RLA* "Geheimwissen" p. 191.

3 Livingstone (1986) p. 32:9.

4 Cf. Lambert, *JCS 21* (1967), p. 132:18-22 and p. 74 above.

CHAPTER 5

THE WORKING PRINCIPLES

Babylonian astrology was the result of the interaction of practical observation and theoretical schematization well known from the other omen series.[1] The crucial phenomena in divination: heliacal and acronycial risings and settings, stationary points, conjunctions and other positions in relation to a particular celestial body, eclipses, colours and other optical phenomena, all derive from actual observation rather than speculation. But it is obvious that practical experience was subordinate to theory or schematization: in order to fit the various schemata, also phenomena which never occur in reality were listed in the series, especially in the eclipse sections (see below). The schematization included binary opposites like –

left – right
above – below
in front of – behind
sunrise – sunset
bright – faint
on time – late/early

and qualifications like –

colours: white, black, red and yellow[2]
direction: the four quarters
time: month, day, watch, duration
location: path of Anu, Enlil or Ea.[3]

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[1] This principle is characteristic of all Mesopotamian *Listenwissenschaft* literature. For the vocabulary lists, see Landsberger, *MSL IX*, p. 142. See also Rochberg-Halton (1987) and, for liver divination, Starr (1983); Ulla Jeyes (1989) p. 8 ff; for *Šumma ālu*, see Ann Guinan (1989).

[2] Rochberg-Halton (1988) p. 56 notes that while in the OB moon eclipse omens only red is recorded (since this is the only colour ever observed), the later texts list colours in the same sequence (white, black, red, yellow, variegated/dark) known from other omen genres. This testifies once again to schematic systematization.

[3] The paths of Enlil, Anu and Ea were probably areas along the eastern horizon rather than bands in the sky parallel to the celestial equator as previously supposed, cf. p. 23 f. This

Furthermore, these opposites and qualifications do not have the same meaning in all contexts; astrology is very far from the neat generalizations striven for in *barûtu*, but there are some tendencies in that direction. Generally, it is good if a mostly well-portending planet, or a constellation representing such a planet, is bright, and bad if an evil-portending planet or constellation is bright, and vice versa if they are faint. A similar rule obtains in extispicy, even if is it not altogether consistent in its application: Right side = pars familiaris; a good sign to the right: good for us; bad sign: bad for us (or the enemy). Left side = pars hostilis; a good sign to the left: good for enemy, bad sign = bad for enemy (or for us). The ambiguity is one of emphasis in interpretation, whether the right side was primarily the favourable side, or primarily "our" side (pars familiaris).[1] Of course, this opens up many possibilities in interpretation.

In astrology, an omen was often seen to pertain to one of the four geographical entities Akkad (South), Subartu (North), Elam (East) and Amurru (West). To the Assyrians, omens pertaining to both Akkad and Subartu referred to "us", at least in times when the Assyrian king was the overlord of Akkad, i.e. Babylonia as well. Elam and Amurru referred to "the enemy". Which quarter an omen pertained to was decided according to which month, day, or watch of the night it occurred, and which wind was blowing. On the sky, the path of Enlil stands for Akkad, the path of Anu for Elam, and the path of Ea for Amurru. Also the planets and stars were allocated a region, but variant traditions existed side by side.

An astrological omen was believed to be valid only for a specified period (*adannu*), depending on the nature of the omen. A lunar eclipse would apply for up to 300 days (see further below), while omens from the stars were only valid for 30 days.[2] This differs somewhat from extispicy, where the *adannu* was arbitrarily stipulated by the diviner.[3]

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new understanding was first pointed out by Reiner and Pingree, *BPO II* p. 17 ff and expounded by J. Koch (1989) p. 14 ff and 119 ff.

1 See Starr (1983) p. 16, U. Jeyes (1991-92) p. 35.

2 *SAA 8* 399 and 414: giškim m[ul.meš] *adi* iti u[d.meš].

3 See Starr, *SAA 4* XVI f.

It is often considered the hallmark of Mesopotamian divination that it concentrates on the anomaly.[1] In fact, normal, regular, or, in extispicy, healthy phenomena are important and auspicious omens.[2]

In the following I will endeavour to give a description of some of the characteristics of the various celestial bodies and phenomena and the (mostly apotropaic) rituals connected with them which are mentioned in the letters and reports. This might give some idea of which omina were considered more important, but the astrologers relatively seldom recommend the performance of apotropaic rituals, perhaps the instances we do have are atypical. Very probably rituals were carried out more often than we can ascertain. The description is of course far from exhaustive and also rather a frustrating task since the astrological tradition is so full of contradictions and certainly does not swear by general rules. Balasî's remark (*LAS* 35) that no two omens have the same interpretation, though said about month omina, might be applied to astrology as a whole. But, as mentioned, to some extent generalizations did exist.

In my presentation, I follow the order of the *EAE*. As a rule, references are given only for statements and explanations that can not be found in Gössmann, *Planetarium Babyloniacum.*

The Moon

The moon plays a prominent part in Babylonian religion and astrology. The first twenty-odd tablets of the about 70 tablets of *EAE* concern the moon, the 8 last of these deal with eclipses, and about half of the astrological reports deal primarily with lunar phenomena.

The paragraph which concludes the section of the *EAE* dealing with the moon – it is followed by the catchline of the first tablet about the sun –

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1 Cf. Oppenheim (1977) p. 212.

2 For extispicy, see Meyer (1987) p. 3; Starr (1983) p. 17; and cf. Boissier, *Documents Assyriens*, p. 13:47 ff.

gives the impression that the signs given by the moon were understood as messages from Sin himself; but the text is somewhat obscure and possibly corrupt:

> *ta-mi-a-tum an-na-a-tum e-nu-ma* ^{d}30 *mit-lu-uk-ta* gar-*nu* dingir.meš *šá* an-*e u* ki-*tim ep-šet a-me-lu-ti tu-bu-ul-šú-nu i-ši-im-mu* an.ta.lù *ri-ih-ṣu mur-ṣu mu-tum* gal$_5$.lá.meš gal.meš ^{d}7.bi *ma-har* ^{d}30 *ip-ta-nar-ri-ku*[1]
>
> These are the oracles when Sin (i.e., the moon) makes a decision, the great gods of heaven and earth decide the doings of mankind and their[2] . . . . ., eclipse, flood, illness, death, the great *gallû*-demons, Sebettu always block the way in front of Sin.[3]

In the letters the same idea may be expressed, e.g. in Nabû-ahhe-eriba's comment to an omen about the Pleiades and the moon (*SAA 8* 72:4-6) "Sin has interceded with the gods on behalf of the king. The king will be well."

Even in *Enūma eliš*, where not much is left to gods other than Marduk, Sin is rendering verdict (V 12-24):

> ^{d}*nanna-ru uš-te-pa-a mu-šá iq-ti-pa*
> *ú-ad-di-šum-ma šu-uk-nat mu-ši a-na ud-du-ú* u_4*-mi*
> *ar-hi-šam la na-par-ka-a ina a-ge-e ú-muš*
> *i-na* sag iti-*ma na-pa-hi e-li ma-a-ti*
> *qar-ni na-ba-a-ta a-na ud-du-ú* 6 u_4*-mu*
> *i-na* ud.7.kám *a-ga-a* [*maš*]-*la*
> *šá-pat-tu lu-ú šu-tam-hu-rat mi-šil* [*ar-hi*]-*šam*

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1 *ACh Sin* 35:50 ff., cf. Rochberg-Halton (1988) p. 269 f, cf. also p. 216.

2 Similar expressions can be found in *šu-ila*-prayers, see the *šu-ila* to Sin, Mayer (1976) p. 493:16, 11a ff: "The great gods are gathered before you, the decision for all lands is put before you ... the great gods ask you and you give your advice, they sit in their assembly, discuss before your feet, *Sîn šūpû ša Ekur*, they ask you and you give the *tamītu*".

3 Probably a reference to the "eclipse myth", see p. 110.

i-nu-ma ^{d}utu *i-na i-šid* an-*e ina-aṭ-ṭa-lu-ka*
ina si-im-ti šu-tak-ṣi-ba-am-ma bi-ni ar-ka-niš
ud *bu-ub-bu-lum a-na har-ra-an* ^{d}utu *šu-taq-rib-ma*
šá [- - - -].kám *lu šu-tam-ḫu-rat* ^{d}utu *lu šá-na-at*[1]
ú-[- - - -] giskim *ba-'-i ú-ru-uḫ-šá*
za x[- - - *š*]*u-taq-ri-ba-ma di-na di-n*[*a*]

He (Marduk) caused the moon-god to shine forth and entrusted the night to him. He assigned to him the jewel of the night, to determine the days: "Go forth in your tiara every month, without fail. In the first of the month, as you light up over the land, you shine with horns to mark six days, on the seventh let the tiara be half. On the fifteenth day, you shall be in opposition to the sun every middle of the month. Then, when the sun is looking at you from the horizon, wane, grow backward as is proper. On the day of disappearance, approach the path of the sun so that [on the thirtieth day(?)], you shall be in conjunction, you shall be the sun's companion. I have . . . a sign, follow its path. [You and the sun shall] approach each other and give judgement."[2]

Signs of the Moon

Of the moon's cyclus, the new and the full moon held special significance. The first sighting of the new moon heralded the beginning of the next

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[1] The restoration offered by Vanstiphout, *JCS 33* (1981) 196 ff: *šá*-[*pat-tu* mìn].kam, etc., "so that the next fifteenth day('s moon) will be again equal to the sun", creates more problems than it solves.

[2] This passage was cited by Burstein (1978) p. 16 n. 21 as a possible background for the statement in Berossos, that the moon is a luminous ball with a dark and a bright side. Certainly the moon was conceived of as shining with its own light, but I do not think it can be concluded from the above passage that the Babylonians explained the phases of the moon the way Berossos did, as suggested by Burstein. Rather, the *Enūma eliš* passage says that the phases of the moon were the result of Marduk's command. I know of no Babylonian astronomical explanation of the phases of the moon, and the naturalist theory may safely be ascribed to pseudo-Berossos drawing on Stoic philosophy, see Kuhrt (1987) p. 39 f. For further native statements on the moon's phases, see *The Great Star List* (App. B 281 ff) and Livingstone, (1986) p. 30 f and 47.

month. The beginning of the month was good (seemingly regardless of the length of the preceding month), as in *LAS* 44:11-14: "The moon has taken a nice course: it is the beginning of the month", also *LAS* 46:14: "We call the 4th a 'new day', it is the *eššēšu*-day. A 'new day' is like the beginning of the month, it is favourable." The day of disappearance was also called Sin's birthday.[1] There are many references to the astral aspect of Sin and to his significance as bringer of portents in the literature, for example the *šu-ila* to Sin, Mayer (1976) p. 493:17 f: "the day of the new moon is your *tamittu*, the secret of the great gods, the 30th is your feast, the day of your divine splendour." It may seem somewhat strange to call the day of invisibility the day of splendour, but this must be due to the importance accorded to the moon "completing the day", bringing the month in harmony with his own mystical number 30. This is described in the letters and reports in two ways, either: (d)30 u_4-*mu ú-šal-lam*, "the moon will complete the (30th) day", or u_4-*mu a-na mi-na-ti-šú e-ri-ik*, "the (30th) day is lengthened to its full measure".[2] The appearance of the new moon on the 29th is in the letters and reports commonly expressed thus: (d)30 u_4-*mu ú-tar-ru* "The moon will reject the (30th) day." (The new day began at sunset, but the new moon only becomes visible a little later. Thus the day after the 29th could either be an abortive one hour 30th day which the moon by its appearance "rejected" and turned into the first day of the new month, or it could be a "complete" day if the new moon became visible for the first time the next evening.) The ominous content of the two possible durations of the month are briefly stated in *ACh Sin* 3:114 f: "If the moon is seen on the 30th day: destruction of Akkad. If the moon is seen on the first day: good luck for Akkad." Two omens for appearance on the first day are often quoted together: "'If the moon is seen on the first day, reliable speech, the land will be content.' 'If the

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1 *i.NAM.giš.hur.an.ki.a* (Livingstone (1986) p. 28), line 31: u_4-*mu i-lit-ti* d30 *ki-i* dug_4.ga "Sin's birthday, as it is said".

2 See Parpola's discussion *LAS II* sub *LAS* 100. His arguments are also corroborated by *SAA 8* 187: "If the Moon is seen on the first day: reliable speech, the land will be content." "If the day of the New Moon is lengthened to its full measure: a reign of long duration."

(30th) day is lengthened to its full time, a reign of long duration'. If the new moon is seen on the 30th day it means frost, clamour of the enemy and, depending on which month it is, Ahlamu will devour Subartu or vice versa, etc., as in *SAA 8* 60:1-4 (Nabû-ahhe-eriba): "'If the moon is seen in Nisan on the 30th day, Subartu will devour Ahlamu, a foreign people will rule Amurru.' We are Subartu!" The sinister character of the last days of the month is also attested in the hemerologies. According to the hemerology *KAR 178* iii 1 ff, the sun and the moon are secluded in conference, making decisions (as in *Enūma eliš* V 24, quoted above) and not to be approached from at least the 26th until the 30th of Nisan. The 29th is called *ūm bubbulu* "day of disappearance" (iii 37) and is very unlucky, solar and lunar eclipses are possible. The 30th is also dangerous (iii 52) but Sin and Shamash will bless you if you pray to them and not to your own god. In *i.NAM.giš.hur.an.ki.a* (Livingstone (1986) p. 24:21 ff), Sin and Shamash stand together and make decisions for the land on the 27th.

The opposition of the moon and the sun could be described in many terms, the pragmatic: 30 *u* 20 ki *a-ha-meš* igi, "the moon and the sun are seen together", or dingir ki dingir igi, "god is seen with god" i.e. at sunset. The poetic: 30 *u* 20 *šit-qu-lu*, "the moon and the sun are balanced", 30 *u* 20 *šu-ta-tu-u*, "the moon and the sun face each other", and the somewhat obscure phrase, which must be a description of the full moon itself: ^{d}30 ^{d}utu *ik-šu-dam-ma it-ti-šú it-tin-tum qar-nu qar-nu i-dir* "the moon reaches/equals the sun and goes parallel with it, one horn embraces the other".[1] The 14th was considered the proper day for the opposition, it portended stability, truthfulness and peace in the land, and a stable throne and wisdom for the king. Full moon generally occurred on the 14th since it occurs on the average 14.7 days after conjunction. If opposition occurred outside its "normal time" (*adannu, minâtu, simānu)*, i.e. on the 12th, 13th, 15th or 16th, it meant that a strong enemy would come, and wolves and lions would ravage the land.

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[1] Cf. *RMA* 119 - 172.

There are omens concerning any way the moon may appear, luminous or dusky, the look and shape of its horns, its *agû* "tiara", which refers either to the disc of the moon as seen when full but more often as seen by its first appearance, i.e., earth-shine, or to phenomena seen to surround the moon, such as stars or cloud-formations. Many of the listed types of tiara are obscure and may refer to different appearances. More important perhaps are its halos, *uṣurtu, supūru* (largest halo) and tùr, "cattle pen", the 22° circle. A planet or constellation seen within the halo of the moon acquires an ominous significance. The omen was modified if the halo was not closed, but how much seems to have been a matter of opinion (see p. 122).

Rituals Connected with the Moon

In *SAA 8* 320, Munnabitu reports opposition on the 16th and recommends: "regarding these observations of the [moon], the king should not be careless, he should perform either a *namburbû* or some other relevant ritual". Otherwise the dire consequences will be: raging lions blocking the traffic, the king will be angry with his country and people, lunar and solar eclipse in one month, war, a conquering enemy, but also that the gods will decide for happiness, and the king of Subartu have no rival! In a similar situation (full moon too early), the king wrote to the chief exorcist Marduk-šakin-šumi, who in *LAS* 172 replies: "Concerning that the moon and the sun were seen in opposition on the last 13th day, there is a ritual (*dullu*) to be performed against it. Let Nabû-gamil come and perform it according to my instructions; he should also perform it for Urad-Ea." Most likely this was the procedure followed every time a ritual was recommended on account of an astrological omen.

Eclipses of the Moon

Eclipses are of course very conspicuous, and they played a part in tradition and divination other than and independent from astrology – as can be seen also in the examples from Mari and Ugarit, mentioned above Chapter 2. Eclipses seem to be bad in themselves, and are listed along with other evils that might befall mankind. Since Old Babylonian times

they were forecast by for instance liver[1]- and oil-divination[2] and are mentioned in *Šumma ālu*[3]. They were also (already in the OB texts[4]) predicted by astrological omens, by halos,[5] by the new moon appearing too early,[6] by the moon being very big,[7] or even by fog![8] In an astrological context the eclipse – if it actually occurred – must of course be interpreted. This is the only example of an ominous event known to me that could itself be predicted by divination!

As is well known, both lunar and solar eclipses were primarily omens of disaster for the king or his enemies, according to which form the eclipse took. Eclipses were very important omens, and an intense watch was kept when they were expected to occur – it seems fantastic that Nabû-ahhe-eriba (*SAA 8* 55) should deem it necessary to explain that eclipses meant trouble (*duluhhû*).

The directions for observing and interpreting an eclipse are given in *Šumma Sîn ina tāmartīšu* tablet 4[9]:

> [diš an.mi en.nun an.usán] *a-na* nam.úš.meš : diš an.mi en.nun murub$_4$.ba *a-na* ki.lam tur-*ra* [diš an.mi en.nun ud.]zal.li *á-na* gig an.ti.la : diš ud.dug.ga en.nun an.usán *a-na* 3 iti ud.10.kam [diš ud.-dug$_4$.ga e]n.nun murub$_4$.ba *a-na* 6 iti ud.20.kam : diš ud.dug$_4$.ga en.nun ud.zal.li *a-na* 10 iti.meš [diš an.mi en.nu]n an.usán *a-na* kur uri^{ki} : diš an.mi en.nun murub$_4$.ba *a-na* kur.su.bir$_4^{ki}$ [diš an.mi en.nun ud.]zal.li *a-na* kur.nim.ma^{ki} : diš iti.bár iti.ne iti.gan kur uri^{ki} [diš iti.gud iti.kin iti.ab kur.ni]m.ma^{ki} : diš iti.sig$_4$ iti.du$_6$ iti.zíz kur

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1 *RA 44* p. 33:3. See *CAD A/1* p. 508 for further references.

2 e.g., *CT 5* 5 r1.

3 e.g., *CT 39* 32:28.

4 Bauer (1936) p. 310:12.

5 *Emar VI/4* no. 650:6; no. 651:60; *SAA 8* 382:7 ff (on this occasion an eclipse actually occurred! See *LAS II* p. 420); *SAA 8* 55.

6 *SAA 8* 382:2.

7 *SAA 8* 251.

8 *SAA 8* 417:2, *LAS* 302 r4. The writer quotes *EAE* !

9 *ACh 2. Suppl.* Sin 19:9'-20'.

mar.tu^{ki} [diš iti.šu iti.apin iti.še kur.]su.bir$_4^{ki}$ iti.meš *šá* an.ta.lù ^{d}30 [diš ud.13.kam kur.uri^{ki} ud.14.ka]m[1] kur.nim.ma^{ki} ud.15.kam kur.mar.tu^{ki} ud.16.kam kur.su.bir$_4^{ki}$ [im gàl.lu kur.nim.ma^{ki} im] si.sá kur.uri^{ki} im kur.ra kur.su.bir^{ki} *u gu-ti-i* im mar.tu kur.mar.tu^{ki} [kaskal *šu-ut*] ^{d}en-lí[l uri]^{ki} kaskal *šu-ut* ^{d}*a-nim* kur nim.ma^{ki} kaskal *šu-ut* ^{d}*é-a* kur.mar.tu^{ki} *u* su.bir$_4^{ki}$ [*enūma*] ^{d}30 an.mi *i*[*š*]-*tak-nu* iti u_4-*ma* en.nun im kaskal *u* ki.meš mul.meš *šá ina* šà-*bi* an.mi gar-*nu* šár.šár-*ma* [- - - eš.ba]r *a-na šá* iti-*šú* u_4-*um-šú* en.nun-*šú* im-*šú* kaskal-*šú u* mul-*šú* sum-*in*

An eclipse of the evening watch means plague, an eclipse of the middle watch means diminishing market, an eclipse of the morning watch means the sick will recover. The period (*adannu*) affected by an eclipse in the evening watch is three months and ten days, the period of an eclipse of the middle watch is six months and twenty days, the period of an eclipse of the morning watch is ten months. An eclipse of the evening watch is for Akkad, an eclipse of the middle watch is for Elam, an eclipse of the morning watch is for Subartu. The months of Nisan (I), Abu (V) and Kislimu (IX) are for Akkad, the months of Ajaru (II), Ululu (VI) and Ṭebetu (X) are for Elam, the months of Simanu (III), Tašritu (VII), and Šabaṭu (XI) are for Amurru, the months of Dumuzu (IV), Arahsamna (VIII), Addaru (XII) are for Subartu. These are the months of lunar eclipses. The 13th day is for Akkad, the 14th day is for Elam, the 15th day is for Amurru, the 16th day is for Subartu. These are the days of lunar eclipses. The South wind is for Elam, the North wind is for Akkad, the East wind is for Subartu and Gutium, the West wind is for Amurru. The Path of the stars of Enlil is for Akkad, the Path of the stars of Anu is for Elam, the Path of the stars of Ea is for Amurru. When Sin makes an eclipse, you must also consider the month, the day, the watch, the wind, the path and the positions of the stars as they stood during the eclipse, and then you can give [. . . *the deci*]-

[1] Restored from *ACh 2.Suppl.* 118:26.

sion in accordance with its month, its day, its watch, its wind, its path and its star.

This is explained by Munnabitu (*SAA 8* 316:3 ff) as follows: "The evil of an eclipse affects the one indicated by the month (lit. "the owner of the month"), the one indicated by the day, the one indicated by the watch, and the one indicated by the beginning, where the moon begins the eclipse and where he takes it off and discards it: these take over the evil of the eclipse." Munnabitu then goes on to interpret the eclipse in question (678 B.C., May 22nd = Simanu 14th, evening): "The month of Simanu is Amurru, and decision is given to Ur. The evil of the 14th day: as it is said: 'The 14th day is Elam'. We do not know the quadrant where it began. The moon shed the extent(?) of its eclipse toward the South and the West: the evil affects Elam and Amurru. That its disc started to clear from the East and the North, means good luck to Subartu and Akkad. That it was covered completely means that the portent pertains to all countries".

There are two rules for the interpretation of the movement of the eclipse shadow incorporated into the *EAE*. According to tablet 15, the part of the moon where eclipse starts indicates the country that will be afflicted; according to the introduction of tablet 20 the opposite is true: the part of the moon where the shadow moves to indicate which country will be afflicted.[1] To judge by number of manuscripts, tablet 20 was more popular than tablet 15, and Munnabitu follows the former. But his interpretation of the month is agreed on by most sources.[2] The pattern was:

Nisan (I), Abu (V), Kislimu (IX) = Akkad
Ajaru (II), Ululu (VI), Ṭebetu (X) = Elam

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1 Rochberg-Halton (1988) p. 54 f. and 178.

2 *The Great Star List* (App. B 270 ff), *ACh 2. Suppl. Sin* 19; *SAA 8* 336 r11 (Ašaridu), *ACh 2. Suppl.* 118:19 f. Another tablet of *Šumma Sîn ina tāmartīšu* (*ACh Sin* 22:25 f.) follows a different pattern: Months I, II, III = Akkad, IV, V, VI = Elam, VII, VIII, IX = Amurru, X, XI, XII = Subartu, this pattern was apparently not applied to eclipses but to flashing (*meših*) of stars.

Simanu (III), Tašritu (VII), Šabaṭu (XI) = Amurru
Dumuzu (IV), Arahšamna (VIII), Addaru (XII) = Subartu

Also his quotation regarding the day is in accordance with the sources cited above and is an instance of the occurrence of an evil sign on a "regular" day portending evil to the enemy. For the interpretation of the direction of shadow of the eclipse, Munnabitu follows the tradition known from *Šumma Sîn ina tāmartīšu*: "The South is Elam, the North is Akkad, the East is Subartu, the West is Amurru." This interpretation is perhaps yet another bit of evidence for the importance of regularity since an eclipse must always begin from the east and clear towards the west. Then, quoting *The Great Star List* (App. B 183-6),[1] Munnabitu lists the significance of the quarters:

> The right part of the moon is Akkad, the left part of the moon is Elam, the upper part of the moon is Amurru, the lower part of the moon is Subartu.

There exist at least three different schematic interpretations of the points of the compass,[2] but only the two following are applied to eclipses.

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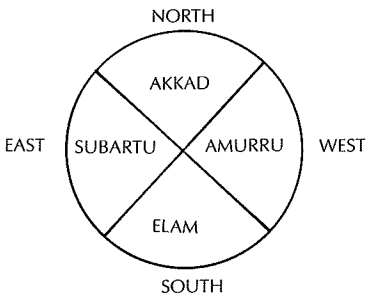
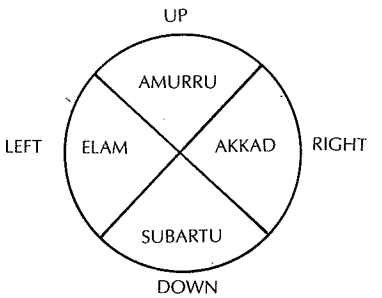
[1] The scheme is attested to in many other sources, e.g. *ACh 2.Suppl.* 118:24 f.

[2] Schott and Schaumberger, *ZA 47* (1942) p. 107 ff. See also *BPO 2* text XII p. 64 f.

Significance of the direction of the shadow:



Significance of quadrants:



(facing South)

According to Rochberg-Halton,[1] the most significant feature of a lunar eclipse was the direction of the movement of the eclipse shadow. This may be so in the series but in practice it seems to have been which quadrant was eclipsed. If the quadrant of Subartu or Akkad (except during the Šamaš-šum-ukin war) was eclipsed, the *šar pūhi* ritual had to be performed. The other possible interpretations of the eclipse (according to day, month, direction, etc.) could not dispel the evil and may be regarded as a sort of supplementary information. The only celestial phenomenon that could mitigate the evil was the presence of Jupiter during the eclipse.[2] Bel-ušezib's assertion that if an eclipse is not visible in the royal city, its evil does not apply (*RMA* 274 = *ABL* 895:3 f) is probably his own invention – this scholar seems to have had a highly original approach to divination (see below p. 148 f).

The *EAE* contains a lot of omens pertaining to lunar and solar eclipses with detailed apodoses, arranged according to month and day, with more

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1 (1988) p. 51.

2 *ACh 2. Suppl.* 29:14, *LAS* 298 r10', cf. also *SAA 8* 502 r11.

or less impossible occurrences. For instance, the days listed for lunar eclipses in *EAE* are the 14th, 15th, 16th, 19th, 20th, 21st and 1st–30th![1] And for solar eclipses the 1st, 9th, 11th, 13th, 14th, 15th, 16th, 17th, 20th, 21st, 28th, 29th, 30th! To make sense of this nonsense pseudo-mathematics (*arû*, *i.NAM.giš.hur.an.ki.a*) could be applied, see the example quoted above p. 87.

The Babylonians seem never to have given an astronomical explanation of eclipses. Tablet 16 of *utukkū lemnūtu*[2] contains a mythological explanation: seven demons, messengers of Anu, break loose and surround Sin, obscuring him completely. The purpose of the ritual seems to be to prevent the demons from also eclipsing the king, who is likened to the moon. The explanation presupposed in the astrological literature seems to be that Sin eclipses on his own initiative – or omits it at his own discretion, e.g. *LAS* 82:9 f, ^{d}*30* an.mi *ú-še-ti-iq.*

In the Neo-Assyrian period, scholars were not yet able to predict the occurrence of eclipses mathematically, but they certainly had some rules-of-thumb. They knew of course that lunar eclipses are only possible at full moon, and solar eclipses at new moon, that the moon may be eclipsed every 6th synodic month,[3] and that a solar eclipse may precede or follow a lunar. They also knew the 47-month eclipse period.[4] Watch was kept when an eclipse was expected from the 13th – 16th day (*SAA 8* 279[5]). The scholars were of course interested in being able to predict eclipses and other events exactly, and observations were probably collected. Only three letters restrict themselves to merely reporting an eclipse (*LAS* 105, 80 and 84).[6] The oldest of the so-called astronomical diaries known so far dates

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1 Cf. Rochberg-Halton (1988) p. 38.

2 *CT 16* 19 ff, translated by Kilmer in *JAOS 98* (1978) p. 372 f.

3 Rochberg-Halton (1988) p. 177 fn. 12, p. 41, *Šumma Sîn ina tāmartīšu* (*ACh Sin* 3:26): "If the Moon is eclipsed outside its proper time, i.e.: if the Moon is eclipsed before six months have passed or if it occurs on the 12th or 13th."

4 See van der Waerden (1966) p. 122 ff and *LAS* 41, 42 and 63.

5 Hunger's translation, "there was no observation" implies a gross dereliction of duty! Rather it means, "nothing unusual was observed".

6 *LAS* 80 and 84 seem to be letters of the kind sent from Assyrian scholars posted all over the Empire, see above p. 71 f.

to the year 652 B.C., the 16th year of Šamaš-šum-ukin,[1] and has exactly the same content and structure as the later diaries. There is every reason to suppose that keeping records of observations was an established practice at the time, even if we have no direct evidence from the letters. The two letters which actually resemble diaries (*LAS* 80, 650 B.C. and 105, 621 B.C.) are both later than the bulk of the letters and reports.

Rituals Connected with Lunar Eclipses

A *tamītu* text, i.e., an inquiry by the king about a specific problem to Shamash and Adad by liver divination,[2] published by Weidner,[3] concerns the occurrence of a lunar eclipse in "this" month on the 12th – 16th day in the evening, during the night or at sunrise. Whether such a *tamītu* was performed every time the possibility of an eclipse was reported to the king is of course impossible to know, but its mere existence illustrates the close link between the two divinatory practices. In connection with the lunar eclipses described in the inscriptions of Sargon and Nabonidus we also have evidence that eclipse omens could be corroborated by extispicy.[4] The *tamītu* text gives some interesting information of the general precautions taken in case of an eclipse (l. 14 ff): "Should I stretch out my hand, should the people of the land not go out, not look at it, not mourn, in . . .-cloth should they not squat down in the place of mourning for the lunar eclipse of this month, should in this month the lock not be closed?"[5] But the action taken by the king was above all for his own safety. The *šar pūhi* ritual[6] was in practice only performed after a lunar or solar eclipse, even if it could also be performed at "eclipses" of the planets, i.e. their disappearance behind the moon. Its main feature was that some

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1 Sachs and Hunger (1988) p. 40 ff.

2 See Lambert, "The 'Tamītu' Texts", *RAI 14* (1966) p. 119.

3 Weidner, "Keilschrifttexte nach Kopien von T.G. Pinches", *AfO 11* (1937) p. 360 f.

4 *TCL 3* 317 ff; *YOS 1* 45 i 8 ff.

5 That the people should cover their heads and the gates be locked is paralleled in the late Babylonian ritual to be performed during an eclipse, *BRM IV* 6.

6 See Parpola *LAS II* p. XXII ff.

inferior person, a prisoner of war or a convict, was installed as king with all the paraphernalia of kingship, including a large body-guard! He sat on the throne for up to 100 days, often shorter, even though the period affected by a lunar eclipse theoretically was determined by the watch in which it occurred and measured 100, 200 and 300 days respectively (see above). At the end of his "reign", the substitute king and queen were put to death. During that time the real king lay low and was advised not to leave the palace, but he still exercised his power and received reports from his scholars addressed to "the peasant". To make sure that the evil was transferred to the substitute king, the omens were written down on a tablet which was read to him and which he should repeat before Shamash and which was finally tied to his garment. Parpola[1] interprets this part of the ritual to show that the evil predicted was regarded as a divine judgement of the ruling king's sins and that the *šar pūhi* functioned as a scapegoat. The fact that the omens had to be transferred from the ruling king to his substitute does not suggest this to me. The substitute apparently *only* carried the evil of the omens thus tied to him, i.e. of the eclipse and of other portents occurring at the time of his enthronement, since apotropaic rituals had to be performed for the real king in the event of evil portents later on (e.g., *LAS* 334 on the late appearance of Mars). It is possible that a similar ritual could be carried out for other members of the royal family, a letter to the queen mother (*ABL* 263) mentions a slave girl who will be used in a ritual (*dullu*) against an eclipse.

The *bīt rimki* ritual was performed both at the time of the eclipse, or when it was predicted with certainty (*LAS* 185), and at the funeral of the substitute king (*LAS* 280). It contained a cycle of *šu-ila*'s which ended with some to stellar deities (*LAS* 185, Marduk-šakin-šumi, chief exorcist): 3 before the moon, 3 before the Pleiades, 2 before the Arrow-star (Sirius and Betelgeuze[2]), 2 before Mars, 2 before Vega (the ritual tablet of *Bīt rimki*, *BBR* 26 iii 63 f, adds Orion), and it seems that these could be performed by day! (*LAS* 185:17 f). *Šu-ila*'s have been characterized as

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[1] *LAS II* p. XXIV.

[2] For this identification of mul.kak.si.sá, see J. Koch (1989), p. 74 ff.

"*rituelle Bittgebete des Einzelnen*"; but apart from a few connected with temple-building etc., only the ones containing the "*attalû*-Formel" have "public significance" in that they concern the king and palace.[1] The *attalû*-Formel is a fixed formula inserted into the text of a *šu-ila* – often with no organic connection to the rest of the text – so that in reality it becomes a kind of *namburbû*. Curiously, this formula could be inserted into *šu-ila*'s to almost any god, to Adad, Belet-ili, Enlil, Gula, Nisaba, Išhara, Marduk, Nergal, Sipazianna, Shamash and Sin.[2] In three instances the day and month of the eclipse and the name of the king is given in the formula.[3]

Even if Jupiter was visible during an eclipse, some kind of apotropaic ritual seems to have been necessary (*LAS* 299 and 278 r16'): "With the king, my lord, all is well, but the watch should not be neglected and the relevant *namburbû* should be performed". *LAS* 185 mentions a *namburbû* called "If the moon and the sun have become a grievance to the noble and his country" which is otherwise unknown but seems to be performed at eclipses.

The Sun

Tablets 23/24–39/40 of *EAE* deal with solar omens. Reports dealing with the sun are very few (*SAA 8* 69, 209, 210, 280, 308, 310, 339, 384, 413, 456). Others which mention the sun really concern Saturn (see below). The sun/Saturn is referred to as 20, ^{d}20, ^{d}utu, or even ^{d}*šá-maš* by the scholar Nabû-ahhe-eriba, famous for his glosses (e.g., *SAA 8* 39). The great Shamash Hymn (*BWL* p. 136:156) says that the sun "exults with mirth and joy" on the 20th, the 20th is said to be his bright day (*namru,*

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1 Mayer (1976) p. 10 ff and 100 ff.

2 Cf. Ebeling, *AGH*, passim.

3 Adad 1a: Abu 14th, Sargon; Belet-ili 1: Šabaṭu 15th, Šamaš-šum-ukin; Marduk 2: Kislimu 10+th, Šamaš-šum-ukin. The numbers of the *šu-ila*'s are according to Mayer (1976).

BWL p. 221 and 341). In the hemerology *KAR* 178 ii 59, it is listed as a day of Shamash, as is the 18th (ii 40) and the 21st (ii 64).[1]

Eclipses of the sun were less sinister than lunar eclipses, performance of the ritual *bīt rimki* was for instance not necessary (*LAS* 104), and they may even be auspicious. The solar eclipse which took place in the morning of Ajaru 29, 669 B.C. (*SAA 8* 384 and *LAS* 28) portended at one and the same time long life to the king and abundance to his land but also death to the kings of Elam, Subartu and Amurru, and so a substitute king had to be installed. The eclipse was interpreted according to which part of the disc of the sun was eclipsed, in the same way as were the lunar (*LAS* 300+110). *ACh 2 Suppl.* 40:1 ff: "If the sun weeps at the decision of the Anunnaki" is perhaps a poetic term for a solar eclipse.[2] Indeed it seems that the sun losing radiance (*maqāt šarūri*), or a "gloomy" sun (*ṣalmu*),[3] is more dangerous (*dannu*) than an eclipse, perhaps because there was no *namburbû* against it (*LAS* 109:15' ff). *LAS* 104, no name, cites Akkullanu reporting that a solar eclipse took place in the morning, but no *namburbû* is needed since it is not like a lunar one. Nevertheless the king ordered that a watch be kept also for solar eclipses, as appears for instance from *SAA 8* 46 and 47. In the anonymous letter *ABL* 477 we hear that the king has demanded a definite answer as to whether a solar eclipse will occur. The writer boasts that neither a lunar nor solar eclipse can escape his notice, and he also exhorts the king to look for himself since he will be outside.

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1 Landsberger, *Kultische Kalender* p. 136-139: Shamash-days start on the 18th and end only on the 23rd.

2 This line does not fit into *EAE*, Weidner (1968) p. 70, but seems to be catchline of tablet 5 of *Šumma Sîn ina tāmartīšu* (*ACh 2. Suppl.* 19:25'). The text has other unusual protases, like (l.17): "If the sun tells the moon of the decision of the Igigi".

3 Caused by heavy sandstorms (*LAS II* sub *LAS* 64).

The Weather, Earthquakes

I will not concern myself with meteorological omens, even if perhaps I ought to since a section of *EAE* is devoted to them, namely the tablets 40–49/50. They deal with thunder in connection with eclipses, thunderstorms and lightning, cloud formations, rain, the rainbow, wind and earthquakes. The apodoses are no different from those known from the rest of the series, they concern war, death, fertility, etc. The four geographical quarters were associated with the four regions in a schema different from the two schemata which were commonly applied to lunar eclipses: the South = Akkad; the North = Subartu, Gutium; the East = Elam; the West = Amurru.[1]

The Planets and Fixed Stars

In the explanatory works, the Heavens were envisaged as divided into three layers. In *SAA 3* no. 39:30-33[2] we hear that Anu was in the upper heaven, of *luludanītu* stone, with 300 Igigi; in the middle heaven, of *saggilmut* stone, the one of the Igigi, Bel sat on a throne, and (l. 33): "The lower heaven, of jasper, is of the stars. He (Bel) drew the constellations of the gods on it".[3] So the stars are but the visible images of the gods on the bottom of the heavens as it were. That the planets and fixed stars were regarded as images of the gods, not identified with them as their sole incarnations, also appears from *Enūma eliš* IV 141 – V 8:

an-*e i-bi-ir aš-ra-ta i-hi-ṭam-ma*
uš-tam-hi-ir mi-ih-rit ap-si-i šu-bat ^{d}*nu-dim-mud*
im-šu-úh-ma be-lum šá ap-si-i bi-nu-tuš-šu
èš.gal.la *tam-ši-la-šu ú-kin* é.šár.ra

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1 See Schott and Schaumberger (1942) p. 107 ff.

2 *KAR* 307, cf. also Livingstone (1986) p. 82.

3 an-*ú* ki.ta.meš na_4.*aš-pu-u ša* mul *lu-ma-ši ša* dingir.meš *ina* ugu *e-ṣir*. Similarly, *The Great Star List* (App. B 278-80): "the lower heaven is of jasper, it is the one of the stars."

èš.gal.la é.šar.ra *šá ib-nu-u šá-ma-mi*
^{d}*a-num* ^{d}en.líl *u* ^{d}*é-a ma-ha-zi-šu-un uš-ram-ma*
ú-ba-áš-šim man-za-za an dingir.dingir gal.gal
mul.meš *tam-šil-šu-nu lu-ma-ši uš-zi-iz*
ú-ad-di mu.an.na *mi-iṣ-ra-ta ú-aṣ-ṣir*
12 iti.meš mul.meš 3-ta.àm *uš-zi-iz*
iš-tu u_4*-mi ša* mu.an.na *uṣ-ṣi-ru ú-ṣu-ra-ti*
ú-šar-šid man-za-az ^{d}*né-bé-ri ana ud-du-u rik-si-šú-un*
a-na la e-peš an-ni la e-gu-ú ma-na-ma
man-za-az ^{d}en.líl *u* ^{d}*é-a ú-kin it-ti-šú*

He (Marduk) went over the heavens, examined its regions. He set up a counterpart of Apsû, Ea's dwelling. He measured the dimensions of Apsû, he established Ešarra (House of Totality), the great temple, in its likeness. The great temple Ešarra, the one he built, is the sky. He caused Anu, Enlil and Ea to set up their dwellings.[1] He fashioned the positions for the Great Gods and made the stars, their images, stand as constellations. He marked off the year and defined its divisions: he set up three stars each for the twelve months[2]. After he had drawn the schedule of the days of the year, he founded the stand of Neberu to indicate their guideline. So that no one might err or be remiss, he set up the stand of Enlil and Ea with him (Neberu).

This is a very tricky passage which has been the subject of much discussion indeed. The Akkadian seems to me to be purposefully ambivalent, referring to the celestial and terrestrial habitat of the gods at the same time. From this passage, as well as from the one quoted above p. 100 f, the close connection of *Enūma eliš* with contemporary astrology and astronomy is apparent.

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1 For a different interpretation of *Ee* IV 141-6, see Livingstone (1986) p. 80 ff.

2 I.e., the three constellations supposed to rise heliacally in each month, according to the *Astrolabe*'s, known in Akkadian as "Three Stars Each".

The astronomical meaning of *nēberu*, "the ford", is not clear. It has been taken to mean the pole-star,[1] or an indicator of the ecliptic identical with the path of Anu, since it stands with Enlil and Ea. *nēberu* could be Jupiter or Mercury. Recently J. Koch[2] has suggested that the passage quoted above, as well as *Enūma eliš* VII 124 ff, refer to Mercury when stationary due east (azimuth 270°) in the middle of the path of Anu. In this connection the important thing is that it is an incarnation of Marduk.[3] Indeed one of the manuscripts of *EAE* tablet 22[4] adds a paragraph to the conclusion which is very similar, only here Anu, Enlil and Ea are credited with designing the sky:

e-nu ^{d}*a-nu* ^{d}en.líl *u* ^{d}*é-a* dingir.meš gal.meš
an-*e u* ki-*ta ib-nu-ú ú-ad-du-ú gis-kim-ma*
ú-kin-nu na-an-za-za [*ú-ša*]*r-ši-du gi-is-gal-la*
dingir.meš *mu-ši-tim ú-*[- - -] *ú-za-i-zu har-ra-ni*
mul.meš *tam-ši-li-*[*šu-nu i-ṣ*]*i-ru lu-ma-a-*[*ši*]
mi ud *kak-ku* [- - - -] x iti *u* mu *ib-nu-u*

When Anu, Enlil and Ea, the great gods, created heaven and earth, they made manifest the signs, decided the places and established the seats. They [. . . .] the gods of the night and divided the paths; they

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1 Landsberger and Kinnier Wilson, *JNES* 20 (1961) p. 173.

2 (1991) with summary of earlier discussion. He asserts that in *Enūma eliš, nēberu* is Mercury when stationary due east (270° azimuth) (p. 51 ff) – strange as it may seem that Marduk would be represented by the dimmest planet in this proud context. His discussion of the whole problem is vitiated by two defects: he assumes a scientific precision in the Babylonian terminology that is deplorably absent in its actual use (see p. 106 and cf., e.g., his repeated assertion that *nēberu* is Jupiter *only* when crossing the meridian, why not also when stationary in the east point?), and he fails to mention that Mercury, along with Venus, Mars, and Saturn, is listed among the stars of Anu in *Mul.apin* I ii 13 ff. Therefore, *nēberu* in *Mul.apin* I i 36-38 presumably refers to Jupiter.

3 *Nēberu* is the name of Jupiter when crossing the meridian (see p. 120) and it is the 49th name of Marduk in *Enūma eliš* (VII 124 ff). ^{mul}Marduk is explained as *Nēberu* in *Hh* XXII, *MSL XI* p. 31, but ^{mul}Marduk could also be Mercury (e.g., *SAA 8* 93 r3).

4 *AfO 17* pl. IV:14' ff. See Rochberg-Halton (1988) p. 270.

drew their starry images, the constellations; night and day . . . [. . .] month and year they made.

In the astrological texts the determinatives *mul* and *dingir* alternate freely, reflecting nothing, it seems, but the habit of the individual scholar. In some cases at least, the planets appear to be gods in their own right, as illustrated in *ABL* 668 (name lost): "The stars [. . . .] Jupiter, Venus, Saturn, Mercury, the moon, the sun, *Bēl mātāti*, the Arrow-star (Sirius), Lisi (Antares), *Bēlet balāṭi* (Vega), Sebettu (the Pleiades) and Išum. In front of these gods I will perform *maqlû*-rituals." Similarly in the list of divine witnesses in the Succession Treaty of Esarhaddon: "in the presence of Jupiter, Venus, Saturn, Mercury, Mars and Sirius; in the presence of Aššur, Anu, Enlil, Ea, Sin, Shamash, Adad, Marduk, Nabû, Nusku, Uraš, Nergal, Mullissu, Šerua, Belet-ili, Ištar of Nineveh, Ištar of Arbela . . ." (*SAA 2* p. 29:13 ff). The planets and stars mentioned cannot possibly have been visible all at once at the time of the treaty (or any other time of that year[1]), so they, like the 'real' gods, may have been represented by their emblems. In *LAS* 1, Ištar-šum-ereš recommends that the scribes of Nineveh, Kalizi and Arbela take the oath of loyalty on the night of the fifteenth of Nisan "before the stars". But this was done, at least in part, to avoid the consequences predicted in the hemerology of taking an oath during the day, not because the ceremony had to be performed at night. Certain planets and constellations were referred to collectively as the "Gods of Night"[2] and as such included in rituals and prayers which had nothing to do with astrology, for instance in *namburbû*'s performed on account of non-astrological omens.[3] But individual constellations and planets also appear in all sorts of magic and medical rituals.[4] For instance, Saturn, the Bow-star, the Pleiades, Sirius, Mars and Orion are invoked along with

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1 Hunger – Dvorak, *Ephemeriden*, sub –671.

2 These "Gods of Night" perhaps do not include all stars since those listed by name remain much the same limited number of bright or conspicuous stars and constellations throughout the centuries, see J. Koch (1991) p. 63.

3 See Borger, *HKL* 3 p. 81 sub *Götter der Nacht* for references, also above p. 39 f.

4 See Reiner (1987).

a large number of gods in tablet 2 of *Šurpu* (l. 180 ff), and medicine is exposed to Gula-stars (Reiner, *Fs. Porada* p. 34). In the hemerologies, offerings and taboos of various planets and constellations, e.g. Ursa Maior, Orion and Cancer are listed along with those of other gods.[1] *Šu-ila*'s to planets and stars were also part of the *bīt rimki* and *bīt salah mê* rituals, to the moon, Mars, Sirius, Orion, the Pleiades and Vega. These could apparently be performed in the day-time (see *LAS* 185:17 f). Also the ritual for consecration of a divine statue, *mīs pî*, included offerings to the planets, various constellations and the stars of the three paths (*TuL* p. 82). In the astronomical compendium *Mul.apin*, the fixed stars and planets on the path of the moon are referred to as "gods", and offerings are prescribed for them on the days of their first appearance (Hunger and Pingree, *Mul.apin* II i 43 and passim). The whole problem is evidently a complicated affair, and one should be careful not to impose distinctions foreign to the ancients.

There are seven planets, including the sun and the moon. These planets were called udu.idim.meš, Akkadian *bibbu*, "wild sheep" (e.g., *The Great Star List*, App. B 241–4). *Mul.apin* II i 1–6 describes the sun and the planets as travelling on the Path of the Moon. II i 7–8 sums them up as: "six gods who have the same positions (*manzāzu*), who touch the stars of the sky and keep changing their positions". The same idea is expressed by Nabû-ahhe-eriba who explains the term in *SAA 8* 55 r7: mul.udu.idim.meš *a-ki ha-an-ni-e* mul.meš *šú-nu* [*ša*] *ina* igi kaskal-*šú-nu ina muh-hi-šú-nu it-ti-qu*, "'Wild Sheep stars': that means: they are stars which pass in front of their course, above them." What he means is presumably that the planets, like sheep, wander through, and in front of, the fixed stars marking their courses. udu.idim alone could only be used to refer to Saturn, Mars and Mercury, but not to Jupiter and Venus, perhaps because these two planets were the most important. At any rate, they are the only ones to have sections of the *EAE* dealing exclusively with them. Mars probably had a single tablet but so few individual omens of Mercury and

[1] See Labat (1939) index.

Saturn are known that they probably did not have whole tablets devoted to them.[1]

I follow the pre-Seleucid order of the planets: Jupiter, Saturn, Venus, Mercury, Mars.[2]

Jupiter

Tablets 64-65 of *EAE* deal with Jupiter.[3] Jupiter is the star of Marduk, but references in literary texts to Marduk's astral aspect are not frequent[4], for instance *AGH* p. 94:13, *i-na bu-ru-mi* kù.meš *šá-ru-uh ta-lu-uk-šú*, "on the pure firmament, he proceeds in majesty". However, Assurbanipal's Acrostic Hymn to Marduk[5] is full of allusions to the god's celestial aspect, e.g., line 41 f: "your shining name is sag.me.gar, the foremost of the foremost, the highest god . . . who at its rising shows a sign." This identification is reflected in one of Jupiter's names, mul.ud.al.tar, Akkadian *dāpinu*, "the heroic one". The ordinary name of Jupiter is sag.me.gar, which is explained in the star list *V R* 46 1:39 as "the bearer of signs to the inhabited world" (cf. also the *akītu*-ritual *Racc.* p. 138:305, on ^{mul}babbar), but this planet has a name for every occasion, *III R* 54:36 ff, and *SAA 8* 147 (Nabû-mušezib): šul.pa.è.a, "Lord of the bright rising", name of Jupiter at its heliacal rising in the east, sag.me.gar in the eastern sky, *nēberu* "crossing" when it stands in the middle of the sky (i.e. culminates crossing the meridian),[6] ud.al.tar in the western sky. It also has a name for every month (*III R* 53 2:2ff). Jupiter is the white planet, as one of its names, mul.babbar "the white star" shows, and that the moon

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1 *BPO II* p. 24.

2 The Seleucid order of the planets was determined by their characteristics: first the well-portending Jupiter, Venus, Mercury and the Moon, followed by the (then) evil-portending Saturn and Mars. See Rochberg-Halton (1988c).

3 *BPO II* p. 23.

4 See Tallquist, *Götterepitheta*, Marduk.

5 *SAA 3*, text no. 2, p. 6 ff.

6 For a discussion of *Nēberu*, cf. above p. 117.

wears a white halo means that Jupiter stands close by it (*ACh Suppl.* 4:11 and 36:9).

Jupiter could signify the moon in what seems a contrived parallel to Saturn signifying the sun.[1] This equation was used by Balasî and Nabû-ahhe-eriba (*LAS* 51) who try to persuade the king to eat, arguing that the appearance of Jupiter equals the appearance of the new moon and thus signifies the beginning of a new month and the end of fasting. If Jupiter is present during a lunar eclipse it cancels the evil omen. Otherwise, Jupiter in connection with the moon is almost always a bad omen (e.g. *ACh Ištar* 18-19).

Together with Shamash, Jupiter is "Lord of the secrets of Akkad" (*STC II* plt. lxix l. 26'). Accordingly, brightness of Jupiter is good for the king and the land, and the angry gods become reconciled with Akkad. In general Jupiter is a harbinger of plenty and peace, except in close connection with the moon (except when eclipsed) when it portends the death of a king and strife in the land, unless it is identified with mul.lugal (Regulus) in which case it brings long days to the king (*SAA 8* 283). Jupiter in the path of Enlil means that the king of Akkad will grow strong (*SAA 8* 54); in the path of Anu, that the king's son will revolt and usurp the throne. Anu's path equals Elam, so the omen pertains to Elam (*LAS* 289:16' f), or alternatively (*SAA 8* 170, Bamâ, and *SAA 8* 115, Bulluṭu) it means rain and a prospering crop.

In *LAS* 289, Mar-Ištar reports as a bad omen that Jupiter had exceeded its term (*adannu*) by five days. According to *Mul.apin* II i 49-50, Jupiter remained invisible from 20 days to a month. The period of invisiblity of Jupiter is actually between 26½ – 35½ days. Parpola[2] suggests that Mar-Ištar used the mean value of these modern figures, but that seems less likely since Mar-Ištar quotes *Mul.apin*. He merely went by the book, was informed that Jupiter had exceeded its term by five days when not visible on the 35th day, and duly reported this.

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1 See *BPO II* text II:14a and *ACh Ištar* 7:44, and BM 121206 viii 55' ff (Menzel, *Tempel*, T 64).

2 *LAS II* p. 287.

Rituals Connected with Jupiter

In *SAA 8* 370, Nabû-šum-iškun reports that Jupiter stands in the halo of the moon, which means that the king will be confined, but the evil is averted because the halo is not closed. But in *SAA 8* 71, Nabû-ahhe-eriba says: "The night of the 1st, Jupiter stood in the halo of the moon, a *namburbû* should be performed. The halo was not closed." He does not give any apodosis, but presumably has the one quoted by his colleague in mind. The gravity of an omen and the effect of a rule, such as the one that an open halo dispells the evil portent, seems to be a matter of opinion. In *LAS* 67, Nabû-ahhe-eriba writes that the universal *namburbû*[1] should be performed and the omen which it will revoke should be written in the text of the *namburbû*. The omen in question is from the appearance of Jupiter and/or Mercury portending that the *asakku*-disease will rage in the land. In *SAA 8* 288, Nabû-iqiša from Borsippa reports a conjunction between Jupiter and Mars (June 11, 679 B.C.) which portends among other things the fall of a great army, evil in the land, death of the cattle, death of the king of Akkad, but a prospering crop: "this is an evil omen for all lands, the king, my lord, should perform the *namburbû*, to make its evil pass by." Mar-Ištar advises in *LAS* 289 that a watch be kept and the relevant *namburbû* be performed on account of Jupiter rising in the path of Anu, even though the omen in theory pertains to Elam – better safe than sorry. In *LAS* 268, Urad-Ea, *galmahu* of the king, reports that the kettledrum will be placed tonight before Marduk. "Marduk" might conceivably be Jupiter, and the ritual caused by a Jupiter omen.

Saturn

When in the astrological texts Saturn is referred to by its own name, it is almost always called (udu.idim).sag.uš, Akkadian *kajamānu*, "the steady". But it was also known as the night sun, or star of the sun, and 20 or ^{d}utu

[1] See *LAS II* sub *LAS* 67.

are regularly used in reference to Saturn. Parpola[1] suggests that this identification may be due to an association of Saturn's Akkadian name, derived from the root *kun*, with *kittu*, "justice", which is of course an attribute of Shamash. Another explanation offered by Pingree[2] is that the sun's hypsoma sets as Saturn's rises. However, the earliest evidence for the hypsomata is from the seventh century B.C., and the association of Saturn and the sun is certainly older[3] and far more entrenched in the tradition than warranted by such arcane speculations. Anyway, the identification was also in use outside of strictly astrological contexts. In the *akītu*-ritual (*Racc* p. 138:307), Saturn is called the star of truth and justice (*kittu u mīšaru*),[4] and in the ritual *mīs pî*, *TuL* p. 105:32, *zibanītu* (Libra) is called "house of Shamash", but the "house" of the sun is Aries, Libra is in fact the "house" of Saturn, see p. 135. Saturn is furthermore identified with Ninurta[5] (*SAA 8* 154, from Nabû-mušeṣi): "If the sun (i.e. Saturn) stands in the halo of the moon . . . If Ninurta stands in the halo of the moon: my army will set foot in enemy land". The duality of Shamash and Ninurta is illustrated in the commentary *ACh Ištar* 8:10–11 where Venus is identified with Shamash at sunrise and Ninurta at sunset. Saturn is also called the black or dark star. Parpola, *LAS II* fn. 636, explains this through its identification with Ninurta, without explaining why Ninurta would be considered "black". Ninurta is described as "the light of heaven and earth who illuminates the interior of the *apsû*" in an inscription of Assurnasirpal II,[6] and Šamši-Adad V describes Ninurta, under the name

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1 See *LAS II* sub *LAS* 326.

2 Hunger and Pingree (1989) p. 147.

3 For instance, *Emar IV/4* 655:22' (thirteenth century): "If the moon makes an eclipse and Shamash stands with it . . .", and 53': "If Shamash at his rising touches two stars . . .", written ^{d}utu and *20* (= Shamash) respectively, must refer to Saturn. The line numbers are according to the copy.

4 Also in the commentary K 260+:18 (Langdon *RA 14* p. 24): mul gi.gi mul *kit-tu u me-šar* ^{d}sag.uš ^{d}utu. The same interpretation is offered of the black star and Libra.

5 mul.kak.si.sá, Sirius, is also identified with Ninurta, Ebeling *AGH* p. 148:29. And so is Mercury in *Mul.apin*, e.g., II i 38; I ii 16 and passim, cf. also Schott, *ZA 43* (1936), p. 135.

6 *AKA* 257 i 8.

^{d}UD-*gàl-lu*, as *aplu šitluṭu ša ina burummi ellūti šurruhu gisgallu*, "the lordly son whose position on the clear firmament is resplendent".[1] When Saturn stands close to a star, the star is said to wear a black tiara[2] (or the tiara of the sun! *ACh Suppl.* 36:14). This is said in connection with Venus (*ACh Suppl.* 36:8), the Yoke-star (Boötes) (*ACh Ištar* 21:18), the moon (*ACh 2. Suppl.* 14 r33). In the reports, however, this seems only to have applied to Saturn in conjunction with the moon (*SAA 8* 40, 41, 517). In *SAA 8* 51 (Nabû-ahhe-eriba), it is said of Mercury in front of Venus. Mercury evidently had some connection with Saturn. In later astrology Saturn came to be one of the sinister planets (see below p. 173); in a non-astrological context, *The Weapon Name Exposition*, the list of "Twelve gods of my city, tramplers of the storms", opens with Libra, Saturn and Mercury,[3] so perhaps Saturn had sinister associations independent of astrology.

Saturn is the star of Akkad (*SAA 8* 383, Raš-ili senior), and the star of Amurru (*SAA 8* 491, Šapiku, from Borsippa). It is also the star of the king: *LAS* 326:7 ff: "Saturn is the star of the sun: its interpretation is: this is good for the king, for Shamash is the star of the king" (cf. also *LAS* 66).

Saturn functions as the sun's substitute in connection with the moon, i.e. if Saturn stands in the halo of the moon on the 14th, this equals opposition on this day and portends the same things, truthfulness and stability. It even mitigates the bad omens of opposition on the 13th (*SAA 8* 40, Nabû-ahhe-eriba). Saturn seems in general to bring good omens (*SAA 8* 39 r5, Nabû-ahhe-eriba): "The appearance of Saturn is good for the king, my lord!", but the letters and reports where Saturn is mentioned are unfortunately often broken (e.g. *SAA 8* 297 and 547, *LAS* 66 and 40), and it does not seem to occupy a place similar to Jupiter in *EAE*.

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1 *I R* 29-34 i 16-18.

2 Bezold (1917) p. 140.

3 Livingstone (1986) p. 54:1 and p. 58.

Rituals Connected with Saturn

In *LAS* 269, Urad-Ea, chief cantor of the king, reports that on the night of the 25th, a kettledrum will be placed before the god [Mars ?] upon clothes of the king. They shall perform the (chants) of Saturn at the same time, and the god will [bless] the king. The clothes of course represent the king. The ritual might have been performed because of an omen involving Saturn (and Mars). Parpola (*LAS II* sub *LAS* 269) suggests that the Mars-Saturn conjunction January 23, 669, reported as ill portending in *SAA 8* 82, may have been the occasion. Raš-ili senior (*SAA 8* 386) warns that Saturn is retrograde from Libra towards Scorpio and recommends that the king stay indoor and be on his guard against rebellion.

Venus

The largest group of planetary omens in *EAE*, tablets 59-63, concerns Venus.[1] The regular names of Venus are $^{d/mul}$*dil-bat*, explained as "the brightest star" (*na-ba-at kak-ka-bu, V R* 46:40), and Ishtar. In *SAA 8* 51, Nabû-ahhe-eriba refers to Venus both as ^{mul}*dil-bat* and ^{d}*eš$_4$-dar*. Ishtar/Venus forms with Shamash and Sin what might be called a celestial triad, as illustrated in *utukku lemnūtu* tablet 16 (*CT 16* 19:54 ff) where Enlil after conference with Ea installs Sin, Shamash and Ishtar to keep order in the *šupuk šamê* and share the rulership of the heavens with Anu – cf. also the depictions of Venus, sun and moon together on kudurrus, etc. In literary texts, references to Ishtar's astral aspect are abundant.

Venus was bisexual, changing her sex according to her position in relation to the sun, but here again we find conflicting traditions. According to one tradition she was considered male (and malefic) as an evening star and female (and benefic) as a morning star (*BPO II* p. 46 text IV:6-7a with parallels); according to another she was male as a morning star and female as an evening star (*ACh Ishtar* 8:8 f). The

[1] *BPO II* p. 23, see in general D. Pingree "Venus Phenomena in *Enūma Anu Enlil* ", *Grazer morgenländische Studien 3* (1993), p. 259 ff.

bisexuality of Venus is actually reflected in the letters since it is alternatively referred to in the masculine and the feminine. But it is not possible to decide from the letters which of the two traditions was prevalent. In *LAS* 69, Nabû-ahhe-eriba uses the masculine when the planet is due to appear as an evening star, so here the first tradition is followed; but in *LAS* 65 he uses the feminine also about an evening star. Ištar-šum-ereš follows the first tradition in *SAA 8* 5 (female morning).[1] The bisexuality does not affect the omens and is not applied in the Venus-tablet *EAE* 63 (*BPO I*). The mere visibility of Venus is counted favourable (*LAS* 70, Nabû-ahhe-eriba); thus if Venus is seen in the path of Enlil, the favourable omen pertains to Akkad; in the path of Anu, it pertains to Elam; in the path of Ea, it pertains to Amurru in accordance with the significance of the paths (*ACh Ishtar* 4:1 ff). Venus generally brings rain and fertility – but her conjunction with the other planets portends war and bad luck for the king. If Venus sets heliacally before its time, there will be wailing in the land. Venus is the star of Elam (*SAA 8* 302 r2), and accordingly Nabû-mušeṣi (*SAA 8* 145) interprets an evil omen from Venus setting too early as pertaining to Elam.

The recording of its sightings is among the oldest parts of *EAE*, testifying to the very early interest in the planet. Tablet 63 of *EAE* (*BPO I*) contains omens pertaining to the Venus cycle, based on observations made during the reign of Ammiṣaduqa. By the seventh century the 8-years Venus cycle was certainly known and the first visibilities of Venus could be predicted with accuracy. The writer of *LAS* 66 (Balasî or Nabû-ahhe-eriba) could with conviction reject as impossible a supposed Venus observation.[2]

Rituals Connected with Venus

As mentioned above, *šu-ila*'s to Venus were part of *Bīt rimki*. In *LAS* 308, Akkullanu says that he has to wear a spindle (^{giš}*pi-laq-qu*) for Venus for three days. The nature of this ritual is unknown; Akkullanu says he has

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[1] Ptolemy, *Tetrabiblos* I 6, quotes the second tradition, but I see nothing in the cuneiform sources lending it greater authority.

[2] See *LAS II* sub *LAS* 66; *BPO I* p. 15 ff and 24.

to do it for the life of the king, so it could be to avert an evil omen. It may also be a ritual connected with a phase in the cycle of Venus like one mentioned in the very fragmentary letter *LAS* 11, from Ištar-šum-ereš, which may be connected with the heliacal rising of Venus in the West. Parpola (*LAS II* sub *LAS* 308) suggests that Akkullanu has to excuse his absence for three days due to the licentious nature of the ritual mentioned. This seems unlikely to me. Akkullanu does not say anything about being away, and even if the ritual was licentious he would not have to excuse himself, prudishness not being an Assyrian vice. *LAS* 333 (Adad-šum-uṣur) reports that they will perform a ritual (*dullu*) before Venus and Sirius. Which ritual and why is uncertain; it may have been part of *Bīt rimki*. In *LAS* 270, Urad-Ea mentions that the kettledrum will be placed before Venus that night. This might be an appeasing ritual performed because of a Venus omen. Otherwise there does not seem to be any Venus omen which called for the performance of an apotropaic ritual; but this may of course be purely accidental.

Mercury

The names of Mercury are udu.idim.gu$_4$.ud or just gu$_4$.ud, *šiḫṭu*, "the jumping one", a suitable name for the fastest moving planet. It is also the planet most often referred to simply as udu.idim, "wild sheep". In *Mul.apin*, Mercury is consistently identified with Ninurta, but otherwise Mercury is mostly identified with Nabû.[1] As Nabû is the son of Marduk, so Mercury is the star of the Crown Prince. Its brightness was taken to be a good omen for the prince (*LAS* 46:r9 and 70:r7 f), and if Mercury enters Regulus (mul.lugal, "the king-star") it means that the crown prince will revolt against his father (*SAA 8* 245). But Mercury can also be the star of Marduk (*SAA 8* 93 r3, Balasî; also *SAA 8* 503:1 ff, no name, and *EAE* tablet 50, *BPO II* p. 42 III:29a). Mercury can be described as a dark tiara of a planet (*SAA 8* 51:7 ff, of Venus) or a dark centre of a con-

[1] Lambert, *AfO 18*, 385 ff.

stellation (*SAA 8* 504 and *ACh Ishtar* 32:10, Scorpio; *SAA 8* 146 and *BPO II* p. 76 XVI:15f., Leo). It can also be a red tiara (*ACh Suppl.* 36:12, Venus; *BPO II* 40 III:7b-c, Cancer). Like Jupiter, Mercury is associated with the moon.[1]

Mercury was above all a harbinger of rain and flood in whatever month it appeared, both as a morning and an evening star (*Racc* p. 138:306, *SAA 8* 157, 503, etc., see *LAS II* sub *LAS* 120) – in *Mul.apin*, however, only if it appears in the winter (II i 54-57). But it could also portend death if it rose in Dumuzu or stood in front of (i.e., to the east of) the moon.

There are Neo-Assyrian texts[2] resembling *EAE* tablet 63, which pertain to the cycle of Mercury, but in the Neo-Assyrian period the appearances of Mercury could not yet be predicted with any certainty. Balasî and Nabû-ahhe-eriba (*LAS* 53) know only enough about the planet to admit that they can not rule out that it has been observed in Babylon even if they have not seen it themselves yet.

Mars

Mars primarily brings evil, its sinister character is made abundantly clear from its many names, and the names of constellations identified with it, listed in *The Great Star List* (App. B 83-113). Some of its names are: *šanûmma* "different", i.e. hostile, *nakru* "enemy", *sarru* "liar", *lemnu* "evil", *ahû* "strange". Other names refer to its appearance: sa_5 "red". However, its regular name in astrological contexts was *ṣalbatānu*, of uncertain etymology. This name is explained as *kakkab lā minâti* "the incalculable star", or *muštabarrû mūtānu* "constantly portending pestilence", cf. also *SAA 8* 114:3, Bullutu: "Mars (*ṣalbatānu*) is said to be for pestilence". It is associated with Nergal, and references in literary texts to Nergal's astral aspect are not infrequent, e.g. Mayer (1976) p. 479:5: "You are exalted in the pure sky, your position is high, with Sin in the sky you watch over

[1] Text to be published in *BPO III*, mentioned in Hunger and Pingree (1988) p. 147.

[2] Pingree and Reiner, "Observational Texts Concerning the Planet Mercury", *RA 69* (1975) p. 175 ff.

everything." Mars may even be referred to as Nergal.[1] Its appearance is an evil in itself, and appears in omen apodoses, astrological and otherwise, already in Old Babylonian texts: "Mars will rise and destroy the cattle".[2]

According to *The Great Star List* (Appendix B 219 = *CT 26* 40 v 7), Mars is one of the twelve stars of Amurru; according to *EAE* 50, *BPO II* p. 40:11a, it is the star of Elam, cf. also *SAA 8* 383 and the commentary *STC II* plt. lxix l. 25' where Mars and the moon are called "Lords of the Secrets of Elam". Raš-ili refers to it as star of Amurru and Elam. Finally it could be the star of Subartu, according to Šapiku (*SAA 8* 491), who consequently also interprets its brightness as good. The luminosity of Mars varies greatly, and normally it is ill-portending if Mars is bright, and good if it is faint (*SAA 8* 114 r3). When bright, Mars portends warfare and death to man and beast; when weak, it means plenty and fertility.

Mars is of course the red planet par excellence (udu.idim sa_5), and when called by this name it brings prosperity to the people (*nuhuš nišî*) but also a raging plague (*mūtāṇu šamru*) (*SAA 8* 274 r4-5, 419:4-5). Venus is red if Mars stands next to her (*ACh Ishtar* 6:24), or if either Mercury or Mars stands next to her (*ACh Ishtar* 7:17). In *ACh Suppl.* 36:11, Mars is described as a yellow tiara of Venus.

Rituals Connected with Mars

In *LAS* 334 (no name) the "farmer" is requested to perform the universal *namburbû*, *eršahunga*'s and *šu-ila*'s for Nergal.[3] In the text of the *namburbû* and *šu-ila* should be written: "Regarding the planet Mars which exceeded its term and [. . .]-ed in the constellation Aries: may its evil not approach, not come near, not press [upon me], not affect me, my country, the people of [my pa]lace and my army!" In *SAA 8* 82, Balasî recommends that the universal *namburbû* should be performed because of the conjunction of Mars and Saturn, which portended scarcity for Akkad. In *LAS* 149, Adad-šum-uṣur, the king's exorcist, quotes the king's order

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1 *SAA 8* 502:11, also 114:8 and *LAS* 110+300:20 ff: "If Nergal is small and white at his appearance and twinkles like a fixed star, he will have mercy on Akkad".

2 BM 86381, quoted by Rochberg-Halton (1989) p. 125 fn. 7. Extispicy: *RA 65* p. 73:62.

3 There is actually one *šu-ila* to *ṣalbatānu*, Mayer (1976), Nergal 1.

that he perform a *namburbû* for the king himself and for the crown prince on account of an unspecified Mars omen. In the fragment *LAS* 233 we hear that *šu-ila*'s are recited before Mars which is approaching Spica, thus portending a swarm of locusts. Sometimes the astrologers recommend other kinds of precautions in connection with Mars phenomena: Nabû-ahhe-eriba (*SAA 8* 53) reports the possiblility that Mars will reach Scorpio and recommends that the mustering of army be finished quickly and that the king not go out. In *SAA 8* 387 Raš-ili senior advises the king to be cautious until Mars leaves Scorpio. Omina pertaining to Mars in Scorpio are indeed ill-portending, see *SAA 8* 502:11 ff.

The Fixed Stars

Some of the tablets of *EAE* were devoted to particular constellations, such as tablet 53 to the Pleiades. Scorpio, Cancer, Leo and some others probably also had tablets of their own, see *BPO II* p. 24.

The regular rising of the constellations in the months assigned to them in the *Astrolabe* was generally well portending, but in tablet 51 of *EAE* it is well portending if a constellation rises early and evil if it rises late (see *BPO II* p. 56). Like the planets, the constellations could stand in the halo of the moon and so gain significance in their own right.

The identification of various stars and planets with each other, and especially of constellations with planets, is a very distinctive feature of Babylonian astrology. It also seems a reasonable assumption that texts that deal with constellations reaching (*kašādu*) and approaching (*ṭehû*) each other were written with planets, rather than fixed stars, in mind.[1] At least, this was how it was understood by the ancient commentators, e.g. of *EAE* 51.[2] Reiner and Pingree (*BPO II* p. 20 f) assume that the names of the fixed stars in *EAE* did always originally refer to constellations, and that the

[1] See e.g. *ACh Suppl.* 49, 50, *2.Suppl.* 66, *TU* 16.

[2] *ACh Ištar* 21. See also *SpTU 3* 101.

redactors of *EAE* 50-51 only followed the practice of equating names of stars with planets to a very limited extent. However, the scholars quoting *EAE* 51 certainly used the equations. Ašaridu senior, for instance (*SAA 8* 325 r3-5) quotes *EAE* 51 (excerpt tablet text XIII:9, *BPO II* p. 67): "'If in Ululu the Kidney star rises heliacally: the crop will prosper'" and comments: "the Kidney star is Mercury".[1] The redactor of *EAE* 51 presumably worked with *Astrolabe B* as a starting point, correlating stars and months, and the text originally referred to the Kidney star as nothing but the constellation Kidney star – not as a pseudonym for a planet. Nevertheless, in the letters and reports the fixed stars appear mostly either as planets or in connection with planets. For example, the omens pertaining to the bright/faint light or various colours of fixed stars, which are often quoted either referring to a planet, or in the case where a planet stands in the constellation, before it or behind it, that planet is understood as giving the fixed stars their colours, or making them bright or faint. Reiner and Pingree suggest that the identifications originally were made by pairing omina pertaining to fixed stars with omina pertaining to planets which had similar apodoses.[2] This might certainly be true in many cases, since so many identifications seem totally random, but other mechanisms are also possible. In a long essay, Bezold (1918) developed the idea, first proposed by Boll, that the identification worked by likeness in colour rather than mythologically, phonetically or otherwise: "Farben der Planeten in vier Abstufungen von Rot zu Weiss wurden mit denen der hellsten Fixsterne verglichen ... und so eingestuft."[3] I will in no way venture to discuss all the identifications Bezold has amassed, but due to his opinion that the fixed stars were an absolutely "dead chapter" (p. 124) and of no interest to the Babylonian astrologers, except when identified with planets, he sometimes misinterprets the material, for instance in his

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1 The identification is canonical: *ACh Ištar* 21:33 ff.

2 *BPO II* pp. 1 and 20, adding that further discussion of the nature and origin of planet–constellation equation must await the publication of the planetary texts (p. 70).

3 Boll, *Sternglaube und Sterndeutung bei den Babyloniern* (1918), p. 7.

identification of Scorpio with Jupiter.[1] Of course it is true that the planets played the major role by far, but *sometimes* the constellations were allowed on stage as well. The idea of identification by colour is in my opinion very difficult to uphold on a general level, though I will not deny that colour likeness may have been the basis of some identifications. We know which colours the planets were supposed to have, but not those of the fixed stars, and indeed Bezold's arguments are based on a misunderstanding of the word *tikpu* which he takes as a variant of *tibku*, "layer of bricks", and interprets as "ziegelrot" (p. 119). According to Bezold's system (p. 127), Sagittarius is identified with both Jupiter (white) and Saturn (black), Pisces Austrinus with at least Jupiter, Mars, Venus and Mercury, etc. In a few cases the colour scheme fits (Aquarius: Venus and Jupiter), but where we do have descriptions of the colours of fixed stars without the mention of planets, the scheme fits badly (p. 145).

In view of the present state of publication, and the poor condition of the published texts, it is difficult to determine the nature of the working principles behind the identifications. Some of the identifications are probably based on mythology (Venus, Išhara, Scorpio); others may link a planet and its hypsoma.

The zodiac was not yet invented in the Neo-Assyrian period. The positions of planets and the moon were primarily referred to in relation to 17 constellations, not all in the ecliptic, described as "Gods standing in the path of the moon" in the first tablet of *Mul.apin*.[2] These constellations are: mul.mul "Stars" = the Pleiades; gu_4.an.na "The Bull of Heaven" (Taurus); sipa.zi.an.na "True Shepherd of Anu" (Orion); šu.gi "Old Man" (Perseus); zubi "Crook" (Auriga); maš.tab.ba.gal.gal "Great Twins" (Gemini); al.lul "Crab" (Cancer); ur.gu.la "Lion" (Leo); ab.sìn "Furrow" (Virgo); *zi-ba-ni-tum* "Scales" (Libra); gír.tab "Scorpion" (Scorpio); pa.bil.sag (Sagittarius); suhur.máš.ku_6 "Goatfish" (Capricorn); gu.la "The Great" (Aquarius); kun.meš "Tails" (Pisces); sim.mah "Swallow" (SW

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[1] (1917) p. 108. He refers to *RMA* 94 (= *SAA 8* 147) saying that "Scorpio" (mul.gír.tab) is written as a gloss to "Jupiter". This is not true. In this case Jupiter *and* Scorpio are said to be in the lunar halo, and the text quotes both omens of Jupiter and of Scorpio.

[2] Hunger and Pingree, *Mul.apin* I iv 33 ff.

Pisces); *a-nu-ni-tum* "Annunitum" (NE Pisces); lú.hun.gá "Hired Man" (Aries).[1] Many omens deal with the planets entering, rising in, or leaving particular constellations, not just these 17, but when other constellations were mentioned, they were in practice often identified with one of the stars of the Path of the moon.[2] Lunar eclipses could also be referred to one of the constellations on the path of the moon in place of date.[3] However, this practice was not too common, and only one relatively short paragraph is known to deal with it.[4] In some manuscripts the paragraph was included in *EAE* 20, or between 21 and 22 – alternatively between tablet 2 and 3 (Weidner (1963) p. 118). In one manuscript it is described as a "scholarly commentary", *ša pî ummâni*.[5] The paragraph deals with eclipses in constellations on the path of the moon, correlating them with "decisions (eš.bar) for GN" (cities, rivers). It is decribed as "stellar positions where Sîn can make an eclipse and give decisions for cities" (MNB 1849:37, Weidner (1963) p. 118). The text is quoted by Ištar-šum-ereš (*SAA 8* 4:8) and included in excerpt texts.

Apart from this, the constellations of "the path of the moon" did not possess any particular significance, unlike the zodiac in Hellenistic and later astrology. *EAE* Tablet 50 seems to be an attempt to establish general characteristics of diverse planets and constellations, and cites omens in support, e.g., *BPO II* text III:11-11b: "The Star of Elam is for cold. The Star of Elam is Mars, the Anzû-bird. 'If the Anzû-bird's Star is very red: there will be cold'" and III:12-12a: "Gemini is for devouring by Nergal. 'If Mars approaches Gemini: the prince will die'"; but these characterizations were not consistently applied. The Pleiades had a special status, also outside astrology. They were mostly thought to bring war and destruction,

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1 The modern constellations listed are only partly identical with the ancient, the exact identifications are still under debate, see, e.g., Hunger and Pingree, *Mul.apin* p. 144, and J. Koch (1989).

2 E.g., *SAA 8* 357: mul.iku, The Field star = part of Andromeda, identified with *Annunītum* = NE Pisces.

3 Rochberg-Halton (1988) p. 10.

4 Known from three manuscripts: *ACh Suppl.* I:1-8, MNB 1849 (see Weidner (1963) p. 118) and the compilation text, *EAE* 20 text a (Rochberg-Halton (1988) p. 219).

5 MNB 1849:54, see Weidner (1963) p. 118.

for instance: "The Pleiades, the warlike gods, who carry bow and arrow, whose rising means war" (Borger, *Assarhaddon*, p. 79:12), and they appear in the retinue of Erra.[1] The only planet identified with the Pleiades was Mars, the most ill-portending of the planets.

Another group of stars sometimes used as reference points are the so-called *ziqpu*-stars, lit. "pegs", stars that were known to culminate at the same time that others just rose over the eastern horizon, where they might be difficult to detect.[2] They are not included in omens but are only used to give the time for the occurrence of an eclipse, for instance in *LAS* 80 and 105. They did have some significance in cultic context. According to a passage in an Assyrian *Festkalender* the king should enter the temples of Assur and Mulissu and the palace when certain *ziqpu*-stars culminate.[3]

The Babylonian *bīt niṣirti* or *ašar niṣirti*,[4] "safe/secret place", equals the hypsoma of Hellenistic astrology, the particular zodiacal sign in which a particular planet was thought to obtain its greatest significance. This has nothing to do with the Hellenistic *oikoi*, "houses", of the planets – they represent the same idea but stem from a totally different tradition. There is a very close correspondence between the Babylonian and Hellenistic systems:

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1 Cagni, *L'epopea di Erra* (1969), 28-40. In Hittite texts, the Pleiades, along with Ursa Maior, were associated with the Weather-god, see Kammenhuber (1976) p. 55 f.

2 Schaumberger, *ZA 50*, 214 ff (*TU* 21), *ZA 51* 237 ff; van der Waerden, *Anfänge der Astronomie*, p. 75 ff; Pingree and Walker (1988); Hunger and Pingree, *Mul.apin* I iv 4-25, discussion p. 141 ff.

3 BM 121206 vii 20' ff, see also viii 4f. Published by van Driel in *The Cult of Aššur* p. 80 ff, see also Menzel, *Temple II*, T59-71.

4 Weidner, *OLZ* (1913) and (1919). There is cuneiform evidence for the identity of all the hypsomata, indirectly confirmed by *LBAT* 1591.

	ašar niṣirti:	Hypsoma:	Calendric event:
sun:	Aries	Aries	Spring equinox (1)
moon:	Pleiades	Taurus	Intercalation (2)
Jupiter:	Cancer	Cancer	Summer solstice (3)
Venus:	Pisces/Leo	Pisces	Precursor of spring (7)
Saturn:	Libra	Libra	Fall equinox (5)
Mercury:	Virgo	Virgo	Precursor of fall (4)
Mars:	Capricorn	Capricorn	Winter solstice (6)

The last column lists the calendric event contemporary with the rising of the *ašar niṣirti* constellations. This connection is made by Pingree[1] in list form, in the commentary to *Mul.apin.* It is to some extent in accordance with *Mul.apin.*[2] Of course this could be the origin of the hypsomata, but in order to form a nice chronological sequence of the calendric events, the planets must be listed in an exceptional sequence: sun, moon, Jupiter, Mercury, Saturn, Mars, Venus.

The few examples we have of omens pertaining to a planet in connection with its *ašar niṣirti* indicates that it was primarily a favourable sign. Venus is the only planet for which we do have omens in connection with its *ašar niṣirti*, Leo. According to *ACh Suppl.* 34:27-30, Venus reaching its *ašar niṣirti* before disappearing is a good omen, and vice versa it is a bad omen if she disappears without reaching it.[3] But according to *ACh Ištar* 2:55 ff, restored from Langdon, *Babyloniaca 7* (1913) pl. xvii: 9 ff, it means war. Esarhaddon refers to Venus reaching its *ašar niṣirti*,

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1 Hunger and Pingree (1988) p. 147.

2 The entries for Jupiter and Mars are not, see Hunger and Pingree, *Mul.apin* I ii 36 – iii 12, summarized p. 140.

3 See also *SpTU 3* 101 r13': "If Venus reaches her *ašar niṣirti*: good [. . . . .]", followed directly by omens pertaining to Ishtar in connection with Urgula (Leo).

here Pisces,[1] and disappearing as a good omen, and to Jupiter reaching its hypsoma and staying there, as a favourable omen and a signal from Marduk that he was pleased with the king's plans to bring him back to his temple Esangil in Babylon (see further p. 156 f). The modern identifications of the Babylonian hypsomata of the moon, Jupiter and Mercury are based on Neo-Babylonian drawings,[2] and the evidence for the rest in the traditional literature, *EAE* and star lists, is meagre. The earliest direct evidence for the *bīt niṣirti* is Esarhaddon's inscriptions from 678 B.C.[3], and indirect evidence for the concept is only a trifle earlier.[4] But the Babylonian concept of "houses" and *bītāt niṣirti* of the planets was nevertheless important enough to be included in the royal inscriptions, and to survive in Hellenistic astrology, so it must have been part of the otherwise so elusive oral tradition.

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1 See Hunger and Pingree, *Mul.apin* p. 146 f for astronomical data to Esarhaddon's mention of planets in connection with hypsomata.

2 See Weidner (1967).

3 Hunger and Pingree, *Mul.apin* p. 146.

4 Hunger and Pingree, *Mul.apin* p. 146: Saturn identified with its hypsoma Libra. According to its colophon (*ibid.* p. 123), this manuscript is dated 704 B.C. The Babylonian star list published by Pingree and Walker, *Fs. Sachs* (1988) is dated to ca. 700 B.C. by the editors.

CHAPTER 6

PRACTICE

A text, justly famous, which was last edited by Oppenheim (1974) as *A Babylonian Diviner's Manual*, gives a vivid description of the astrologers' working conditions. Oppenheim regards it as representing a personal departure from the stream of tradition, written in Sargonid times, but considering that no less than nine manuscripts are known from Niniveh, two in Babylonian ductus, it must have been a canonical text.[1]

It opens with two catalogues, lists of incipits, of divinatory texts about unprovoked omens. First are listed fourteen tablets of terrestrial omens of the *Šumma ālu* type described in the text (l. 22 f) as coming from (the series?) "If in month of Arahsamna on". According to Oppenheim, none of them are known in the published corpus of terrestrial omens. Then follows a list of incipits of eleven tablets with celestial omens. Three of these lines are known as omens in the astrological series, but only one as an incipit (l. 34: "The Field star rises in the month of Nisan", the incipit of tablet 51 of *EAE*, see Reiner and Pingree, *BPO II* IX:1). Some lines are rather summaries than incipits, such as line 27, "If Venus is stationary in the morning and her periods". The first half is from the omen with commentary discussed above p. 83. These eleven tablets are said to come from (the series) "If a star is seen that has a coma in front and a tail behind and it lightens up the sky."[2] The text states (line 55 f) that every sign that has ever occurred in the sky or on earth can be found in the two series listed. The main interest of this text is the instructions it gives in the interpretation of omens. It stresses over and over again that the signs of heaven and earth are connected (l. 38 ff):

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[1] A quote from a report from the Second Isin Dynasty given in *LAS* 110+300 has some similarities to this text, as noted by Parpola *LAS II* p. 310 fn. 565, so a late second millennium date for *The Diviner's Manual* may be considered.

[2] Cf. *The Great Star List* (App. B 174 ff).

i-da-at ki-*tim it-ti* an-*e ṣa-ad-du i-na-áš-šá* an-*e u* ki-*tim* ur.bi *gis-kim-ma ub-ba-lu-ni a-he-en-na-a ul* bar.meš an *u* ki-*tim it-hu-zu it-tum šá ina* an-*e lem-ne-tu*$_4$ *ina* ki-*tim lem-ne-et ša ina* ki-*tim lem-ne-tu*$_4$ *ina* an-*e lem-ne-et*

The signs of the earth together with those of the sky produce a signal, heaven and earth both bring us portents, each separately but not different, since sky and earth are interconnected. A sign that is evil in the sky is evil on earth, a sign that is evil on earth is evil in the sky.

The text goes on with the following truly unique description of the situation of the diviner (lines 43 ff):

When you look up a sign, be it one in the sky or one on earth, and if that sign's evil portent is confirmed (*kaššedi*[1]), then it has indeed occurred for you in reference to an enemy or to a disease or to a famine. Check the date of that sign, and should no sign have occurred to counterbalance that sign, should no annulment have taken place, one can not make it pass by, its evil can not be removed, it will happen. These are the things you have to consider when you study the two collections: "If from the month of Arahsamna on" and "If a star has a coma in front". When you have identified the sign, and when they ask you to save the city, the king and his subjects from the enemy, pestilence and famine, what will you say? When they complain to you, how will you make (the evil) bypass them?

The way to dispel the evil portent (its *namburbû)* is given in l. 57 ff: the diviner should compute the exact date of the occurrence of the sign. The text ends with a menological table, which summarizes three traditions. Presumably the diviner at a glance could decide whether the exact time when the omen occurred was favourable or unfavourable for the

[1] See discussion by Oppenheim (1974) p. 207.

undertaking planned. Did a favourable timing cancel out an evil omen? Normally, the time of occurrence was decisive for which part of the world the omen pertained to – but the use of hemerologies to cancel omens is not attested in the letters.

Even if this text represents an unusual attempt to streamline the astrologer's compendium and means of dispelling evil omens, it gives a good description of the astrologer's regular procedure: first ferret out pertinent omina, then look for possible counterbalancing signs and perhaps suggest some appropriate action to be taken.

The scholars reporting to the king would collect and write out a quantity of omina with protases pertaining to the observed celestial phenomena that they considered significant. It was actually called to "extract" a report (i.e. the relevant omina from the series). The relevant omen, protasis and apodosis, of an ominous phenomenon was called its *pišru*, "interpretation", e.g. *SAA 8* 325: "Mercury became visible in the east in the region of Virgo, its interpretation is: 'If the Fish star comes close to the Bow star: the harvest of the land will prosper.'"[1] It is of course impossible to know when omissions or inclusions are due to conscious selection and when they merely reflect the individual scholar's abilities and devotion to duty. Very likely the education of the scribes included learning by heart selections concerning ominous phenomena that occurred frequently, as the colophon to *CT 40*, 8c r26 f (= Hunger, *Kolophone* no. 558) indicates: "The third collection of extracts from the series *Šumma ālu*, to memorize". This might be the case with the omens pertaining to the moon's cyclus: full moon on the 14th day, or new moon on the first, since everybody quotes the same combination of omina even though the omens concerning the first day apparently come from different parts of *EAE*.[2]

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1 Cf. also, e.g., *SAA 8* 186, 488, 502:17 and *LAS II* p. 40.

2 Cf. *RMA* 1-23. They come from two different parts of *EAE*: one from *ACh Sin* 4:10 and *ACh Sin* 3:115 f (tablet 1 of *Šumma Sîn ina tāmartīšu*), the other from *ACh Adad* 33:26 (possibly tablet 6 of *Šumma Sîn ina tāmartīšu*, commentary to *EAE* 37, according to Weidner, *AfO 22*, p. 69).

A Case Study

The delayed appearance of the full moon, combined with the conjunction of Saturn and Mars with the moon in Virgo which took place on March 15th (Addaru 16th) 669 B.C.[1] inspired a seemingly unparalleled activity: at least nine reports and one letter (*LAS* 54) deal with it. This makes it the single most commented upon celestial configuration of all that we know of, surpassing even any eclipse. It should be noted that in this particular period, Addaru 14th – Nisan 9th, 669 B.C., two of the scholars alone sent the king more than eleven letters and reports. This amount of correspondence in less than half a month is exceptional, even if the texts of the *LAS* corpus do center on the period 672-669 B.C., and the reports on the period 675-667 B.C.[2]

The letter from Balasî and Nabû-ahhe-eriba, *LAS* 54, is in poor condition, but it appears that it was written some days earlier (March 13th) than the reports, in answer to an inquiry from the king concerning Saturn and Mars. They say that the conjunction of Mars and Saturn is not yet certain but they will keep watch and report. In spite of their collaboration they did not quote the same omens when the conjunction actually occurred.

The nine reports may be summarized in the following table, arranged according to writer and quoting only the omina, leaving out all explanations and commentary. The numbers refer to the order in which each writer arranged the individual omina in his report. For the full texts of the reports (in translation), see Appendix A.

Assyrian writers: Akkullanu (Ak), Balasî (Bal), Bamaja (Bam), Šumaja (Šu), Nabû-ahhe-eriba (Nae)
Babylonian writers: Ašaridu senior (Aš), Nabû-iqbi (Ni), Raš-ili (Ra), Šapiku (Ša).

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1 Schaumberger and Schott, "Die Konjunktion von Mars und Saturn", *ZA 44* (1938) p. 271 ff. On March 15th Mars and Saturn were only 22' (four fingers) apart, close to the full moon and Virgo.

2 *LAS II* p. 415, *SAA 8* p. xxii.

Writer: *SAA 8* no:	Ak 102	Bal 82	Bam 169	Šu 168	Nae 49	Aš 327	Ni 416	Ra 383	Šap 491
lunar phenomena:									
1) Opposition 16th: enmity, confinement of king, enemy victory	3 –	–	–	1	–	–	–	–	1
2) Opposition on 16th: king of Subartu unrivalled	2	4	–	–	1	3	–	–	–
3) Opposition not Addaru 14th or 15th: destruction of Ur	1	–	–	–	–	1	–	–	–
4) Moon late: rising in *āl kiššati*		1	–	–	–	2	–	–	–
planets and the Moon:									
5) Mars in lunar halo: loss of cattle and produce, Amurru grow weak	–	6	1	3	2	4	1	3	2
6) Sun in lunar halo: stability, truth	–	–	2	2	–	–	2	2	3
7) Planet in lunar halo: robbers	–	5	–	–	3	–	–	–	–
8) Two stars in lunar halo: long reign	–	–	3	4	–	–	3	1	–
9) Yoke-star in lunar halo: king die, country weaken.	–	–	–	–	–	–	–	4	–
Mars and Saturn:									
10) Mars keeps going around planet: grain scarce.	–	2	–	–	–	–	–	–	–
11) A planet reaches and passes a planet: "weapon of Erra".	–	–	–	–	–	–	–	–	4
12) Pleiades reach the Deleter: famine.	–	–	–	–	–	–	–	–	5
13) Corvus reaches path of Sun: trade diminish.	–	3	–	–	–	–	–	–	–
14) Strange star approaches a planet: loss of cattle.	–	–	–	–	–	5	–	–	–
15) Planet touches stars of the sky: king destroy all lands.	–	–	–	–	–	6	–	–	–
16) Plough-star reaches path of Sun: hunger	–	–	–	–	5	–	–	–	–
17) Mars and planet conjunction: rising of Elam.	–	–	–	5	–	–	–	–	–
18) Planet and Mars conjunction: rising of the enemy	–	–	–	–	6	–	–	–	–
broken:									
Mars and Saturn.....	4	–	–	–	–	–	–	–	–
18) Mars....: King of Elam die	–	–	–	6	–	–	–	–	–
19) Fox-star:	–	–	–	–	7	–	–	–	–
20) ...in front surrounded: decision for Amurru.	–	–	–	–	–	–	–	–	6

ther:									
1) Jupiter near Taurus: offspring of ɔws not thrive.	–	–	–	–	4	–	–	–	–
2) Field-star in lunar halo: diminhing of grain.	–	7	–	–	–	–	–	–	–

The table illustrates various characteristics of Babylonian astrology:

– *The preeminent importance of lunar and planetary phenomena.* Only one author refers to a constellation: Balasî, omen 22). The authors follow roughly the same order when reporting their observations, they start with lunar phenomena, go on to the planets in the lunar halo, the 22° circle, and end with other planetary phenomena. Only one author, Balasî again, does not follow this order, but he too starts out with a lunar omen. The order is in accordance with the organization of *EAE*, and seems to have been followed generally also in other reports which include lunar phenomena. This, however, is only a tendency, there is nothing like the rigid order followed by the *bārû* in examining and reporting on the details of the exta.[1]

– *Identification of celestial bodies with each other.* A means to squeeze the utmost out of a particular celestial phenomenon was the technique of identifying celestial bodies with each other. The rules of identification are often obscure to us, and certainly belonged to the arcana of the discipline (see p. 130 ff). It is perhaps significant that the only identification all the authors apply is the identification of Saturn with the sun, which is one of the oldest and most well established. The sun represents Saturn in omen 6), 13) and 16). The authors who quote omens using more sophisticated identifications do not once select the same – though most are to be found in the scriptures. Mars is a planet with many aliases and the scholars focus

[1] See D.A. Foxvog, 'A Manual of Sacrificial Procedure', *FS Sjöberg* (1989) p. 167 ff, cf. also Starr, *SAA 4* p. xxxix.

on the planet: 9) Yoke-star = Mars;[1] 12) Pleiades = Mars, The Deleter = Saturn;[2] 13) Corvus = Mars;[3] 16) Plough-star = Mars;[4] 19) Fox-star = Mars.[5] The only exception is made by Balasî who identifies one constellation with another: 22) Field-star = Virgo, one would expect Mars[6] but *The Great Star List* contains a broken list of identifications of various constellations with Virgo (App. B 41 ff), so he may have found confirmation there.

– *The variations on a theme.* Beside the identifications the planets also had different names (see above), e.g. 14) "Strange star" is one of the names of Mars. Omen 17) and 18) are obviously related and in *ACh Suppl.* 49:6,10 they have exactly the same apodosis. Not only was the nomenclature manifold, but the terminology used to describe celestial phenomena was rather wobbly: protases describing the same celestial phenomenon in different terms were collected in the series – the best example is perhaps lunar phenomena. The astrologers had much to choose from. In this case omen 1) – 4) all refer to full moon on the 16th. In omen 7) is mentioned an unspecified planet, the term "planet", udu-idim, normally refers to either Mercury, Saturn or Mars. The two authors quoting the omen apparently chose each their identification of a "planet". Judging by the context, Balasî seems to refer to Mars, and Nabu-ahhe-eriba explicitly states that he is referring to Saturn – the same omen could be applied to different celestial phenomena.

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1 *The Great Star List* (App. B 102): mul.šudun = ^{d}min, i.e. Mars.

2 Cf. *ACh Suppl.* 49:13 and the *mukallimtu ACh 2. Suppl.* 66:6, 78 ii 13.

3 The omen is quoted without comment in *ACh Ištar* 20:104 as the catchline of tablet 57, and in *ACh 2. Suppl.* 78 ii 15, according to the commentary in *ACh Suppl.* 50:17 the omen refers to a conjuntion between Saturn and Mercury or Jupiter. But the identification Corvus = Mars is well attested, *The Great Star List* (App. B 105), cf. also *ACh Ištar* 26 which contains Mars omina using pseudonyms including Corvus, mul.ug$_5$.ga.

4 *The Great Star List* (App. B 52).

5 *The Great Star List* (App. B 44).

6 The Field-star in the lunar halo is explained as Mars: *ACh Suppl.* 7:27, cf. also *ACh Išt.* 30:11 ff, Virgo: *ACh Suppl.* 5:27.

– *Arbitrarily applied rules and generalizations.* An important characteristic of celestial omina is the correlation with the political entities of the earth. Raš-ili, omen 9), seemingly working with *The Great Star List* as a dictionary, identifies the Yoke star with Mars, which he rightly says is the star of Amurru, also in accordance with *The Great Star List.*[1] Therefore, he says, the evil omen pertains to Amurru. He sees Saturn as the star of Akkad, therefore the good omen of the "sun" in the halo of the moon pertains to "us". He applies the rule that the planet indicates which country the omen refers to. On the other hand, Šapiku describes Mars as the star of Subartu, and Saturn as the star of Amurru. He then says that Mars is bright and Saturn dull, and proceeds, applying the rule that a bright good star is good for us, and a faint bad star is bad for the enemy, i.e., good for us as well. Therefore the bad omens pertain to Amurru. So with totally opposite interpretations of the planets the two scholars reach the same favourable result by choosing to apply different rules! Akkullanu reports that full moon occurred on the 16th and he states, in accordance with *Šumma Sîn ina tāmartīšu*[2], that the 16th signifies Subartu. One would expect that the evil omen must pertain to Subartu, but – perhaps in order to forestall the layman's hasty conclusions – he immediately says that the omens actually refer to Akkad.[3] Why that should be so is unclear and the text is unfortunately somewhat broken. Normally, the day indicated the country affected. In *SAA 8* 527 the evil omen of full moon on the 15th is seen to pertain to Amurru, since the 15th is the day of Amurru. And elsewhere, Munnabitu (*SAA 8* 320) considers opposition on the 16th as serious enough to warrant an apotropaic ritual. I am tempted to feel that the scholars' use of generalizations illustrates:

– *A certain tendency to see things from the bright side.* The two astrologers most worried are some of those closest to the king, Balasî and Nabû-ahhe-eriba. They quote mostly evil portending omens and do not explain them

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[1] App. B 219 ff, where *ṣalbatānu* is listed as one of the twelve stars of Amurru.

[2] *ACh 2. Suppl.* 19:16', see p. 105 f.

[3] The same interpretation is made by Šumaja in *SAA 8* 177.

away. In view of their cooperation it is not strange that they both have dug up the favourable extraneous omen no. 2), but none of them quote the otherwise so strong omen 6) pertaining to the sun (i.e., Saturn) in the halo of the moon, which is cited by most of their colleagues. Nabu-ahhe-eriba is the only one to notice Jupiter and quote the pertinent, unfavourable, omen. Balasî alone recommends that something be done to ward off the evil omens, even if he does it in a somewhat off-hand manner: "What does it matter? Let the pertinent *namburbû* be performed."

– *Conflicting approaches.* The unusual wealth of reports illustrates well the wildly conflicting approaches possible in interpreting the same celestial phenomena. Not only do the authors choose to quote different omina but they also evaluate the relative importance of the celestial phenomena differently. To some writers, the conjunction of Mars with Saturn is of great importance, while others disregard it altogether. Some are preoccupied with the late appearance of the full moon, while two do not mention it at all, and one (Raš-ili) just points out that the next opposition will occur on the 14th. All but Akkullanu comment with two or more omina on the planets in the lunar halo.

– *Internal consistency.* Even if conflicting interpretations was a very possible result of their interpretative procedure, the astrologers certainly did not mindlessly copy omina from the series. The individual reports seldom contain apodoses that are actually incompatible, for instance are omen 1) and 2) never quoted by the same author, though one must suspect at least Nabu-ahhe-eriba of knowing both.[1] One exception may in this case be the report from Šumaja, *SAA 8* 168 (see App. A), who is the only one to quote the apodosis of omen 6) in full. We may wonder: how can the enemy walk around proudly in the land if there is peace in the world? Was the last omen understood to cancel the first event, even if it is not stated in the text?

[1] On another occasion, Munnabitu quotes both in *SAA 8* 320.

The cancellation, or counterbalancing, of signs (Akkadian *ittu meher itti*) is an intriguing interpretative tool – which happens not to be illustrated in these reports. As stated in the *Diviner's Manual* (see above), signs could sometimes counterbalance, or cancel out, each other. For example, Nabû-ahhe-eriba says in the interesting, but unfortunately broken, report *SAA 8* 63: "'If the moon is seen on the 28th day: good luck for the land of Akkad, bad luck for Elam.' That the moon was seen on the 28th means that the sign counterbalances the sign of [the 12th day].[1] As I wrote to the king my lord: 'The gods will open the ears of the king my lord. If anything should [happen] to the king, so that he should become worried [- - -], [the gods] would hurriedly send a sign from the sky saying [- - - - -].'" That Saturn standing in the halo of the moon counterbalances opposition on the 13th is attested in another report from Nabû-ahhe-eriba, *SAA 8* 40:6' ff: *it-tú me-hi-ir it-ti ša* ud.13.kam *šu-u ina* ugu *ša* ^{d}30 ud.13.kam *in-na-mir-u-ni ana* ugu *šu-u* ^{mul}udu.idim.sag.uš *ina* tùr ^{d}30 *it-ti-it-zi*, "This sign counterbalances the sign of the 13th, because although the moon was seen on the 13th, Saturn stood in the halo of the moon." Nabû-ahhe-eriba seems to think that the gods wanted to keep the king on the alert, sent bad omens but then relented. In *SAA 8* 370, Nabû-šum-iškun reports that Jupiter stands in the halo of the moon, which is a bad omen for the king. The halo is open, and he quotes an omen of the Erua constellation, which is broken. He continues: "There is a sign for good luck in the sky which counterbalances the sign". Presumably he refers to the open halo and the Erua omen. It thus seems that the favourable sign did not necessarily have to occur *after* the ill-portending one which it revoked. Indeed good signs might pile up and dispel an evil one: in *SAA 8* 64 Nabu-ahhe-eriba explains that the king need not fear the evil omen of full moon on the 13th since the previous four months had had the ideal length of 30 days. Unfortunately, we have only few references to the annulment of omens, so we do not know when the rule of counterbalancing sign with sign actually applied. In the few examples we do have, where annulment is mentioned explicitly, the two

[1] I.e., opposition on the 12th which was a bad omen, cf. Balasî, *SAA 8* 88: "The Moon was seen on the 12th day: bad luck for the land of Akkad, good luck for Elam and Amurru."

omninous phenomena seem to have some connection: early conjunction annuls early opposition, Saturn acts as a substitute for the sun on the 14th. Astrologers do not appear simply to have chalked up a balance sheet of favourable and unfavourable apodoses the way it was done in extispicy.[1]

One wonders what the king would do when he received incompatible reports such as *SAA 8* 319: "If the moon is seen on the 30th day of Ajaru: Amurru will smite Subartu with weapons.", and *SAA 8* 292: "If the moon is seen on the 30th day of Ajaru: Ahlamu will eat the plenty of Amurru". One may sense the king's impatience and frustration in some of his queries to the scholars (see p. 64 and p. 66 fn. 3).

After determining the significance of an ominous phenomenon the next step, as described in *The Diviner's Manual*, was to find out what action to take – if any apotropaic ritual or special precautions were necessary. The astrologers do not often recommend the performance of apotropaic or appeasement rituals, except in connection with eclipses;[2] but presumably such rituals were carried out in more cases than we can ascertain. Sometimes the astrologers advise the king to take precautions, often stay in his palace, but it is impossible to know what criteria were used to determine whether an omen called for an apotropaic ritual or not. Unsurprisingly, it appears from what we do have that the king was expected to take action both in matters concerning his own health and welfare *and* the well-being of the land, for example *SAA 8* 71 (against being confined to his palace), *LAS* 67 (against *asakku*-disease in the land), *SAA 8* 82 (against scarcity for Akkad), and *SAA 8* 49 r2-3: "Jupiter has entered Taurus. The king, my lord, should be on his guard against drafts."

But most of the time the astrologers quote their *EAE* without giving any comments as to what the king should do about it. Their comments are mostly astronomical or simply explanations of terminology. Disappointingly seldom do they expound the apodoses. When they do comment on them, it is often in the form of mere summing-ups, for instance

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1 Cf. e.g. U. Jeyes (1991-92) p. 26.

2 Cf. the examples in Chapter 5.

SAA 8 290 which quotes favourable omens of the appearance of the new moon on the first day with the comment: "this is good for the king, my lord". Also *SAA 8* 351:

> 'If the Pleiades enter the moon: the month will bring destruction to the whole land.' [This concerns?] Elam, i.e. the enemy. 'If the Pleiades enter the moon and go towards the North [. . . .]: The land of Akkad will be content, the king of Akkad will be strong and have no equal.' The North wind blew and ever since the moon entered the Pleiades the North wind continued. The morning watch is for Elam. This is bad for the enemy. From Ašaridu junior.

Some reports touch upon the more personal affairs of the king, e.g. *SAA 8* 381 r4 ff: "The king, my lord, should be glad, good health to the king, his son and the harem." Ašaridu senior warns the king to be careful, *SAA 8* 399:

> 'If the GILIM.MA star stands in the moon: there will be an eclipse of Subartu.' 'If the Bow star is split(?) in front of the moon and enters the moon: The days of a noble will come to an end'. The king should know this and be alert. He should be on his guard and not go into the street until the period of the omen has passed.

Or *SAA 8* 387, about Mars: "May the king be content, the king should be very happy, (but) until it has left (the constellation of Scorpio) the king should be on his guard." The same occurrence affected the mustering of the army, *SAA 8* 53: "The muster of the troops should be finished quickly, the king should go out as little as possible until we see how (Mars) goes and stands." *SAA 8* 334, Ašaridu: "'If a meteor flashed in the first double-hour of the night from North to South.' This is a sign suiting the king's wishes: 'The king of Akkad will accomplish what he sets out to do.'"

The Babylonian Bel-ušezib is an interesting exception – he relates astrological omens to political affairs past and present and interprets apodoses accordingly. The omen of full moon on the 15th, which is

unfavourable according to the series (e.g. *ACh 2. Suppl.* 18:14 f, "a strong enemy will raise his weapon against the land"), he interprets: "where an enemy rises against a country, that country carries the evil," which again leads to his conclusion: the omen pertains to the Manneans, since an enemy, the Assyrian king, is attacking them.[1] This is an original departure from the standard method. In omen literature "the land" refers to "us", and Bel-ušezib's use of it as a relative term is quite unorthodox. Normally the scholars only manipulated the material by looking for alternative interpretations within the omen corpus or among the extraneous omina. Whether Bel-ušezib's writings represent normal scholarly reflections on tradition,[2] which undoubtedly took place, or whether he was a lone crackpot, is difficult to say. But he does seem to come up with unique interpretations of apodoses. In *ABL* 1216 (see Parpola *RAI 26* (1980) p. 179), Bel-ušezib complains that he has not been properly rewarded for indirectly predicting Esarhaddon's ascent to kingship – he had sent the queen mother a report of an omen to the effect that the Crown Prince would murder the king and "the son of a nobody" would ascend the throne. This seems to be stretching the meaning of the apodósis, and presumably neither Esarhaddon nor his mother relished being described in those terms!

The mode of thinking behind the manifold attempts at finding the *pišru* "interpretation" to a celestial phenomenon should not be compared with science in the strict modern sense of the word. A modern scientist faced with a specific problem would immediately try to classify, i.e., generalize it, then seek out which generally formulated principle would apply in the actual case. His solution might then be subject to verifying experiment. The individual scientist's judgement does not enter into the process, in theory at least. The method of the ancient astrologers is quite different. They do not work by classification or generalization but by analogy and identification. Faced with a specific phenomenon, they excerpt from the

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1 *CT 54* 22:7 ff.

2 As suggested at length in a discussion of this letter by G. B. Lanfranchi, "Scholars and Scholarly Tradition in Neo-Assyrian Times: A Case Study", *SAA III/2* (1989) p. 99 ff.

book the omina that seem relevant to the one in question. The omina are usually quite specific in their formulation; and the astrologer's task is then to compare one specific case – the one observed in the sky – with the thousands of specific cases recorded in the book with their apodoses, and select the ones that seem relevant. The omina – protases *and* apodoses – are the "interpretation", and the apodoses suggest which further action should be taken. The individual astrologer's judgement of what seems relevant plays a decisive role in what omina are selected.

It is immediately obvious that this thought pattern has analogies elsewhere. The closest parallel is that of a rabbi acting as a judge in a legal dispute. He would search through the traditional texts for a parallel to the case in question, and apply the recorded verdict to the present case. Talmudic law is suggestive, not normative, to the extent that "he who believes that the ox in the Talmud is a real ox has not even begun to understand *halakha* (tradition)".[1] Rules given for a goring ox may be applied to a biting dog, or to any other case that appears similar; Biblical injunctions against kindling or extinguishing fire on the Sabbath have been applied in modern times to turning on or off electrical appliances. Evidently, the equation of electricity with fire is a subjective judgement, unverifiable by empirical means.

Behind the scientist and the rabbi are two different conceptions of truth. The scientist works on the assumption that there is an objective truth. It may be as yet unknown, but it can be found by empirical means. The scientist's world view is that of an open-ended universe of objective knowledge, to which it is always possible to add further knowledge by empirical methods. His personality, or the purposes with his work play no role whatsoever: medical knowledge is the same whether obtained by a medical firm through legitimate research, or by Nazi torturers. The rabbi assumes that all knowledge comes from God; God gave it to Man through the Torah. "Turn it and turn it again, for everything is in it; contemplate it and grow grey over it".[1] The rabbi's world view is, then, a closed, finite

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[1] Unattributed quote in A. Steinsaltz, *The Essential Talmud* (1976), p. 147.

[1] *Pirqe Avot* 5:26.

body of raw material, so to speak, which may be turned to knowledge, or rather, wisdom, through hard work and penetrating understanding of this material. The wisest one is he who has learned the whole tradition, and who is so devout that his mind works in harmony with the ways of God. His truth is necessarily subjective and will only be accepted by his community according to the personal respect he enjoys.

In a similar fashion, it seems that some of the astrologers enjoyed more respect and authority than others. Balasî and Nabû-ahhe-eriba were of such standing that they could risk making unfavourable predictions. However, for all the similarities in methods and thought, the equally obvious differences between the astrologers and the rabbis should not be overlooked. Like the rabbis, the astrologers believed that their knowledge came from the gods; but unlike the rabbis, they did not try to act as legal experts, nor did they seek to make themselves or others more acceptable to the gods. Their working conditions were utterly different from those of the rabbis, and their knowledge was not designed to perfect Man's ways, only to serve his needs.[1]

[1] For a somewhat different analysis of the similarities and the differences between Babylonian and Jewish scholarly thought, see A. Cavigneaux, "Aux sources du Midrash: l'herméneutique babylonienne", *Aula Orientalis* 5 (1987), p. 243 ff, with references to previous literature.

CHAPTER 7

ROYAL INSCRIPTIONS

Even though divination played an important part in royal decision-making, to judge from the amount of letters, reports and extispicy queries, it is only occasionally referred to explicitly in the king's self-representation, the "royal inscriptions". Most common are of course the more or less elliptical references to extispicy, to the gods' *annu kēnu*, their full and confirmed approval of the king's intentions. We have plenty of references to communications from the gods, such as "Assur encouraged me", or "at the command of Assur, Sin, Shamash, Ištar of Nineveh, Ištar of Arbela, . . .", communications which must often have been conveyed by means of omens. The frequent phrase "in a favourable month, on a propitious day" for embarking on building activities clearly reflects the hemerologies; but direct mention of astrological omens in the royal inscriptions is quite rare. Nevertheless, all the Sargonid kings have some references to astrology. Most come from the inscriptions of Esarhaddon, and Sennacherib's only bow to astrology seems to have been in the nomenclature of gates.

Compared with earlier Assyrian royal inscriptions, references to astrological matters are much more frequent in the Sargonid period. In earlier inscriptions, mention is sometimes made of the astral aspect of deities,[1] but it seems fairly clear that celestial phenomena were not considered to be significant to national affairs the same way they are in the Sargonid inscriptions. Differences in style may play their part, but it is probably no accident that Assurnasirpal II ascribes the power to reveal omens to Marduk alone among all the gods.[2]

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[1] Mostly in connection with Sin and Ištar, of course; but cf., e.g., *I R* 29-34 i 11-12, 16-18 (Šamši-Adad V): "Ninurta . . . . who, like the Sun, the light of the gods, surveys the whole world .... the lordly son whose position in the clear firmament is resplendent"; also *AKA* 257 i 8 (Assurnasirpal II): "Ninurta .... the light of Heaven and Earth, who illuminates the depth of Apsû". However, such astral manifestations of the gods are mentioned in exactly the same way as all their other attributes; if anything, the emphasis is on their warlike character.

[2] *AKA* 242 f, i 1-11, esp. 5.

Sargon II.

Sargon was perhaps the first king to bring both a haruspex and an astrologer on his military campaigns, as suggested by Oppenheim[1] in his famous discussion of Sargon's Eighth Campaign (*TCL 3*). The account contains both a description of a lunar eclipse that occurred during the campaign before his attack on Muṣaṣir, and its astrological interpretation, followed by a reference to extispicy (*TCL 3*, 317 f):

> At the exalted command of Nabû and Marduk, who had moved on a path in a stellar station for starting my campaign, and besides, as a favourable sign for seizing power, Magur ("the Boat", a name of the moon), lord of the tiara, (made an eclipse that) lasted one watch, to herald the destruction of Gutium. Upon the precious approval of the warrior Shamash, who wrote encouraging omens on the exta that he would walk at my side . . . I mustered my army.

The first line is undoubtedly a reference to the planets Mercury and Jupiter – the exact nature of these omens are of course unknown. The omen could come from *EAE* tablet 16. Unfortunately, all the omens with similar protases in the known parts of *EAE* have lost their apodoses,[2] but the interpretation quoted here is probably gospel. As Oppenheim remarked, the interpretation of the lunar eclipse is in accordance with the paradigm for the interpretation of the movement of the eclipse shadow[3]. The purely favourable interpretation of the eclipse, however, does seem a little strained – the eclipse started in the eastern quadrant,[4] and this quadrant signified both Subartu and Gutium. Anyway, the most common procedure was to interpret the quadrant where the eclipse ended as

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1 "The City of Aššur in 714 B.C.", *JNES 19* (1960) p. 138.

2 See the edition by Rochberg-Halton (1989) chapter 2.

3 *JNES 19* (1960) p. 137 ff.

4 The eclipse occurred Oct. 24, 714 B.C. (Sachs apud Oppenheim (1960) p. 137) and the eclipse shadow entered the moon at 65° and exited at 241°, according to Neugebauer and Hillel, *Spezieller Kanon der Mondfinsternisse für Vorderasien und Ägypten von 3450 bis 1 v. Chr.* (1934).

carrying the evil portent. As noted above p. 109, the predominantly evil portent of an eclipse by no means excluded supplementary, or secondary, favourable interpretations from other features of the eclipse. That the long duration of the eclipse did *not* counterbalance the evil omen for the king, appears from a report from Akkullanu, *SAA 8* 103, concerning an eclipse which occurred in October 667 B.C. He quotes an omen, unfortunately fragmentary, with a phraseology similar to Sargon's; but only because Jupiter was visible, the *šar pūhi* ritual was not necessary.[1] Sargon mentions Jupiter before the lunar ecipse, perhaps to indicate mitigating circumstances, but actually, Jupiter was *not* visible during the Sargon eclipse.[2] Still Sargon, or his ghost-writer, cannot really be convicted of anything more than looking at the bright side, which was anyway characteristic of Mesopotamian astrology. The eclipse was immediately followed up by extispicy. Sargon did not in general take lightly a serious celestial omen like a total lunar eclipse: the ritual *Bīt rimki* was performed for him on one such occasion (Meyer (1976) Adad 1a (= *LKA* 53)). We have a solitary astrological report (*SAA 8* 501) written in Babylonian and dated to the first year of Sargon's rule in Babylon (709 B.C.). The early date is unusual in the preserved corpus of reports but otherwise the report is exactly like those received by Esarhaddon and Assurbanipal. Sargon also had a luxury edition of *EAE* written on ivory writing boards for his new palace in Khorsabad (Wiseman (1955) p. 7 f).

Sennacherib

The allusions to astrological matters in Sennacherib's inscriptions are not to divination but rather to its explanatory–mythological superstructure. One of the gates of Nineveh is called "May the reign of Sennacherib be as steady as the position of The Wagon (Ursa Maior), the gate of Mulissu of Kar-Mulissu" (e.g., *Iraq 7* p. 90:18 f). The Wagon Star is not particularly propitious, but perhaps this is an allusion to the fact that Ursa Major is circumpolar and thus never sets. Some of the gates of the temple

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1 See *LAS II* p. XXIII.

2 Hunger – Dvorak, *Ephemeriden von Sonne, Mond und hellen Planeten von –1000 bis –601* (1981) sub –713.

Ehursagkurkurra have names like "Gate of the (stars) of the Path of Enlil" (Luckenbill, *OIP 2*, p. 145:22) – the Path of Enlil represents Akkad, "Gate of the Firmament" and the northern gate is aptly called "Gate of The Wagon Star (Ursa Maior)".[1] Finally he says that the *akītu* festival had not been celebrated in "Nisan, the first month of Father Enlil, the month of the appearance of The Plough Star" (*ibid.* p. 136:24 f), in accordance with *Astrolabe B* iii 1-5.

Esarhaddon

Esarhaddon relates the various favourable omens that heralded his reign, and in a building inscription from Aššur, the astrological ones are mentioned first (Borger, *Assarhaddon*, p. 2:31 ff):

> Sin and Shamash, the twin gods, took every month the path of truth and justice, and in order to give the land and the people a reliable and just judgment, they appeared regularly on the [1]st day and the 14th day. Venus, the brightest of the stars, appeared in the west in the path of Ea to stabilize the land and appease the gods. It reached its hypsoma and disappeared. Mars, who makes decisions for Amurru, was bright in the path of Ea, it showed its *ṣindu* as an omen, which gave the king and his land strength.

First comes a general reference to the auspicious omens of opposition and, probably, conjunction of the sun and the moon on the proper dates. This is a literary phrase like "may Sin and Shamash bless him without cease" (*ibid.* p. 67:14' f). The description of Venus and Mars is based on observation and accords with the calculated movements of these planets in 680 B.C.[2]

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1 Cf. also BM 121206 viii:43' ff, see Menzel, *Tempel II*, T64.

2 See Hunger and Pingree, *Mul.apin* p. 146–7.

In text B of the Babylon inscription (*ibid.* p. 14, Ep. 6:11) we hear that the unruly state of affairs in Babylon so angered Marduk that he cursed the land, and –

> in Heaven and on Earth there were constantly evil signs portending the ruin of mankind. (The stars) of the path of Enlil, the path of Anu and the path of Ea took evil positions and showed omens of destruction, all the signs [of . . .] became increasingly ill-portending.

Interestingly, this view, that the misbehaviour of the Babylonians caused the evil omens to appear, is also found in a report (*SAA 8* 502 r7 ff, no name, Babylonian script) which can be dated to November 679 B.C.:

> All these omens concern the land of Akkad and its nobles, nothing pertains to the king, my lord. The eclipse of the moon and the sun which occurred in Simanu, these evil omens concern the land of Akkad and the kings of Amurru, they pertain to the land of Akkad, and now, in this month of Kislimu an eclipse has taken place . . . . and Jupiter stands in the eclipse: this is good for the king. Anything that Bel-ušezib writes to the king, his lord, he should do, and I will be responsible for the king, my lord. The nobles of the land of Akkad, which the king, your father appointed, have destroyed Babylon and carried off its riches. On account of this, these evil portents have occurred. The troops of the king should go and in the palace [. . .] seize them and appoint others instead. If the king does not act quickly, the enemy will come and make them defect [. . .].

Similarly, the angry gods, or Marduk, signalled their reconciliation with Babylon and heralded its rebuilding by a favourable Jupiter omen. This omen occurred in the first year of Esarhaddon's reign[1], part of it is quoted almost verbatim from the series[2] (*ibid.* A, B, C, AsBA, p. 17, Ep. 13:34 ff):

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[1] October 680 B.C., see Hunger and Pingree, *Mul.apin* p. 147.

[2] Cf. *ACh Ishtar* 17:10 ff.

> In the month of Simanu, bright Jupiter, which makes decisions for Akkad, approached the place where the sun lights up, and stood there shining, its rising was perfect like the rising of the sun. The angry gods became reconciled with the land of Akkad, there was plenty of rain and regular flooding in the land of Akkad. It then doubled its course and in the month of Pet-babi it reached its hypsoma and stayed in its house.

continued (*ibid.* A, B, p. 18, Ep. 14:5b ff):

> Concerning proficient works and good deeds he showed me a well-portending omen about his entering into Esangil. The stars of the sky stood in their stations, they took the path of truth (*harrān kitti*) and abandoned the irregular path. Every month Sin and Shamash in their appearance gave each other decisive confirmation (*annu kēnu*) for reinstating (the statues of) the gods . . . .

The omen of the appearance of Jupiter like the sun is found in context with other Jupiter omens in *ACh Ishtar* 17:10 ff, here the planet is referred to as Marduk. It is tempting to assume that the inspiration to use the omen came from contemporary reports, it is quoted in *SAA 8* 170 by Bamaja, and in *SAA 8* 115 by Bulluṭu, cf. also *SAA 8* 323 r8, from Ašaridu son of Damqâ: "The first year of your reign, Jupiter was seen in a steady position. May the lord of the gods make you happy and prolong your days!" The author of the contemporary letter *LAS* 289, presumably Mar-Ištar, saw the matter quite differently, quoting evil omens of Jupiter appearing in Simanu close to Orion: "destruction of the land, grain will be dear, the gods will devour the land"! As the reign of Esarhaddon lasted twelve years, equalling a Jupiter cyclus, it is difficult to know if the two reports, *SAA 8* 115 and 170, which quote the same omen, and *SAA 8* 323, were written at the beginning of his reign (May 681 B.C) or

twelve years later (June 669).[1] It may be common sense that Marduk should signal his wish to return to Esangil as Jupiter entered its "house", but that has little to do with omen astrology. In a propaganda text concerned with Esarhaddon's preparations for the return of Marduk's cult statue in Ajaru 669 B.C.,[2] Jupiter seems to confirm the decisions reached by lecanomancy and extispicy. Such omens are also mentioned in the royal inscription (Borger, *Assarhaddon*, Ep. 17, p. 19) but here as a substantiation of the astrological omens.

Recension E of Esarhaddon's Babylonian inscription omits all direct reference to omens. We only hear about the theological explanation of Babylon's plight – and its future prosperity – namely Marduk's anger and subsequent reconciliation with the city (*ibid.* p. 16 Ep. 11). M. Cogan (1984) suggests that recension E was written by *Assyrians* opposed to divination as a Babylonian import. It is of course difficult to say why the descriptions of the omens are left out; but I find it hard to believe that a craft that was an integral part of the kings' decision-making, and which was by no means a recent import to Assyria, would have enemies so close to the throne. Perhaps the redactor simply left out parts that after all were only supplementary to the description of the god's change of heart.

Assurbanipal

Assurbanipal, too, refers in a general way to the propitious omens from the full moon on the proper day. In two dedicatory inscriptions, he describes Sin in terms which resemble very closely astrological apodoses, even if he may not refer to any specific events. One is a votive inscription to Sin and Nusku (Bauer, *Assurbanipal*, p. 43 r6 ff):

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1 See *LAS II* appendix A p. 382.

2 K 6048+8323, most recently edited by Lambert, "Esarhaddon's Attempt to return Marduk to Babylon", *AOAT 220* (1988) p. 157-174. Parpola suggests (*LAS II* p. 32) that an ominous event en route stopped Esarhaddon's plans. In any case, Marduk was only returned by Assurbanipal.

> When (the moon) is seen steadfastly with the sun [. . .] to make steady the foundation of my royal throne and prolong my reign [. . .] may they give me good signs of long days [. . .].

The other is a votive inscription to Sin in Harran (*ibid.* p. 42:10 ff):

> [Sin] . . . who gives a clear sign and makes the people speak truthfully, [who] stands opposite the sun to make the throne steady and stabilize the reign.

Cf. also the *Grosse Jagdinschrift* p. 87:19:

> Sin and Shamash constantly every month sent favourable omens to indicate their confirmed approval.

These passages are almost verbatim quotations of the apodoses of the appearance of the new moon on the first day and of the opposition of the moon and the sun occurring on the 14th day, concerning which the king received countless reports.

Like Sargon, Assurbanipal experienced a lunar eclipse at an awkward time. During his second Elamite campaign a partial eclipse occurred on July 13th, 653 B.C.[1] (Piepkorn, *Assurbanipal* ed. B V:3 f):

> Teumman (the Elamite king) plotted evil against me, but Sin plotted evil signs against him! In the month of Dumuzu, the moon was eclipsed (*uštānih*) from the last night watch until sunrise, Shamash saw him and continued (*uštānih*) like this the whole day, portending the end of the reign of the king of Elam and the destruction of his land. The moon revealed to me the fruit of his decision that can not be changed.

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[1] Piepkorn, *Assurbanipal, AS 5* (1933), p. 105 ff.

This passage could be a paraphrase of an omen from *EAE* tablet 19, for instance Rochberg-Halton (1988) p. 162:11' ff:

> [If an eclipse] lasts from the evening watch until sunrise and the sun sees it and (lasts) like it all day: destruction of all lands, the land will be destroyed at once, var.: a king of the world will die and his country will be destroyed as well.

Nevertheless the description is somewhat obscure: surely Assurbanipal would not have us believe that the lunar eclipse was succeeded by a solar one, or that the lunar eclipse lasted all day? The interpretation is even more fishy than the one offered by Sargon. Jupiter was not visible during this eclipse[1] either, so the omen did pertain to the Assyrian king. The last night watch is the watch of Elam, but Dumuzu is the month of Subartu. Furthermore, the eclipse shadow moved from the Northern quadrant towards the Western, and the last phase was probably not even visible.[2] The eclipse thus referred to Akkad and possibly to Amurru. One wonders how Teumman interpreted the omen – at any rate, he proceeded to attack the Assyrians.

Later in the same text Assurbanipal mentions in general terms an omen of Sin and Ishtar which could be astrological (*ibid.* p. 66 Ed. B V:77 ff):

> In the month of Elulu . . . . trusting the decision of the shining Nannar and the message of Ishtar, my lady, which can not be revoked, I mustered my army.

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The overall impression given by the Assyrian royal inscriptions is the remarkably good fit between the "received tradition", the letters and reports, and their practical application in the kings' decision-making. It

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1 Hunger – Dvorak, *Ephemeriden von Sonne, Mond und hellen Planeten von –1000 bis –601* (1981), sub -652.

2 According to Hillel and Neugebauer (1934).

is obvious that divination, including astrology, was not an arcane, theoretical body of knowledge, far removed from the real workaday world.

It has been suggested that ominous events, cleverly manipulated, were cited merely to allay the fears of the rank-and-file soldiers on a campaign, or to justify what the king wished to do anyway.[1] This is most unlikely. Propitious omens may indeed have been put to effective use in royal propaganda; but all available evidence suggests that the kings themselves believed in divination just as sincerely as everyone else.

[1] E.g., A.L. Oppenheim, "The City of Aššur in 714 B.C.", *JNES 19* (1960) p. 138. Cf. p. 67 above.

CHAPTER 8

THE PERSIAN AND SELEUCID PERIODS

Astrology and astronomy began to change in the late seventh century, and the development accelerated during the Persian and Seleucid periods. The development is still not too well understood since many sources are in poor condition and many remain unpublished. New types of omen texts were generated by combining old and new ideas or rearranging old material. They existed side by side with the traditional texts of *EAE* which continued to be copied[1] throughout the closing centuries of the first millennium. There is some discussion whether the work on this "old-fashioned" form of astrology continued for other than purely antiquarian purposes. The late copies do indeed testify to a scholarly approach, many of the Persian and Seleucid manuscripts are excerpts, commentaries and other scholia. Also long antiquated astronomical texts continued to be copied,[2] but the mere fact that these texts were copied does not in my opinion prove their actual use. It is worthy of note that the scribes who copied them considered their labour an act of piety.[3] The title *ṭupšar enūma anu enlil*, "Scribe of *Enūma Anu Enlil*", i.e., astrologer/astronomer is recurrent, whereas the haruspex, *bārû*, is virtually unattested.[4] Most of the texts come from Uruk, but some can also be assigned to Babylon[5] and probably Sippar. Very much material still remains unpublished and unedited, so it is impossible to speak with much confidence on the developments of new forms of astrology or the fate of the old. The impetus for the changes may have come from the rise of mathematical astronomy as much as from any outside influence.

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1 Even as scribal exercises, see Gerlinde Mauer, "Ein Schülerexzerpt aus Enūma Anu Enlil", *Bagh. Mitt. 18* (1987), p. 239 ff.

2 E.g., *Mul.apin*, see Hunger and Pingree, *Mul.apin*, pl. IV, source K r15', and the Astrolabes *LBAT* 1499, 1500.

3 E.g., Hunger, *Kolophone*, nos. 91 and 93.

4 M^{c}Ewan (1981) p. 15.

5 For a survey of the sources, see Oelsner (1986) p. 176 ff and p. 212 ff.

In Uruk, astrology/astronomy was a sideline to the other traditional subjects of the scholar, the "scribes of *EAE*" were often also lamentation priests or exorcists. At Babylon, a star-watch was kept at Esangil, as attested by the "diaries" (day-by-day observations).[1] The earliest diary dates to 652 B.C. and uses the same formulary and have much the same content as the later – continuity in observations despite political upheavals. The watch, personnel and payment, seems to have been managed by the Esangil itself, as suggested by protocols of meetings of the dean and assembly of Esangil. The descendants of astrologers employed by the temple had a hereditary right to position and prebend, provided they were competent to make observations and give the yearly calculations (*tersêtu*). The astrologers of Babylon also had other, perhaps primary, occupations: Itti-Marduk-balaṭu was *rabbāni* of the neighbourhood of the city and overseer of the temples, and his sons claimed his job as astrologer at Esangil, his grandson Nabû-apla-uṣur was also a lamentation priest.[2]

The most significant innovation was perhaps the zodiac, the division of the ecliptic into twelve equal parts or signs. It replaced the earlier series of 17 constellations on the "Path of the Moon" (see p. 132 f). The zodiac was first used in Babylonian astronomy in the fifth century B.C.,[3] but soon came to play an important in role in astrology and astro-magic. The twelve zodiacal signs, *lumāšu*, were:[4]

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1 Hunger, *Astronomical Diaries and Related Texts from Babylonia* (1988-89).

2 *BOR IV* 132, *CT 49* 144 and 186, *AB* 247; M^{c}Ewan (1981) p. 18 ff, see van der Spek (1985) p. 548 ff.

3 See van der Waerden (1952-53). Some of the earliest examples of the use of the zodiac are the horoscopes from 410 B.C. (Sachs (1952) p. 54 f, Durand, *Textes babyloniens d'époque récente* (1981) pl. 52). The zodiac is also attested in astronomical texts that list phenomena from the fifth century along with later material, see Aaboe-Sachs, *Centaurus 14* (1969) p. 17, Neugebauer-Sachs, *JCS 21* (1967) p. 197, Neugebauer, *A History of Ancient Mathematical Astronomy* (1975), p. 593 f.

4 Cf. Gössman, *Planetarium*; Weidner (1927) and (1967), Foxwog (1993) p. 107; and especially Wallenfels (1993), for the pictorial symbols on seals from Hellenistic Uruk.

	NAME:	SYMBOL:
Aries:	lú.hun.gá (hun, lú, lu), the Hireling;	A ram;
Taurus:	gu_4.an.na (mul.mul), Bull of An (the Stars);	A humpbacked bull;
Gemini:	maš.tab.ba.gal.gal (maš.maš), the Great Twins;	Two figures with weapons;
Cancer:	al.lul (alla), the Crab;	A crab;
Leo:	ur.gu.la (a, ur.a), the Lion;	A lion;
Virgo:	ab.sín (absin), the Furrow;	A maiden holding a stalk of grain;
Libra:	*zibānītu* (rín), the Scales;	Scales(?);
Scorpio:	gír.tab, the Scorpion;	A scorpion;
Sagittarius:	pa.bil.sag (pa),	A hippo-centaur with bow and arrow;
Capricorn:	suhur.máš (máš), the Goat-fish;	A goat-fish;
Aquarius:	gu.la (gu), the Great;	Figure with streams of water flowing over his shoulders;
Pisces:	kun.meš (zib.meš, iku), the Tails (the Field)	Swallow and fish.

One cannot fail to notice that, whenever a symbol differs from the literal meaning of the constellation's Babylonian name, it tends to agree with the Greco-Roman name. The zodiac was used in new forms of the old omen astrology, in connection with lunar eclipses (e.g., *LBAT* 1595) and planetary phenomena (e.g., *TU* 13). It may also have stimulated the effort to correlate things and phenomena as evidenced in the *Gestirn-Darstellung* texts (see below). It was used in magical and medical contexts,[1] and was applied in other genres of divination as well.[2] One late extispicy text from Uruk[3] correlates parts of the exta with months and the corresponding

[1] See, e.g., *BRM 4* 19 and 20 and *LBAT* 1596, an iatro-astrological text which associates illnesses with the position of various constellations and planets.

[2] For *Šumma izbu*, see Biggs, "An Esoteric Babylonian Commentary", *RA 62* (1968) p. 51 ff.

[3] Reiner (1985) p. 592, courtesey von Weiher.

zodiacal signs. A forerunner to this might be found in extispicy texts from Nineveh which list omens pertaining to a specific feature arranged according to month, e.g. the significance of a destroyed gall bladder in Nisan etc. (*CT 28* 44, duplicated by *CT 30* 12).

A short paragraph, which must have enjoyed some popularity since it is included in at least three unrelated texts,[1] contains personal predictions associated with "positions" (*qaqqaru*) of the zodiacal signs in the form: "position of Taurus: death at war" (*TU* 14:22). This might indicate that the association of attributes to zodiacal signs had already begun in a small way. There is also some evidence for this process from a sort of board game, known in two copies.[2] On the twelve subsections of the board were written twelve (or five)[3] predictions, or "Spielreime". In the younger version of the game board, the "Spielreime" are associated with the signs of the zodiac beginning with Pisces – perhaps in order to match the character of the signs to the predictions. The best fit is: "Gemini: you will get a companion" and "Leo: you will be strong like a lion". But otherwise, the individual zodiacal signs do not seem to have attained their peculiar significance characteristic of Hellenistic and later astrology.

The zodiac was the subject of a small series, the remains of which were edited by Weidner who dubbed them *Gestirn-Darstellung* texts.[4] It consisted of twelve sections, one for each month and the corresponding zodiacal sign, that is, the sign where the sun would be according to an ideal calendar: Nisan = Aries, etc. The outline of the series is: Each section contained a lunar eclipse omen, sometimes followed by a drawing of the relevant constellation and its neighbours. In schematic form the zodiacal sign is then divided into twelve parts of 2½° each, the "dodekatemoria"

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1 *TU* 14:22-25, *SpTU II* 43:20-28, *LBAT* 1600:3'-14'.

2 Bottéro, "Deux curiosités assyriologiques", *Syria 33* (1956), and Weidner, "Ein Losbuch in Keilschrift aus der Seleukidenzeit", *Syria 33* (1956) p. 175 ff. See also Landsberger, *WZKM 56* p. 125 ff.

3 Landsberger, *WZKM 56* p. 128.

4 E. Weidner, *Gestirn-Darstellungen auf babylonischen Tontafeln* (1967). See also W. Mayer, *Bagh. Mitt. Beih. 2* nos. 78-79, and Hunger, *ZA 64* (1975) p. 43.

of Hellenistic astrology. These in turn are related to the zodiacal signs, the first to the sign in which it is situated followed by the rest in sequence, forming a micro-zodiac. Each part is then connected with a temple or a city, a tree, a plant, a stone, cultic or agricultural instructions, and ominous significance.[1]

Parts of this series are also known as independent texts: the lunar eclipses are found in BM 36746+. The lists correlating temples, trees, stones, etc., also have parallels, the oldest of which is a text from Assurbanipal's library,[2] which presumably organized the material according to days of the month. This is the arrangement of a series of Seleucid texts which is also related.[3] None of these has any mention of celestial bodies.[4]

The texts are rightly famous for their graphic representations of constellations. Weidner called them *Hypsomata-Bilder*, i.e., pictures of planets and their hypsomata. This is clear in the case of the picture in the section dealing with Ajaru and Taurus (Weidner (1967) pl. 1), showing the Pleiades, the moon and Taurus (Taurus is the *hypsoma* of the moon), and the drawing in the section dealing with Elulu and Virgo (pl. 10, tablet 2 rev.) which shows Corvus, Virgo and Mercury, and Virgo is the *hypsoma* of Mercury. But the interpretation seems a little strained in the picture on the the section Abu and Leo (pl. 9, tablet 2 obv.) showing Leo, Hydra and an eight-pointed star with the label Sagmegar. Here Sagmegar allegedly represents both Jupiter and its *hypsoma* Cancer. The drawings do not seem to reflect the eclipse omens (contra Rochberg-Halton (1988b) p. 58).

The protasis of the introductory eclipse omens pertains to the month – but at the same time the lunar eclipse is supposed to occur in the corresponding zodiacal sign.[5] This is of course impossible: at full moon, the moon would be in *opposition* to the zodiacal sign of the month. As mentioned above, the eclipse omina have a parallel, BM 36746+, which

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1 Rochberg-Halton (1984b), see further below.

2 Weidner (1967) p. 39 and plt. 17.

3 Weidner (1967) p. 41 f. and plts. 13-16.

4 See Weidner (1967) p. 39 ff.

5 Evident in the Abu (= Leo) eclipse which mentions Regulus standing in the lunar halo.

in fact arranges the eclipses according to zodiacal signs rather than months. The compilator of the *Gestirn-Darstellung* texts was evidently more concerned with correlating things than with astronomical fact.

The interpretation of the eclipse omens is in accordance with the rule known from *Šumma Sîn ina tāmartīšu* (see above p. 105 f) and elsewhere which equates months with the four geographical and political quarters Akkad, Subartu, Elam, and Amurru, and also with the rule for the interpretation of the prevailing wind, from the same source. Given the schematic nature of the text, perhaps the winds were arranged to fit the month schema – or the month schema taken over by the zodiacal signs, since the unusual sequence N-S-W-E, rather than the normal S-N-E-W,[1] is followed. Most of the individual elements found in the protases go back to *EAE*, but the recording of planets in combination with eclipses is rare in *EAE*; only Jupiter is of some significance.[2] This combination with planets is distinctive of the late texts. Here the moon and Saturn and Mars are listed with specification of their positions in zodiac, the absence of the benefic planets Jupiter and Venus is also noted, but that part of the protasis is destroyed in many cases, so we cannot tell whether they could also be present – or had to be absent not to detract from the significance of the omen. The moon, Saturn and Mars are arranged in what is called triangles or trines in Hellenistic astrology. They may, for example, stand in Aries (I), Leo (V), Sagittarius (IX) respectively, but nothing in the apodoses suggest that the positions had any significance, or that the concept of *aspect*[3] was known. It seems to be an instance of old ideas put to new use, a simple transfer of the old system of equating months with geographical entities (I, V, IX = Akkad, etc., see p. 105 f). The correlation of wind and triangles was transmitted to Hellenistic astrology in exactly

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1 Also in *EAE* 16, see Rochberg-Halton (1988) p. 57 ff.

2 Mars, Venus and Jupiter are mentioned in the *EAE* lunar eclipse section, see Rochberg-Halton (1988) p. 62, and Saturn (written ^{d}utu) in a text from Emar, *Emar IV/4* 655:22'.

3 i.e., the influence of the planets according to their relative positions in the zodiac. The classical aspects are opposition, trine, quartile and sextile, denoting signs that differ in longitude by 180°, 120°, 90° and 60° respectively, see Bouché-Leclerq (1899) p. 165 ff.

the same form as found here.[1] The triangles were also applied in an unpublished text mentioned by Rochberg-Halton.[2] This text contained constructed "horoscopes" for the day of conception, but I do not know what function the triangles had. Presumably they were not used for the concept of *aspect*. The four triangles were even graphically represented in a circular drawing on the reverse of *TU* 13, so apparently it was already envisaged as a geometrical relationship. The circle is divided into months rather than zodiacal signs, but that the zodiac was envisaged as a circle is evident from a tablet found in the recent excavations at Sippar.[3] Some of the months are connected with planets in an arrangement of obscure significance.[4] There is some indirect evidence for the use of other divisions of the zodiac as well. Hellenistic seals from Uruk with representations of zodiacal signs include both pictures of individual signs, the four triangles and signs which are in quartile and sextile aspect.[5]

The triangles is one of the few direct Mesopotamian ancestors of Hellenistic astrological concepts. Another are the dodekatemoria, the division of each zodiacal sign into twelve parts of 2½° each, forming a microzodiac beginning with the name of the sign in case (thus the first dodekatemorion of Taurus is Taurus and the last Aries). Since this division of the zodiacal signs is attested in the *Gestirn-Darstellungen* and the astrological Sammeltafel *TU* 14:6-20, one may assume that not only the zodiacal sign itself but also the position with reference to the microzodiac was of significance. In order to calculate which microzodiacal sign corresponds to the degree of a zodiacal which a planet occupies, e.g. the moon in 24° of Aries, all one has to do is divide 24 by 2½. Division by 2½ is cumbersome, and undoubtedly the Babylonians devised an easier method, perhaps the precursor of the method used in Hellenistic astrology: multiply the degree with 12, add the result to 0° of the sign, for

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1 See Rochberg-Halton (1984b) p. 121-126.

2 BM 32488, quoted by Rochberg-Halton (1989) p. 107 n. 21.

3 Walid al-Jadir, *Archéologia 224* (1987) p. 26 f. It appears to be a circular representation of the zodiac rather than an astrolabe as first assumed.

4 See Rochberg-Halton (1987b) p. 226 f.

5 R. Wallenfels (1993).

instance 24x12 = 288° of Aries = 18° of Capricorn, microzodical sign = Capricorn of Aries. (Multiplication by 12 and division by 30 is of course equal to division by 2½).[1] We do not have any astrological texts where this method is actually applied, but the microzodiac of Aries preserved on the astrological Sammeltafel *TU* 14:6-20 probably attests to the use of the procedure in personal astrology.[2]

Another method, which produces a different result, is known for deciding a dodekatemorion of a given position in the zodiac. The other scheme for correlating a point on the zodiac with another, also called its dodekatemorion in Hellenistic astrology, is to multiply the degrees by 12 and add the sum to the original position (for instance 288° + 24° of Aries = 312° of Aries = 12° of Aquarius). This scheme is attested in two magico-astrological texts which associate incantations with zodiacal signs.[3] For example –

XI 10 ud.da.kam munus-*ka ana* nita igi nu íl-*e* XI 10 III 10 maš.maš *šá* gu zi

Aquarius 10°: period of "Your woman should not look at a man"; Aquarius 10° = Gemini 10°, Gemini being the 'distance' of Aquarius.

BRM IV 19:10

munus lú.nita *šá-nim-ma* igi.II-*ši la na-še-e* ki mul.maš.tab.ba.gal.[gal]

"A woman should not look at another man": position of Gemini.

BRM IV 20:21

That is, 10x12 = 120, Aquarius (XI) 10°+120° = Aquarius 130° = Gemini (III) 10°. By either procedure one doubles the potential material for making predictions from the positions of the planets and the moon.[4]

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1 Cf. Manilius, *Astronomica*, 2.713–748.

2 Suggested by Sachs (1952) p. 73.

3 *BRM IV* 19 and 20, see Ungnad, "Besprechungskunst und Astrologie in Babylonien", *AfO 14* (1941-44) p. 251 ff.

4 Sachs and Neugebauer, "The 'Dodekatemoria' in Babylonian Astrology", *AfO 16* (1952-53) p. 65-66; Sachs (1952) p. 72 f. Rochberg-Halton (1988b) p. 58, discusses only the second procedure.

Ungnad suggested that "position" (ki, *qaqqaru*) of zodiacal signs mentioned in *BRM IV* 19 and 20 may refer to the position of the moon.[1] The two texts have an older parallel in *STT II* 300,[2] which assigns the undertakings and incantations to calendar dates and does not refer to the zodiac. In *STT II* 300 the passage parallel to those quoted above is (*STT II* 300 r12): "Šabaṭu 10th period of 'A woman should not look [at a man]'". As was the case with the *Gestirn-Darstellung* texts, the transmission from calendar dates to degrees of zodiacal signs is quite automatic. In the ideal calendar, the sun is in Aquarius 10° on the 10th day of the 11th month – not the moon. That does not rule out that *BRM IV* 19 and 20 and other texts which concern "positions" of zodiacal signs[3] refer to the position of the moon, even if this is never stated explicitly (at least in the texts I know of). The practice of interpreting the position of the moon (or the sun) in the zodiacal signs as propitious or appropriate for various activities is well known from Greek and Roman popular astrology from the first millenium A.D. and the middle ages. This form of astrology enjoyed popularity well into the nineteenth century.[4] The *qaqqaru*-texts might be compared with Greek and Latin *lunaria*[5] and *zodiologia* which pertain to the position of the moon or the sun in the zodiacal signs.

Another new genre of astrological omen texts deals with specific topics.[1] One example is *SpTU 1* 94, which concerns trade. This text was copied about 320 B.C. from an already damaged original, but the use of the zodiac and the reference to positive and negative latitude indicate that the

1 Ungnad (1941-44) p. 283.

2 as recognized by Gurney, *STT II*.

3 As might other "ki"-texts, e.g. those mentioned above *TU* 14:22-25, *SpTU II* 43:20-28, *LBAT* 1600:3'-14', *LBAT* 1626

4 See S. Eriksson, (1956).

5 First suggested by E. Reiner (1993) who is preparing a monograph on the subject.

1 Divinatory texts dealing mainly with recovery/death from disease, or success/failure on trips are known from Old Babylonian onwards, some of them using a great variety of techniques, cf. Reiner (1960); also Virolleaud, *Babyloniaca 4*, 125 f.

text can not be more than a couple of centuries older at the most. Lines 1–4:

> If you want to make a prediction for the market price for barley *broken* notice the movement of the planets. If you observe the first visibilities, the last visibilities, the stationary points, the conjunctions, . . . the faint and bright light of the planets and zodiacal signs and their positive or negative latitude . . ., your prediction for the coming year will be correct.

Here, beside the familiar rule that brightness is a good element, dimness negative, we also have positive latitude: good, negative latitude: bad, so that a benefic planet in positive latitude is a good omen (l. 9-15 planets, 20-21 the moon). It also contains the old significance of the date of the lunar phases: first visibility of the new moon on the first (i.e., the previous month had thirty days) and opposition on the 14th are good omens, the first visibility of the new moon on the 30th and opposition on the 13th or 14th are bad omens. The omen pertains to Akkad, Elam, etc., according to where the moon stands: in the area (ki) of Akkad, etc. These "areas" must be part of the ecliptic, or perhaps identical with the old stars of Elam, Akkad and Amurru.

TU 19 and 20 concern the weather. They may have been composed in early Seleucid Uruk (Hunger (1976) p. 242). They make weather forecasts from planetary phenomena according to months or zodiacal signs, and even attempts to translate the periodicity of planetary phenomena to meteorological ones.[1] Another form is found in the Sammeltafel *TU* 13 ii 7-29[2] which gives instructions for predicting an enemy attack, or *LBAT* 1604 where all apodoses predict locusts.

Personal Astrology

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[1] *TU* 20 r5 ff. Hunger (1976) p. 236: "Dass solche Methoden auf das Wetter nicht anwendbar sind, ist geradezu bedauerlich; die Babylonier hätten sonst bestimmt ein raffiniertes Verfahren dafür ersonnen."

[2] Edited by Rochberg-Halton (1987b).

Personal predictions in omen form are not entirely novel. They are found in *Alamdimmû*, the omens from personal appearance,[1] and to some extent in *Šumma ālu*[2] and *Iqqur īpuš*.[3] Also predictions from the date of birth were a well established practice,[4] attested already in the second millennium in Hittite translation, e.g., *KUB VIII* 35 r9–10: "If a child is born in the 12th month, this child will grow old and have many sons." This kind of omens are the precursors of the so-called nativity omens, which begin to be compiled in the second half of the first millennium. Nativity omens link celestial phenomena with predictions for an individual's fate.[5] Closely related to the omens from date of birth are the omens that relate a child's future with the parts (beginning, middle, end) of the zodiacal sign in which it is born.[6] Such predictions were made not only in connection with the zodiac, we also have a compilation of omens based on the rising of the *ziqpu* stars.[7] The horoscopes do not specify in which sign the child is born, but the omens presumably refer to position of the sun at time of birth. Other nativity omens contain predictions pertaining to the movements of the planets with no reference to the zodiac: "If a child is born when the moon comes forth: (his life will be) bright, excellent, regular, and long",[8] also combination of planets: "If a child is born when Venus comes forth and Jupiter has set: his wife will be stronger than he."[9] Perhaps it is no coincidence that the apodoses of the nativity omens resemble the physiognomic omens.

It would seem that general characteristics were attributed to the planets and used in the generation of the nativity omen apodoses (*TU* 13 ii 1–4

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1 Rochberg-Halton (1989) p. 110, see Kraus, *Texte zur babylonischen Physiognomik, AfO Beiheft 3.*

2 Sachs (1952) p. 52.

3 Labat, (1965).

4 Sachs (1952) p. 52 fn. 17a. See also Labat, (1965) § 64, p. 132 ff.

5 See Rochberg-Halton (1989) p. 109 f.

6 *LBAT* 1592.

7 *TU* 14 r29 ff, see Sachs (1952) p. 70.

8 *TU* 14:27, see Sachs (1952) p. 66.

9 *TU* 14 r11.

and *TU* 14:27–r28). As pointed out by Rochberg-Halton, Jupiter and Venus were benefic, Mercury malefic or ambivalent, Saturn and Mars malefic, just as in Hellenistic astrology. The moon is benefic, except when eclipsed, a solar eclipse is described as UD KUR *pardat*, ". . ., terrifying".[1] This is to some extent in line with the general character of the planets in the *EAE* tradition, even if it certainly is not so clear-cut there. The only real exception is Saturn which is more often well-portending than sinister in classical Meopotamian astrology (see p. 122 ff). The nativity omens consistently apply the familiar rule that brightness is good and dimness bad, so if a good planet is bright it is good, if a bad planet is bright it is bad, etc. But the planets also had a new symbolic significance, representing human agents. Jupiter is the man to whom omen pertains, Venus his wife, Mercury his (eldest) son, Saturn his enemy, Mars his enemy (*TU* 14:7 ff). *TU* 14 often just lists the protases, the planetary phenomena, without the apodoses, perhaps because the principles for interpretation were so well-known that writing them down was considered superfluous.

Babylonian horoscopy has attracted much attention as the precursor of so tenacious a sort of divination. Only 32 cuneiform horoscopes have so far been identified, of which nine – a mere sample – have been published.[2] Their number is entirely dwarfed by the amount of contemporary astronomical texts and traditional astrological material. This is perhaps not so strange. Considering their nature, one may indeed wonder why those we do have were written down on clay and stored at all. One horoscope is even known in duplicate.[3] They span the period from 410 – 62 B.C., the bulk falling within the last three centuries B.C.[4] Only two of them name the person for whom the horoscope was cast, both of the names are

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1 Rochberg-Halton (1988c) p. 323-328. She reads UD KUR as *parsat*, translating *parsat pardat* "divided, confused". Though it tallies nicely with the *EAE* tradition, this seems to stretch the meanings of the Akkadian words a bit far.

2 Rochberg-Halton is preparing the corpus for publication, see (1989) p. 102 fn. 5. See Sachs (1952) and Rochberg-Halton (1989) for texts and a detailed discussion of the horoscopes.

3 MLC 2190 (Sachs (1952) p. 60) and *Bagh. Mitt. Beih. 2* no. 82.

4 Rochberg-Halton (1989) p. 102 f.

Greek.[1] A third gives the Akkadian names of the yet unnamed child's father and ancestor.[2]

Horoscopy depended on the recent advances in astronomy. One of the revealing features is the use of the zodiac as reference, and that the position of the planets are computed rather than the result of observation.[3] Another is the interest in using astrology for personal predictions.

The amount and kind of information given by the horoscopes varies somewhat, but the general lay-out is: date and time of birth, with information on the length of the previous month (30 or 29 days), sometimes also the seasonal hour, *simānu* is given. Then the positions of the moon, the sun, Jupiter, Venus, Mercury, Saturn and Mars in the zodiac. The sequence of the planets is the same as is used in non-tabular astronomical texts,[4] the order is according to the general character of the planets.[5] This order is not strictly applied, two planets in the same zodiacal sign may be listed together.[6] The planetary positions were probably obtained by calculation rather than observation. The interest is not only in planets that are actually visible at the time of birth, but occasionally the texts note that this or that planet had set, or leave it out altogether.[7] The horoscopes may also offer information on eclipses, equinoxes, solstices and conjunction of the moon with Normal Stars.[8]

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1 *a-ri-is-tu-ug-gi-ra-te-e*, MLC 2190:2; *nik²-nu-ú-ru*, BM 33741:2, see Sachs (1952) p. 60 f.

2 dumu *šá* ¹mu-šeš dumu *šá* ¹mu-mu a ¹*de-ke-e²*, AB 251:2, Sachs (1952) p. 54.

3 Rochberg-Halton (1989) p. 104 f. She further suggests (p. 119 ff) that the almanachs (see Sachs (1948) p. 277 ff) were the primary source for the celestial phenomena listed in the horoscopes, since they contain the information needed for calculating the position of the planets and The Lunar Three.

4 On these, see Sachs (1948).

5 Rochberg-Halton (1988c) p. 323 ff.

6 BM 35516:6-7, Sachs (1952) p. 62.

7 E.g., MLC 2190 (Sachs (1952) p. 60), gives positions of planets that were invisible at the time of birth.

8 Thirty-one stars along the ecliptic used as reference points in Diaries, Goal-year texts and Normal-Star Almanachs, see, e.g., Neugebauer, *A History of Mathematical Astronomy*, p. 545.

Besides the length of the previous month the horoscopes also often give information on the visibility of the full moon during the day (period from sunrise to moonset, the interval called NA), and the date and duration of the last visibility of the old moon at the end of the month (the phenomenon called KUR). These three data were dubbed by Sachs "the Lunar Three"[1] that apparently gave the information necessary for calculating the time of conception of the child.[2] That this date was also considered significant is shown by the horoscope BM 33667 (Sachs (1952) p. 58 f) which begins with the date of conception (1 Addaru II 53 S.E. = March 15, 258 B.C.), but only together with information on the position of the moon and the date of vernal equinox. The text then continues with the normal information for a horoscope (8 IX 54 S.E. = Dec. 15, 258 B.C.). "Horoscopes" for the day of conception were even computed,[3] as were omens, see *LBAT* 1588, 1589. The horoscopes sometimes offer the information that the child was born in the *bīt niṣirti*, "secret house" (see above p. 104* f) of a planet. Two of the published horoscopes mention the *bīt niṣirti* of Jupiter, i.e., Cancer; in unpublished horoscopes we also have references to the *bīt niṣirti*'s of Mercury and Venus.[4] No good explanation suggets itself, neither the planets nor the sun were in the relevant constellations, and the *bīt niṣirti* was not the ascendant, or *horoscopus*, i.e. rising at the time of birth.

The horoscopes almost never give any conclusions but merely list the celestial phenomena. In this respect they are not different from Greek horoscopes. One exception is MLC 1870 (Sachs (1952) p. 57, pl. III), of which the last eighteen lines contain predictions, unfortunately in a very fragmentary state, and it is hard to see what the relation is between the celestial phenomena and the predictions given. Another text, MLC 2190

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1 Sachs, *JCS 2* (1948) p. 278.

2 Pingree apud Rochberg-Halton (1989) p. 107 fn. 21.

3 BM 32488 (unpublished), see Rochberg-Halton (1989) p. 107 fn. 21.

4 BM 35516 r3 (Sachs (1952) p. 62, pl. IV) and BM 36796 r3 (*LBAT* *1466, Rochberg-Halton (1989) p. 114–115). The traces in BM 35516 surely allow the reading *ni-ṣ[ir-ti]*. Mercury: BM 47721:4'; Venus: BM 36943 r2–3, both quoted by Rochberg-Halton (1988b).

(*ibid.* p. 60, pl. III) lists after the position of each planet an interpretation for the position (ki) of the planet. These predictions are quotations from the apodoses of the nativity omens (*ibid.* p. 60) pertaining to the forthcoming of the planets. But these omens have no specification of the positions of the planets (cf. *TU* 14:27-34). MLC 2190 also contains what seems to be an *EAE*-type omen (l. 4-6): "The moon proceeds from the middle toward the top: 'If its face is set from the middle toward the top: destruction'".

In sum, then, it is hard to see how the horoscopes were interpreted. Babylonian horoscopes do not contain any of the interpretative tools so characteristic of Hellenistic horoscopy, such as information on *horoscopus*, *centers*, *lots*, etc.[1] Perhaps they were regarded merely as a collection of omens, as it would appear judging from MLC 2190,[2] and therefore by nature not different from the traditional forms of Mesopotamian divination. They do call to mind the extispicy reports and queries which likewise only list the ominous phenomena and only rarely add interpretations. On the other hand, this must mean that the interpretation of the horoscope was evident to the expert, that the information was relevant, and hence, that the position of the planets in the zodiac must have had *some* significance that is not exploited (or explained) in MLC 2190. But we have no Babylonian evidence for most of the Hellenistic astrological concepts. We do see the beginnings of the belief in the characteristic qualities of the planets and the zodiac in the nativity omens, as well as the arithmetic concepts, the triangles and the dodekatemoria; and probably all this was applied in some fashion, as yet unknown, by the Babylonian astrologers.

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[1] O. Neugebauer and H.B. van Hoesen, *Greek Horoscopes* (1959).

[2] Rochberg-Halton (1989) p. 110.

One of the main points of scholarly interest in late Babylonian astrology and astronomy is its relationship with Hellenistic astrology and astronomy.[1] The classical authors saw astrology as a wisdom (or folly) imported from the east,[2] and the term *Chaldean* came to refer both to a people and to the members of a profession, i.e., astrologers.[3] Even if the term came to be derogatory, the prestige of the Chaldeans was still so strong that a Nabatean scholar of the eighth century, Ibn Waḥshiya, claimed to have found and copied an ancient Babylonian manuscript concerned with the "Secrets of the sun and the moon".[4] In Greek and Latin astrological texts, "Babylon" and "Chaldea" continued to be referred to as sources along with other notoriously vague information on the origin of astrological doctrine.[5] Babylonian astrological omina and astronomical practices and knowledge did indeed enjoy wide popularity and were disseminated throughout the East, from Egypt and the Hellenistic world to India[6] and China.[7] Simple forms of astrology (*Laienastrologie*) that does not require any sort of astronomical knowledge but only the use of an almanach played a huge part in keeping alive popular interest in astrology till today. It is indeed amusing that exactly those popular forms of astrology: zodiologies, lunaria, brontologies, seismologies all had Babylonian precursors. But the amount of Babylonian astrological concepts directly transmitted to Hellenistic astrology is relatively small, as far as can be judged at the present state of research:

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1 On the influence of Babylonian astronomy on Greek astronomy, see Neugebauer, (1975), p. 589 ff.

2 See A. Kuhrt, "Assyrian and Babylonian Traditions in Classical Authors: A Critical Synthesis", in: Nissen and Renger, *Mesopotamien und seine Nachbarn* (1982) p. 539-553, and F. H. Cramer, *Astrology in Roman Law and Politics* (1954).

3 For a survey, see Rochberg-Halton (1988) p. 2-7.

4 D. Chwolson, *Über die Überreste der altbabylonischen Literatur in arabischen Übersetzungen*, St.Petersburg (1859). Actually, the text has nothing to do with Mesopotamian astrology, see Gutschmid and Nöldeke, *ZDMG 15*, p. 1, 29, 445.

5 Cf. the indices of *Catalogus Codicum Astrologorum Graecorum*, also Eriksson (1956) p. 9 ff.

6 D. Pingree, (1982), p. 613-631; Pingree, "MUL.APIN and Vedic Astronomy", *Fs. Sjöberg*, p. 439 ff; Rochberg-Halton (1988b).

7 Miller (1988).

– the zodiac itself,[1] the microzodiac, and the two systems for correlating one point of the zodiac with another, or for determining which microzodiacal sign a planet occupied, that is the principle of "dodekatemoria";

– the principle of dividing the zodiac into subgroups, e.g. triangles, groups of signs whose celestial longitude differ by 120°, and the winds associated with the triangles;

– the association of a particular constellation with each of the seven planets as the place where it attained special significance, *hypsoma*.

There is also some evidence that the Babylonian scholars correlated parts of the human body with the planets or the signs of the zodiac.[2] This might be a precursor to the doctrine of *melothesia*, the analogy between man, mikrokosmos, and the universe, makrokosmos, which was an important part of Hellenistic astrological theory. On the other hand, since correlating all possible things was a pastime in which Babylonian scholars excelled, the relationship with the Hellenistic concept of melothesia is at most incidental.

As publication and research progress, more Babylonian precursors of Hellenistic astrology will undoubtedly be recognized. But it still seems that the Babylonian concepts were integrated into a fundamentally different framework shaped by Hellenistic philosophical and scientific theories.

Ever since Aristotle, the prevailing Hellenistic view of the workings of the Universe was one of physical causality. Prognostication essentially consisted in determining how the purely physical influences of the various celestial bodies were balanced, depending on their inherent qualities and their relative positions in a geometrical relationship.[3] The theoretical and philosophical foundations of late Babylonian astrology remain for the present impenetrable, though it is safe to assume that they were very different from those that Aristotle would have recommended. The devia-

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1 Neugebauer, (1975), p. 594, Rochberg-Halton (1988b) p. 61.

2 E. Reiner, "Two Babylonian Precursors of Astrology", *N.A.B.U. 1993*, p. 21-22. The evidence presently available amounts to scholia referring to a tablet called "Spleen = Jupiter" and to the Kidney-star = Mars.

3 See e.g., Pingree 'Astrology' in *Dictionary of the History of Ideas* vol. 1, p. 118.

tions from the perfect circle in the movements of the celestial bodies, which were such a problem to the Greeks, did not concern the Babylonians. In general, the Babylonians seem to have taken little interest in constructing models of the Universe.[1] But the differences in theory should not be allowed to obscure the impressive similarities in the practice of astrology. It was these similarities in the desire to predict the future, and the means to do so, that made it possible for much of Babylonian astrology to survive into Hellenism, so much indeed that astrology became "the Chaldean art" pure and simple.

[1] The Babylonians treated astronomy as an abstract, purely mathematical science, unaided by any kinematic theory or spheric-geometrical model, see Lis Brack-Bernsen, "Babylonische Mondtexte: Beobachtung und Theorie", *Grazer Morgenländische Studien 3* (1993), p. 331 ff with references to earlier literature.

APPENDIX A

Reports written on March 15th (Addaru 16th) 669 B.C.

Assyrian writers:

Akkullanu (*SAA 8* 102):

The observation of the moon with [the sun was made] on the 16th day.
The 16th is the day of Subartu [- - - -]
but actually, [this is] bad for Akkad.

"If the moon is unexpectedly late [and does not rise: uprising in(?) *āl kiššati*]"
"If the moon [is not seen with the sun] on the 14th or
the [15th] day of Addaru: [destruction of] Ur."
"If on the 16th day the moon and the sun [are seen together]:
the k[ing will be confined] in his palace the whole [month,
the enemy will march against his land, the e]nemy will walk proudly in his land."
"[If the moon] in its appearance [- - - - - - - - - -]".

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7 lines unintelligible
concerning Mars which [- - -] towards
Saturn [- - - - - - -]
there is nothing, it will not approach [- - -].

A planet flashed and surrounded the sun [- - - - - -]

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concerning that it approached in front of it [- - - - -]
I have written the interpretation to the king my lord [- - -].

Concerning the burnt offerings about which the king wr[ote to me], I spread my hands and prayed for the king, the crown prince and Šamaš-šum-ukin
4 lines broken
the king should ask [- -]x-naja.
From Akkullanu.

Balasî (*SAA 8* 82):

"If the moon unexpectedly is late and is not seen:
uprising in(?) *āl kiššati*".
On the 15th day it sets, and on the 16th it is seen with the sun.

"Mars keeps going around a planet: grain will become scarce."
"If Corvus reaches the path of the sun: trade will diminish. Alternatively: there will be clamour."

These reports concern Akkad.
Mars is four fingers (= 20') from Saturn,
it has not approached the region further but stands above it, I have excerpted (the relevant omens).
What does it matter: let the pertinent *namburbû* be performed.

"If the moon is seen on the 16th day: the king of Subartu will be strong and have no equal".

"If the moon is surrounded by a halo and a planet stands in it: robbers will go on a rampage."
"If the moon is surrounded by a halo and Mars stands in it:
loss of cattle and the beast of the steppe, the *kur*-measure will become small,
the cultivated fields and the dates will not thrive, Amurru will grow weak."
"If the moon is surrounded by a halo and the Field-star stands in it: diminishing of grain."

The Field-star is Virgo.
From Balasî.
From this point (ta* šà *an-ni-i-e*) Mars will go away, it is [in front] of Saturn.
[The moon] will complete the day in Nisan.

Bamaja (*SAA 8* 169):

"If the moon is surrounded by a halo and Mars stands in it:
loss of cattle in all lands,
the cultivated land and the dates will not thrive,
ditto: Amurru will grow weak."
"If the sun stands in the halo of the moon:
in all lands truth will be spoken,
the son will speak truthfully to his father."
"If two stars stand in the halo of the moon:
a reign of long duration."
From Bamaja.

Šumaja[1] (*SAA 8* 168):

"If on [the 16th day the moon and the sun] are seen together:
king will send enmity to king,
the king will be confined in his palace the whole month,
[the enemy will march] against his land,
the enemy will walk [proudly in his land]."

"If the moon is surrounded by a halo and the sun stands in it:
in all lands truth will be spoken,
the son will speak truthfully to his father,
peace in the world."
"If the moon is surrounded by a halo and Mars stands in it:
loss of cattle in all lands,
the cultivated land and the dates will not thrive;
ditto: Amurru will grow weak."
"If the moon is surrounded by a halo and two stars stand in
the halo of the moon: a reign of long duration."

"If Mars and a planet confront each other and stand:
rising of Elam."
"If Mars stands [- - - - - -]:
The king of Elam will die."

From Š[um]aja.

Nabû-ahhe-eriba (*SAA 8* 49):

"[If the moon] is seen on the 16th day
[the king of Subartu] will be strong [and have no equal]".

"If the moon is surrounded by a halo and Mars stands in it:
loss of cattle of all lands, the cultivated land and the dates
will not thrive; ditto: Amurru will grow weak."

"If the moon is surrounded by a halo and a planet stands in it:
robbers will go on a rampage."

---

[1] Thus, against Hunger, *SAA 8* 168:9, reading $^{m}b[a\text{-}ma]\text{-}a\text{-}a$. Why would Bamaja have written two reports about the same matter on the same day?

Saturn stands in the halo of the moon.

"If Jupiter comes near Taurus:
the good of the land will perish;
ditto: the offspring of the cows and ewes will not thrive."

Jupiter has entered Taurus.
The king my lord should be on his guard against drafts.

"If the Plough-star reaches the path of the sun: starvation of the cattle, there will be hunger."

Mars will reach Saturn.

"If a planet and Mars confront each other and
they stand: rising of the enemy."

"If the Fox-star in its rising [- - - - -] is dark [- - - -]
its star like [- - - - - - -]
moves around [- - - - - - - - - -]
star [- - - - - - - -]"

From [Nabû-ahhe-eriba].

Babylonian writers:

Ašaridu senior (*SAA 8* 327):

"If in Addaru the moon is not seen with the sun on the 14th or the 15th day:
destruction of Ur".
"If the moon is unexpectedly late and is not seen:
uprising in(?) *āl kiššati*, years of [- - - -]"

"If on the 16th day the moon and the sun [are seen to]gether:
The king of Subartu [will have no eq]ual."
This is from an [extraneous?] tablet.

"If the moon is surrounded by a halo and [Mars stands in it]:
destruction of the cattle, in all lands
the [cultivated fields] and dates will not thrive."
break

"[If a strange star] approaches a planet: loss of cattle".
Mars approaches Saturn.

"If a planet touches stars of the sky:
the king will destroy all lands."
Mars is bright and touches stars.

From Ašaridu senior, servant of the king.

Nabû-iqbi, from Kutha (*SAA 8* 416):

"If the moon is surrounded by a halo and Mars stands in it:
destruction of the cattle and herds."
"If the moon is surrounded by a halo and the sun stands in it:
there will be justice in the land,
the son will speak truthfully to his father."
Saturn stands in the halo of the moon, and
"If the moon is surrounded by a halo and two stars stand in it:
a reign of long duration."

From Nabû-iqbi in Kutha.

Raš-ili senior (*SAA 8* 383):

"If the moon is surrounded by a halo and [two stars stand in it]:
a reign of long duration."
"If the sun stands in the halo [of the moon: truth will be spoken],
the son wi[ll speak truthfully to his father],
peace in the world."
The moon was surrounded by a halo and [Saturn stood in it].
"If the moon is surrounded by a halo and [Mars stands in it]:
loss of cattle in all lands, the cultivated lands
and dates will not thri[ve],
Amurru will grow weak."
"If the Yoke-star (Bootes) stands in the halo of the moon:
the king will die and his country grow weak,
the king of Elam will die."
The Yoke-star is Mars.

Mars is the star of Amurru,
bad for Amurru and Elam.
Saturn is the star of Akkad,
good for the king my lord.

On the 14th god will be seen with god,
may the king, my lord, be content!
From Raš-ili senior, servant of the king.

Šapiku, from Borsippa (*SAA 8* 491):

"If on the 16th day the moon and the sun are seen together:
king will send enmity to king; the king will be confined
to his palace the whole month,
the enemy will march against his land, the enemy will walk proudly."

"If the moon is surrounded by a halo and Mars stands in it:
loss of ca[ttle, the cul]tivated lands and the dates will not thrive,
[Amur]ru will grow weak,
[If ditto and the sun stands in it:] there will be stability in the land,
[the son will speak tru]thfully with his father."

"[If a planet] reaches [a pla]net and passes it:
the strong ["weapon of Erra"] will be in the land."
"[If the Pleiades] reach the Deleter:
[in that year there will be famine." Ma]rs has reached Saturn.
"[If ....] in front of it surrounded: rising of the enemy"
A decision will be given for Amurru:
Mars, [the star of] Subartu is bright
and is clothed in brilliance: this is good for Subartu;
and Saturn is the star of Amurru,
it is faint and its brilliance is weak,
bad for Amurru; an enemy will rise against Amurru.

From Šapiku of Borsippa.

APPENDIX B

The "Great Star List"

This is not a fresh edition of the text but merely a digest of what today is public knowledge about it, for the reader's convenience. See especially Weidner, *HBA* p. 6–20; Weidner, "Ein astrologischer Sammeltext aus der Sargonidenzeit", *AfO 19* (1959) 105 ff; and p. 93 above. A reconstructed line count has been attempted on the assumption that A had about 53 lines per column, B about 64, C about 72, G about 50, and H about 67; but the variations between the MSS make an exact estimate a somewhat futile undertaking. Sigla for ms. A–H are in agreement with *AfO 19*, p. 105 f.

A =	K 250	*CT 26* 40-41	NA, six cols. i = 29–53, ii = 79–95,
	+ K 13677	*CT 26* 50	iv = 163–185, v = 213–234, vi = 263–289.
	+ K 7646	*CT 29* 47	Joins I?
	+ K 16242	*CT 34* 14	
	+ K 11184	*AfO 19* p. 110	
	+ K 13709	*AfO 19* p. 109	
B =	K 4195	*CT 26* 42-43	NA, eight cols. i = 26–42, ii = 92–114, iii = 165–181. vi–viii word list, not transliterated.
C =	K 8067	*CT 26* 44	NB, from Kuyunjik? Obv. and rev. to be reversed, eight cols. ii = 130–143, iii = 204–218, iv = 300–305.
D =	K 2067	*CT 26* 45	NA fragment, not necessarily belonging to the "*GSL*". Lines 1–3 = *KAR* 142 i 22–25; ll. 4 ff = 222–245.
E =	K 11267	*CT 26* 49	NA fragment, = 206–212.
F =	Sp. II 381 = BM 34874	Pinches *PSBA* 34 p. 293	NB, belonging to "*GSL*"? = 257–273.
G =		Scheil *RA 24* p. 33	NA, bought in Mosul. Apparently lower right-hand corner of obv., unfinished six-col. tablet. ii = 78–94, iii = 125–143, iv = 152–157.
H =	AO 8196	*AfO 19* xxxi-xxxiv	NB, origin unknown, six cols. ii 4–17 unidentified, ii 18 ff = 80–94, iii = 138–194, iv = 258–312. The gap between iii and iv must have been about 30 lines shorter than the text reconstructed here.
I =	K 7625	*CT 26* 46	NA fragment = 234–244. Joins A?
	+ K 13601	*CT 26* 48	
J =	Ash.1924.1637+1881	*OECT XI* no. 84	NB fragment, from Kish? Word list, = B vii 12'–27', not transliterated here.

25 lines missing

	B	[- - - -]	[^{d}]min
	B	[^{d}nin.gul.ti]	*ana mas-si-e*
	B	[^{d}dil].bat	*ana* si.sá *bu-lim*
	AB	[mu]l im.šu.rin.na nu.kúš.ù: ^{d}dil.bat	
30	AB	mul dil.bat	^{d}*iš-tar be-let* kur.kur
	AB	mul *a-nu-ni-tum*	^{d}*iš-tar* min
	AB	mul *a-ri-tum*	^{d}*iš-tar* min
	AB	mul *iš-ha-ra*	^{d}*iš-tar* min
	AB	mul gír.tab	^{d}*iš-ha-ra*
35	AB	mul gír.tab	^{d}min *ti-amat*
	AB	mul gír.an.na	mul gír.tab
	B	mul nin.mah	mul min
	AB	mul nin.mah	dingir.mah dù-*at* an *u* ki
	AB	mul nin.gìrim	*be-let te-lil-ti*
40	AB		^{d}*iš-ha-ra*
	AB	---	---
	AB	mul ban	mul ab.sín
	AB	mul gilim	mul min
	A	mul tir.an.na	mul min
	A	mul *a-ri-tum*	mul min
45	A	mul mar.gíd.da	mul [- - - - -] x
	A	[- -]	
	A	[- -]	
	A	mu[l -]	
	A	mul pa [- -]	
50	A	mul udu [- - - - - - - - - - - - - - - - - - - -]	
	A	mul ka.muš.ì.gu$_7$.[e - - - - - - - - - - - -]	
	A	mul nun.me [- - - - - - - - - - - - - - - - -]	
	A	[- -]	

24 lines missing

Variants: 31–33: B ^{d}min 38: B omits *u*

	[- - - - - - - -]	ditto
	Ningulti	is for a leader
	Venus	is for thriving cattle
	The Widows' Oven	Venus
30	Venus	Ištar, queen of all lands
	Annunitu	Ištar, ditto
	The Shield-bearer	Ištar, ditto
	Išhara	Ištar, ditto
	The Scorpion	Išhara
35	The Scorpion	ditto Tiamat
	The Sword-of-Heaven	The Scorpion
	Ninmah	ditto
	Ninmah	Belet-ili, creator of Heaven and Earth
	Ningirim	Goddess of Purification
40		Išhara

	The Bow	The Furrow (Virgo)
	The Reed-bundle	ditto
	The Rainbow	ditto
	The Shield(bearer)	ditto
45	The Wagon	[- - - - -]
	[- -]	
	[- - - - - - - - - - - - - - -ditto]	
	[- - - - -]-star	[ditto]
	. . -star	[ditto]
50	[- - -]-planet	[ditto]
	The Deleter	[ditto]
	The Sage	[ditto]
	[- -]	

Notes: 27–28: for the restorations, see Weidner, *AfO 19* 106.
29: mul im.šu.rin.na.nu.kúš.ù.(e.ne) was apparently opaque to some Babylonians, cf. *CAD* sub *almattu* e; but see *SbTU 3* 114 v 112 (*Hh 22*) where the name is translated *kak-kab ti-nu-ri al-ma-na-a-ti.*

	G	[- - - - - - - - - - - - -]	[d]min
	AG	mul x x [- - - -] x	dmin
80	AGH	mul x [- - - - -]	dištaran
	AGH	mul *ì-lí-ab-*[*rat*]	dmin
	AGH	mul dumu.[zi]	dmin
	AGH	---	---
	AGH	AN AN NI x [x]	d*ṣal-bat-a-nu*
	AGH	mul [- - - - - -]	dmin
85	AGH	mul *ma-ak-ru-u*	dmin
	AGH	mul sa_5	dmin
	AGH	mul sig_7	dmin
	AGH	[mu]l man-*ma*	dmin
	AGH	mul *a-hu-u*	dmin
90	AGH	mul [*n*]*a-ka-ru*	dmin
	AGH	mul *s*[*ar*$_6$]*-ru*	dmin
	ABGH	mul hul	dmin
	ABGH	mul ka_5.a	dmin
	ABGH	mul nim.ma	dmin
95	AB	mul lú.sa.gaz	dmin
	B	mul ur.bar.ra	dmin
	B	mul $ti_8^{mušen}$	dmin
	B	mul *lu-um-nu*	dmin
	B	mul *si-mu-ut*	dmin
100	B	mul *la* šid.meš	dmin
	B	mul apin	dmin
	B	mul šudun	dmin
	B	mul šu.pa	dmin
	B	mul bal.téš.a	dmin
105	B	mul ug_5.ga	dmin
	B	mul bir	dmin
	B	mul nun^{ki}	dmin
	B	mul ud.ka.duh.a	dmin
	B	[- - - - - - -] x	dmin
110	B	[- - - - - -] ki gal	dmin
	B	[- - - - - -]	dmin mu.bí

	[- - - - - - - -]	ditto
	[- - - - - - - -]	ditto
80	. . . . .	Ishtaran
	Ilabrat	ditto
	Dumuzi	ditto
	. . . . .	Màrs
	[- - - -]-star	ditto
85	The Fiery Red	ditto
	The Red	ditto
	The Yellow	ditto
	The Sinister	ditto
	The Strange	ditto
90	The Hostile	ditto
	The Liar	ditto
	The Evil	ditto
	The Fox	ditto
	The Star of Elam	ditto
95	The Robber	ditto
	The Wolf	ditto
	The Eagle	ditto
	The Evil	ditto
	Simut	ditto
100	The Incalculable	ditto
	The Plough	ditto
	The Yoke	ditto
	ŠU-PA	ditto
	The Star of Dignity	ditto
105	The Raven	ditto
	The Kidney	ditto
	The Star of Eridu	ditto
	The Panther	ditto
	[- - - - - - -]	ditto
110	[- - - - - - -]	ditto
	[- - - - -]	ditto, is its name

	B	[- - - - - -]	^{d}u.gur
	B	[- - - - - -]	[^{d}]min
	B		
	B	[- - - - - -]	[^{d}en.me].šár.ra

10 lines missing

125	G	mul [- - - - - - - - - - - - - - - -]	
	G	mul [- - - - - - - - - - - - - - - -]	
	G	mul [- - - - - - - - - - - - - - - -]	
	G	mul x [- - - - - - - - - - - - - - - -]	
	G	mul x [- - - - - - - - - - - - - - - -]	
130	G	mul nu.muš.da	[- - - - - -]
	G	mul min	^{d}[- - - - - - -]
	CG	mul min	^{d}amar.utu
	CG	mul $li_9.si_4$	^{d}x [- - -]
	CG	mul min	^{d}u.gur
135	CG	mul min	^{d}nin.urta
	CG	mul *ra-ap-pu*	mul ur.gu.la
	CG	mul *e-tu*$^{!}$*-ram-mi*	mul min
	CGH	mul sag $ur.gi_7$	mul min
	CGH	mul an.ta.sur.ra	^{d}*šullat u* ^{d}*haniš*
140	CGH	mul an.ta.sur.ra	^{d}utu
	CGH	mul an.ta.sur.ra	*me-ših* mul
	CGH	mul an.ta.sur.ra	*me-ših* ^{d}pa.bil.sag
	CGH	mul *ur-um* an.na	^{d}min
	H	mul *bur-ru-um* an.na	^{d}min
145	H	mul al.lul	^{íd}idigna
	H	mul ^{íd}idigna	^{d}*a-nu-ni-tum*
	H	mul ^{íd}buranun	mul šim.mah
	H	mul.meš igi.meš *šá* mul al.lul: ^{íd}idigna	
	H	egir.meš-*tum*	^{íd}buranun^{ki}
150	H	igi.meš kur_4.meš-*ma* sa_5.me-*ma* ^{íd}idigna du-*kám*	

Variants: 133: C [- - -] ^{d}u.gur : $^{d}li_9.si_4$ 138: CG mul min, H mul ur.gu.la, at beginning of col. iii

[- - - - -]	Nergal
[- - - - -]	ditto
[- - - - - -]	Enmešarra

130	Numušda	[- - - - - - - - -]
	ditto	[*divine name*]
	ditto	Marduk
	Lisi	. . . . .
	ditto	Nergal
135	ditto	Ninurta
	The Bridle	The Lion
	Eturammi	ditto
	The Dog's Head	ditto
	The Flashing	Šullat and Haniš
140	The Flashing	Šamaš
	The Flashing	A meteor (?)
	The Flashing	Flashing of *Pabilsag*
	. . . . .	ditto
	. . . . .	ditto
145	The Crab	Tigris
	Tigris	Annunitum
	Euphrates	The Swallow
	The front stars of The Crab	Tigris
	the rear ones	Euphrates
150	The front stars shine brightly and are red: the Tigris will flow.	

Notes: 136, *rappu*: thus with *AHw* and Hunger, *SAA 8* 81:5–6. 137: for the various spellings of this name, cf. *BPO II* p. 11 sub É.TÙR "Cattle Pen", which Reiner and Pingree take to be the same. However, here and in *ACh 2. Suppl.* 78 i 7, *eturammi* can not refer to the "Cattle Pen" = the (eastern) horizon; rather, it seems to be a part of Leo.

	H	murub.meš sa_5.me-*ma* zi im	
	GH	egir.meš sa_5.me-*ma* $^{\text{íd}}$buranun$^{\text{ki}}$ du-*kám* nim.meš	
	GH	si.sá.meš	
	GH		
	GH	mul dingir.gub.ba.meš	$^{\text{d}}$30 *u* $^{\text{d}}$utu
155	GH	kun mul ur.gi_7	mul im.šu.rin.na *al-ma-nu-u*
	GH	mul kak.ban	mul kak.si.sá
	GH	mul *ha-ba-ṣi-ra-nu*	$^{\text{d}}$nin.gír.su
	H	mul *da-mu*	$^{\text{d}}$gu.la
	H	mul $^{\text{d}}$im.dugud$^{\text{mušen}}$	mul anše.kur.ra
160	H	mul ka	mul lú.úš
	H	mul ág.an.búr *ana* bala til.lum *nap-šur-tum gam-lum*	
	H	mul *za-ru-ú*	*ma-šad-du*
	AH	mul sipa.zi.an.na	šita.da.ru
	AH		*šá ina* $^{\text{giš}}$tukul *mah-ṣu*
165	ABH	mul *tul-tum*	$^{\text{d}}$*a-nu-ni-tum*
	ABH	ku_6.meš *tu-la-a-tum u* mušen.meš *hu-u_8-ú*	
	ABH	tir.an.na ud *nu-uh-šú* mu.bí *mar-ra-tum*	
	B		
	ABH	ul babbar	$^{\text{d}}$*ṣal-bat-a-nu*
	ABH	ul gi_6	$^{\text{d}}$pap.sukkal
170	ABH	ul sa_5	$^{\text{d}}$udu.idim
	ABH	ul sig_7	$^{\text{d}}$dumu.zi
	ABH	ul sa_5	šub-*tim* izi
	ABH	ul sig_7	an.mi
	AB		
	ABH	diš ul *šá ina* igi-*šú ṣip-ru ina* egir-*šú* kun gar-*nu*	
175	ABH	igi-*ma* an-*e* zálag-*ir ki-ma ṣal-lum-mu-ú*	
	ABH	*ki-ma me-ših* mul.meš	
	BH		
	ABH	*ṣal-lum-mu-ú*	*meš-hu šá* mul ki-*šú ia-'-nu*
	ABH	*ṣal-lum-mu-ú*	*mi-ših* mul.meš
	ABH	*ṣal-lum-mu-ú*	*ṣa-ra-ár* mul.meš

Variants: 163: A *ši-ta-ad-*[166: A *hu-u_8-'* 173: A an.mi, H an.ta.lù
175: AH zalag-*ir*, B igi-*ir* 177: H mul.me

The middle stars are red: rising of wind.
The rear stars are red: the Euphrates will flow and the early (crop) will thrive.

	The Standing Gods	Sin and Shamash
155	The tail of The Dog	The Widow's Oven
	The Arrow	The Arrow
	The Mouse-like	Ningirsu
	Damu	Gula
	The Anzû-bird	The Horse
160	The Mouth	The Corpse
	. . . . .	
	The Pole	The Pole
	The True Shepherd of Anu: Šitadaru, the one who was struck with the mace.	
165	The Maggot	Anunitum
	"Sea-worms"	"Hoot-owls"
	Rainbow, its name is "day of plenty", the rainbow	

	The White Star	Mars
	The Black Star	Papsukkal
170	The Red Star	The Planet (Mars)
	The Yellow Star	Dumuzi
	The Red Star	Falling of Fire
	The Yellow Star	Eclipse

If a star that has a coma in front and a tail behind
175 appears and it lightens up the sky like a fireball, like the flashing of stars

---

Fireball	A flash without a star
Fireball	Flashing of a star
Fireball	Brightness of a star

Note: 155, *almanû*: cf. l. 29 above.

180	ABH	*ṣal-lum-mu-ú*	*zi-im* mul
	ABH	*ṣal-lum-mu-ú*	*šá-lum-ma-tum*
	AH	*šá-lum-ma-tum*	*me-lam-mu*
	AH		
	AH	15 30	kur [uri]^{ki}
	AH	150 30	kur nim.[ma^{ki}]
185	AH	an.ta 30	kur mar.[tu^{ki}]
	H	[ki.ta] 30	kur su^{ki} *u* [kur *gu-ti*]
	H	[- - - -]	^{d}*a*-[*nu* - - - -]
	H	[- - - -]	^{d}en(?).líl [- - -]
	H	[- - - -]	^{d}*é*-[*a* - - - - -]
190	H	[- - - -]	[^{d}]*a-nu*
	H	[- - - -]	[- - -] x
	H	[- - - -]	[^{d}*é*]-*a*
	H	[- - - -]	[- - -]-*ì-lí*
	H	[- - - -]	[- - - -] x ki
		7 lines missing	
		[mul dil.bat	mul.mul]
		[mul ur.gu.la	mul maš.tab.ba]
		[mul ban	mul uga]
	C	[mul en.te.na.bar.hum]	mul gír.tab
205	C	[mul ud.ka.duh.a]	mul gu.la
	CE	mul n[u.muš.da	mul ku$_6$]
	CE		
	CE	12 mul.meš	kur nim.ma[^{ki}]
	CE		
	CE	mul apin	mul *a-nu-ni-tum*
	CE	mul sipa.zi.an.na	mul ud.al.tar
210	CE	mul mar.gíd.da	mul šu.pa
	CE	mul *zi-ba-ni-tum*	mul ur.idim
	CE	mul ùz	mul ti$_8^{mušen}$
	AC	mul *da-mu*	mul *né-bé-rum*

Variant: 182: A *šá-lum-ma-tú*

180	Fireball	Glow of a star
	Fireball	Radiance
	Radiance	Nimbus

The right side of the moon is Akkad
The left side of the moon is Elam
185 The top of the moon is Amurru
The bottom of the moon is Subartu

[- - - - - - -]	Anu
[- - - - - - -]	Enlil
[- - - - - - -]	Ea
190 [- - - - - - -]	Anu
[- - - - - - -]	Enlil
[- - - - - - -]	Ea
[- - - - - - - -]	[- - - -]-ili
[- - - - - - - -]	[- - - -] . . .

Venus	The Stars
The Lion	The Twins
The Bow	The Raven
Entenabarhum	The Scorpion
205 The Panther	The Great
Numušda	The Fish

Twelve stars of Elam

The Plow	Annunitum
The True Shepherd of Anu	Jupiter
210 The Wagon	ŠU.PA
The Scales	The Mad Dog
The Goat	The Eagle
Damu	The Ford

Note: 201–206: restored in accordance with Weidner, *HBA* p. 13 and 68.

	AC		
	AC	12 mul.meš	kur uri^{ki}
	AC		
215	AC	mul aš.gán	mul šu.gi
	AC	mul muš	mul kak.si.sá
	AC	mul maš.tab.ba.gal.gal	mul bir
	AC	mul nin.mah	mul lugal
	A	mul *ṣal-bat-a-nu*	mul al.lul
220	A	mul sim.mah	mul ka$_5$.a
	A		
	A	12 mul.meš	kur mar.tu^{ki}
	A		
	AD	mul gàm	mul lugal
	AD	mul u$_5$.rí$^{!}$.in	mul ka.muš.ì.nag.a
	AD	mul *is li-e*	mul muš mul li$_9$.si$_4$
	A		
225	AD	7 *ti-ik-pi*	
	AD		
	AD	mul šu.gi	mul ud.ka.duh.a
	AD	mul sipa.zi.an.na	mul kak.si.sá
	AD	mul en.te.<na>.bar.hum	mul ti$_8$^{mušen}
	AD	mul pa.bil.sag	
	A		
230	AD	7 *lu-ma-šú*	
	AD		
	AD	mul maš.tab.ba.gal.gal mul maš.tab.ba.tur.tur	
	AD	mul maš.tab.ba *šá ina* igi-*it* mul sipa.zi.an.na gub-*zu*	
	AD	mul nin.mú	mul ìr.ra.gal
	ADI	mul ^{d}*šullat* mul *haniš* mul šár.ur$_4$	mul šár.gaz
235	DI	mul zi.ba.an.na	
	I		
	DI	7 *ma-a-šú*	
	DI		
	DI	ul man-*ma* mul *a-hu-ú* ul *na-ka-ru*	

Variants: 217: C maš.tab.ba.gal.gal.la 223: A u$_5$.ZU.in, D ^{d}u$_5$.<rí>.in; D ka.muš.ì.nag.e 230: D *lu-ma-ši*

Twelve stars of Akkad	
The Field	The Old Man
The Serpent	The Arrow
The Great Twins	The Kidney
Belet-ili	The King
Mars	The Crab
The Swallow	The Fox

Twelve stars of Amurru	
The Crook	The King
The Eagle	The Deleter
The Jaw of the Bull	The Serpent Lisi

Seven "Point" (*tikpu*) stars	
The Old Man	The Panther
The True Shepherd of Anu	The Arrow
Entenabarhum	The Eagle
Pabilsag	

Seven *lumāšu*	
The Great Twins	The Small Twins
The Twins which stand in front of The True Shepherd of Anu	
Ninmu	Erragal
Šullat Haniš	Šarur Šargaz
The Scales	

Seven Twins		
The Sinister	The Strange	The Hostile

Note: 223, mul u_5.rí.in: the list of *tikpu*-stars in *KAR* 142 i 36 has mul sipa.zi.an.na instead.

DI ul *sar$_6$-ru* ul hul ul ka$_5$.a ul nim.ma.ki
DI ul *ṣal-bat-a-nu*
I ———————————————————
240 DI 7 *zik-ru-šu*
DI ———————————————————
DI ^{d}30 *u* ^{d}utu ^{d}šul.pa.è mul dil.bat
DI mul udu.idim mul sag.uš ^{d}udu.idim.gu$_4$.ud
DI ul *ṣal-bat-a-nu*
I ———————————————————
DI 7 mul udu.idim.meš
D ———————————————————
245 D igi muš ^{d}ban.ba.an.šur *da-'-ik* an.ki
D igi muš ^{d}la.ba.an.šur *da-'-ik* an.ki
D igi *nim-ri* ^{d}*ka-mu-ú da-'-ik* [an.ki]
D [- - - - -] di *da-'-ik* [an.ki]

8 lines missing

	F	[iti bar.sag.sag]	iti bár.zag.gar
	FH	[iti *ša-ba-ṭi*]	iti bár.zag.gar
	FH	[iti *a-da*]-*ri*	iti gu$_4$.si.sá
260	FH	[iti *ši-r*]*i-*'-buru$_{14}$	iti sig$_4$.ga
	FH	[iti *pi-ti*]-ká	iti šu.numun.na
	FH	[iti] dingir.mah	iti izi.izi.gar
	AFH	iti *a-bi*	iti kin.^{d}innan.na
	AFH	iti *la-lu-bi-e*	iti du$_6$.kù
265	AFH	iti *si-bu-tú*	iti apin.du$_8$.a
	AFH	iti *ši-ri-'-e-re-šú*	iti gan.gan.è
	AFH	[iti *tam-ḫi*]-*ri*	iti ab.ba.è
	AFH	[iti *si-l*]*i-li-ti*	iti zíz.a.an
	AFH	iti *hul-dab$_6$-ba-a*	iti še.kin.kud
	AFH	———————	———————
270	AFH	iti bár kur uri^{ki}	iti gu$_4$ kur nim.ma^{ki}

Variants: 264: F *taš-ri-tum* 266: A gan.gan.DAM 267: F ab.ba 269: F [*hul-d*]*úb-bé-e* 270: H [ni]m^{ki}

The Liar The Evil The Fox The Star of Elam
Mars

240 Its seven names

The moon and the sun Jupiter Venus
"Wild Sheep": Saturn Mercury
Mars

Seven planets

245 Before The Serpent is Banbanšur, killer of heaven and earth
Before The Serpent is Labanšur, killer of heaven and earth
Before The Panther is The Catcher, killer of heaven and earth
[- - - - - - - - - - - - -] killer of heaven and earth

	. . . . .	Nisan (I)
	Šabaṭi	Nisan (I)
	Adari	Ajjaru (II)
260	Širi'-eburi	Simanu (III)
	Pit-babi	Dumuzu (IV)
	Dingir-mah	Abu (V)
	Abi	Elulu (VI)
	Lallubê	Tašritu (VII)
265	Sibutu	Arahsamnu (VIII)
	Širi'-ereši	Kislimu (IX)
	Tamhiri	Tebetu (X)
	Sililiti	Šabaṭu (XI)
	Huldabbê	Addaru (XII)
270	Nisan Akkad	Ajjaru Elam

Note: 257 ff: see Reiner, *AfO 24* (1973) 97 ff.

	AFH	iti sig_4	kur mar.tu^{ki}
	AFH	iti šu	kur su^{ki} *u gu-ti-i*
	AFH	*šu-tab-lak-kut-tum*	šukud.gim
	AH	---	
	AH	iti bár iti izi iti gan	kur uri^{ki}
275	AH	iti gu_4 iti kin iti ab	kur nim.ma^{ki}
	AH	[iti sig_4] iti du_6 iti zíz	kur mar.tu^{ki}
	AH	[iti šu] iti apin iti še	kur su.bir_4^{ki}
	H	---	
	H	[an-*ú*] an.ta-*tum* na_4.*lu-lu-da-ni-tum šá* ^{d}*a-nim*	
	H	[an-*ú*] murub-*tum* na_4.*sag-gil-mut šá* ^{d}igigi	
280	H	an-*ú* ki.ta-*tum* na_4.*aš-pú-u šá* mul.meš	
	AH	---	
	AH	diš 30 ina igi.lal-*šú* ta ud.1.kam en ud.5.kam	
	AH	5 ud-*mi* ud.sakar ^{d}*a-nim*	
	AH	ta ud.6.kam en ud.10.kam	
	AH	5 ud-*mi* *ka-li-tú* ^{d}*é-a*	
285	AH	ta ud.11.kam en ud.15.kam 5 ud-*mi* aga *taš-ri-ih-ti*	
	AH	[*ip-pir*]-*ma* ^{d}en.líl	
	A	---	
	AH	^{d}30 ^{d}*a-num* ^{d}en.líl ^{d}*é-a par-ṣu-šú*	
	AH	^{d}utu *ina* kur-*šú* ^{d}en.líl	
	AH	^{d}utu *ina* šú-*šú* ^{d}⌈nin$^{?}$.urta⌉	
	H	---	
290	H	en.nun.an.ta	kur u[ri^{ki}]
	H	en.nun.$murub_4$.ba	kur mar^{ki}
	H	en.nun.ud.zal.li	kur nim^{ki}
	H	---	
	H	$im.u_{18}$.lu kur nim^{ki}	im.si.sá kur uri^{ki}
	H	im.kur.ra kur su *u* gu^{ki}	im.mar kur mar^{ki}
	H	---	
295	H	*ina* $im.u_{18}$.lu	gu_4.meš

Variants: 271: H mar^{ki} 272: F kur su.bir_4^{ki} *u gu-ti-um*^{ki}, H kur su^{ki} only 275: H kur nim^{ki} 276: H kur mar^{ki} 277: H kur su^{ki} 278–281: A omits entire section 284: H *ka-li-ti* 287 H ^{d}en.líl *u* ^{d}*é-a* 289: H omits ^{d}utu, in one line with 288

Simanu	Amurru
Dumuzu	Subartu and Gutium
mutatis mutandis as above	

Nisan, Abu, Kislimu	Akkad
Ajjaru, Elulu, Ṭebetu	Elam
Simanu, Tašritu, Šabaṭu	Amurru
Dumuzu, Arahšamnu, Addaru	Subartu

The upper heaven is of *luludanītu*-stone, it is of Anu
The middle heaven is of *saggilmut*-stone, it is of the Igigi
The lower heaven is of jasper, it is of the stars.

The moon in its appearance from the first day to the fifth,
five days, is a sickle, it is Anu;
from the sixth day to the tenth day,
five days, is a kidney, it is Ea;
from the eleventh day to the fifteenth day, five days, it wears
the crown of splendour, it is Enlil.

The *parṣu* of the moon are Anu, Enlil and Ea
The sun at its rising is Enlil
The sun at its setting is Ninurta(?)

The evening watch	Akkad
The middle watch	Amurru
The morning watch	Elam

The south wind Elam The north wind Akkad
The east wind Subartu and Gutium The west wind Amurru

In the south wind	cattle

	H	*ina* im.si.sá	udu.nitá.meš
	H	*ina* im.kur.ra	anše.kur.ra.meš
	H	*ina* im.mar.tu	anše.meš
	H		
	CH	an.né a.ma.ru	*a-bu-ub* an-*e*
300	CH	hur.sag.sá	*he-su-ú* kur-*i*
	CH		
	CH	2 amar.meš	*šá* ^{d}im
	CH		
	CH	giš.lam.šár.šár *muš-ta-bil* an-*e u* ki-*tim*	
	CH	balag.di a.ma.ru	*tim-bu-ut-ti a-bu-bi*
	CH		
	CH	2 anše.kur.ra.meš	*šá a-bu-bi*
	H		
305	H	^{d}ba.ba$_6$	^{d}gu.la PA.ŠE^{ki}
	H	^{d}nin.^{šu}šud^{ud}.da	^{d}min UD.UD.ak^{ki}
	H	^{d}ama.arhuš.šud	^{d}min é.eš.bar
	H	^{d}du$_6$.kur.gal	^{d}min bád.sig$_5$.dingir.šú^{ki}
	H	^{d}gù.nu$_6$.ra	^{d}min é.sa.bad
310	H	^{d}nin.aga.sag	^{d}min gír.su^{ki}
	H	^{d}nin.um.ma.sì.ga	^{d}min ŠIR.BUR.LA^{ki}
	H		
	H	7 dingir.meš me.me	

break

Line 312 may well be the end of the list proper. In B, C, H, and J, but not in A, the list is followed by a badly preserved glossary explaining words and signs.

In the north wind	sheep
In the east wind	horses
in the west wind	asses
Anne-amaru	Deluge of the Sky
Hursag-sa	Mountain-coverer
The two calves of Adad	
Gišlam-šaršar	Mingler of heaven and earth
Balagdi-amaru	Harp of the Deluge
The two horses of the Deluge	
Baba	Gula of Isin
Ninšudda	ditto of Larak
Ama-arhuš-šud	ditto of the temple E-ešbar
Dukurgal	ditto of . . . . .
Gunura	ditto of the temple E-sabad
Ninagasag	ditto of Girsu
Nin-umma-siga	ditto of Lagash

Seven Gula gods

Note: 311, nin.um.ma.sì.ga: cf. *CT 25* 8:4 and *CT 46* 53:11.

APPENDIX C

List of Babylonian Star Names

The identifications of Babylonian star names are still under discussion and many remain uncertain or unknown. This list is compiled with the help of the lists made by Pingree in *BPO II* and *Mul.Apin* and some of the identifications made by Koch in *Neue Untersuchungen zur Topographie des babylonischen Fixsternhimmels.* See also Gössman, *Planetarium Babyloniacum.*

Annunītu; The eastern fish in Pisces
Anzû-bird; ?
The Arrow; Sirius (+ Betelgeuze)
Belet-ili; ?
The Bow; Part of Canis Major
The Bull of Heaven; Taurus
The Bull's Jaw; Hyades
The Bull's Mane; Pleiades
The Corpse; Delphinus?
The Crab; Cancer
The Crook; Auriga
Damu; Delphinus (?)
The Deleter; β Andromedae
The Dignity; Corona Borealis
The Dog; Southern part of Hercules
The Dog's Head; ?
The Dog's Tail; β Herculis
Dumuzi; Orion
Eagle; Aquila
Entenabarhum; Part of Centaurus
Eridu; Canopus
The Field; Part of Pegasus
The Fish; Piscis Austrinus
The Ford; Jupiter
The Fox; Part of Ursa Major
The Furrow; Virgo
The Goat; Lyra
The Goat-Fish; Capricorn
The Great; Aquarius
The Great Twins; α and β Geminorum
Gula; Lyra?
The Horse; Part of Cassiopeia?
The Hired Man; Aries
Ilabrat; ?
Išhara; Venus
The Kidney; Canopus
The King; Regulus
The Lion; Leo
Lisi; α Scorpii
The Mad Dog; Lupus
The Maggot; ?
The Mouse-like; Centaurus
The Mouth; ?
Ningirim; ?
Ningirsu; Saturn
Ningulti; Venus
Ninmah; Vela
Numušda; ?
The Old Man; Perseus
The Oven; ?
Pabilsag; Sagittarius
The Panther; Cygnus
The Plough; Part of Andromeda
The Pole; ?
Rabbu; Jupiter
The Raven; Corvus
The Reed-bundle; ?
The Sage; ?

Šargaz; λ or υ Scorpii
Šarur; λ or υ Scorpii
The Scales; Libra
The Scorpion; Scorpio
The Serpent; Hydra
The Shield-bearer; ?
The Standing Gods; Part of Hercules?
The Stars; Pleiades
Šullat and Haniš; Part of Centaurus?
ŠU.PA; Arcturus
The Swallow; Wings part of Pegasus, tail part of Western Pisces?
The Sword-of-Heaven; ?
True Shepherd of Anu; Orion
The Wagon; Ursa Major
The Wolf; α Trianguli
The Yoke; Boötes

BIBLIOGRAPHY

Arnaud, D. (1980) "La bibliothèque d'un devin syrien à Meskéné-Emar (Syrie), *CRAIBL*, 375 ff.

Arnaud, D. (1987) *Emar IV/4.*

Aro, J. (1966) "Remarks on the Practice of Extispicy in the Time of Esarhaddon and Assurbanipal", *RAI 14*, 109 ff.

Bauer, Theo (1936) "Eine Sammlung von Himmelsvorzeichen", *ZA 43*, 308 ff.

Beaulieu, P.-A. (1992) "New Light on Secret Knowledge in Late Babylonian Culture", *ZA 82*, 98 ff.

Beckman, Gary (1983) "Mesopotamians and Mesopotamian Learning at Hattusa", *JCS 35*, 97 ff.

Bezold & Boll (1911) "Reflexe astrologischer Keilinschriften bei griechischen Schriftstellern", *Sitzungsberichte der Heidelberger Akademie der Wissenschaften, phil.-hist. Kl. 1911/VII.*

Bezold, C. (1918) "Die Angaben der babylonisch-assyrischen Keilinschriften", in Boll, "Antike Beobachtungen farbiger Sterne", *Abhandl. d. Königl. Bayer. Akad. d. Wiss., Bd. 30/I.*

Bjorkman, J.K. (1973) "Meteors and Meteorites in the Ancient Near East". *Meteoritics 1973, 8*, 91-132.

Böhl, F.M.Th. (1939) *Festschrift Koschaker*, 151 ff.

Borger, R. (1973) "Keilschrifttexte verschiedenen Inhalts", *FS Böhl*, 38 ff.

Bottéro, J. (1950) "Autres textes de Qatna", *RA 44*, 105 ff.

Bottéro, J. (1974) "Symptomes, signes, écritures". In Vernant et al., *Divination et Rationalité*, 70 ff.

Bouché-Leclercq (1899) *L'astrologie grecque.*

Burstein, S.M. (1978) *The Babyloniaca of Berossus. SANE 1, 5*

Charpin, D. (1985) "Les archives du devin Asqudum dans la résidence du "Chantier A", *MARI 4*, 453 ff.

Cogan, M. (1984) "Omens and Ideology in the Babylonian Inscription of Esarhaddon", in Tadmor and Weinfield (eds.): *History, Historiography and Interpretation*, 76-87.

Devisch, R. (1985) "Perspectives on Divination in Contemporary sub-Saharan Africa", in W. van Binsbergen and M. Schoeffeleers (eds.), *Theoretical Explorations in African Religion*, chapter 2.

Dietrich, M. (1970) *Die Aramäer Südbabyloniens in der Sargonidenzeit. AOAT 7.*

Dietrich - Loretz - Sanmartín (1974) "Sonnenfinsternis in Ugarit PRU 2, 162 (= RS 12.61). Das älteste Dokument einer Totaleklipse", *UF 6*, 464 ff.

Dietrich - Loretz - Sanmartín (1975) "Der keilalphabetische *šumma izbu*-Text RS 24.247 + 265 + 268 + 328", *UF 7*, 133 ff.

Dossin, G. (1951) "Lettre du devin Asqudum au roi Zimrilim au sujet d'une éclipse de lune", *RAI 2*, 46 ff.

Driel, G. van (1969) *The Cult of Aššur.*

Durand, J.M. (1981) *Textes babyloniens d'époque recente.*

Ebeling (1953) *Die akkadische Gebetsserie "Handerhebung"*

Elman, Y. (1975) "Authorative Oral Tradition in Neo-Assyrian Scribal Circles", *JANES 7*, 19 ff.

Eriksson, S. (1956) *Wochentagsgötter, Mond und Tierkreis. Laienastrologie in der römischen Kaiserzeit. Studia Graeca et Latina Gothoburgensia III.*

Falkenstein, A (1966) "Wahrsagung in der sumerischen Überlieferung", *RAI 14*, 45 ff.

Finet, A. (1966) "La place du devin dans la société de Mari", *RAI 14*, 87 ff.

Finkel, I.L. (1988) "Adad-apla-iddina, Esagil-kīn-apli, and the Series SA.GIG" in *FS A. Sachs*, 143 ff.

Finkelstein, J.J. (1963) "Mesopotamian Historiography", *PAPS 107*, 461-472

Foxwog, D.A. (1993) "Astral Dumuzi", *FS Hallo*, 103 ff.

Gadd, C.J. (1966) "Some Babylonian Divinatory Methods and their Interrelations", *RAI 14*, 21 ff.

Geller, M.J. (1990) "Astronomy and Authorship", review of Hunger and Pingree: *MUL.APIN*, *BSOAS 53*, 209-213.

George, A.R. (1991) review of Hunger and Pingree: *MUL.APIN*, *ZA 81/2*, 301 ff.

George, A.R. (1991a) "Babylonian Texts from the Folios of Sidney Smith. Part Two: Prognostic and Diagnostic Omens, Tablet I", *RA 85* 137 ff.

George, A.R. (1991b) review of Rochberg-Halton: *Aspects of Babylonian Celestial Divination: The Lunar Eclipse Tablets of Enūma Anu Enlil*, *OLZ 86*, 378 ff.

Glassner, J.-J. (1983) "Narām-Sîn poliorcète. Les avatars d'une sentence divinatoire", *RA 77*, 3 ff.

Gössmann, P. (1950) *Planetarium Babyloniacum oder die sumerisch-babylonischen Stern-Namen. Šumerisches Lexicon IV/2.*

Grayson, A.K. (1966) "Divination and the Babylonian Chronicles", *RAI 14*, 69-76.

Greenfield&Sokoloff (1989) "Astrological and Related Omen Texts in Jewish Palestinian Aramaic", *JNES 48*, 201 ff.

Guinan, A. (1989) "The Perils of High Living: Divinatory Rhetoric in Šumma Alu", *FS Sjöberg*, 227 ff.

Hillel & Neugebauer (1934) *Spezieller Kanon der Mondfinsternisse für Vorderasien und Ägypten von 3450 bis 1 v.Chr.*

Huber et al. (1982) *Astronomical Dating of Babylon I and Ur III. Occasional Papers on the Near East, Vol. 1/4.*

Huber, P.J. (1987a) "Dating by Lunar Eclipse Omens with Speculations on the Birth of Omen Astrology." *FS Asger Aaboe, Acta Historica Scientiarum Naturalium et Medicinalium, Vol. 39.*

Huber, P.J. (1987b) "Astronomical Evidence for the Long and against the Middle and Short Chronologies". P. Åström (ed.) *High, Middle or Low? Acts of an International Colloquium on Absolute Chronology Held at the University of Gothenburg 20th - 22nd August 1987.*

Hunger, H. (1968) *Babylonische und assyrische Kolophone. AOAT 2.*

Hunger, H. (1976) "Astrologische Wettervorhersagen", *ZA 66*, 234-260.

Hunger & Parpola (1983-84) "Bedeckungen des Planeten Jupiter durch den Mond", *AfO 29-30*, 46-49.

Hunger & Pingree (1989) *MUL.APIN. An Astronomical Compendium in Cuneiform. AfO Beih. 24.*

Hunger, H. (1992) *Astrological Reports to Assyrian Kings. SAA 8.*

Jeyes, U. (1989) *Old Babylonian Extispicy Texts in the British Museum.*

Jeyes, U. (1991-92) "Divination as a Science in Ancient Mesopotamia", *JEOL 32*, 23-41.

Kammenhuber, A. (1976) *Orakelpraxis, Träume und Vorzeichen bei den Hethitern.*

Koch, J. (1989) *Neue Untersuchungen zur Topographie des babylonischen Fixsternhimmels.*

Koch, J. (1991) "Der Mardukstern Nēberu", *WdO XXII*, 48-72.

Koch-Westenholz, U. (1993) "Mesopotamian Astrology at Hattusas", *Grazer morgenländische Studien 3*, 231 ff.

Kuhrt, Amélie (1987) "Berossus' *Babyloniaka* and Seleucid Rule in Babylonia". In Kuhrt & Sherwin-White (eds.): *Hellenism in the East*, 32-56.

Kümmel, H.M. (1967) *Ersatzrituale für den hethitischen König. StBoT 3.*

Labat, René (1939) *Hémérologies et Ménélogies d'Assur.*

Labat, René (1965) *Un calendrier babylonien des travaux des signes et des mois (séries iqqur îpuš).*

Lacheman, E.R. (1937) "An Omen Text from Nuzi", *RA 34*, 1 ff.

Lambert, W.G. (1957) "Ancestors, Authors and Canonicity", *JCS 11*, 1 ff. and 112.

Lambert, W.G. (1962) "A Catalogue of Texts and Authors", *JCS 16*, 59 ff.

Lambert, W.G. (1967) "Enmeduranki and Related Matters", *JCS 21*, 126 ff.

Lambert, W.G. (1976) "A Late Assyrian Catalogue of Literary and Scholarly Texts", *AOAT 25*, 313 ff.

Laroche, E. (1971) *Catalogue des textes hittites.*

Larsen, M.T. (1987) "The Mesopotamian Lukewarm Mind. Reflections on Science, Divination and Literacy", *AOS 67*, 203 ff.

Leibovici, M. (1956) "Un texte astrologique akkadien de Boghazköi", *RA 50*, 11ff.

Leichty, E. (1970) *The Omen Series Šumma Izbu. TCS 4.*

Lieberman, S.J. (1990) "Canonical and Official Cuneiform Texts: Towards an Understanding of Assurbanipal's Personal Tablet Collection", in T. Abusch, J. Huehnergard, P. Steinkeller (eds.): *Lingering over Words, FS Moran*

Livingstone, A. (1986) *Mystical and Mythological Explanatory Works of Assyrian and Babylonian Scholars.*

Long, A. (1982) "Astrology: Arguments pro and contra", in J.Barnes et al. (eds.): *Science and Speculation. Studies in Hellenistic Theory and Practice.*

Mayer, W. (1976) *Untersuchungen zur Formensprache der babylonischen "Gebetsbeschwörung". St. Pohl, ser. mai 5.*

McEwan, G.J.P. (1981) *Priest and Temple in Hellenistic Babylonia.*

Meissner, B. (1925) *Babylonien und Assyrien I-II.*

Meyer, J.-W. (1987) *Untersuchungen zu den Tonlebermodellen aus dem Alten Orient. AOAT 39.*

Meyer, L. d (1982) "Deux prières *ikribu* du temps d'Ammiṣaduqa", *Zikir Šumim*, 271-278.

Miller, R.A. (1988) "Pleiades Perceived: MUL.MUL to Subaru", *JAOS 108*, 1ff.

Neugebauer, O. (1975) *A History of Ancient Mathematical Astronomy.*

Nougayrol, J. (1968) "La divination babylonienne", in Caquot and Leibovici (eds.): *La Divination vol. 1*, 25 ff.

Oelsner, J. (1971) "War Nippur Sitz einer spätbabylonischen Astro nomenschule?", *WZJ 20*, 141 ff.

Oelsner, J.(1986) *Materialien zur babylonischen Gesellschaft und Kultur in hellenistischer Zeit.*

Oppenheim, A.L. (1966) "Perspectives on Mesopotamian Divination", *RAI 14*, 35 ff.

Oppenheim, A.L. (1969) "Divination and Celestial Observation in the Last Assyrian Empire", *Centaurus 14*, 97 ff.

Oppenheim, A.L. (1974) "A Babylonian Diviner's Manual", *JNES 33*, 197 ff.

Oppenheim, A.L. (1977) *Ancient Mesopotamia. Portrait of a Dead Civilisation.* Revised edition.

Parpola, S. (1970, 1983) *Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal. I Texts. II Commentary and Appendices. AOAT 5/1 & 2.*

Parpola, S. (1972) "A Letter from Šamaš-šumu-ukin to Esarhaddon", *Iraq 34*, 21 ff.

Parpola, S. (1983a) "Assyrian Library Records", *JNES 42*, 1 ff.

Parpola, S. (1987) "The Forlorn Scholar", in Rochberg-Halton (ed.): *Language, Literature and History: Studies . . . Erica Reiner. AOS 67*, 257-278.

Pedersén, O. (1985) *Archives and Libraries in the City of Assur. A Survey of the Material from the German Excavations. Part I.*

Pedersén, O. (1986) *Archives and Libraries in the City of Assur . . . Part II.*

Perry, E.G. (1907) *Hymnen und Gebete an Sin. Leipziger Semitistische Studien 2,4.*

Pingree, D. (1982) "Mesopotamian Astronomy and Astral Omens in Other Civilizations", *Mesopotamien und seine Nachbarn*, 613 ff.

Pingree & Walker (1988) "A Babylonian Star-Catalogue: BM 78161", in *FS Sachs*, 313-322.

Reade, J.E. (1972) "The Neo-Assyrian Court and Army: Evidence from the Sculptures", *Iraq 34*

Reiner, E. (1960) "Fortunetelling in Mesopotamia", *JNES 19*, 23 ff.

Reiner & Pingree (1975) *Babylonian Planetary Omens Part One: The Venus Tablets of Ammişaduqa. Bibliotheca Mesopotamica 2,1.*

Reiner & Pingree (1975a) "Observational Texts Concerning the Planet Mercury", *RA 69*, 175 ff.

Reiner & Pingree (1981) *Babylonian Planetary Omens Part Two: Enūma Anu Enlil, Tablets 50-51. Bibliotheca Mesopotamica 2,2.*

Reiner, E. (1985) "The Uses of Astrology", *JAOS 105*, 589 ff.

Reiner, E. (1987) "Magic Figurines, Amulets, and Talismans", *FS E. Porada*, 27 ff.

Reiner, E. (1993) "Two Babylonian Precursors of Astrology", *NABU 1993*, 21f.

Rochberg-Halton, F. (1984a) "Stellar Distances in Early Babylonian Astronomy: A New Perspective on the Hilprecht Text (HS 229)", *JNES 42*, 209ff.

Rochberg-Halton, F. (1984b) "New Evidence for the History of Astrology", *JNES 43*, 209 ff.

Rochberg-Halton, F. (1984c) "Canonicity in Cuneiform Texts", *JCS 36*, 127-44.

Rochberg-Halton (1987) "The Assumed 29th ahû-tablet of Enūma Anu Enlil", *AOS 67*, 327 ff.

Rochberg-Halton (1987b) "TCL 6 13: Mixed Traditions in Late Babylonian Astrology", *ZA 77*, 207 ff.

Rochberg-Halton (1988) *Aspects of Babylonian Celestial Divination: The Lunar Eclipse Tablets of Enūma Anu Enlil. AfO Beiheft 22.*

Rochberg-Halton (1988b) "Elements of the Babylonian Contribution to Hellenistic Astrology", *JAOS 108*, 51 ff.

Rochberg-Halton (1988c) "Benefic and Malefic Planets in Babylonian Astrology", *FS Sachs*, 323 ff.

Rochberg-Halton (1989) "Babylonian Horoscopes and their Sources", *Orientalia 58*, 102 ff.

Rutten, M. (1938) "Trente-deux modèles de foies en argile provenant de Tell-Hariri (Mari)", *RA 35*, 36 ff.

Sachs, A. (1952) "Babylonian Horoscopes", *JCS 6*, 49 ff.

Sachs & Hunger (1988) *Astronomical Diaries and Related Texts from Babylonia.*

Schaumberger & Schott (1938) "Die Konjunktion von Mars und Saturn im Frühjahr 669 v.Chr. nach Thompson, Reports Nr. 88 und anderen Texten", *ZA 44*, 271 ff.

Schaumberger (1952) "Die Ziqpu-Gestirne nach neuen Keilschrifttexten", *ZA 50*, 297 ff.

Schaumberger (1955) "Anaphora und Aufgangskalender in neuen Ziqpu-Texten". *ZA 51*, 237 ff.

Schott & Schaumberger (1942) "Vier Briefe Mâr-Ishtars an Asarhaddon über Himmelserscheinungen der Jahre -670/668", *ZA 47*, 89 ff.

Seidl, U. (1971) "Göttersymbole und -attribute", *RLA III*, 483-490.

Shumaker, K. (1972) *The Occult Sciences in the Renaissance. A Study in Intellectual Patterns.*

Šileiko, V. (1927) "Mondlaufprognosen aus der Zeit der ersten babylonischen Dynastie", *Comptes-Rendus de l'Académie des Sciences de l'URSS,* 125-128.

Sollberger, E. (1954-56) "Sur la chronologie des rois d'Ur et quelques problèmes connexes", *AfO 17*, 10-48.

Sommerfeld, W. (1984) "Die mittelbabylonische Grenzsteinurkunde IM 5527", *UF 16*, 299-306.

Spek, R.J. van der (1985) "The Babylonian Temple during the Macedonian and Parthian Domination", *BiOr 42*, 541 ff.

Starr, I. (1983) *The Rituals of the Diviner.*

Starr, I. (1985) "Historical Omens Concerning Ashurbanipal's War against Elam", *AfO 32*, 60-67.

Starr, I. (1990) *Queries to the Sungod, Divination and Politics in Sargonid Assyria. State Archives of Assyria IV.*

Svenberg, E. (1963) *Lunaria et Zodiologia Latina. Studia Graeca et Latina Gothoburgensia XVI.*

Ungnad, A. (1941-44) "Besprechungskunst und Astrologie in Babylonien", *AfO 14*, 251 ff.

Virolleaud, Ch. (1908-12) *L'Astrologie Chaldéenne. Le Livre intitulé "enuma (Anu) ^{il}Bêl".*

Virolleaud, Ch. (1911) "De quelques textes divinatoires (Suite)", *Babyloniaca IV*, 101 ff.

Waerden, v.d. (1952-53) "History of the Zodiac", *AfO 16*, 216 ff.

Waerden, v.d. (1966) *Die Anfänge der Astronomie.*

Wallenfels, R. (1993) "Zodiacal Signs among the Seal Impressions from Hellenistic Uruk", *FS Hallo*, 281 ff.

Weidner, E. (1913) "Beiträge zur Erklärung der astronomischen Keilschrifttexte", *OLZ 5*, 204-212.

Weidner, E. (1927) "Eine Beschreibung des Sternhimmels aus Assur. VAT 9428", *AfO 4*, 73-85.

Weidner, E. (1928-29) "Historisches Material in der babylonischen Omina-literatur", *MAOG 4*, 221-240.

Weidner, E. (1941) "Die astrologische Serie Enuma Anu Enlil", *AfO 14*, 172-195, 308-318;

Weidner, E. (1954) *AfO 17*, 71-89.

Weidner, E. (1968) *AfO 22*, 65-75.

Weidner, E. (1959-60) "Ein astrologischer Sammeltext aus der Sargonidenzeit", *AfO 19*, 105 ff.

Weidner, E. (1963) "Astrologische Geographie im Alten Orient", *AfO 20*, 117ff.

Weidner, E. (1967) *Gestirndarstellungen auf babylonischen Tontafeln.*

Wiseman, D.J. (1955) "Assyrian Writing-Boards". *Iraq 17*, 3 ff.

Wiseman, D.J. (1962) "Some Aspects of Babylonian Influence at Alalah". *Syria 39*, 180 ff.

Wynghene, H. de (1932) *Les présages astrologiques. Übersicht über die Keilschriftliteratur Heft 3.*

LIST OF ABBREVIATIONS

ABL	R.F. Harper, *Assyrian and Babylonian Letters*
ACh	C. Virolleaud, *L'Astrologie chaldéenne*
ADD	C.H.W. Johns, *Assyrian Deeds and Documents*
AfO	*Archiv für Orientforschung*
AGH	E. Ebeling, *Die akkadische Gebetsserie "Handerhebung"*
AHw	W. von Soden, *Akkadisches Handwörterbuch*
AKA	L.W. King, *The Annals of the Kings of Assyria*
AOAT	*Alter Orient und Altes Testament*
AOS	*American Oriental Series*
ARM	*Archives Royales de Mari*
AS	*Assyriological Studies*
ASJ	*Acta Sumerologica (Japoniensia)*
AT	D.J. Wiseman, *The Alalakh Tablets*
BA	*Beiträge zur Assyriologie*
Bagh. Mitt.	*Baghdader Mitteilungen*
BBR	H. Zimmern, *Beiträge zur Kenntnis der babylonischen Religion I-II*
BiOr	*Bibliotheca Orientalis*
BM	British Museum no.
BOR	*Babylonian and Oriental Record*
BPO	E. Reiner and D. Pingree, *Babylonian Planetary Omens*
BRM	*Babylonian Records in the Library of J. Pierpont Morgan*
BSOAS	*Bulletin of the School of Oriental and African Studies*
BWL	W.G. Lambert, *Babylonian Wisdom Literature*
CAD	*The Assyrian Dictionary of the University of Chicago*
CRAIBL	*Compte Rendu de la . . . Rencontre Assyriologique Internationale*
CT	*Cuneiform Texts from Babylonian Tablets in the British Museum*
CTH	E. Laroche, *Catalogue des textes hittites*
EAE	*Enūma Anu Enlil*
HAMA	O. Neugebauer, *A History of Ancient Mathematical Astronomy*
HBA	E. Weidner, *Handbuch der babylonischen Astronomie*
HKL	R. Borger, *Handbuch der Keilschriftliteratur*
HUCA	*Hebrew Union College Annual*
IAS	R.D. Biggs, *Inscriptions from Tell Abū Ṣalābīkh. (OIP 99)*
JANES	*Journal of the Ancient Near Eastern Society of the Columbia University*
JAOS	*Journal of the American Oriental Society*
JCS	*Journal of Cuneiform Studies*

JEOL	*Jaarbericht van het Vooraziatisch-Egyptisch Genootschap Ex Oriente Lux*
JNES	*Journal of Near Eastern Studies*
KAR	E. Ebeling, *Keilschrifttexte aus Assur religiösen Inhalts*
KAV	O. Schroeder, *Keilschrifttexte aus Assur verschiedenen Inhalts*
KB	*Keilschriftliche Bibliothek*
KBo	*Keilschrifttexte aus Boghazköi*
KTU	Dietrich-Loretz-Sanmartín, *Die keilalphabetischen Texte aus Ugarit. Teil 1: Transkription.* (*AOAT 24/1*)
KUB	*Keilschrifturkunden aus Boghazköi*
LAS	S. Parpola, *Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal*
LBAT	A.J. Sachs et al., *Late Babylonian Astronomical and Related Texts*
LKA	E. Ebeling, *Literarische Keilschrifttexte aus Assur*
MAOG	*Mitteilungen der Altorientalischen Gesellschaft*
MARI	*Mari, Annales de Recherches Interdisciplinaires*
MDP	*Mémoires de la Délégation en Perse*
MSL	*Materialien zum sumerischen Lexicon*
NABU	*Nouvelles Assyriologiques Brèves et Utilitaires*
OA	*Oriens Antiquus*
OIP	*Oriental Institute Publications*
OLZ	*Orientalistische Literaturzeitung*
PAPS	*Proceedings of the American Philosophical Society*
PBS	*Publications of the Babylonian Section*
PRU	J. Nougayrol et al., *Le Palais Royal d'Ugarit*
PSBA	*Proceedings of the Society of Biblical Archaeology*
RA	*Revue d'Assyriologie et d'Archéologie Orientale*
Racc	F. Thureau-Dangin, *Rituels Accadiens*
RAI	*Rencontre Assyriologique Internationale*
RLA	*Reallexikon der Assyriologie*
RMA	R.C. Thompson, *The Reports of the Magicians and Astrologers . . .*
SAA	*State Archives of Assyria*
SANE	*Sources from the Ancient Near East*
SpTU	*Spätbabylonische Texte aus Uruk*
StBoT	*Studien zu den Boğazköy-Texten*
STC	L.W. King, *The Seven Tablets of Creation*
STT	O.R. Gurney and J.J. Finkelstein, *The Sultantepe Tablets*
TCL	*Textes Cunéiformes. Musée du Louvre*
TCS	*Texts from Cuneiform Sources*

TU	F. Thureau-Dangin, *Tablettes d'Uruk* (*TCL 6*)
TuL	E. Ebeling, *Tod und Leben nach den Vorstellungen der Babylonier*
UF	*Ugarit-Forschungen*
USP	B.R. Foster, *Umma in the Sargonic Period*
WdO	*Die Welt des Orients*
WZJ	*Wissenschaftliche Zeitschrift der . . . Universität Jena*
WZKM	*Wiener Zeitschrift für die Kunde des Morgenlandes*
YOS	*Yale Oriental Series*
ZA	*Zeitschrift für Assyriologie*
ZDMG	*Zeitschrift der Deutschen Morgenländischen Gesellschaft*

Index of Texts Discussed

Texts that are merely quoted as supportive evidence are not included