

39) **Lingering invisibly in the sky: on the meaning of *uštāniḫ*** – Eclipses of the Sun and the Moon are spectacular celestial phenomena that were anxiously studied by Mesopotamian astrologers, as evidenced by eclipse omens, which are attested since the Old Babylonian period. In these omens, the word *uštāniḫ* sometimes appears, always with the obscured celestial body as its subject. According to the dictionaries, *uštāniḫ* is a 3rd p. perf. of the Š stem of *anāḫu*, to be translated as ‘anstrengen’ (AHW I) or ‘to linger, last’ (CAD A/II).¹ The latter was adopted by most translators, including Oppenheim (1960), Rochberg (1988) and Reiner (1998), except Koch (1996), who proposed ‘to be delayed’. I argue that *uštāniḫ* means ‘lingered’ if it is intransitive, and ‘outlasted (a watch)’ if it is transitive, and that the latter usage specifically applies to events beginning in one watch and ending in another, unlike what was previously assumed in most translations.

Usually *uštāniḫ* appears in combination with watches (**en.nun** = *maššartu*), of which there were 3 during daylight and 3 at night.² Since they are defined with respect to sunrise and sunset, they cannot be thought of as beginning at an arbitrary moment, and their duration varies through the year. Hence watches are unsuitable for quantifying the duration of time intervals.³ Their main function is to provide a division of time that can be exploited for attaching ominous significance to astronomical events, depending on the watch in which they occur. In this respect eclipses (and occultations of stars and planets) are special events, in that they last for a certain short time, so that they may begin in one watch, and end in another. These considerations already suggest that *uštāniḫ* means ‘it outlasted’ when a watch is the object, not in the sense of lasting longer than the duration of a watch, but of beginning in one watch and ending in another. I begin by quoting the textual evidence, omitting omen apodoses. Unless stated otherwise, the eclipse omens are quoted from Rochberg (1988), and they date from the Neo Assyrian period.

A. Transitive *uštāniḫ*. Sometimes the object is an unspecified watch (*EAE* = *Enūma Anu Enlil* Tablet 16 § IV 12; § XI 13; § XII* 13):

šumma (DIŠ) ina MN u₄.N.kam attalū(AN.MI) iššakin(gar)-ma en.nun uš-ta-ni-iḫ ... = If in month MN on day N an eclipse occurs and it outlasts the watch: ...

Also in this category are *EAE* 19, § I A iv 12’,

DIŠ AN.MI ina e]n.nun.an.usan₂ ušarri(sar)-ma en.nun uš-ta-ni-iḫ ... = [If an eclipse begins in the] 1st watch and it outlasts the watch: ...

and the Venus omen K 7169+7223 (Reiner 1998, pp. 106-107) Obv 4, which deals with an occultation of Venus by the Moon:

[DIŠ mul]dil-bat ana ša₃ sin] ku₄-ma en.nun uš-ta-ni-iḫ-ma e₃-ma ... = If Venus enters the Moon, outlasts the watch and comes out: ...

A duplicate (K 3111+10672 Obv 14; Reiner 1998, pp. 90-91) has *u₂-ša-ni-iḫ-ma* instead of *uš-ta-ni-iḫ-ma*, which suggests that there is no difference in meaning between the two. A literary example is found in Sargon’s 8th campaign (*TCL* 3, 318):

^dma₂.gur₈ en a-ge-e a-na šul-pu-ur kururiki u₂-ša₂-ni-ḫa en.nun = Magur, lord of the crown, outlasted the watch for the destruction of Gutī.

Oppenheim (1960) recognized that this is an abbreviated description of a lunar eclipse. He translated *ušāniḫa maššarta* as ‘it outlasted the watch’, which he takes to mean that the eclipse lasted longer than a full watch. This must be rejected, because it would imply that the beginning of an eclipse that ‘outlasts a watch’ coincides with the beginning of a watch. Since the watches are fixed with respect to sunset, this would be highly coincidental and render the omen virtually useless for a diviner wishing to interpret a lunar eclipse. The most obvious interpretation of the quoted omens is that they deal with eclipses or occultations that begin in one watch and end in another watch.⁴ Therefore, also the Venus occultation mentioned above does not necessarily last for a full watch as assumed by Reiner (1998), p. 4. In the following omen, an eclipse begins in watch WN₁ and, assuming that *uštāniḫ* has the same meaning, it ‘outlasts watch WN₂’:

DIŠ AN.MI WN₁ WN₂ uš-ta-ni-iḫ ... = If an eclipse of watch WN₁ outlasts watch WN₂ ...

Parallels are *EAE* 19 § I 3’ (WN₁ = 1st watch; WN₂ = 2nd watch), 5’, 14’ (WN₁ = 1st, WN₂ = 3rd watch) and the Middle Assyrian text BM 121034 Rev 22’ (WN₁ broken, WN₂ = 3rd watch; Rochberg 1988, p. 278). While Rochberg interprets *uštāniḫ* in the previous examples as ‘it outlasts’, she translates the present case as ‘If an eclipse in watch WN₁ lasts until WN₂’. However, it is unclear how the preposition ‘until’ can be justified. Also here a translation ‘to outlast’ can be assumed, so that the examples imply eclipses with a duration of at least 1 watch or at least 2 watches, respectively. Astronomically speaking, the former are possible, but the latter appear to be impossible, as will be discussed below. Old Babylonian examples are BM 86381, 15-17 (Rochberg 1988, p. 158 n. 14; Koch 1996, p. 199). If one adopts Rochberg’s restorations, they contain transitive forms:

[BE sin en.nu.an.us]an₂ a-di en.nu.murub₄.ba uš-ta-ni-iḫ ... = [If the Moon outlasts the 1st watch until the 2nd watch: ...

BE s[in ... a]-di na-ma-ri uš-ta-ni-iḫ ... = If the M[oon] outlasts [... un]til clearing/dawn: ...

The verb *namāru* (*zalag₂*), ‘to brighten’, is ambiguous since it can mean both ‘to clear’ (of the eclipse) and ‘dawn’. The annals of Assurbanipal’s 7th campaign (Cylinder B, Col V 5-7) contain an interesting account of a lunar eclipse with two instances of *uštāniḫ*:⁵

⁶ina itišu AN.MI šat ur-ri en zalag₂ ⁷uš-ta-ni-iḫ-ma ^dutu igi-šu₂-ma ki-ma šu-a-tu-ma / [kal] u₄-me uš-ta-ni-iḫ ... = In month IV an eclipse outlasted the 3rd watch until dawn, the Sun saw it, and it likewise outlasted/lingered [all] day: ...

In this case, *namāru* (*zalag₂*) certainly means dawn, because it is when the Sun is said to see the eclipse. Parallel passages from the omen literature are *EAE* 19 § I 10’-11’, C 5’, D2’; *KUB* 30 9 iii 28-31, 4 63 iii 46-47 (Boghazköy). As argued convincingly by Koch (1996; pp. 201-205), *uštāniḫ* conveys that the Sun, after seeing the eclipsed Moon, responded by remaining hidden from sight all day, presumably behind clouds.

B. Intransitive *uštāniḫ*. The first example is a solar omen from *EAE* 25 I 2 (van Soldt 1995), unrelated to eclipses:

[DIŠ *šamaš*(MAN) *ina gi*₆] *e₃-ma adi(en) ka-ša-a-tu₄ uš-ta-ni-iḫ* ... = [If the Sun] rises [in the night] and it lingers until the morning: ...

This is one among several omens dealing with a ‘Sun’ rising at night, perhaps a reference to the planet Saturn.⁶ If the Sun itself is meant, it is apparently considered to have risen during the night without dispelling darkness, so that *uštāniḫ* again conveys a sense of ‘lingering invisibly’. In the following example,

DIŠ AN.MI WN **en zalag₂-ir** *uš-ta-ni-iḫ* ... ,

which is attested in *EAE* 19 § I 7', 10' (WN = 1st watch), 1", and the astrological report *SAA* 8 103 Obv 1 (WN = 3rd watch), two aspects, namely the syntactic relation between AN.MI and WN, and the meaning of **zalag₂-ir** require clarification. One might take WN to be the object of a transitive *uštāniḫ* and translate ‘If an eclipse outlasts watch WN until it clears: ...’, but I follow Rochberg in assuming that AN.MI is *regens* and WN *rectum*, so that *uštāniḫ* is intransitive, leading to ‘If an eclipse of watch WN lingers until it clears: ...’. Both translations are possible and amount to the same, but the second one seems preferable on account of the variant *EAE* 19 § I 4”:

DIŠ AN.MI **en.nun.u₄zal a-dir-ma en na-wa-ri** *uš-[ta-ni-iḫ]* ... = If an eclipse of the 3rd watch is dark and lingers until clearing: ...

Secondly, I assume that the ambiguous *adi nawir/nawāri* here means ‘until it clears’,⁷ since this is certain in a number of similar omens (*EAE* 19 § I E 1'-9'; F 1'-6') that include a reference to a quadrant of the lunar disk:

DIŠ AN.MI **en.nun** *uš-ta-ni-iḫ-ma ina QN en zalag₂-ir uš-ta-ni-iḫ* ... = If an eclipse outlasts the watch and lingers until it clears in quadrant QN: ...

This summarizes the textual evidence of *šutānuḫu*. As I have argued, the context implies that the intransitive cases mean ‘to linger’, and the transitive ones ‘to outlast’. Koch (1996) has argued against the latter, claiming that it cannot be upheld for eclipses that, in his reading, last for 3 watches, or from the 1st watch until dawn. Instead, he proposes a meaning ‘to be delayed (with respect to a prediction)’. Koch rightly points out that, unlike what Rochberg (1988) assumes (p. 44), the penumbral phases of lunar eclipses are disregarded in the cuneiform records, i.e. lunar eclipses are defined by the 4 contacts between the Moon and the Earth’s shadow. The resulting maximum duration of a lunar eclipse (1st to 4th contact) is 3.8 hrs, while totality (2nd to 3rd contact) lasts at most 1.7 hrs, not 6 hrs as assumed by Rochberg. Since a watch lasts between about 3 and 6 hrs, depending on the season, lunar eclipses can still last longer than the duration of a watch, so that an eclipse beginning in the 1st watch and ending in the 3rd watch is perfectly possible, even without invoking penumbral contacts. As shown above, most instances of *adi nawāri/nawir* that were previously read as ‘until dawn’ can be read as ‘until it clears’, which eliminates a number of unrealistic eclipse durations (those longer than 2 watches). Of the quoted omens, the only ones that remain impossible are a few that mention eclipses beginning in the 1st watch and outlasting the 3rd watch, since they imply a duration of at least 2 watches. But this is not really decisive, since it is known that extrapolation played a role in the construction of omens. Hence one expects only a core of omen protases to be possible and observable.

There are additional reasons why a translation ‘to be delayed’ must be discarded. First, it presupposes that the astrologers were able to predict the time of a lunar eclipse. The first evidence for this stems from astrological reports from the 8th c. BC (Steele 2000, pp. 69-70), and it is very unlikely that the period relation which was used for these predictions, the length of the Saros⁸ in excess of a whole number of days, was known much earlier.⁹ Hence the prediction of eclipse times cannot be assumed to play a role in the Old Babylonian examples, which suggests that *uštāniḫ* is not related to eclipse prediction. Secondly, it would be strange if only delayed eclipses were mentioned. One would also expect omens dealing with eclipses that occur in an earlier watch than expected, but they are not attested. Furthermore, there is a well attested phrase which is used in connection with unexpected eclipses, namely *ina lā minātišu*, ‘at its improper moment’. However, this always refers to an unexpected date, e.g. when a lunar eclipse happens on the 13th day of the month instead of the 14th, not to an unexpected time (Rochberg 1988, p. 42).¹⁰

By translating *uštāniḫ* as ‘outlasted’ or ‘lingered’ I have adopted a functional approach in that these words are meant to convey the effective, but not necessarily the literal meaning, which may actually belong to the realm of figurative language. Another meaning of *anāḫu* Št is ‘to be depressed’, and it is possible that eclipsed celestial bodies were considered to be in a state of depression. This is consistent with a well-known figurative expression, according to which the Moon or the Sun is said to ‘weep’ when totally eclipsed.¹¹ Finally, as suggested in the *AHw*, *maššarta uštāniḫ* may carry a meaning ‘to tire; worry the watch’. Neo Assyrian letters from the astrologers to the king contain frequent references to the duty of keeping the watch (*maššartu*). It can be assumed that the astrologers would anxiously await the reappearance of an eclipsed or occulted body, which can thus be viewed as ‘tiring the watch’.

References :

- L. Brack-Bernsen, J.M. Steele 2005, 'Eclipse Prediction and the Length of the Saros in Babylonian Astronomy', *Centaurus* 47, 181-206
- J. Koch 1996, 'Zur Bedeutung von *uštāniḫ* in den Lunareklipsen-Omina von *Enūma Anu Enlil*', *ZA* 86, 192-206
- F. Rochberg-Halton 1988, 'Aspects of Babylonian Celestial Divination: The Lunar Eclipse Tablets of *Enūma Anu Enlil*', *AfO Beiheft* 22
- A.L. Oppenheim 1960, 'The City of Assur in 714 BC', *JNES* 19, 133-147
- E. Reiner 1998, 'Babylonian Planetary Omens', Vol. 3, *Cuneiform Monographs* 11
- J.M. Steele 2000, 'Observations and Predictions of Eclipse Times by Early Astronomers'
- W. van Soldt 1995, *Solar Omens of EAE, PIHANS* 73

1) Cf. *CAD A/I anāhu* A and *AHw* I. The G stem has the basic meaning 'to be tired'. Both dictionaries assume that *uštāniḫ* is a perf. Š, but this would be unusual for omen protases, to which nearly all instances belong. I therefore follow Rochberg (1988) in assuming that it is a pret Št, so that the infinitive is *šutānuḫu*. The pret Š, *uštāniḫ*, is also attested occasionally, cf. the examples quoted below.

2) The watches of the night are *barārītu* (en.nun.an.usan₂ = 1st watch, *qablītu* (en.nun.murub.ba) = 2nd watch, *šat urri* (en.nun.u₄.zal) = 3rd watch.

3) Indeed, fractional watches are rarely mentioned and do not appear as the object of *šutānuḫu*.

4) Another verb which is used in connection with eclipses and watches is 'to complete the watch' (*maššarta gamāru*, cf. *EAE* 19 par. 2.). The difference with *šutānuḫu* is not clear.

5) R. Borger, *BIWA*, pp. 98, 224, and older references quoted therein; cf. also *TUAT* NF2, 81-84.

6) Saturn is also known as the 'Sun of the night'; cf. Gössman, *Planetarium Babylonicum*, p. 124.

7) Rochberg acknowledges this possibility (p. 52; p. 83 n. 5; p. 162 n. 2) but she assumes that here *zalag₂-ir* is defective for *nawīri*, 'dawn'. Some support for this might be seen in *EAE* 19 § I 10' where the protasis continues as *u^dutu igi-š₂-ma*, 'and the Sun sees it'.

8) The Saros is defined as the duration of 223 consecutive synodic months.

9) A possible method for predicting eclipse times is described in L. Brack-Bernsen, J.M. Steele (2005).

10) Another phrase used in eclipse omens which one might be tempted to interpret as expressing a delay is *uḫḫuru*, but the context implies that it denotes the duration of the eclipse (Rochberg 1988, p. 46).

11) M. Stol, 'The Moon as seen by the Babylonians', in *Natural Phenomena. Their Meaning, Depiction and Description in the Ancient Near East*, ed. D.J.W. Meijer (Amsterdam: North-Holland, 1992), p. 258; A.J. Sachs, H. Hunger, *Astronomical Diaries and Related Texts from Babylonia*, Vol. I (Verlag der Österreichischen Akademie der Wissenschaften: Wien, 1988), p. 24.