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# Mesopotamian Influence on Persian Sky-watching and Calendar

## Part I. Mithra, Shamash and Solar Festivals<sup>1</sup>

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**Abstract:** *There are numerous similarities between Mithra and Shamash, the Persian and Babylonian Sun-Gods. Many of them may be a result of cultural diffusion between Iran and Mesopotamia, chiefly directed from the west to the east. The comparison of the attributes of Mithra in Avesta and the attributes of Shamash in various Babylonian and Assyrian sources shows that in the 2<sup>nd</sup> half of the 2<sup>nd</sup>, and the 1<sup>st</sup> half of the 1<sup>st</sup> millennia BCE the Mesopotamian religion strongly influenced Persian idea of the Sun-God. This influence is particularly well visible in the symbolism of the solar festival during the VII<sup>th</sup> month of both the Babylonian and the Persian calendars, the festival of the autumn equinox with its relation to the constellation Libra. The second phase of Mesopotamian influence on the attribution of Mithra may be more precisely dated to the reign of Artaxerxes II. This Persian king reformed the official pantheon and established the cult of the divine triad: the main god Ahuramazda, the Sun-God Mithra and Anahita, the goddess of planet Venus. Such a triad strongly resembles the planetary triad worshipped in Mesopotamia.*

**Keywords:** Mesopotamia, Persia, Sun-Gods, solar festivals

## Introduction

When the priests of Marduk opened the gates of Babylon to Cyrus the Great and his troops in 539 BCE, the Mesopotamian lowland became a part of the Achaemenid Empire. Cyrus entered the temple of Marduk and grasped the hands of the main Babylonian deity. That gesture had not only symbolic implication but also became an element of legitimization of Persian authority over Babylonia. With that gesture Cyrus symbolically took possession of the whole Babylonian tradition and lore. Since that time this part of the Middle East became one of the most important satrapies in the Persian Empire. However, the influence of Mesopotamian civilization on the peoples inhabiting the Iranian plateau may be dated back much earlier; it is well attested at least from the 4<sup>th</sup> millennium BCE. The conquest of Cyrus was just the culmination of Persian fascination with Mesopotamia (Lamberg-Karlovsky 1985).

The Mesopotamian tradition was very attractive to the Iranians and had strong influences on almost all aspects of Persian life. It may be expected that

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also in respect to sky-watching – so important in the Mesopotamian tradition of the 2<sup>nd</sup> and 1<sup>st</sup> millennia BCE (cf. Koch, Westenholz 1995) – Persia owed a lot to the western neighbours.

This short paper will focus on the Persian Sun-God Mithra and the solar festivals in the Achaemenid period. Our question is how intensive was the transfer of attributes from the Babylonian Sun-God Shamash to Mithra and in which period or periods did it occur. This contribution is the first in a series of papers dealing with several aspects of Persian sky-watching and calendars supposedly of Mesopotamian origin.

## Mithra and Shamash

The name of the god Mithra was mentioned for the first time in a treaty between the Hittite king Suppiluliumas I and the Mitannian king Shattiwaza (14<sup>th</sup> century BCE). Mithra's name appeared there together with Indra, Varuna and the Nasatya twins. All these gods are prominent in Vedic religion, and for that reason the whole text is well known in contemporary historiography as an evidence of early Aryan expansion to upper Mesopotamia (Dumézil 1977:18).

In the *Vedas* Mitra and Varuna are usually mentioned as a pair, although sometimes Varuna appears by himself or coupled with Indra (e.g. RV 17). Both gods are called the guards of the Law (e.g. RV 2:8, 23:5), the Righteous Ones (RV 151:4+8), helpers of all mankind (RV 151:1), Heroes (RV 151:9), Bounteous Ones or the Watchful Twin (RV 136:1). They appear to be the divine judges, protecting the pious and punishing the sinners: “All falsehood, Mitra-Varuna! ye conquer, and closely cleave unto the Law Eternal” (RV 152:1), “Mitra and Varuna they guard from censure: Aryaman too, discovers worthless sinners” (RV 167:8). Sometimes Mitra and Varuna are connected with Aryaman (RV 41, 90:1, 136:2) or Agni (RV 115:1, 136:7) and in those cases the whole triad is associated with the Sun (Surya) which represents their eye. However, Mitra by himself was never treated explicitly as a solar deity.

The direct relation between Mithra and the Sun is attested very rarely in *Avesta*, the sacred text of the Zoroastrian religion. It is clear, however, that the Iranian Mithra and the Vedic Mitra originate from the same prototype. In this earliest common Indo-Aryan tradition Mithra/Mitra was a god of cosmic law and protector of mankind, but their subsequent evolution was independent. In many respects Mithra resembles the Babylonian Shamash and, since even some secondary similarities are striking, it may be hypothesized that the evolution of Mithra proceeded under Mesopotamian influence, possibly since the period of the Mitanni kingdom.

There is an abundance of Mesopotamian texts mentioning the attributes of Shamash (and Utu, the older Sumerian Sun-God who had been identified with the Semitic Shamash) in various phases of the evolution of Mesopotamian religions. On the other hand we have *Avesta*, the single Persian text preserved in relatively late manuscripts only although composed before the foundation of the Achaemenid dynasty. For this reason the search for similarities can only be

directed from the later *Avesta* to the earlier Mesopotamian sources. Analyzing possible influences, three types of similarities must be distinguished: natural analogies relating to the general features of the Sun, homologies resulting from cultural diffusion, and accidental analogies. Practically, the reliable classification of similarities is difficult and must be discussed carefully.

Mithra is called in the *Avesta* the Lord of all countries (MN 12, MY 145), "the lord of wide pastures, who is truth-speaking, a chief in assemblies, with a thousand ears, well-shapen, with ten thousand eyes, high, with full knowledge, strong, sleepless, and ever awake" (MY 7, 10, 12, 17 etc). Such a list of general epithets is repeated many times and relates to the general symbolism of the Sun-God who travels over the whole world and observes all human deeds. It is stated explicitly in another passage, that he is the god "whom Ahura Mazda has established to maintain and look over this entire moving world, and who maintains and looks over all this moving world; who, never sleeping, wakefully guards the creation of Mazda" (MY 103).

The task of Mithra as the Sun-God is to protect the cosmic law. Mithra shares this attribute both with the Vedic Mitra and with Shamash, but in the case of the latter, this feature is much more emphasized. It may be explained by the henotheistic nature of Mazdaic religion where the cosmic law is under Ahura Mazda's control. However, Mithra is the leader of the mankind in the way to *asha*, who "keeps in his hands both peace and trouble for nations" (MY 29), punishes the sinners and protects the righteous ones. Thus, even if the cosmic law was not set by him, Mithra guards it in the same way as Utu/Shamash does in the Mesopotamian tradition. In late Sumerian tradition Utu is responsible for the whole world as the messenger of gods, the judge and the executor of gods' decisions (Kramer 1963:181). Shamash announces the future events both by solar omens and by hepatoscopy (Langdon 1915:189, Rochberg-Halton 1984:136); also the great assembly of gods takes place upon the mountain of sunrise where Shamash departs from the Underworld and enters the sky to announce the future (cf. Seux 1976:223). Both Mithra and Shamash were thought to be the judges in the Underworld as the gods who disappear during the night below the horizon (cf. Alster 1991:30). Both are also responsible for the alternations of days and nights, as well for the sequence of seasons.

The judicial symbolism of Mithra and Shamash concerns not only the Underworld but also mundane affairs. The Sun-Gods were thought to know all human affairs and be the best guarantors of contracts, testaments and treaties. Shamash is called "the upright judge of gods and human beings" (cf. HSM 7494 in Starr 1983:37), the term "judge" is one of his common epithets. Also in mythology he is frequently mentioned as the god in whose name all oaths are taken and who punishes those who break them (e.g. the eagle that had betrayed the snake in the story about Etana). In the treaty of Asarhaddon and Ramataia (6<sup>th</sup> c. BCE) Shamash threatens the traitor with blindness (Wiseman 1958:59–60). Also Mithra hates liars: "On whatever side there is one who has lied unto Mithra, on that side Mithra stands forth, angry and offended, and his wrath is slow to relent" (MY 19) or "Thou bringest down terror upon the bodies of the men who lie unto Mithra" (MY 23). Both Mithra and Shamash are protectors against the attacks of evil spirits. In many rituals of exorcism Shamash is

invoked to repel demons (e.g. VAT 5 in Seux 1976:364–365; Scurlock 1988:207). Mithra, just as Shamash, always helps the sufferers: “whom the poor man, who follows the good law, when wronged and deprived of his rights, invokes for help, with hands uplifted” (MY 84).

*Avesta* mentions Mithra’s two companions: Sraosha (Chista) and Rashnu (MY 100, 126). Both are the divine judges supporting Mithra in the last judgment close to the Činvat bridge. Also Utu and Shamash are supported by two lesser deities of justice: Nigzida (“divine justice”) and Nigsisa (“divine uprightness”) in Sumerian (Alster 1991:74), Kettu and Mesharu in Akkadian (Douglas Van Buren 1944:284).

Both Mithra and Shamash are represented as the warrior–gods setting the battle against evil. The *Avesta* calls Mithra “a warrior with strong arms” (MY 25), “who stands against (armies) in battle” (MY 36), “whom wide–hoofed horses carry against havocking hosts, against enemies coming in battle array” (MY 47), who “smites the foe in battle” (MY 71), “a stout and strong warrior” (MY 140). On the other hand, Shamash is very frequently called “the Warrior”, especially in exorcistic sources (eg. *Shurpu* II 179 (Reiner 1958:18)) or the hemerologies (Wiseman 1969: 179–180). His attribute is *šaššaru*, a deified saw–like sword depicted in the hands of the Sun-God from Early Dynastic (VA 2952) till the Isin–Larsa period, and especially on Old Akkadian cylinder seals (Douglas Van Buren 1945:180, Dombart 1928). Analogically, Mithra is armed with a silver spear, arrows with golden arrowheads, axes, mace heads, and daggers and wears golden armour. The mace heads deserve our special attention; as they are usually used in combat against disloyal men and especially against Angra Mainju. One of such brass molted mace heads had a hundred knobs and a hundred edges which awoke fear even in the Devil Spirit (Angra Mainju) (MY 96, 141). In the same *Yasht* Mithra is described as a warrior driving a golden chariot made of a heavenly substance with four swift white horses (MY 52, 67, 124, 143). Here an obvious difference between Mithra and the Mesopotamian Sun-God may be observed, because only in a Sumerian source do we find Utu driving a chariot with four lions (Alster 1991:74) and this attribute is not witnessed in later Akkadian documents.

Mithra as the Sun-God was connected also with fire and light: “his face is flashing with light like the face of the star Tistrya” (MY 143). Moreover, he was a protector of the morning hours, which is directly connected with his solar aspect. He appeared each morning with the first rays of the Sun and symbolically illumined the world, and chased away all evil spirits, which could threaten people. Analogically, Shamash is provided with a fiery *melannuu* (divine aura) which makes the stars invisible (Horowitz 1993:54); he is also called the Lord of Light (KAR 223; Łyczkowska 1995:50). Mesopotamian gods of fire, Gibil/Bilgi and Nusku, are frequently called the Comrades of Shamash (K 8583; cf. Livingstone 1986:31, Lewy, Lewy 1948:148, Seux 1976:376, Weidner 1915:87–88).

Both Mithra and Shamash are sometimes related to the water flow and to abundance. Mithra “makes the waters flow forward, (...) makes the waters run and the plants grow up” (MY 61). In late sources Shamash is associated with the upper sea (i.e. the sky) and with the Euphrates (Livingstone 1986:77). There is also a text describing the cosmic tree *kiškanu* growing between the rivers of

abundance, between Shamash and Dumuzi (Langdon 1928:847). Shamash, as the god of abundance, is always connected with Enki/Ea, the god of fresh water. Mithra is also the divine protector of cattle and called "the lord of wide pastures" (MN 10, MY 3, 10), whom "the cow driven astray invokes for help" (MY 86). In Mesopotamia the god of cattle was the Moon-God Nanna/Suen/Sin and this symbolism was related to two observations: the crescent resembles the horns of cattle, and the whole sky was called the cattle pen (cf. Hall 1986:155–158, Horowitz 1998:255, Heimpel 1989:250–251, Reiner, Pingree 1981:42). Only in the Sumerian tradition of Girsu the festival of the VII<sup>th</sup> month included offerings for Utu and the Moon-God Suen in the cattle pen (Cohen 1993:74), but the relation of Utu and the cattle is secondary here. Cattle and birds were the animals sacrificed for Mithra (MY 119); also in rituals of Shamash the doves were set free to the west and to the east (K 2438, ARAK 38 = K 115; Livingstone 1997:216, Hunger 1992:21).

Possibly the most important attribute of Mithra as the Sun-God is his omnipresence: "his dwelling, wide as the earth, extends over the material world, unconfined, and bright, a far-and-wide-extending abode" (MY 44), "Whose long arms, strong with Mithra-strength, encompass what he seizes in the easternmost river and what he beats with the westernmost river, what is by the Sanaka of the Rangha and what is by the boundary of the earth" (MY 104), "Who goes over the earth, all her breadth over, after the setting of the sun, touches both ends of this wide, round earth, whose ends tie afar, and surveys everything that is between the earth and the heavens" (95). However, the proper abode of Mithra is mount Hara, "the bright mountain around which the many (stars) revolve where come neither night nor darkness, no cold wind and no hot wind, no deathful sickness, no uncleanness made by the Daevas, and the clouds cannot reach up unto the Haraiti Bareza" (MY 50, cf. MY 13), "a dwelling that all the Amesha-Spentas, in one accord with the sun, made for him in the fullness of faith of a devoted heart, and he survives the whole of the material world from the Haraiti Bareza" (51).

Shamash also dwells in the Eastern Mountain (cf. Heimpel 1986:128). There are many representations of Mesopotamian Sun-God arising from the mountain (Douglas Van Buren 1955:1) and the Mountain of Sunrise takes a very important place in Mesopotamian religion as the point of connection between the heaven and the underworld. The place where the assembly of gods sets the destiny of the land is located upon it. This mountain is sometimes (e.g. in Lugalbanda epic) called the mountain of the *lušur*-tree (Heimpel 1986:143–145).

Summing up, there are many similarities between Mithra and Shamash, most of them resulting from the common observations of the Sun, but some should probably be treated as homologies. It is especially the judicial attributes, the bird offerings, and the symbolism of the Mountain of Sunrise, which should be most probably the results of cultural diffusion between Mesopotamia and Iran before the times of Achaemenid dynasty. Perhaps that exchange of ideas is rooted as early as in 3<sup>rd</sup> millennium BCE when the relations between two regions started to become very close.



## The reform of Artaxerxes II

The position of Mithra in the Persian pantheon was changing in the Achaemenid period. We have no information about this god in the official documents until the time of Artaxerxes II (404–359 BCE). He was the first Achaemenid king to mention Mithra together with Ahuramazda and Anahita (Boyce 1982: 89–90). It was during his reign that the triad of these most powerful deities was established. Nevertheless, it may be supposed that even before, from the reform of Zoroaster on, the cult of Mithra remained an important part of common Iranian beliefs, especially among the ordinary people. Several tablets found in the fortification and treasury of Persepolis contain lists of goods used during rituals dedicated to Mithra. It is possible that those offerings could be associated with unknown rituals preceding Nou Ruz, or even performed during that festival, as will be discussed below (Frye 1975:63).

It is likely that what was called the religious reform of Artaxerxes II could be associated with the political situation in Persia after the battle of Cunaxa where Artaxerxes had to fight against his brother Cyrus the Younger to save his throne (Xenophon, *Anabasis*. I.8; Briant 2002:627–630). During the conflict between the two brothers both sides used similar, pure Persian ideology, in which the right to the Persian throne was strongly associated with *chwarenah*, and heroism displayed on a battlefield. Because Cyrus the Younger had quite a massive support among the Persian aristocracy, who believed in his right to the throne, consequently, Artaxerxes II needed to find additional support for his victory that could be associated with some religious aspects. The best solution appeared to be the promotion of two Persian deities that had still remained outside the orthodox Zoroastrian official religion, i.e. Mithra and Anahita. Both deities were certainly frequently worshiped by the common people. Mithra, being a solar god, had the already mentioned aspects, which could be useful in the re-modeled royal ideology. His attributes were extremely helpful for Artaxerxes II who needed to support and legitimize his victory in religious terms. In other words, his victory in the battlefield was presented as the result of a support given to him not only by Ahuramazda but also by two important warlike deities Mithra and Anahita. Especially Mithra could give not only support in the battle, but also the right judgment, causing the Cyrus the Younger's death.

The main elements of the new aspects of the royal ideology were similarly based on the Babylonian background. The worship of these two new deities was probably proclaimed in a special royal edict mentioned by Berossus and later quoted by Clement of Alexandria (Clement of Alexandria, *FGrH* 680 F11; Briant 2002:676). If our assumption is right, the Great King would find the help among Babylonian priests, who could provide the base for the triad of the Persian deities, which was clearly based on the Babylonian triad Sin–Shamash–Ishtar. The similarities of both triads were so striking that supposedly the cult of the new one became very popular not only in Persia, but particularly in Mesopotamia, where the old traditional religion had still survived.

Sin was the most important astral deity in Babylonian religion, often linked with the Sun-God Shamash and Ishtar, the goddess of the planet Venus. This



planetary triad is abundantly witnessed in Mesopotamian iconography (e.g. on *kudurrus*) and texts (cf. BM 91000, Douglas Van Buren 1945:87–88; Seidl 1968; Reiner 1996:311). Artaxerxes II may have exploited this well-recognized motif deeply rooted in the Mesopotamian tradition. The Moon-God has been substituted here by Ahuramazda, and the remaining two deities of the triad had united Persian and Mesopotamian elements. It is also possible that the Persian king intended to make Persian religion more understandable for the Babylonians to use it for the religious unification of the empire. It may be noted that the Moon-God was almost not present in Persian religion and probably Ahuramazda had taken his position in the triad, but without any lunar attribution.

There is another piece of evidence for a conscious reform: Artaxerxes II was also the first Persian king who built temples for Iranian deities: Ahuramazda, Mithra and Anahita. It is quite unlikely that there were anthropomorphic statues located in temples dedicated to Ahuramazda and we can assume them to be the first temples of fire in Persian history. In the case of Mithra and Anahita it is more probable that, besides the sacred fires, also their statues could have been situated inside the temples, although there is no direct evidence. Nevertheless, the idea of the temple was clearly of Mesopotamian origin.

## Solar festivals in Persian calendar

Mesopotamian influence on Persian religion is clearly indicated in the solar festivals. Mithra was linked to the middle of the year: the first month of the second half-year bore Mithra's name – *Mitrahe* in the *Avesta* (Partner 1985:760, Blois 1996:39–50). Mithra occupied the same position not only during the course of the year, but also the sixteenth day of each month was dedicated to him. For both reasons Mithra was sometimes called the Lord of Division. The most important festival dedicated to Mithra, which was called *Mithrakana*, was organized on the sixteenth day of the seventh month of the year. According to the account of Duris of Samos (ca. 280 BCE) during that festival the Persian king drank and danced (Frye 1975:64; Boyce 1975:106–118). The drink was most probably *haoma*. The *haoma* ritual and king's dance were only a part of this ritual, although their significance remains obscure.

The New Year festival was related to Mithra's judicial attribution. During one night of the year, the last night before the Nou Ruz festival, the dead ancestors were able to visit their houses, but had to go away with the first rays of the rising Sun. That night was called *hamaspatmaedaja* (Boyce 1979:29, 31, 53, 142–3). Also after death the deceased stays for four days among his relatives and departs with the first rays of the rising Sun on the fifth day, to be judged by Mithra and his comrades Sraosha, and Rashnu. After that day the dead have no possibility of coming back into the world of living, except during the night before the New Year.

All these elements in the festivals of Mithra may be traced back to Mesopotamian tradition. In Mesopotamia as early as in the 3<sup>rd</sup> millennium BCE the year was divided into two parts, starting with the equinoxes and the *akiti/akitu* festi-

vals of the I<sup>st</sup> and VII<sup>th</sup> month (Cohen 1993:400). During the I<sup>st</sup> month, Nisannu (in the standard Babylonian calendar), the New Year festival took place and was the most important festival in many Mesopotamian traditions. The VII<sup>th</sup> month, Tashritu (possibly from Akkadian *šurrû* “to begin”), was dedicated to Shamash (Cohen 1993: 326, 330). The late document NCBT 1132 contains the record of sesame oil quantities used during rituals in Uruk; among them we can find the *tallu* festival of Shamash during the fourth month (Du’uzu), the seventh (Tashritu) and the twelfth (Addaru) (Beaulieu 1993:82–84).

In astronomical sources from the late 2<sup>nd</sup> and 1<sup>st</sup> millennia BCE the month Tashritu was associated with the constellation *Libra* (called “The Scales” in Babylonia), which was the astral attribute of Shamash related to his judicial function. *Libra* was called “the house of Shamash”, the “star of Shamash’s justice” (Reiner 1995:141) and was associated with the planet Saturn, also the planetary attribute of Shamash (ARAK 48; Hunger 1992:24, 28). This complex of associations refers to the autumn equinox (Hunger, Pingree 1989:147; cf. Oelsner, Horowitz 1998: 179). In late sources the constellation *Libra* was related also to the cult centers of Shamash: Sippar, Larsa, Girsu and Pashe (Pettinato 1998:249–250). Its representation appears on stamp seals produced in the Seleucid period (Wallenfels 1993:285).

According to the series <sup>mul</sup>Apin the constellation *Libra* rises heliacally on the 15<sup>th</sup> day of Tashritu (Ap I iii 1, iv 25, II i 14). A. Wolters associates this date with the motif of scales appearing in the *Book of Daniel* 5, 27 in the well-known passage where Daniel forecasts the end of the Babylonian kingdom and the invasion of the Persian king. The chronicle states that the priests of Marduk opened the gates of Babylon on the 16<sup>th</sup> day of Tashritu (12 October, 539 BCE in Julian calendar) and the motif of scales may be here an allusion to the fall of the unjust king (Wolters 1993).

The relation of Shamash and the month Tashritu is thus very firmly established in the Babylonian tradition. Much less frequently Shamash appears in the rituals of the New Year festival, although the most important motif of this festival is the great assembly of gods on the Mountain of Sunrise. Only in the late 3<sup>rd</sup> millennium in Eshnunna (Central Mesopotamia) the *humm-ṭum* festival dedicated to Shamash took place on the XII/I month of the year (Cohen 1993:396–397).

The relation of Shamash to the middle of the month (i.e. the full moon) is rather vague in Mesopotamian tradition. Only in the late tradition of Larsa during the full moon Shamash was provided with new clothes (Beaulieu 1993:79). The middle of the month was dedicated chiefly to the Moon-God (cf. Koch-Westenholz 1995:108) or to the main gods of the local pantheon. For example the 16<sup>th</sup> or 17<sup>th</sup> day of the month was dedicated to Ištar and Baal in Emar (Cohen 1993:357), to Anu in the late tradition of Uruk (Reiner 1995:139), to Dumuzi during the IV<sup>th</sup> month Du’uzu in Assyria (Gurney 1962:157), to Marduk in Babylon (Pettinato 1998:263). However, there is a strong connection between the Mesopotamian Sun-God and the 18<sup>th</sup> day of the month. In the standard Assyrian calendar during the 18<sup>th</sup> day of the I<sup>st</sup> month Nissanu, the *huntu* festival of Shamash was organized (Wiseman 1969:181, Pettinato 1998:258). In Mari, Shamash’s ritual took place in the 18<sup>th</sup> day of the IV<sup>th</sup> and VII<sup>th</sup> month (Cohen

1993:290); in Sippar, the city where Shamash headed the whole local pantheon, probably the 18<sup>th</sup> day of each month was dedicated to him (Cohen 1993:275). It may be hypothesized that this 2-day difference between Mesopotamian and Persian tradition was a result of the much lower position of the Moon-God in Iran, that simply was not considered to take a more prominent place in the course of the month.

The association of Shamash with the Underworld is also attested in the Mesopotamian tradition where the Sun-God is the judge of the dead. Shamash frequently appears as the god entering the Underworld and who (together with chthonic gods), protects mankind against evil demons leaving later the kingdom of death (cf. Seux 1976:431–432). In the well-known *Epic of Gilgamesh* the Sun-God opens the gate of the Underworld and enables the Sumerian hero to speak with his dead friend Enkidu.

The solar festivals in Mesopotamia and Persia are so similar that their homological character is not in doubt. The attribution of the VII<sup>th</sup> month to the Sun-God was adopted by Iranians from Mesopotamia and this borrowing may be dated back to the late 2<sup>nd</sup> or early 1<sup>st</sup> millennium BCE, well before the conquest of Mesopotamia by Cyrus the Great.

## Conclusion

Far-reaching similarities between Shamash and Mithra may be treated as support for the thesis that Mesopotamian religion influenced Iran as early as in times of the *Avesta*. Later their intensity weakened due to henotheistic trends and the exaltation of Ahuramazda. However, the reform of Artaxerxes II again used the Mesopotamian model of a planetary triad Sin–Shamash–Ishtar, where Ahuramazda took the position of the Moon-God, though deprived of lunar attributions. It may be concluded that there are two distinct phases of Mesopotamian influence on Iranian concept of the Sun-God: the first dating back to Avestan times or even earlier, the second related to the imperial unifying policy of Artaxerxes II.

## Abbreviations

AfO	Archiv für Orientforschung, Horn
AnOr	Analecta Orientalia, Roma
Ap	<sup>mini</sup> APIN series
ARAK	H.C. Hunger, Astrological Reports to Assyrian Kings
AS	Acta Sumerologica
BiM	Bibliotheca Mesopotamica, Malibu
BM	British Museum, London
CHI	Cambridge History of Iran
CM	Cuneiform Monographs, Groningen

CNI	The Carsten Niebuhr Institute of Near Eastern Studies Publications, Copenhagen
GMS	Grazer Morgenländische Studien, Graz
HSM	Harvard Semitic Museum
JAOS	Journal of the American Oriental Society
JCS	Journal of Cuneiform Studies
JNES	Journal of Near Eastern Studies
JRAS	Journal of the Royal Asiatic Society of Great Britain and Ireland
JSOR	Journal of the Society of Oriental Research
JSS	Journal of Semitic Studies
K	Kuyunyik (the inventory number)
KAR	Keilschrifttexte aus Assur religiösen Inhalts, ed. E. Ebeling
MCiv	Mesopotamian Civilizations, Winona Lake
MN	Mihr Niyayesh (Avesta)
MY	Mihr Yasht (Avesta)
NABU	Nouvelles Assyriologiques Brèves et Utilitaires
NCBT	Newell Collection of Babylonian Tablets
ONS	Orientalia – Nova Series
RA	Revue d'Assyriologie et d'Archéologie Orientale, Paris
RV	Rig Veda
SAA	States Archives of Assyria, Helsinki
SNKF	Occasional Publications of the Samuel Noah Kramer Fund, Philadelphia
TAPS	Transactions of the American Philosophical Society, Philadelphia
VA	Vorderasiatische Abteilung, Staatliche Museen, Berlin
VAT	Vorderasiatische Abteilung Tontafel
ZA	Zeitschrift für Assyriologie

## Bibliography

### Alster B.

1991: *Incantation to UTU*, AS 13, pp. 27–96.

### Beaulieu P.A.

1993: *The Impact of Month-lengths on the Neo-Babylonian Cultic Calendar*, ZA 83, pp. 66–87.

### Blois de F.

1996: *The Iranian Calendar*, "Iran" 34, pp. 39–53.

### Boyce M.

1975: *Mithraism among the Irani Zoroastrians* [in:] "Mithraic Studies, Proceedings of the First International Congress of Mithraic Studies", ed. J.R. Hinnells, vol. I, London, pp. 106–118.

1979: *Zoroastrians, Their Religious Beliefs and Practices*, London.

1982: *History of Zoroastrianism*, vol. 2: *Under Achaemenians*, Leiden.

### Briant P.

2002: *From Cyrus to Alexander. A History of the Persian Empire*, Winona Lake.

**Cohen M.**

1993: *The Cultic Calendars of the Ancient Near East*, Bethesda.

**Dombart Th.**

1928: *Das babylonische Sonnentor und die "Säge" des Šamaš*, JSOR 12, pp. 1–24.

**Douglas Van Buren E.**

1944: *The giš-ti and the giš-ka-an-na*, ONS 13, pp. 281–287.

1945: *Symbols of the Gods in Mesopotamian Art*, AnOr 23, Roma.

1955: *The Sun-God Rising*, RA 49, No. 1, pp. 1–14.

**Dumézil G.**

1977: *Les dieux souverains indo-européens*, Paris.

**Frye R. N.**

1975: *Mithra in Iranian History* [in:] "Mithraic Studies, Proceedings of the First International Congress of Mithaic Studies", ed. J.R. Hinnells, vol. I, London, pp. 62–67.

**Gurney O.R.**

1962: *Tammuz Reconsidered: Some Recent Developments*, JSS 7, pp. 147–160.

**Hall M.G.**

1986: *A Hymn to the Moon-God, Nanna*, JCS 38, No. 2, pp. 152–166.

**Hartner W.**

1985: *Old Iranian Calendars*, CHI 2, pp. 714–792.

**Heimpel W.**

1986: *The Sun at Night and the Doors of Heaven in Babylonian Texts*, JCS 38, No. 2, pp. 127–151.

1989: *The Babylonian Background of the Term "Milky Way"* [in:] "DUMU-E<sub>2</sub>-DUB-BA-A. Studies in Honor of Åke W. Sjöberg", ed. H. Behrens, D. Loding, M.T. Roth, SNKF 11, Philadelphia, pp. 249–252.

**Horowitz W.**

1993: *A Parallel to Shamash Hymn 11–12 and the Melammu of the Sun*, NABU, No. 3, pp. 54–55.

1998: *Mesopotamian Cosmic Geography*, MCiv 8, Winona Lake.

**Hunger H.C.**

1992: *Astrological Reports to Assyrian Kings*, SAA 8, Helsinki.

**Hunger H.C., Pingree D.**

1989: *MUL.APIN. An Astronomical Compendium in Cuneiform*, AfO Bh. 24, Horn.

**Koch-Westenholz U.**

1995: *Mesopotamian Astrology. An Introduction to Babylonian and Assyrian Celestial Divination*, CNI 19, Copenhagen.

**Kramer S.N.**

1963: *The Sumerians, Their History, Culture, and Character*, Chicago – London.

**Lamberg-Karlovsky C.C.**

1985: *The longue durée of the Ancient Near East* [in:] "De l'Indus aux Balkans. Recueil à la mémoire de Jean Deshayes", ed. J.-L. Huot et al., Paris, pp. 55–72.

**Langdon S.**

1915: *A Fragment of a Series of Ritualistic Prayers to Astral Deities in the Ceremonies of Divination*, RA 12, pp. 189–192.

1928: *The Legend of kiškannu*, JRAS, pp. 843–848.

**Lewy H., Lewy J.**

1948: *The God Nusku*, ONS 17:1948, pp. 146–159.

**Livingstone A.**

1986: *Mystical and Mythological Explanatory Works of Assyrian and Babylonian Scholars*, Oxford.

1997: *How the Common Man Influences the Gods of Sumer* [in:] "Sumerian Gods and Their Representations", ed. I.L. Finkel, M.J. Geller, CM 7, Groningen, pp. 215–220.

**Lyczkowska K.**

1995: *Babilońskie zaklęcia magiczne*, Warszawa.

**Oelsner J., Horowitz W.**

1998: *The 30-Star-Catalogue HS 1897 and the Late Parallel BM 55502*, AfO 44–45:1997–1998, pp. 176–185.

**Pettinato G.**

1998: *La scrittura celeste. La nascita dell'astrologia in Mesopotamia*, Milano.

**Reiner E.**

1958: *Šurpu. A Collection of Sumerian and Akkadian Incantations*, AfO Bft 11, Graz.

1995: *Astral Magic in Babylonia*, TAPS 85, part 4, Philadelphia.

1996: *Suspendu entre ciel et terre...* [in:] "Collectanea Orientalia. Histoire, arts de l'espace et industrie de la terre. Études offertes en hommage à Agnès Spycket", ed. H. Gasche, B. Hrouda, Paris, pp. 311–313.

**Reiner E., Pingree D.**

1981: *Babylonian Planetary Omens. Part Two: Enuma Anu Enlil, Tablets 50–51*, BiM 2:2, Malibu.

**Rochberg-Halton F.**

1984: *New Evidence for the History of Astrology*, JNES 43, pp. 115–140.

**Scurlock J.A.**

1988: *KAR 267/BMS 53: a Ghostly Light on bit rinki?*, JAOS 108, pp. 203–209.

**Seidl U.**

1968: *Die babylonische Kudurru-Reliefs*, "Baghdader Mitteilungen" 4, pp. 1–220.

**Seux P.J.**

1976: *Hymnes et prieres aux dieux de Babylone et d'Assyrie*, Paris.

**Starr I.**

1983: *The Rituals of the Diviner*, BiM 12, Malibu.

**Turcan R.**

1993: *Mithra et le mithriacisme*, Paris.

**Wallenfels R.**

1993: *Zodiacal Signs among the Seal Impressions from Hellenistic Uruk* [in:] "The Tablet and the Scroll. Near Eastern Studies in Honor of William W. Hallo", ed. M. Cohen, D.C. Snell, D.B. Weisberg, Bethesda, pp. 281–289.

**Weidner E.F.**

1915: *Handbuch der Babylonischen Astronomie*, Leipzig.

**Wiesenhöfer J.**

2002: *Das Antike Persien*, Düsseldorf – Zürich.

**Wiseman D.J.**

1958: *The Vassal-Treaties of Esarhaddon*, "Iraq" 20, No. 1, pp. 1–99.

1969: *A Lipšur Litany from Nimrud*, "Iraq" 31, No. 2, pp. 175–183.

**Wolters A.**

1993: *An Allusion to Libra in Daniel 5\** [in:] "Die Rolle der Astronomie in den Kulturen Mesopotamiens. Beiträge zum 3. Grazer Morgenländischen Symposium (23–27 September 1991)", ed. H.D. Galter, GMS 3, Graz, pp. 291–306.