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## The Day Unit within the Old Assyrian Calendar

Cécile Michel

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DUB.SAR É.DUB.BA.A  
Studies Presented in Honour of  
Veysel Donbaz

Yayına Hazırlayan / Edited by  
Şevket Dönmez

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# THE DAY UNIT WITHIN THE OLD ASSYRIAN CALENDAR

Cécile MICHEL\*

“Now is the time (*šattum šanat*). Send me some silver so that we can bring in barley for you before you come here. As for the ‘beer bread’ I made for you, it has grown (too) old!” (CCT 3 25, *CMK* 345). This letter was sent by a woman, alone at home in Aššur, while her husband traded goods in Anatolia. She refers first to a point within the year, using the word “year” twice in figurative sense. Then she complains that a long time will elapse before her husband’s return, expressing this by observing that the ‘beer bread’ she had prepared for him had gone bad. Beyond metaphor, the Assyrians used traditional units of time based on the calendar: day, month, year...

I offer this small study, focused on the “day” to Veysel Bey, who dedicated many studies to the Old Assyrian field, in echo to one of his first publications dealing, which dealt with the month Kanwarta (Donbaz 1971, updated in Donbaz 1984). The day was the smallest unit of time used by the Assyrian merchants. I consider it here in the broader context of Old Assyrian concepts of time and calendar, both in daily life and in financial and commercial activities.

The private letters exchanged between the Assyrians in Kaniš, their families and colleagues in Aššur or settled in other Assyrian colonies in Anatolia are the most numerous documents of the Old Assyrian archives. They deal with both trade matters and daily concerns, and use a language very close to the spoken idiom. They are never dated, but their authors often explain past activities and planned projects. Then, they may specify the days, months or even years elapsed or to come in their scheduled operations. Beside correspondence, numerous loan contracts are systematically dated, mostly by month name and a year eponym, but they never specify the day. They also refer to a system of *hamuštum* eponyms that is unique in the cuneiform documentation. Some loan contracts use another dating system linked to seasonal activities. Thus, all the examples cited here come mainly from letters and loan contracts.

## 1. From hours to a day

The smallest unit of time used in the Old Assyrian corpus is the day or night. In the letters sent from Aššur to Kaniš or from other Anatolian cities to Kaniš, activities may be reported that take place in a short time. But, since the letters will take several days to arrive at their final destination (Veenhof 2008), the writer assumes that there is no purpose to give the sequence of narrated events more specifically within the day.

### 1.1. The case of the *bērum*

The word *bērum* usually corresponds to a time unit, a “double-hour”, but all its occurrences in the Old Assyrian corpus refer to the length units equal to the distance a walker may cover within this “double-hour”, a little more than 10 km (Veenhof 1982: 67-72): “Here the king has fallen during the *sikkatum*, there is upheaval within the

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city and we fear for our lives. There are enemies over a distance of one and a half double-hour (*bēra u zūza*) and nobody dares to go out into the countryside. One even tries to make us set out together with him for doing battle!” (Kt 92/k 526, 6-15, OBO 160/5: 173, n. 747).

*Bērum* is used, for example, figuratively to indicate a long distance between two persons: “When you were in Kaniš, Šū-Išhara was right in front of you, but you did not size him and you did not ask him to pay the silver! You have been running after him (without success) for a distance of ten ‘*bērū*’ (10 *bé-re-e...*). Instead of following my instructions, you have been running back and forth” (TC 3 60, 16-18, 23-28, Veenhof 2001: 103). So even if *bērum* is used here as a unit of length and not of time, the general meaning of the sentence conveys the idea of wasting time, calling to mind our modern expression “time is money”: the silver not paid back cannot be reinvested.

## 1.2. Day and night

One may wonder why, in Old Assyrian letters, we find also almost no mention of the different parts of the day. Most of the times of day known, for example, from the contemporaneous Mari letters are not mentioned in the Old Assyrian corpus. The Mari letters use several words allowing to specify when, during the day, an event takes place: *šihūm* “sunrise”, *muštērtum* “early morning, time of awakening”, *šērum šēramma* “early in the morning”, *kašātum* “morning, morning coolness”, *šērtum* “morning”, *ūmum mašil* “midday”, *mušlalum* “midday, afternoon”, *līlātum* “evening”, *kinsigum* “late afternoon”, *naptanum* “time of the evening meal”, *qablītum* “middle of the night” (Kupper 1996). Perhaps Mari high officials needed to be more precise when they related some events to the king than merchants who were telling their correspondents about their activities.

The Assyrian merchants make use of two verbs to refer to activities during the early morning and the late evening: *šīārum* “to rise early” and *šumšū* “to spend the night awake”. The former is also used as a substantive to refer to the morning: “A servant of mine went out in the morning (*ina šīārim...*) to wash his hands” (KTS 1, 8a, 5-10, *Innāya* 31). The verbs appear together in two unpublished letters in the expression: *ašiar u ušamša* (1<sup>st</sup> person) which we translate as an expression for “morning and night”, in the sense “all day long”. In the first instance, Imdilum is waiting for silver that does not come: “Every day, morning and night (I write to you) saying: ‘Release the silver and I will make a purchase’”<sup>1</sup>. In the second, a merchant complains that he has no access to a house that has been sealed by the eponym; he goes “morning and night” to see representatives without any success<sup>2</sup>.

The Mesopotamian “day” consists of daytime and nighttime (*nichtemeron*). The word night, *mūšum* or *muštum*, appears often in the Old Assyrian documentation. This is the time of danger, preferred by robbers and fugitives. In some letters addressed to women at home alone, their husbands give them advice such as this: “Watch the house at night (*i-mūšim*)” (BIN 6 6, 16-17, *CMK* 335). A young lady who has to stay with her in-laws, while her husband is abroad, runs away at night to her father’s house (AAA 1/3 1, *CMK* 320). Nighttime is also expressed by the term *nabattum*. A merchant complains that he had to follow three robbers who stole textiles and left the town at night: “We left Badna together during the night (*nabattam*) but they did not let me go to the inn with them, I had to spend the night (*abīt*) alone in the stable” (KTH 3, 10-16, *OAA* 1 130). In this letter, «to stay at night» is rendered by the verb *biātum*, as in many other texts, where it is clear that, when travelling, merchants have to go quickly from one place to another, when possible without staying overnight, if only to save time and money<sup>3</sup>.

<sup>1</sup> C 15 (transcription B. Landsberger), 18-23: *i-na u<sub>4</sub>-mī-im i-na u<sub>4</sub>-mī-im, a-šī-ar ù ú-ša-am-ša, a-na šé-ri-šu-nu, um-ma-a-na-ku-ma KÙ.BABBAR, wa-šī-ra-ma šī-ma-am, a-ša-a-ma.*

<sup>2</sup> Kt c/k 266, 21-22 (courtesy J. G. Dercksen): *a-na šé-er mu-zi-zi-kà, a-šī-a-ar ù ú-ša-am-ša*

<sup>3</sup> See for example CCT 4 28a, 19, *CMK* 354: *u<sub>4</sub>-ma-kál’ : lá i-bi-a-at*; CCT 3 36b, 10, *CMK* 190: *lá i-bi<sub>4</sub>-at.*

### 1.3. The day unit

The word “day” is very common in the Old Assyrian letters. It is used as a unit of time but also in several expressions which have nothing to do with the length of a day. Some texts refer to a single day using the word *ūmakkal*: “Do not stay on (there) one single day (*ūmakkal*)” (CCT 6 2a, 6-7, *CMK* 32)<sup>4</sup>, while others use the term *ūmam ištēn*: “Wait one day with him” (KTH 6, 14-15, *CMK* 378).

Days are counted in letters from one to twenty or more: “Write on a memorandum how many days (*mala ūmēšu*)...” (TC 2 9, 30-31, *CMK* 183); “Three days later, they got up and left to go to you” (CCT 3 6b, 30-32, *CMK* 254)<sup>5</sup>, “I left for five days” (BIN 6 23, 4-5, *CMK* 69). Sometimes, the writer foresees the number of days needed for a trip: “He will arrive within two days” (VS 26 47, 15, *CMK* 107); “In ten days’ time the caravan will arrive” (BIN 4 84, 12-13, *CMK* 200)<sup>6</sup>; “I just sent servants to Nihriya. They will arrive within five days and will deliver to you 2 or 3 donkeys” (CCT 4 36b+37a, 3-7, *CMK* 365). In this case, the letter was supposed to travel with a fast messenger to arrive before the announced servants. The sender of the letter may also plan to send a letter or a shipment: “Within 5 days after this (negotiation) I shall send you word” (KTH 2, 7-9, OAA 1 29) or “In five days’ time I will send you the silver” (HUCA 40 47-48, 27-28, *POAT* 21, *CMK* 148)<sup>7</sup>. It is clear that in some cases, the indicated amount of days is more or less precise: “During the (next) ten days, travellers will leave two or three times” (CCT 4 10a, 10-13, *CMK* 242); “You should not stay in the *kārum* of Burušhattum, when you arrive, do not stay there more than ten days!” (CCT 3 4, 41-45, *CMK* 267); “He let us wait twenty days” (TC 3 85, 17, *CMK* 90).

The day unit also marks a point of reference corresponding to the moment of an action: “On the day you hear (the contents) of my tablet”<sup>8</sup>, “On the day I am writing this tablet” (TC 3 13, 3-4, *CMK* 17)<sup>9</sup>; “The day you arrive here” (KTS 1 28, 10-11, *CMK* 152); “Send me 2 minas of silver and the very day you send the silver, record it on your memorandum” (BIN 4 13, 20-25, *CMK* 122); “Take a talent of tin (...) and the very day you take it, give him 10 minas of fine silver when it is convenient for him” (HUCA 39 22-23, 25-30, *POAT* 13, *CMK* 259). The reference point may match with the day the letter was written: “Seize him and make him pay the silver and its interest (calculated) up to this day” (BIN 4 98, 23-25, *CMK* 130)<sup>10</sup>; “Up to this day (*ūmšu-ma*), you are late” (TC 3 94, 25, *CMK* 162), this could also be called “today” from the writer point’s of view. It is expressed by the accusative *ūmam*.

The following day is written *šanîm ūmim*, literally “the second day”: “the day after you left...” (TC 3 3, 3-4, *CMK* 81) or “the day following the one I wrote you this tablet” (Kt n/k 388, 12-14, *CMK* 101).

### 1.4. The day in figurative expressions

The importance of the day as a point in time is used figuratively in connection with commercial and financial activities (Michel in press). The word *ūmum* may be understood as a metaphor for the settlement date in the expression “his days are over” (*ūmūšu malû*, which means “his time is up”). The construction of *ūmum* with the verb *amārum* has to be translated as: “to see the day of one’s ruin”. Thus, after the death of his father, Šu-Kūbum writes<sup>11</sup>: “May they not be many who would see the day (of the ruin) of the house of our father”. In another letter,

<sup>4</sup> See also TC 3 71, 18-19, *CMK* 206: *u<sub>4</sub>-ma-kâl Bê-lûm-ba-nî, la i-sà-hu-ur té-er-ta-kà*.

<sup>5</sup> For three days, see also BIN 4 77, *CMK* 71.

<sup>6</sup> See also: “We will arrive within ten days”, BIN 6 20, 26-27, *CMK* 334; “in 10 days’ time”, ATHE 32, 23, *CMK* 70.

<sup>7</sup> See also KTH 1, *CMK* 64.

<sup>8</sup> There are many references among which Kt 92/k 203, 7, *CMK* 21: *i-<sup>a</sup>UTU<sup>si</sup> tup-pi-ni ta-ša-me-a-ni* or Kt 83/k 117, *CMK* 44. See also “the day your father will come back” in TC 3 112, 6-7, *CMK* 350: *i-na u<sub>4</sub>-mî-im, ša a-bu-kà : i-lâ-kà-ni*.

<sup>9</sup> See also KTK 6, *CMK* 55.

<sup>10</sup> See also “till this day” in CCT 4 30a, 27, *CMK* 98: *ù a-dî u<sub>4</sub>-mî-im a-[nî]m*.

<sup>11</sup> CCT 2 33, 8-12: *a-wi-lu iš-té-en<sub>6</sub>, ù šé-na la-am-nu-tum a-na, É a-bi<sub>4</sub>-ni da-la-hi-im, i-za-zu a-me-er-ú-um É<sup>et</sup> a-bi<sub>4</sub>-ni, la i-ma-i-du*.

Ahaha writes to her brother: “Accede (to my wish) while you can (still) be obliging (*ūm gamālim*) and while (I can still) be saved (from financial stress, *ūm eṭārim*) and dispatch to me ten minas of silver lest anyone see the day of my (ruin, *mamman ūmi la emaršu*)” (KTH 7, 30-34, CMK 225). In this example, *ūmum* corresponds to a date before which it is still possible to intervene financially to save the economic situation of someone; it can even be seen as a “poverty line”.

## 2. From days to a month

### 2.1. The week

In loan contracts, dates are not expressed in days, but in *hamuštum*. The value of this unit of time has been a matter of dispute for almost a century<sup>12</sup>. The commonly accepted value of the *hamuštum*, a week, was computed by K. R. Veenhof in 1996. The calculation of its length was made possible from a few texts that give at the same time the amount of the debt, the interest rate, the amount of the interest and the number of *hamuštum* for which the interest is due after the settlement date has expired. The result could be compared to the unique *hamuštum* almanach, Kt g/k 118, which seems to give a complete list of 50 to 52 *hamuštum* corresponding to a single year led to a *hamuštum* period of a seven-day week<sup>13</sup>. Each *hamuštum* of this list is named for two merchants<sup>14</sup>. Surprisingly, we have found so far only one *hamuštum* almanach but we have seven *limum* lists for the years (see below § 3.3).

How can a *hamuštum* of seven days be linked with its etymological meaning of 1/5? According to G. Kryszat, those who gave their names to a *hamuštum* had an administrative task and might belong to a larger group of perhaps ten people at the beginning of *kārum* II (and later on five), they would then represent 1/5 of the group (OAS 2: 159-164). According to K. R. Veenhof, this office might have been occupied by junior members of the firms (Veenhof 1996: 26).

In some rare loans made for short periods, the “day”, *ūmum*, appears in relation to the “week” *hamuštum* as in this example: “he borrowed the silver (to be paid) within 15 days in the week of Iddin-abum”<sup>15</sup>. Usually the loan contracts start the first day of the *hamuštum* or of the month since most of the debts result from accounting and balancing operations made on specific days (Veenhof 1996)<sup>16</sup>. A few documents specify number of days within which payment should be made; one loan states for example that the silver should be paid after the termination of one month and two days<sup>17</sup>.

<sup>12</sup> The only consensus which has been made on this word is that it must be derived from the Semitic root “five” HMŠ. The different proposals to equate the *hamuštum* with a number of days are the following: 1/5 of the year because the Akkadian number *hamšum* means 1/5 (Lewy 1939); 50 days or pentecontad (Lewy/Lewy 1943); 10 days: because the original significance is a “committee of five”, the length of a *hamuštum* should have nothing to do with the number 5; the calculations are then based on mathematical data given in the texts (Brinkman 1963); 6 days: *hamuštum* must equal to 1/5 of a month (Jankowska 1967; this proposal was accepted by von Soden in AHw 319b); 5 days because 6 *hamuštum* should equal to one month, which fits the sexagesimal system (Landsberger 1925, Gelb 1935, Balkan 1965; this proposal was accepted by the CAD H 74-75). Most of these authors agree on the observation of the frequent ascending sequence: *hamuštum* – *warhum* – *limum* in the loan contracts dates, which proved that the *hamuštum* consists of less than 30 days.

<sup>13</sup> Veenhof 1996: this tablet is partly broken but according to Veenhof’s reconstruction it would comprise 50 to 52 lines, each line corresponding to a *hamuštum*. Thus, the equation of a *hamuštum* to a seven days week would then be correct because 52 weeks make one year. Memoranda give the data of several loans and the attested number of seven-day week up to 50 (BIN 4 61: 45, 47 and 50 *hamuštum*); numbers over 50 are extremely rare (once 100 *hamuštum*). The most frequent numbers are from 1 to 3, which correspond to a fraction of a month. Numbers 4 and 13 are also frequent because 4 *hamuštum* equal to one month and 13 *hamuštum* = 3 months = ¼ of a year. The maximum number of different *hamuštum* attested during one and the same month (month ix of KEL 89) is four.

<sup>14</sup> This system means that during a single year, a hundred persons would give their names to a *hamuštum* period. But Assyrians gave their names several times within a year. Under the reign of Puzur-Aššur II, around the eponym KEL 98, the *hamuštum* system was simplified, each *hamuštum* being thereafter named for one and no longer two merchants; see Veenhof 1996.

<sup>15</sup> kt 94/k 721, 22-23 (courtesy Larsen): (ana) 15 U<sub>4</sub> : ha-mu-uš-tum, ša l-dt-a-bi<sub>4</sub>-im KÙ.BABBAR al-qé. In other cases, the *hamuštum* is combined with a month name, as in TC 1 3, 20: *hamuštum ša ti’inātim*; this should be understood as the first *hamuštum* of month x.

<sup>16</sup> BIN 4 147, 20-21 quotes the first day of the week (SAG *hamuštum*). For the first day of the month, see below § 2.3.

<sup>17</sup> Kt j/k 90, 6-8 (courtesy C. Günbatti): ITI.KAM, ù U<sub>4</sub> 2 i-qá-ti-ma, KB i-ša-qal.

## 2.2. Half-month and days corresponding to phases of the moon

Between the seven-day week unit and the month, the Assyrians use another time unit which is the *šapattum*. There are about thirty references to the *šapattum* in the documents at our disposal, it is used to precise the date loans. In some of these tablets, *šapattum* is to be translated as “the day of the full moon”, precisely corresponding to the middle of the month: “from the week of Kudādum, the (moon) god having reached the full moon day, month x, eponym KEL 104”<sup>18</sup> or “one month, after the day of the full moon”<sup>19</sup>.

In other cases, the *šapattum* corresponds to half a month, the month being divided in two by the *šapattum* day: the first part of the month has theoretically 15 days while the second part might have 14 or 15 days<sup>20</sup>. K.R. Veenhof suggested that *šapattum* in our texts refers to the first fifteen days of the month ending with the *šapattum* day (Veenhof 1996): “I will take interest for 2 months and a *šapattum* (= half-month)”, the payment should not be made after the full moon<sup>21</sup>. Another example combines *šapattum* not with months but with weeks: “I took interest on 5 minas of silver for 8 weeks and a *šapattum* (half-month)”<sup>22</sup>.

Apart from the *šapattum*, there are very few references, in the loan contracts, to days corresponding to the moon phases (Veenhof 1996):

First day of the month: “from the *hamuštum* of Ah-šalim (the day of) the appearance of the (moon) god (*nāmarti ilim*), within one month they will pay. If not, they shall add interest” (ICK 2 45A, 6).

End of the month: “from the *hamuštum* of Ah-šalim, the (moon) god having disappeared (*ilum ūbilma*)” (ICK 2 196)

“(When) the (moon) god was standing (in the sky) for 5 days (*ilum 5 ūmim issas*)” (AKT 1 35, 10).

The week and half-month periods seem to be used for salary computations in five accounting drafts in which the scribes mention salaries (*igrum*) and food products (oil containers and cuts of meat) together with the signs 7 (week?) and 15 (half-month?) repeated several times and perhaps corresponding to working periods<sup>23</sup>.

## 2.3. The month and the first day of the month

There are also about thirty references to the beginning of the month SAG/*rēš warhim*, which seems to correspond to the first day of the visibility of the new moon<sup>24</sup>:

“From the beginning of the month Te’inātum he will pay in two month’s time” (CCT 1 5a, 4-6)<sup>25</sup>.

<sup>18</sup> Kt 93/k 531, 37-39 (loan between Assyrians): *iš-tù ha-muš-tim ša Ku-da-dim*, DINGIR *ša-pá-tám i-lik* ITL.KAM *Té-i-na-tim*, *li-mu-um A-šur-malik* DUMU *A-lá-hi-im*. It is also used among Anatolians, see for example Kt 93/k 206, 5’-7’: *ša-pá-tám*, *i-li-ik-ma* KÙ.BABBAR, *il<sub>5</sub>-qé-ú*. For other occurrences, see Kt a/k 459, 12-13; Kt a/k 497, 3; Kt a/k 1055, 5; Kt c/k 384, 19; Kt k/k 82, 12; Kt n/k 220, 4; Kt n/k 1647, 6; Kt 87/k 290, 11; Kt 94/k 826; OIP 27, 56, 22.

<sup>19</sup> Kt 89/k 294, 5 (courtesy Y. Kawasaki): ITI 1.KAM *war-ki ša-pá-tim*. See also KTP 45, 7’-9’: *iš-tù ša-pá-tim*, *a-ni-tim a-šf-ib-tim*, *ni-il<sub>5</sub>-qé-ma*.

<sup>20</sup> Two full moon days are separated by 29 ½ days. But Tanret 2004 proposed that all the Old Babylonian months had 30 days.

<sup>21</sup> KKS 12a, 7-8: *ša* ITL2.KAM *ù ša-pá-tim*, *šf-ib-tám a-lá-qé*. See also Kt 94/k 858b, 9-13 (courtesy M. T. Larsen): *u<sub>4</sub>-mu-kà 3* ITL.KAM : *i-tf-qú-ma*, *I-na-ah-DINGIR* : *I-df-Ku-ba-am*, *ú-ša-hi-it-ma* : *ša 2* ITI.KAM, *ú ša-pá-tim 17 1/2* GÍN KÙ.BABBAR *šf-ib-tim*, *il<sub>5</sub>-qé*.

<sup>22</sup> Kt b/k 651 (Balkan 1965: 164): *ša 5* MA.NA KÙ.BABBAR, *ša 8 ha-am-ša-tim*, *ú ša-pá-tim*, *2/3* GÍN 15 ŠE, *šf-ib-tám*, *al-qé*.

<sup>23</sup> See Michel 2008a, and the documents A = KTP 39, Hecker 1993: n°7; B = Kt k/k 23, Hecker 1993: n°8; C = private coll., Donbaz 1990; D = Kt 98/k 107, Donbaz 2001: 109 (*kārum* Ib); E = TPAK 1 209.

<sup>24</sup> According to Durand 2009, in Babylone, *rēš warhim* refers to the end of the month and the beginning of the next month.

<sup>25</sup> References to the beginning (SAG ITI.KAM) of the month are the following. Without mention of the month’s name: Kt 93/k 168, 14. Month i, Bēlet ekallim: Kt m/k 113, 5; Kt m/k 147, 24; Kt k/k 110, 5; Kt 94 k 839, 16; Kt 94/k 841, 18. Month ii, (Narmak Aššur) *ša* Sarrātīm: Kt m/k 123, 13. Month iii, (Narmak Aššur) *ša* Kēnātīm: Prag I 544, 7-8; Kt e/k n56, 17; Kt 91/k 129, 10; Kt 91/k 493, 5-6. Note TC 1 75, 7-8: SAG ITI.KAM, Narmak-Aššur (month ii or iii). Month iv, Mahhur ilī: Kt n/k 205, 4; KKS 26a, 5-9. Month vi, Hubur: AKT 1 19, 6-7; KTS 2 1. Month vii, Šip’um: Kt n/k 659, 5; Kt n/k 1940, 15. Month viii, Qarrātum: KTBI 4, 10-15; Kt a/k 900b, 3; Kt a/k 978b, 10; Kt b/k 143, 4. Month ix, Kanwarta: Kt a/k 888, 5; Kt 93/k 442, 8-9. Month x, Te’inātum (this month is called Šin during the Ib period): KKS 30a. Month xi, Kuzallum: AKT 3 11, 13; Kt c/k

But most of the time there is no precision and one should suppose that when a date starts from a named month, this means “from (the beginning of) the month”. In fact, the basic meaning of *warhum* is “the new moon”.

The Old Assyrian months are named after cultic and seasonal events (see note 25). They are usually used in the loan contract dates, but time computation by month may also be used in letters where the *hamuštum* system is seldom mentioned. Note that many letters come from Aššur while the *hamuštum* system is used in the *kārums* in Anatolia. In a letter addressed to her son Aššur-taklāku, who has been detained by the local palace, Ab-šalim writes: “Here, we heard that since month Mahhur-ilī (iv) they detain you (...) since month Kuzallum (ix) I have not received any help” (Kt 93/k 296). More often, the merchants calculate time elapsed by adding months, just as they do with days (and with years): “Five months ago, your father left for Qabrā... and till now he is not back” (TC 3 112, CMK 350).

### 3. From months to a year

#### 3.1. Anatolian seasonal dates

In Anatolia, debt notes are not always using the Old Assyrian calendar but can be dated after important events such as the death or accession of a local ruler<sup>26</sup>, or after the agricultural calendar. The loan contracts using the agricultural calendar are predominantly those concerning Anatolians and dealing with barley. They follow the many agricultural events from seeding to threshing and refer to seasons as *daš’ū* “spring” or *harpū* “summer” (Veenhof in OBO 160/5: 238-245).

Seasons had an important impact on trade. In Anatolia during the summer, the entire population took part in the harvest and had less time to trade with the Assyrians. In winter time, roads between Upper Mesopotamia and Anatolia were closed and caravan traffic stopped during for four months (Michel 2008b).

#### 3.2. New year’s Day

A silver debt excavated in 1990 at Kültepe proposes an equation between the seasonal calendar and the Old Assyrian months. The loan runs “from the spring, month Šip’um (vii), from the week of Aššur-ṭāb, year eponym of Ennam-Aššur” (KEL 113, TPAK 1 98). According to this document, the seventh month in the Old Assyrian calendar, Šip’um, fell in spring (March-June, OBO 160/5: 243); this would mean that the first month, Bēlet-ekallim (i), fell in autumn (September-December). Thus, the Old Assyrian year may have started the day of the autumnal equinox (22-23 September), if we consider that Šip’um was the first month of the spring.

#### 3.3. The solar year and intercalary months

In Aššur, years were named after eponyms. Over the past decade, seven copies of Aššur eponyms list (Kültepe Eponym List, KEL), covering both *kārum* level II and Ib periods, have been identified and published (Veenhof in *OALE*, Günbattu 2008a and 2008b). The new eponym was chosen in Aššur by lot, so it was impossible to know in advance the name of the new eponym and, since the information had to travel to Anatolia, it is common that during the first months of the year dates referred to the name of the previous eponym: *līmum ša qāti* PN, “the eponym following PN”. We find mentions of *ša qāti* eponyms during the first four months of the year (Veenhof 1996 and 2000, OAAS 2). This means that the Assyrian calendar was based on the solar year.

As the Assyrians were using lunar months with a solar year, they sometimes need to add sometimes an intercalary month. If the year started on the day of the autumnal equinox, then we expect the addition, some years, of a

425, 15; Kt 93/k 529, 24. I could not find references for months v (Ab šarrāni) and xii (Allānātum).

<sup>26</sup> ICK 1, 178, 2-4: “When Labarša became king” or Kt n/k 716, 12-13: “When Asu, king of Luhusaddia had died”.

thirteen month after Allānātum (xii), so that the first day of Bēlet-ekallim (i) stays correlated with the autumnal equinox. K. R. Veenhof proposed that the Assyrians might have doubled the last month of the year without changing its name, a tradition still surviving in the Middle Assyrian period (Veenhof 2000). Since the new eponym was chosen during the first months of the year, the references to *ša qāt līmu* during month xii (in KEL 92, 93, 97, 99 and 107) might refer to a second month xii. He also pointed out the existence of three references to a month Zibiba/urum, at least, two of them corresponding to very late dates in the year, after month xii. They occur during KEL 81 and 84, at any interval years, suitable for months to fit with the solar year.

The day holds a special place in the Kültepe archives, being the smallest unit of time of the Old Assyrian calendar. Contrary to Old Babylonian practice, it is generally absent from loan contract dates, which prefer weeks, months and years. Based on lunar months and the solar year, the Old Assyrian calendar uses a quite unusual division of the month into weeks that might have been inspired originally by the phases of the moon, starting first with the full moon, *šapattum*, also used for half a month, and then with half a *šapattum*, corresponding to a week of seven days.

## Bibliography

The Old Assyrian abbreviations used in this paper are those listed in OAAS 1 [C. Michel, *Old Assyrian Bibliography of Cuneiform Texts, Bullae, Seals and the Results of the Excavations at Aššur, Kültepe/Kaniš, Acemhöyük, Alişar and Boğazköy*, Leiden, 2003] and OAB 1 [C. Michel, *Old Assyrian Bibliography 1* (February 2003 – July 2006)», *AfO* 51 (2005-2006), 436-449]. Some are repeated here for the convenience of the reader.

- Balkan 1965 K. Balkan. "The Old Assyrian Week", *Studies in Honor of Benno Landsberger on his Seventy-Fifth Birthday* (Eds. H.G. Güterbock / Th. Jacobsen). Chicago: 159-174.
- Brinkman 1963 J.A. Brinkman. "New Evidence of Old Assyrian *hamuštum*", *Orientalia* 32: 387-394.
- CMK C. Michel. *Correspondance des marchands de Kaniš au début du II<sup>e</sup> millénaire avant J.-C.* Paris. 2001.
- Donbaz 1971 V. Donbaz. "The Old Assyrian Month Name Kanwarta", *Journal of Cuneiform Studies* 24: 24-28.
- Donbaz 1984 V. Donbaz. "New Evidence on the Reading of the The Old Assyrian Month Name Kanwarta with an Edition of the Memorandum Kt c/k 839", *Jaarbericht van het Vooraziatisch- Egyptisch Genootschap Ex Oriente Lux* 28: 3-9.
- Durand 2009 J.M. Durand. "La pratique de la tēbitum dans l'hépatoscopie de Babylone», *Nabu Nouvelles Assyriologiques Brèves et Utilitaires* 2009/09.
- Gelb 1935 I.J. Gelb. *Inscriptions from Alişar and Vicinity*. Chicago.
- Günbattu 2008a C. Günbattu. "An Eponym List (KEL G) from Kültepe", *Studies (Karl) Hecker*: 103-132.
- Günbattu 2008b C. Günbattu. "A List of Eponyms (KEL D) from Kültepe", *Old Assyrian Studies in Memory of Paul Garelli* (Ed. C. Michel). Leiden: 125-135.
- Innāya C. Michel. *Innāya dans les tablettes paléo-assyriennes*, Paris. 1991.
- Jankowska 1967 N.B. Jankowska. "A System of Rotation of Eponyms of the Commercial Association at Kaniš", *Archiv Orientální* 35: 524-548.
- Kupper 1996 J.R. Kupper. "Les différents moments de la journée, d'après les textes de Mari", *Tablettes et images aux pays de Sumer et d'Akkad. Mélanges offerts à M. H. Limet* (Eds. Ö. Tunca / D. Deheselle). Liege : 79-86.
- Landsberger 1925 B. Landsberger. *Assyrische Handelskolonien in Kleinasien aus dem dritten Jahrtausend*. Leipzig.
- Lewy 1939 J. Lewy. "The Assyrian Calendar", *Archiv Orientální* 11: 35-46.
- Lewy / Lewy 1943 H. Lewy / J. Lewy. "The Origin of the Week and the Oldest West Asiatic Calendar", *Hebrew Union College Annual* 17: 1-146.
- Michel 2008a C. Michel. "Écrire et compter chez les marchands assyriens du début du II<sup>e</sup> millénaire av. J.-C.", *Muhibbe Darga Armağam* (Eds. T. Tarhan / A. Tibet / E. Konyar). Istanbul: 345-364.
- Michel 2008b C. Michel. "Les pérégrinations des marchands assyriens en haute Mésopotamie et en Asie Mineure", *Res Antiquae* 5: 371-388.
- Michel (In press) C. Michel. "Le langage figuré dans les lettres paléo-assyriennes: expressions relatives à l'homme et à la nature", *Language in the Ancient Near East, LIII<sup>e</sup> Rencontre Assyriologique Internationale, 23-28 juillet 2007 Moscou – Saint-Pétersbourg*. (Eds. L. Kogan et all.).
- OAA 1 M.T. Larsen. *The Aššur-nādā Archive*. Leiden. 2002.
- OAAS 2 G. Kryszat. *Zur Chronologie der Kaufmannsarchive aus der Schicht 2 des Kārum Kaneš*. Leiden. 2004.
- OALE K.R. Veenhof. *The Old Assyrian List of Year Eponyms from Karum Kanish and its Chronological Implications*. Ankara. 2003.
- OBO 160/5 K. R. Veenhof. "The Old Assyrian Period", *Annäherungen* 5. *Orbis Biblicus et Orientalis* 160/5, Teil 1, (Ed. M. Wäfler), Fribourg-Göttingen: 13-264.
- Tanret 2004 M. Tanret. "What a Difference a Day Made...: On Old Babylonian Month Lengths", *Journal of Cuneiform Studies* 56: 5-12.
- Veenhof 1982 K.R. Veenhof. "Babylonian Expressions for 'Over/at a Distance of ...'", *Jaarbericht van het Vooraziatisch- Egyptisch Genootschap Ex Oriente Lux* 27: 65-75.
- Veenhof 1996 K.R. Veenhof. "The Old Assyrian *hamuštum* Period: A Seven-day Week", *Jaarbericht van het Vooraziatisch- Egyptisch Genootschap Ex Oriente Lux* 34: 5-26.
- Veenhof 2000 K.R. Veenhof. "Old Assyrian Chronology", *Akkadica* 119-120: 137-150.
- Veenhof 2001 K.R. Veenhof. "The Old Assyrian Period", *Security for Debt in Ancient near Eastern Law* (Eds. R. Westbrook / R. Jasnow), Leiden: 93-159.
- Veenhof 2008 K.R. Veenhof. "Communication in the Old Assyrian Trading Society by Caravans, Travelers and Messengers", *Old Assyrian Studies in Memory of Paul Garelli* (Ed. C. Michel). Leiden: 199-246.