

Enn Kasak, Raul Veede

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UNDERSTANDING PLANETS IN ANCIENT MESOPOTAMIA

Enn Kasak, Raul Veede

On our planet time flows evenly everywhere but the history as we know it has different length and depth in every place. Maybe the deepest layer of history lies in the land between Tigris and Euphrat – Mesopotamia (Greek *Μεσοποταμία* ‘the land between two rivers’). It is hard to grasp how much our current culture has inherited from the people of that land – be it either the wheel, the art of writing, or the units for measuring time and angles. Science and knowledge of stars has always – though with varying success – been important in European culture. Much from the Babylonian beliefs about constellations and planets have reached our days. Planets had an important place in Babylonian astral religion, they were observed as much for calendrical as astrological purposes, and the qualities of the planetary gods were carried on to Greek and Rome.

The following started out as an attempt to compose a list of planets together with corresponding gods who lend their names and qualities to the planets. Though it was easy to find such a list about Greece and Rome, texts concerning Mesopotamia included miscellaneous facts subdivided into general categories only (e.g. Pannekoek 1961). The reasons of this vagueness later became evident with the compiling of such a table starting to look like Sisyphean work.

As we aim to systematise the names of planets and their gods used in Mesopotamia, let us have a brief look at Mesopotamian history since there have been many changes in them.

MESOPOTAMIAN HISTORY, LANGUAGES AND SCRIPT

Though Mesopotamian prehistory reaches at least 60,000 years, we can only date permanent settlements there beginning with the Sumerians in the 4th millennium BC. Events since then are dated differently in different sources in addition to which in those times time was reckoned from some important event or the enthronement of the ruler currently in power. The situation would be hope-

less if we did not have astronomic data about observing Venus preserved on cuneiform tablets to compare to other sources to determine dates. Unfortunately, there is not enough material to determine everything: up to *ca* 1500 BC, observation data allow at least three different interpretations with the difference between the long and short chronology is 120 years. Though many reference books, e.g. Encyclopaedia Britannica use the middle chronology as a compromise, the majority of historians tend to use the short chronology; so shall we.

Leaving details to historians, we will focus on the most important events in Mesopotamian history (Table 1). Before the Akkadian rule, dates can vary within a big interval; the beginning of Akkadian dynasty is fixed fairly certainly. The possible error of the Assyrian dating from the beginning of 15th c BC onwards is 10 years, from 1180 BC onwards 1–2 years, and the dates are quite certain from 900 BC on; Babylonian dates are completely fixed from 747 BC onwards (Soden 1991).

Sumerian period	3500–2300 BC
Akkadian period (Sargon I, 2275–2219)	2275–2094
Neo-Sumerian period (Sumerian renaissance, 2094–1939)	2094–1750
Old Babylonian (Hammurabi 1728–1686)/ Old Assyrian period	1850–1531
Middle Babylonian / Middle Assyrian period	1531–1000
Neo-Babylonian / Neo-Assyrian period (Assurbanipal 668–631)	1000–626
Late Babylonian period (Nebuchadnezzar II 604–562)	626–539
<i>Persian</i> period (Achaemenides)	539–331
<i>Macedonian</i> period (Alexander the Great 331–323)	331–150
<i>Parthian</i> period	150 BC – 226 AD

Table 1. Periods in Mesopotamian history. If both Assyria and Babylonia are mentioned then the dominating power is written in bold; italic indicates foreign rule. Brackets include some renowned rulers and their time of ruling. Of course, it would be possible to further specify much, e.g. the Neo-Sumerian period can be subdivided into three, but for our purposes this table is sufficient.

Writing was invented by Sumerians ca 3200 BC. Cuneiform¹ tablets of Sumerian period give us very interesting material but unfortunately no astronomical or astrological texts. Though some texts have been thought to originate from former periods, they have been only found in later copies, making dating extremely difficult. The oldest existing texts about stars, one astrological and one astronomical, both come from the Old Babylonian period. Analysis of religious texts has led some scientists to suppose Semitic or even West-Semitic origin for the concept connecting stars and earthly phenomena, because Akkadians (the term is hereby used to denote linguistically close Semitic peoples – Babylonians, Assyrians and their predecessors) take a much more personal approach to gods than Sumerians. On the other hand, the Akkadian use of Sumerian names of constellations, stars, and planets weighs against this theory; however, such names could issue from the period when Semites had not yet accustomed enough to using the Sumerian-invented cuneiform script for their own language, so Sumerian was used for writing. It is possible that some sumerograms concerning stars have never been pronounced in Sumerian, but only in Akkadian. Later on, the symbols remained in use because of their shortness: e.g. the Sumerian name for the Scales is RIN₂, which corresponds to Akkadian *Zi-ba-nh-tu(m)*, so it can be written as a Sumerogram with one sign instead of four signs for Akkadian. As another matter, the interpretation of such different names can be difficult, but in this case it seems that in both languages, in the first place scales were meant, as Sumerian ^{GIŠ}RIN₂ and Akkadian *gišrinnu* both mean primarily the most ordinary scales. An epithet of the Scales constellation, “Star of justice of Šamaš” (Reiner 1995: 4) can be considered indirect proof – scales are a symbol of justice. Also in Greece, Virgo – which lies besides Scales – was connected to Dike, goddess of justice.² In any case, to talk about planet names, we have to start from the Babylonians, not Sumerians, though we have to consider the influence of Sumerian language and writing.

The term **Akkadian** is used as a common name for the related Semitic languages Babylonian and Assyrian which can also be considered dialects of the Akkadian language. As most contemporary scientists consider the cuneiform script to have originally been used for Sumerian language, and the Sumerian language has no typological relatives whatsoever (despite several claims by pseudo-sci-

entists), it must have been very hard to adjust it for use by Akkadians. The difficulties can be seen in the heavy use of sumerograms – Sumerian signs which were pronounced in Akkadian, making the structure (and reading) of the originally mostly phonetic (and mostly syllabic) script much more difficult and, by parts, ideogrammatic. Also, although already in Sumerian different signs could correspond to the same phonetic value (and *vice versa*), Akkadian tradition added several new values. And last, but not least, throughout the approximately two millennia of Akkadian use, many new “Sumerian” compounds were included into cuneiform script, several of them reconstructed by Semites in times when there were no native speakers of Sumerian any more. So the same sign can in Akkadian denote a phonetic value that originated in Sumerian, its Sumerian meaning, or an Akkadian phonetic value. Signs which denoted a Sumerian meaning were generally pronounced as Akkadian words with the same meaning. And in late periods (esp. in Hittite and Aramaic cuneiform) a Sumerian sign could be followed by a phonetic complementary, meaning to show the phonetic ending (e.g. case and number) of the Akkadian word that was written with that Sumerian sign. Thus the Akkadian cuneiform writing includes many Sumerian anachronisms in addition to the Akkadian language having abundant Sumerian loans (Borger 1981 1–4; 46–52).

A special class of signs is **determinatives** – signs/words denoting the (non-grammatical) class of the following noun and in modern transliterations written in superscript, e.g. ^{GIŠ} ‘wooden/tree’, ^{DINGIR} ‘god/goddess/mythological creature’ (in transliterations commonly shortened to ^d), ^{ID3} ‘river’, ^{URU} ‘town’, ^{MUŠ} ‘snake’ etc. Originally, these were ordinary Sumerian nouns, but as determinatives they were probably not pronounced (Caplice & Snell 1988: 4–9). Here we have a special interest in determinatives denoting stars, constellations, planets, and other “heavenly phenomena”. Generally, ^{MUL} Sumerian ‘star’, Akkadian *kakkabu* was used for all of these (Figure 1). In transliteration, different cuneiform signs with the same phonetic value are marked with different subscript – e.g. GU ‘string, cord’, and GU₄ ‘oxen, bull’; these originally denoted frequency of the sign. Many scientists follow the assyriological tradition, using accent marks for the indices 2 and 3, so GU₂ = GÚ ‘throat’, and GU₃ = GÛ ‘voice’.



Figure 1. Some determinatives in cuneiform. Sumerian *DINGIR* (Akkadian *ilu*) means ‘god/goddess’; *MUL*, Akkadian *kakkabu*, means ‘star’. *DINGIR* has come from a pictogram depicting a star, and if we look close at *MUL*, we see it consists of three *DINGIR*s. Similar sounding *UL* or *ul* means ‘star’ and is often used as a determinative. In late astrological texts three more determinatives are used for stars: *TE*, *AB*₂ and *GAN*₂, now written by Assyriologists as *MUL*₂, *MUL*_x and *MUL*₄ accordingly. The original reasons for using these are currently unknown; they could be either cryptograms or a sophisticated joke of professional astrologers – *barû* (Reiner 1995: 5). Of course, *MUL* did not mean only ‘star’. Halloran’s dictionary about the word *mul*: “star; constellation; planet; meteor (*GI*₆/*MI*, ‘night’, + *UL*, ‘star, ornament’) [*MUL* archaic frequency: 6]. v., to (let) sparkle, shine, glow” (Halloran 1999).

As the Akkadian cuneiform system is mainly syllabic, it allows the same word to be written in several ways. E.g. ‘star’ *kakkabu* could be written with a sumerogram *MUL*, but it could also be written differently by syllables: *kak-ka-bu*, *ka-ak-ka-bu*, *ka-ka-bu*, and *mu-ul*; this list is by no means exhaustive as syllables can be written in phonetically similar, but literally different ways (Hunger 1992: 27, 29, 44, 57).

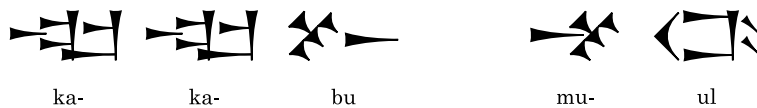


Figure 2. Some ways of writing ‘star’ – *kakkabu* – in Akkadian.

During the course of Mesopotamia’s long history there were changes in both language and writing; naturally there were also differences between Babylonian and Assyrian dialects. In the current article we use mostly later writings in problematic cases as the consensus is that Mesopotamia was on the highest level of astrological and astronomical development in the Late Babylonian period (Kugler 1909/10: 27; Barton 1994: 20–22).



Figure 3. Neo-Assyrian prediction about lunar eclipses. Hunger 1992, text no. 535, plate XIV. (Tablet 80–7–19, 103; Obverse) For transliteration and translation see Hunger 1992: 293.

THE PLANETARY GODS OF MESOPOTAMIA

The Mesopotamian pantheon is quite tangled because different cultures and ages have added to it. E.g. Sumerians honoured ca 1000 gods, about fifty of whom were considered the main gods, and especially important were seven gods – the Great Seven. The functions of different gods tended to vary by city states, but of the Great Seven *An* was universally the god of heaven, *Enlil* – the god of air and earth, and *Enki* – the god of water and wisdom; less important were *Utu* – the Sun god, *Nanna* – the Moon god, *Inanna* – the goddess of love and war, and *Ninhursag*, the mother of gods (Kramer 1977: 122–130; 146–152).

The name and status of the main god depended on who had the power. In Sumerian times, the greatest god was *An*, whose son was *Enki*. In the Old Babylonian period, of course, the city god of Babylon, *Marduk* became the main god and was also to be son of *Enki* and grandson of *An*. As *An* was more like a *deus otiosus*, *Marduk* as an acting god started to be identified with the acting main god *Enlil*, whose son, god of war *Ninurta* was identified with *Marduk*'s son, multifunctional *Nabû*. The rise of the Assyrian empire put the city god *Assur* on the throne of the main god, but in the Late Babylonian

period *Marduk* rose again. In local tradition, of course, both had the power all the time, but while *Marduk* has been mentioned also in more distant regions, *Assur* stayed a city and state god, never reaching the status of a planetary god. However, according to another interpretation the concept of *Assur* developed to monotheism (Parpola 1997: XXI). Things are no clearer with the functions and identities of other gods. Maybe the best way to bring some order into this mayhem is that of the Finnish Assyriologist Simo Parpola, who has reconstructed the Assyrian tree of life: in every circle of the tree of life there are both a god's name and its according magical number (Parpola 1998: 281–285).

However, we can console ourselves that it was difficult to understand relationships between Sumerian and Akkadian gods already in their times. Even in the most exact-to-be bilinguals, concepts about the beginning of the world among Sumerians and Akkadians differ (Clifford 1998: 67).

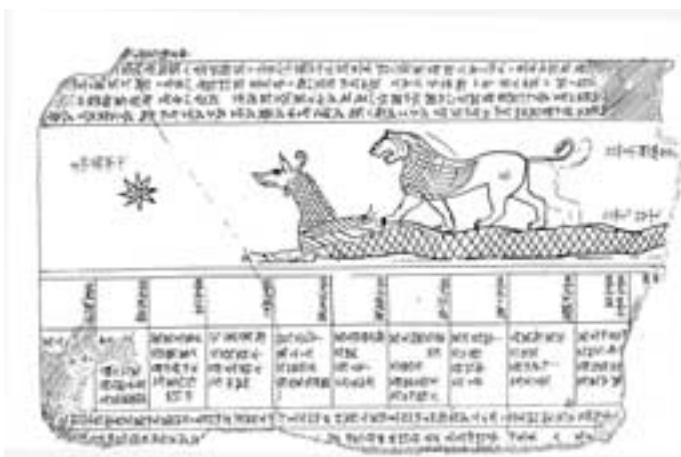


Figure 4. The constellations of Hydra and Leo as depicted on an astrological tablet of the Seleucid era, the eight-pointed star on the left is named *SAG.ME.GAR* – Jupiter (VAT 7847; bottom side). Lion (Leo) is depicted stepping forth. This plate has been described in depth by N. Postgate, who brings out the division of Zodiac into subzodiacs on this tablet, while these subzodiacs are connected to different towns, plants, trees and stones (Postgate 1997: 219).

As we can see later, every planet could be connected to several gods; in Table 3 are presented the strongest interconnections (based mainly on the Akkadian material, because – except for the Sun, the Moon, and Venus – we do not know about the state of matters in Sumerian period; thus these three are also the only ones that have numerical counterparts in the Assyrian tree of life).

Sumer	Akkad	Planet	Main portfolio of the god in Akkadian tradition
An	Anu		God of heaven
Enlil	Marduk (Bēl)	Jupiter	Main god, god of air and earth
Enki	Ea		God of waters and wisdom
Nanna	Sîn	Moon	Moongod, god of fertility and prosperity
Utu	Šamaš	Sun	Sungod, god of justice
Inanna (Ninurta)	Ištar Nabû	Venus Mercury	Goddess of love and war God of wisdom and writing (Savior, Redeemer)
Ninurta	Ninurta	Saturn	God of war and hunting
?	Nergal	Mars	God of plague, famine, war, and the Underworld

Table 2. Main gods of Mesopotamia, the planets connected to them, and their portfolios by Akkadian tradition. Saturn is hard to interpret, as it is connected to Ninurta, but this leads us through Nabû straight to Mercury.

At first sight, the composition of such a table does not seem to be very hard. Sumerian *Nanna* and Akkadian *Sîn* are the Moongod, *Utu* or *Šamaš* is the Sungod without a hint of doubt. With the rest, however, there are problems.

For an Estonian, the concept of stars as a heavenly writing – Akkadian *šītir šamê* or *šītir burūme* – sounds quite homely. Esarhaddon, a megalomaniac Assyrian king, said all the stars to be letters in which his name is written (Rainer 1995: 9). Subsequently,

we bring an excerpt of a list of witnesses from a pact between the same Assyrian king and Median king Ramataia (672 BC), signs denoting the planets are translated as modern planet names:

In the presence of the planets, Jupiter, Venus, Saturn, Mercury, Mars, Sirius, and in the presence of Assur, Anu, Enlil, Ea, Sîn, Shamash, Adad, Marduk, Nabû, Nusku, Urash, Nergal, Ninlil, [---], Ishtar of Niniveh, Ishtar of Arbela Ištar, by all the gods in [the cities of] Assur, Niniveh, Kalah, Arbela, Kakzu, Harran, by all the gods of Assyria, by all the gods in Babylon, Borsippa, Nippur, by the gods of Sumer, all of them, by the gods of the Lands, all of them; by the gods of Heaven and Earth. (Lindsay 1971: 42)

Planets are named first to stress their importance. A closer look reveals also that the god of a planet and its corresponding god are named separately in the list. First of all, this is valid about *Ištar*, but such splitting can be seen in case of four other planets with the exception of the Moon and the Sun. Quite often, planet names tend to have the determinative of gods (Kugler 1907: 62). Thus we can suppose that except in the case of the Moon and the Sun we have to be much more careful about drawing strict connections between the planetary gods and planets than we would have thought initially. The same is suggested by Brown: “Much is said about planets “representing” or “standing for” gods or constellations.” The relations of planets with gods are intricate, and deserve a separate study and much more accurate terminology than we are currently used to (Brown 2000: 54). The tangle is further increased by the fact that the planets with the strongest maleficent influence, like Mercury, Saturn, and Mars, do not have always a strong, one-to-one relation to one god. E.g. Saturn is connected to *Ninurta*, who tends to be identified with *Nabû*, who in turn is connected to Mercury. We can also, starting from *Ninurta*, reach the war god *Nergal* who is connected to Mars.

AKKADIAN ASTRAL TERMINOLOGY

In cuneiform texts, any name can be found written in different ways; and the meaning of a name can depend on its written form. For the sake of better understanding we shall add to the name of a celestial

body its number by Gössmann’s catalogue in brackets (Gössmann 1950). This classical catalogue contains the names of celestial bodies and related gods with data concerning them. E.g. ^{MUL}GAL (G62), Akkadian *kakkabu rabû* ‘Big Star’, can mean the Moon, the bright star Sirius, Jupiter, Saturn, and in astrological texts also a meteor. The combination ^{MUL}*Rab-bu* (G367) is pronounced and translated similarly to the previous one, but it means Jupiter, Venus, or the not too conspicuous star η *Oph* in the constellation of *Ophiuchus* (Gössmann 1950: 18, 183).

‘Planet’ can be met in three forms: ^dUDU.IDIM, ^{MUL}UDU.IDIM or ^{MUL}*bi-ib-bu*. UDU.IDIM, Akkadian *bibbu* in itself means ‘wild sheep’; while fixed stars are a peacefully pasturing flock, planets as “traveling” stars are wild sheep or even beasts lurking for sheep (Hommel 1909: 217). However, it seems we might have to abandon the classical widespread concept of ‘wild sheep’. While the cuneiform sign was earlier read as LU.BAT or LU.BAD, and later, for most of the 20th century, UDU.IDIM, recent studies have suggested the best pronunciation to be UDU.BAD (Reiner 1995: 7), but BAD is not such a “wild” word as IDIM (e.g. while ‘dog’ is UR, ‘wolf’ is UR.IDIM).



Figure 5. ‘Planet’ (Akkadian *bibbu*) in two forms: ^dUDU.IDIM and ^{MUL}*bi-ib-bu*. In cuneiform texts, wedge signs are usually not as clearly grouped and are often written downright carelessly. Handwriting of the ancient scribes is sometimes a problem in Assyriology.

The above-mentioned ^dUDU.IDIM could also mark Jupiter, Venus, and Mercury, but sometimes also Mars, Saturn, or even the constellation of Scales.

Although theoretically it is possible to collect all planet names and gods related to them, their reading and interpretation have changed quite a lot in time (Kugler 1907: 293; Gössmann 1950; Borger 1981; Rochberg 1998: 28–29). Sometimes, instead of naming the Sun, the Moon, and Venus, a number as a symbol of the corresponding god is

used together with the determinative of the god (e.g. the Sun is marked by ^d20) as has been pointed out by Simo Parpola's new model of the Assyrian tree of life (Parpola 1998: 285, 289).

All planets together can be met mainly in astrological texts and there they are arranged in order of their beneficial influence. The original arrangement – the Moon, the Sun, Jupiter, Venus, Saturn, Mercury, Mars, was later replaced by the Moon, the Sun, Jupiter, Venus, Mercury, Saturn, Mars; Saturn and Mercury exchanged places (Rochberg 1998: 90). In this article we follow the same arrangement with every planet's name followed by its number in Gössmann's catalogue, its pronunciation in Akkadian, translation and commentaries. In case of planets, the determinatives DINGIR (^d) and MUL (^{MUL}) can and have been used interchangeably.

THE MOON

The Moon, Akkadian *Sin* (but (*w*)*arhu* as a celestial body only) is generally the first planet in texts, and Moongod is the personification of wisdom and father of Sungod. From the beginning of Mesopotamian history till the end of cuneiform cultures he was considered the eldest of the planetary gods, thus his cult proliferated although he never played a great role in mythology. This archetypal place in the pantheon could be the reason why in the main parts of Mesopotamia there never were alternative moongods (though there were some in the periphery, e.g. among the Hittites and Aramaic).

Sin was depicted as a horned bull (*qarnû*) and a 'fruit that grows by itself' (*enbu ša ina ramānišu ibbanu*; a reference to the belief that the moon regenerates itself after each waning). "Among the astral deities, the moon-god was considered to be the most gentle and reliable, intimately connected with the fertility and fruitfulness of man and beast" (Leick 1998: 152–153). And Moon's moving is really clear and simple to observe.

In Akkadian, the most widespread form of writing the moongod's name was ^d*Sin* (Sumerian ^d*NANNA*(*R*)); ^d*NANNA* is a rare sumerogram). ^d*Sin* itself was originally written *EN.ZU* 'lord of wisdom' (later also written as ^d*ZU.EN*), with the earlier reading ^d*Su'en* soon shortened to ^d*Sin*. Though the Moongod's name can some-

times be written as ^dNANNA-SUEN, this form was not used to denote the celestial body. There is also a variant ^dZU, which has shortened from ZU.EN.

Nanna was usually written ^dŠEŠ.KI, probably because of its connection with the city of Ur (Sum. ^dŠEŠ.AB.KI); an alternative spelling was ^d30, the symbolic number of the moon (Leick 1998: 125). Sometimes this number could be written without a determinative, just 30 (Neugebauer 1955). This number marks wisdom in the Assyrian tree of life (number 3 in Cabala), which indeed is connected to the moongod ^dSîn (G352). In horoscopes, Moon is often marked by the number 30 if literary pseudonyms are not used. Both ^dNANNA (G295), often seen in Old Babylonian texts, and ^dŠEŠ.KI were read by Akkadians simply *Sîn* (Borger 1981: 138).

In Old Babylonian astrological predictions and the oldest astronomical text MUL.APIN, Moon can be denoted simply by DINGIR – Akkadian *Ilu* (G194) – ‘God’. Moon as the celestial body is in Akkadian (*w*)*arhu* (G169), in more poetic cases either ^{MUL}GAL (G62) or more often as ^{MUL}BIR (G56), which Gössmann suggests to read as ^{MUL}KALAM₂, with the Akkadian translation in both cases ^{MUL}*Kalītu* ‘the Kidney Star’. As a pseudonym, this combination can be also used to mark Mercury and Mars. Different phases of the Moon could be mentioned by their own names: the new moon from the first to fifth day was called UD.SAR ^dA-nu-ú, on 6th-10th day the half moon was *ka-li-tu* ^dÉ-a, full moon of 11th-15th day was AGA *taš-ri-ḫ-ti* ‘the tiara of the full moon’ (Gössmann 1950: 133), etc.



Figure 6. Widespread ways of writing ‘moon’ in cuneiform: ^d30, ^dEN.ZU and ^{MUL}GAL. All these were read alike: *Sîn*.

THE SUN

The Sun, Sumerian *UTU* and Akkadian *Šamaš*, stays in texts always on the second place, he is the eldest son of the Moongod, and brother of *Ištar*. In Akkad, the astral goddess *Aya* was considered to be the wife of *Šamaš*. In the Assyrian period *Šamaš* and *Sîn* had a

common temple in Assur (Black & Green 1998: 184). Ecliptic, of course, is the way of *Šamaš*. ‘Sundisk’ is written by a sumerogram AŠ.ME, Akkadian *šamšu*. Sun as the god of justice or just judgement is symbolized in the Assyrian tree of life by the number 20 (5 in Cabala), that resides directly below the number that symbolizes the Moon in the pillar of justice in tree of life (Parpola 1998). Sumerian *Utu* has never been as popular as Semitic *Šamaš*, warrior and god of justice with a cosmic importance, “lord of heaven and earth”.

The extent of *Šamaš*’s popularity can be observed from the great number of people named after him, from cylinder seals, and the considerable number of hymns and prayers dedicated to his honor. Some of these hymns have a poetic structure imitating the movement of the planet (Leick 148). *Šamaš* started to lose his positions with the rise of state gods like *Marduk* and *Assur*.

Like the Moon, the Sun was often marked as ^d20, sometimes also without a determinative (Neugebauer 1955). Quite widespread is the form ^dUTU, less often the syllabic variant ^dŠa-maš was used. In horoscopes, the Sun is usually either 20 or ^dUTU. Here we have to bear in mind that UTU is the same sign as UD, which denotes ‘bright’, ‘shining’, ‘white’, and, of course, ‘the Sun’. UTU (UD) and BABBAR being two words written by the same sign explains the parallel use of the forms ^{MUL3}BABBAR and ^dUTU in the late period (Brown 2000: 56). Also, it should be mentioned that the Sumerian BABBAR ‘shining’, ‘bright’ suits to characterize all brighter planets. Anyway, in the case of Jupiter BABBAR/UD has come into use from abbreviating UD.AL.TAR (see below).

Less common names for the Sun are ^dGIŠ.NU or ^dGIŠ.NU₁₁ (Borger 1981:123). The name GIŠ-NU₁₁ means ‘lamp’, ‘light’ (‘tool’ + ‘light’, ‘fire’, ‘lamp’) (Halloran 1999) and is not connected with *Utu/Šamaš*. The version GIŠ-NU is probably just phonetic, as NU₁₁ means ‘fire’ while NU is ‘image’.

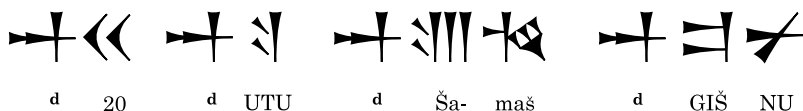


Figure 7. Common ways to write ‘sun’ in cuneiform: ^d20, ^dUTU, ^dŠa-maš and ^dGIŠ.NU. All these are still usually read *Šamaš*.

JUPITER

The name ^{MUL}d MARDUK (G260) – star of god *Marduk* – confirms that Jupiter was the star of *Marduk*, who was, first of all, a god caring for the state and royalty, thus making Jupiter the star connected to the king. Though Jupiter’s name ^{MUL}d AMAR.UTU shows it as the star of the Babylonian main god, it is clear that this relation appeared only after Marduk’s theological rise during the rise of the Babylonian state with the more this same name was used also for Mercury (Brown 2000: 57). It can be supposed that ^{MUL}LUGAL ‘king’ also developed from the epithet of *Marduk*, what in Assyria was taken over by *Assur*. In any case, this relation is so strong that Brown characterises it as “traditional/fundamental” (Brown 2000: 63). As *Marduk* was the Babylonian main god, there started the tradition by which Jupiter later became the main god both in Greece and Rome. But their clear relations cannot be compared to the tangle in Mesopotamian planet names: e.g. on some occasions Mercury was also called the star of *Marduk* (e.g. on the New Year), and sometimes even Mars was called so. ‘King Star’ ^{MUL}LUGAL (G240) (Akkadian *kakkab šarrī*) means besides Jupiter also Regulus (α Leo) and, more seldom, α Centauri (α Cen).

Jupiter is nearly as bright as Venus and in some respects even more conspicuous as it may shine all night long. This is also the origin of the appellation ^{MUL}UD.AL.TAR (G137), Akkadian *ûmu dâpinu* ‘victorious daylight’, ‘frightful splendour’ (Gössmann 1950: 52). *Dâpinu* is also used as a name for Jupiter but its meaning ‘heroic’, ‘martial’, ‘ferocious’ is an epithet for several gods – *Adad*, *Šara*, *Nabû*, *Marduk*, *Nusku*, *Huwawa*, *Lamaštu*, and most of these are not connected to Jupiter; since this adjective has also been used to describe kings (Soden 1965: 162) we may suppose it to be not strictly connected to *Marduk* nor *Šulpae*.

Probably it is not surprising that ^{MUL}UD.AL.TAR can mean, in addition to Jupiter, also Procyon (α CMi), as near to it lies the astrological “home” of Jupiter. On one case, ^{MUL}UD.AL.TAR has been abbreviated to ^{MUL}UD = MUL.BABBAR (G136, G399), possibly translated as ‘White Star’ or ‘Sun Star’; another abbreviation is ^{MUL}AL.TAR (G16). In horoscopes, too, Jupiter occurs mainly as ^{MUL}₂.BABBAR.

Unfortunately, the pronunciation and meaning of one of the most popular names for Jupiter $d/MULSAG.ME.GAR$ or $MULSAG_3.ME.GAR$ has still not been determined; one of the most ingenious attempts to interpret it has been made by Brown (Brown 2000: 65). Some authors (Borger 1981: 238,267) have proposed to read NIG instead of GAR and PA instead of SAG_3 , preferring different possible phonetic values of the same signs.

Another frequent name of Jupiter *Nēberu*, written $MULNe_2-bi-ru$ (G144, G298), can mean Jupiter in culmination or in other specific positions, but can also denote the North Star (α UMi) and Canopus (α Car), and even the constellation Perseus or a meteor.

Another widespread designation of Jupiter $MUL\check{S}UL.PA.E_3.(A)$ ‘Lord of the Bright Dawn’ (meaning Jupiter in the east) shows a possibility to classify the names of Jupiter by its place on the firmament. It may appear that $MULSAG.ME.GAR$ means ‘Jupiter in culmination’ while $MULUD.AL.TAR$ means ‘Jupiter in the west’.

$d\check{S}ulpae$ refers to the god *Šulpae* (also *Šulpa’e*) ‘brilliant youth’ (Black & Green 1998: 173) or ‘lord of the shining dawn’. In the Sumerian period he belonged among smaller underworld gods (dealing also with war and wild beasts), changing later into a vizier of *Marduk* (the title *sukkal* has been also translated as ‘herald’ or ‘lieutenant’). In any case, connection with Jupiter seems to originate from earlier times (Brown 2000: 65).

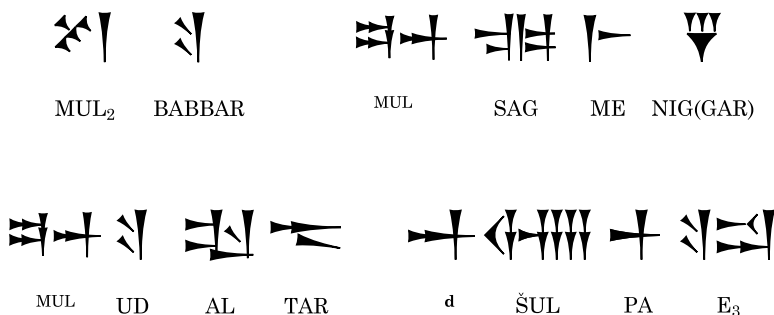


Figure 8. The most popular ways of writing ‘Jupiter’ in cuneiform: $MUL_2.BABBAR$, $MULSAG.ME.GAR$, $MULUD.AL.TAR$, $d\check{S}UL.PA.E_3$.

The best illustration about how a planet's names can depend on time and place is an Akkadian table that presents names of Jupiter by month (Gössmann 1950: 97–98):

ina	arab̄	Nisanni	^d ŠUL.PA.E ₃	^{il} Marduk
-"	-"	Aiari	^d UD.AL.TAR	-"
-"	-"	Simâni	^d IKU bâb ilâni ^{pl}	-"
-"	-"	Du'uzi	^d da-pi-nu	-"
-"	-"	Abi	^d ma-ag-ru-u ₂	-"
-"	-"	Ulûli	^d SAG.ME.GAR	-"
-"	-"	Tišrîti	^d Ni-bi-ru	-"
-"	-"	Arah̄šamni	^d rab-bu	-"
-"	-"	Kislimmi	^{ul} GAM ₃	-"
-"	-"	Tebêti	^{ul} LUGAL	-"
-"	-"	Šabâti	^{ul} GAL	-"
-"	-"	Adari	^{ul} KUA ^d E ₂ -a	-"

Table 3. Different names of Jupiter as the star of the god Marduk by months. In Gössmann's original writing. Here, the determinative of stars ^{ul} and determinative of gods ^{il} are used. The month Nisan lasted approximately from the middle of April to the middle of May. The first row is to be read as "In the month of Nisan – Lord of the bright dawn – god Marduk". Other rows have to be interpreted analogously.

VENUS

Venus, or *Ištar*, sister of the Sun, is the only woman among the planets. As the brightest planet it has a special place; often Moon, Sun, and Venus are treated as a triad. The two appearances of Venus though acknowledged as the same planet were attributed to two different manifestations of the same god: as the Morning Star Venus was female, as the Evening Star – male, and the two aspects corresponded to the double character of *Ištar* as the goddess of love and war (Leick 1998: 96). As a male god, *Ištar* was described as bearded (Tablet 61 of *Enūma Anu Enlil*: "ziqna zaqnat") (Reiner 1995: 6). We have to remind here that ordinarily the gender of Venus's appearances has been treated by the opposites, according to the specification of the planet genders by Ptolemy (*Tetrabiblos*, parts 1.6 and 7). E.g. in Southern Arabia, *Aštar*/*Aṭṭar* was worshipped as

the personified male aspect of Venus as the Morning Star. Southern Arabia he was also worshipped, there uniting both the aspect of morning and evening star (Leick 1998: 15).

Venus is the last of the three planets that also have numerical counterparts—^d15 or simply 15. This number in the Assyrian tree of life marks ‘beauty’ (6 in Cabala). The most widespread appellation of Venus is ^d*Dil-bat* or ^{MUL}*Dil-bat*, its meaning still unknown, but it could be worthwhile to note that a town of the same name existed (^{URU}*Dil-bat*), and ^{U3}*Dil-bat*, Akkadian *maštakal* is ‘daisy’ (Labat 1963: 43). There is no agreement as to how to read the signs – Rochberg suggests it to be read *Dili-bat*, Reiner has proposed *Dele-bat* (according to the Greek transcription *Delephat*) (Rochberg 1998: 28; Reiner 1995: 7). In any case, *Dil-bat* is predominant (see e.g. Reiner 1998). Other gods have been related to Venus as one of the most popular celestial bodies, but these do not always appear in the names of the planet – e.g. *Nanaya*, Sumerian goddess of physical love, Semitic goddess *Aya* and West Semitic *Aštarte*.

An important appellation ^d*NIN.AN.NA* is actually *Nin-ana*, ‘lady of heaven’, the earlier form of Sumerian war and love goddess *Inanna*’s name. (*Ninurta* was often called *Inurta* in Assyria.) Likewise, ^d*U.DAR*/^d*Iš-tar* marks the Semitic goddess *Ištar* (Neo-Assyrian *Issār*) who corresponds to *Inanna*. There are also similar-sounding designations coming from the meaning ‘lady of heaven’: ^d*NIN.AN.NA*

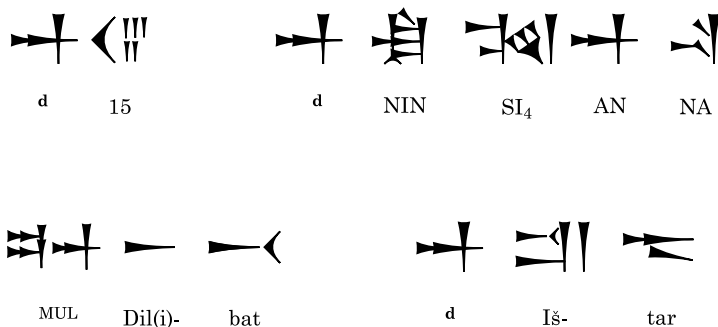


Figure 9. Common versions of Venus in cuneiform: ^d15, ^{MUL}*Dil(i)-bat*, ^d*Iš-tar* and ^d*NIN.SI₄.AN.NA*. In Gössmann’s time, the last sign row was read as ^d*NIN.TAR.AN.NA*.

(G315) ‘Lady of Heaven’ and ^dNIN.SI₄.AN.NA ‘Fair (many-hued) lady of heaven’ (G320; *Ninsianna*, a minor Sumerian goddess, later identified with *Ištar*). In Old Babylonia Venus was marked similarly – ^dNIN.SI.AN.NA (G327). The long name ^{MUL}NIN.A.HA.KUD.DU (G314), Akkadian *Be-lit te-lil-ti*, meaning ‘lady of incantations’, refers to a minor Sumerian goddess *Ningirin*. (Leick 130).

Characteristically to Mesopotamia, matters are made no clearer by ^{MUL}NITA.A.TA (G330) ‘male’, denoting Venus in the morning a.k.a. the Morning Star. As the Evening star, Venus is called ^{MUL}USAN2.DA.EL (G157). Of the additional appellations of Venus, we’d like to mention also ^dNUN.SAR.A (G309), ^dGAL.A.RU.RU (G63) and U.DAR, which mark both Venus and *Ištar* in the Assyrian astrological predictions (Hunger 1992:350). Things become even more confused if we take into account that Venus, too, could be named differently in different months, e.g. ^{MUL}SAG, Akkadian *kakkabu rēštū* ‘Head/Main Star’ – Venus in the Simanu month.

MERCURY

Mercury is primarily the star of the god *Nabû* – ^{MUL}*Na-bu-u₂* (G290), who was identified with Sumerian *Ninurta*. In later period, *Nabû* was considered to be son of the state god *Marduk* or *Assur* (in Babylonia and New Assyria, accordingly); therefore he came to be protector of the crown prince. Hence a name of Mercury DUMU.LUGAL = *Mār šarri* ‘Crown Prince’. E.g. Esarhaddon’s enthronement was to have been predicted by a meeting of Jupiter and Mercury (Reiner 1995: 74–75). In spring Mercury could also be star of *Marduk* (Gössmann 1950: 99). Analogically to Venus, since Mercury appears both as a morning and evening star, it was sometimes thought of as having two sexes.

Though *Ninurta* and *Nabû* were greatly interchangeable in the Sargonid Assyrian mystics, *Ninurta* meant first of all ‘savior in the battle with sin and death’, while *Nabû* ‘radiant’ was primarily the ‘winner, who judges all people on judgment day’. Influences of this concept have spread into Jewish magical texts, where Michael – as the earlier *Ninurta/Nabû* – occurs as ‘healer’ and is connected to Mercury (Parpola *LAS*, n.196). The cult of *Nabû* lasted until the 2nd c AD, later he became identified with Apollo.

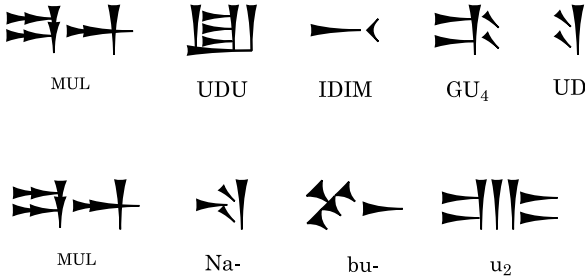


Figure 10. Most widespread variants of Mercury in cuneiform: ${}^{\text{MUL}}\text{UDU.IDIM.GU}_4\text{.UD}$ and ${}^{\text{MUL}}\text{Na-bu-u}_2$.

The full name of Mercury is ${}^{\text{MUL}}\text{UDU.IDIM.GU}_4\text{.UD}$ (G139^{bis}) ‘star of the Sun Bull’ or ‘star of the White Bull’, in connection with the earlier name of *Marduk* AMAR.UTU ‘Calf of Sun’. Akkadians translated it *Ši₅ḫtu* ‘jump’ or *Ša₅ḫitu* ‘jumpy’. Both names suit the ‘darting’ Mercury. From this developed the Greek transcription $\Sigma\epsilon\chi\acute{\epsilon}\varsigma$ (Gössmann 1950: 24). Earlier, instead of GU_4 , GUD has been read. A shorter variant of the same name is ${}^{\text{MUL}}\text{GU}_4\text{.UD}$ (G79). An interesting expression is ${}^{\text{MUL}2}\text{GU}_4\text{.UD}$ *mu-ša-az-nin zunni* ‘Rainbringer Mercury’ (Gössmann 1950: 25). In addition to *Nabû* and *Marduk*, Mercury was connected to *Ninurta*, who usually represented the evening Sun and is mostly related to Saturn.

Also, it could be mentioned that one name for Mercury is *ilu muš-ta-RI-lu* or *ilu muš-ta-di₅-lu*, ‘running god’, (compare to Arabian *Almuštari*). In horoscopes, Mercury is usually $\text{GU}_4\text{.UD}$. Its bad aspect may be expressed by the same appellation as Mars – ${}^{\text{MUL}}\text{Šanumma}$.

SATURN

The full name of Saturn is ${}^{\text{MUL}}\text{UDU.IDIM.SAG.UŠ}$ (G141), abbreviated ${}^{\text{MUL}}\text{SAG.UŠ}$ (G333), Akkadian *Kaj(j)amanu* ‘normal’, ‘regular’, ‘usual’, ‘steady’ (Soden 1965: 420). It is hard to find a more suitable name for the slowly moving Saturn. According to Gössmann, this name has spread into many languages: Syrian *kêwân*, Arabian *kaiwân*, Hebrew *kijjûn*, Chinese *kai-wun*. As the moving of Saturn is as slow and firm as the Sun’s, it has been also called ‘Sun of the night’; this, too, has spread into many languages, e.g. Egyptian and

Phoenician (Gössmann 1950: 124). Derivation of the appellation of *kajamānu* from an Akkadian word *kittu* ‘justice’ is according to Brown (Brown 2000: 69) the main reason for Saturn being sometimes connected to *Šamaš*. Namely, Saturn is sometimes marked ^dUTU and ^d20, which in Parpola’s opinion may be explained by its epithet ‘Sun of the night’ as Saturn’s moving in the night sky is as firm, trustful, and unshakable as the Sun’s in daytime (Parpola, *LAS* II: 342–343).

Saturn is often connected to *Ninurta*, god of war and hunt. ^dNIN.URTA/^dMAŠ *Ninurta*, Sumerian god, whose portfolio originally included agriculture and fertility, later war and heroic deeds (Leick 1998: 135). Of the less important appellations of Saturn, later was used ^dNIN.GIR₂.SU (G316) *Ningirsu* ‘Lord of Girsu’, a local personification of *Ninurta* in the town of Girsu.

As Saturn is one of the dimmest planets, a suitable name for it was GENNA (G69), Akkadian *Šerru* ‘small’, ‘tiny’, ‘wee’. Saturn’s connection to the Sun is indirectly proved by the appellation ^{MUL2}GENNA, Akkadian *kakkab kit-tu u mi-šar* ‘Star of Law and Justice’; cf Nissinen (1998: 92): “Saturn is star of the Sun, Sun is star of the king”. Although Saturn has been also written as *MUL^{kur}MAR.(TU).KI*, this does not denote ‘wild/barbaric god’ *Martu* who represents Amorites in Sumerian mythology, but Saturn as the star of their land Amurru; this is apparent from the determinative of land KUR and the use of the same name to denote Mars, which is related to all things evil and foreign.

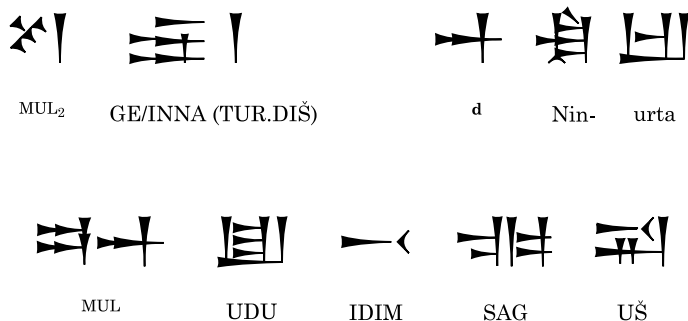


Figure 11. Some variants of Saturn in cuneiform: ^{MUL}UDU.IDIM.SAG.UŠ, ^{MUL2}GENNA and ^dNin-urta, which was earlier read as ^dNIN.IB (G69). GENNA consists of two symbols (GE/INNA), which could also be read as TUR.DIŠ (or TUR.TIŠ).

MARS

Of all the names of Mars, at first glance two gods strike the eye at once: *Nergal* and *Gibil*. *Nergal* was one of the greatest (if not the greatest) of the gods of Underworld, whose cult disappeared only when it melted into the cult of Hercules in the Hellenistic period. *Nergal*, whose portfolio also included some fertility functions, also occurred widely in mythology and absorbed in time many smaller gods. It is interesting that Mars is not referred to by *Nergal*'s most widespread designations ^dGIR3.UNU.GAL and ^dU.GAR, although in some later texts we can find ^dNergal. His name does not seem to be originally Sumerian: Babylonian theologians constructed a derivation from *ne3.eri.gal* 'lord of the underworld' (Leick 1991: 127).

One of the most popular names of Mars is *Šalbatānu* ^{MUL}Ša-al-ba-tā-nu (G360), but up to the present day its meaning has remained unknown. Scholars have explained it as 'he, who keeps the plague lasting' by breaking the name into syllables and interpreting these syllables in Sumerian, thus getting the hypothetical Akkadian *Muštābarrū mūtānu* (Reiner 1995: 7). This is in concordance with a parallel appellation of Mars – ^dNergal (G302). *Nergal* is a god of plague, war, death and the underworld. Maybe this could also explain the strange name of Mars: ^{MUL}GIG (G85) 'black star'.

Mars was connected with the Akkadian's hostile neighbours, e.g. it belonged to the "stars of Amurru"; thus, it was always the last of the planets. Appellations ^{MUL}NIM.MA^{ki} 'star of Elam' (G312) and ^{MUL}MAN.MA 'the other star', 'strange/foreign star' (Akkadian ^{MUL}Šanumma) prove Mars to be connected with the strange and evil. There is no need for comments for names such as ^{MUL}Ahū 'the other star', ^{MUL}Nak(a)ru (G293) 'hostile star', ^{MUL}KA₅.A or ^{MUL}Sarru 'rebellious star', ^{MUL}Limnu 'wicked/nasty star' (G360). The designation *kakkab la mināti* 'unpredictable star' expresses the idea that Mars is a star that "changes its place all year round" (Gössmann 1950: 180); the same is suggested by the name ^{MUL}NU.ME.A (G304), Akkadian *kakkabu la bašū* 'restless star'.

As the planet is quite bright, names like ^{MUL}NIN.SI₄ (G318) 'bright lord' and ^dNIN.DAR.A (G319) 'lord of brightness' have been used for Mars. ^{MUL2}BABBAR 'bright star' sounds very much like Jupiter. Appellations ^{MUL}Makrū and ^{MUL}ŠI.PA 'red star' refer to the red color of

the planet. There is not much separating red color from fire, so one of the fire gods ^dGIBIL was connected to Mars. *Gibil* (Akkadian *Girra/u*) is a Sumerian fire god; his primary function contributed to his secondary roles being the patron of magic and smithing. The name of this god can be written as ^dGIŠ.BAR, ^dBIL.GI, ^dGI.BIL, ^dGi-ri, in Emesal (Sumerian women’s talk) also ^dMU.BAR.RA.

In horoscopes, Mars is consistently AN or ^{MUL2}AN, read as *Šalbatânu*, not *Anu* because despite the use of the Sumerian sign AN there is no evidence whatsoever about the connections of Mars to the god *Anu*; this can be merely an abbreviation that has preserved the end of the name. In astrology, Mars has been depicted also as ^{MUL}IKU (G193), which means a square measure. As IKU has been identified with Mars and Mars in its turn with the plough (APIN) (Gössmann 1950: 13, 79), we could suggest that Mars has also been a “ploughing star”.

The less common names are ^{MUL/d}IM.DUGUD.MUŠEN or ^{MUL/d}an-zu which are connected to *Anzu* who (according to most sources) is a giant bird with a lion’s head (supposedly a relative of the roc-bird of the later Arabian mythology); the determinative of a god marks it rather as belonging to lower celestial fauna, not having a widespread cult. The appellation ^{MUL}KA5.A = *Šēlebu* refers – besides Mars – also to the still not identified constellation of Fox (supposedly one of the names of Ursa Majoris) (Brown 2000: 54).

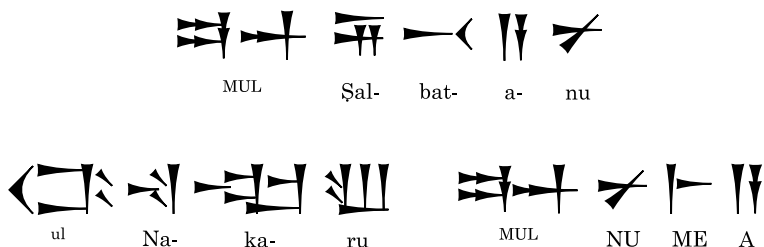


Figure 12. The most widespread variants of Mars in the cuneiform: ^{MUL}Sal-bat-â-nu, ^{MUL}NU.ME.A (G304) and ^{ul}Nak(a)ru.

THE TABLE OF GODS AND PLANETS

As planned from the beginning, we shall try to compose a large survey table (Table 4) of Mesopotamian planet names and the gods related to them. Unfortunately we cannot consider all appellations. To save space, we shall use modern symbols of planets in the table (Moon – ☾, Sun – ☉, Jupiter – ♃, Venus – ♀, Mercury – ☿, Saturn – ♄, Mars – ♂). In the second column the modern symbol is followed by the Akkadian name of the planet as a celestial body. The third column includes planet names in the texts of MUL.APIN and *Enūma Anu Enlil* series, also designations used in horoscopes (Kugler 1907: 7–14; Rochberg 1998: 28). The fourth column counts names from some minor sources. The fifth column consists of the names of gods related to the planet by its names.

Though Table 4 includes a lot of information, it is not suitable for in-depth analysis. Apparently, it is impossible to compose a good and simple survey table about the planet names all over Mesopotamia without mistreating the material. In some respects this outcome was unexpected for the authors, but now it seems to be the only possible way. The whole body of assyriological planetary material should be reconsidered and all designations classified in time and space, resulting in different tables; an all-uniting table can not convey the changes in time and local uses, resulting in confusion and loss of data. But at the moment, that work is yet to be done. Some authors have begun such research that could be considered case studies in relation to such comprehensive work, e.g. Brown has centred on the analysis of planet names in the period 750–612 BC. In his work he is warning us of the dangers of ruthless attempts of generalization over the whole of Mesopotamian history (Brown 2000: 53). We still consider such generalization possible, but not before the material has been systematised thoroughly both by localities and periods. The Table 4 in the current article should give an approximate picture of how the planets were understood in Mesopotamian culture, how and why they were called thus and with which gods they were related to.

Translated by Raul Veede

Pl	Name	MUL.APIN, <i>En ūma ...</i> , Horoscopes	Minor Sources	R
☽	<i>Šin</i>	^d 30, ^d EN.ZU, DINGIR, 30	(<i>w</i>) <i>arhu</i> , ^{MUL} GAL, ^{MUL} BIR = ^{MUL} KALAM ₂ = ^{MUL} <i>Kal itū</i> , ^d <i>Šin</i> , ^d ZU, ^d NANNA, ^d ŠEŠ.KI	Λ
☉	<i>Šamaš</i>	^d 20, ^d UTU, 20	AŠ.ME = <i>šamšu</i> , ^d <i>Ša-maš</i> , ^d GIŠ.NU, ^d GIŠ.NU ₁₁	U
♁	?	SAG.ME.GAR, PA.ME.GAR, MUL ₂ .BABBAR	^{MUL} ^d MARDUK, ^{MUL} LUGAL, ^{MUL} UD.AL.TAR = <i>l</i> <i>D āpinu</i> , ^{MUL} UD = MUL.BABBAR, ^{MUL} AL.TAR, ^{MUL} SAG.ME.GAR = ^{MUL} SAG ₃ .ME.GAR = <i>N ēberu</i> (?), ^{MUL} Ne ₂ -bi-ru = <i>N ēberu</i> , ^{MUL} ^d AMAR.UTU, ^{MUL} ŠUL.PA.E ₃ .(A)	l
♀	<i>Dil(i)bat</i>	^d <i>Dil-bat</i> , ^d 15, Dil-bat	15, ^{MUL} <i>Dil-bat</i> , ^d U.DAR = ^d IŠ.TAR, ^d NIN.AN.NA, ^d NIN.SI ₄ .AN.NA, ^{MUL} NIN.A.HA.KUD.DU = <i>Be-lit te-lil-ti</i> , ^{MUL} NITA.A.TA, ^{MUL} USAN ₂ .DA.EL, ^d NUN.SAR.A, ^d GAL.A.RU.RU, ^{MUL} SAG	<i>I</i> Λ Λ
♀	<i>Šihšu</i>	^d UDU.IDIM.GU ₄ .UD, GU ₄ .UD	^{MUL} <i>Na-bu-u</i> ₂ , DUMU.LUGAL = <i>M ār</i> <i>šarri</i> , ^{MUL} UDU.IDIM.GU ₄ .UD = <i>Šihšu</i> , ^{MUL} GU ₄ .UD, ^{MUL} ₂ GU ₄ .UD, <i>ilu muš-ta-RI-lu</i> = <i>ilu muš-ta-di</i> ₅ - <i>lu</i> , ^{MUL} Šanumma	Λ

<p>♃ <i>Kajam ānu</i> ^dUDU.IDIM.SAG.UŠ, GENNA</p>	<p>^dMAŠ = ^dNin-urta, ^{MUL}UDU.IDIM.SAG.UŠ, ^{MUL}SAG.UŠ = <i>Kaj(j)amanu</i> , ^dNIN.GIR₂.SU, GENNA = <i>Šerru</i> , ^{MUL2}GENNA, MUL ^{KUR}MAR.(TU).KI</p>	<p>Λ Λ</p>
<p>♂ <i>Šalbat ānu</i> ^dŠal-bat-a-nu , AN</p>	<p>^{MUL}NIM.MA^{ki} , ^{MUL}MAN.MA = ^{MUL}Šanumma , ^{MUL}Ahû , ^{MUL}Nak(a)ru , ^{MUL}KA₅.A = ^{MUL}Sarru , ^{MUL}Limnu , <i>kakkab la minâti</i> , ^{MUL}NU.ME.A, ^{MUL}NIN.SI₄ , ^dNIN.DAR.A, ^{MUL2}BABBAR, ^{MUL}Makrû , ^{MUL}ŠI.PA, ^dGIBIL, ^dNergal, ^{MUL}GIG, ^{MUL2}AN = <i>Šalbatânu</i> , ^{MUL}IKU, ^{MUL}KA₅.A = <i>Š ēlebu</i></p>	<p>Λ G A</p>

Table 4. Planet names in Mesopotamia.

Comments

¹ Because of its availability and cheapness clay was used for writing, first drawing and later pressing marks on clay. A special reed stylus was used to make wedge imprints on clay – thus **cuneiform** (<Latin *cuneus* ‘wedge’ + *-form*).

² For several reasons the Scales have been interpreted as a wagon. In the Old Babylonian period Scales were joined with Scorpion as the Pincers of Scorpion. At the end of classical antiquity the Scales constellation was taken into use again. Hence the classical misconception of Scales being a new constellation, created for the honor of Julius Caesar (Allen 1963: 271).

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