

The Sogdian calendar

In Sogdiana the 365-day calendar was in continuous use, side by side with a **lunisolar** calendar. The Sogdian kings used a **solar** year calendar with an additional month after a certain period. “The Sogdian system of intercalation agreed with the practice of the Persians, as also did their neglecting intercalation.”¹ This “solar” year was divided into four **seasons**:

- I. *Vartē* ‘spring’. The first day of the month Məšβōγ was the first day of spring. This first month of spring was also called Taymic ‘the month of the crops’.
- II. *Āminē* ‘summer’. The first day of Nausarδ, called Nōgrōc ‘new-day’, announced the beginning of summer.²
- III. *Xazān* ‘autumn’. “It is said that Xazān is not a Sogdian expression, although the Sogdians use it, but a Tuxārian one, and the Tuxārians regard it as a sign of change of the weather towards cold. There is a private autumn feast which is on the 16th day of the (Persian) month Šahrever (= the 11th day of Xazānānc), and a public autumn feast on the 2nd day of the month Mihr (= th 26th day of Xazānānc). It seems that both of feasts concern the beginning of the wine-press and the treading of the grapes.”³
- IV. *Zamē* ‘winter’.

The first day of each **lunar month** beginning at sunset is the day of the astronomical New Light. The first Sogdian lunar month occurs in the month Nausarδ; but the first month of the Uyyur lunar calendar corresponds to the first Chinese month. Each lunar year has twelve regular months, which are numbered in sequence; only the twelfth month is called *Caxšāpəδ Māx* ‘month of commandment’ (Uyy. *čaxšapat ay*). Every second or third lunisolar year has an intercalary month, the first day of which may fall in the last month or in the Epagomenae of the “solar” year. It has the same number as the preceding regular month, but is designated intercalary.

Month-names (*māx* ‘moon; month’):

- 1 *Nau-sarδ* ‘new year’ / *Nausarδic* (Uyy. n’wsrδynč)
- 2 *Xorežn(ic)* (Barčuq-Sak. *ahverjana*, Uyy. xwrsynynč)

¹ . ۱۳، ۵، الآثار الباقية، بيروني، (Sachau, 57).

² . See Bērōnī,

بيروني، الآثار الباقية، ۱۰، ۱: "وكان أول نوسرد من شهور السغد، وأول الصيف."

³ . ۲۶۷-۶۸، ۱۳۵۳، تهران، التفهيم، بيروني،

See also ۳۵-۳۶، ۹، الآثار الباقية، بيروني،

- 3 *Nisan(ic)*⁴
- 4 *Pusāk(ic)* (Uyγ. ps'kyč/ ps'kynč)
- 5 *Šnā(k)-Xand(ic)* (Uyγ. šn'xntynč)
- 6 *Xazānānc/ Məzē(x)-Xand(ic), Məzē(x)-Xandā* (Uyγ. m'zyγtyč)
- 7 *Bayakān(ic)/ Bayakānc* (**Bayakāna-/*Bayakānānc*)⁵
- 8 *Āpānc* (**Āpānānc*)
- 9 *Bōγ(ic)/ Bōγc*
- 10 *Məšβōγ(c, ic), Taymic, Məs-Bōγ/ Məsβōγ(ic, c)*
- 11 *Žimdic/ Žimdā*
- 12 (ə)*Xšūm(ic)* (Uyγ. 'xšwmšpyč)

Epagomenæ *Ve-Pancak*. The five additional days were added at the end of the year, i.e., after the month of Xšūm.⁶

The days of the Sogdian months were called like in the Avesta.

Day-names (*mēθ* 'day', *rōc* 'id.')

- 1 ^ə*Xurmazd(a) rōc*
- 2 ^ə*Xuman(a) rōc*
- 3 *Artxušt* (**artx'əšt*) *rōc*
- 4 ^ə*Xševār* (**Xšševār*) *rōc*
- 5 ^ə*Spandārmāt/δ rōc*
- 6 ^ə*Rtāt* (**Rutāt*) *rōc*
- 7 *Mərtāt/ Murtāt rōc*
- 8 *Āš-δatš/ Āš-δašci rōc/ Δatš/Δašci* (*əftəm* 'the first')
- 9 *Āš rōc / ārt rōc*
- 10 *Āβox rōc*
- 11 *X'ar/ X'ər rōc/ Mīr rōc*
- 12 *Māx rōc*
- 13 *Tiš rōc*
- 14 *Γōš rōc*
- 15 (*Məzēx-*)*δatš/ δašci rōc, Γōš δašci rōc/ (δəβdy* 'the second')
- 16 *Mišē rōc/ Bəγe rōc*
- 17 *Srōš rōc*
- 18 *Rašn rōc*
- 19 *Fravart(īn) rōc*
- 20 *Vəšayn(ā) rōc*

⁴. If this word comes from Babylonian *Nisannu*, then it was adopted in the third century before our era (when the month Nisan of the "movable" year fell in March-April). See B.I. Marshak, « The Historico-Cultural Significance of the Sogdian Calendar », *Iran*, XXX, 1992, (145-54), 145.

⁵. From OIr. **bagakāna-* 'festival of Baga (or festival of the God)' corresponding to the Old Persian month Bāgayādi, Armen. Mehekani (**miθrakāna-* 'festival of Miθra'), and Pers. Mihr (**miθra-*).

⁶. Bērōnī has given two separate series of these five days:

خاوشت شت (ز. خاوش ست)؛ انخندن؛ وحشن (ز. رخشن)؛ وناذن؛ اردم تیش (ز. اردم ییس).

ژنورد (ز. ژنورد)؛ بنورد؛ سرد رد؛ ماخ رد؛ میررد.

- 21 *Rām rōc*
- 22 *Vāt rōc*
- 23 *Δatš/ Δašci rōc/ (əštīk ‘the third’)*
- 24 *Δēn/ Δēne rōc*
- 25 *Artixu rōc*
- 26 *Aštāt rōc*
- 27 ²*Smān rōc*
- 28 ²*Zmōxtuγ rōc*
- 29 *Manspand rōc*
- 30 *Nayran rōc*

Epagomenal days:

- 1 *Nayran rōc*
- 2 ²*Xurmazd(a) rōc*
- 3 *əXuman(a) rōc*
- 4 *artxušt rōc*
- 5 ²*Spandārmāt/δ rōc*

In the Uyğur fragments the first day of the lunar month was specified by counts of days in Chinese sexagenary cycles. A fragment of a Sogdo-Chinese calendar also is extant. In the later Sogdian calendar years were counted by the cycle of twelve animals.⁷ The Sogdian calendar lists indicate the moment of the appearance of the moon in each month of the Sogdian “movable” year.

Year names in the animal cyle:

- 1 *Mūš sarδ (mūš ‘rat’)*
- 2 *Γāv sarδ (γāv ‘cow, ox’)*
- 3 *Muyū sarδ (myw ‘tiger’)*
- 4 *Xaryōše sarδ (xaryōš ‘rabbit’)*
- 5 *Nāk sarδ (Skt. nāga- ‘snake, serpent-demon’)*
- 6 *Kirm sarδ (kirm ‘worm; snake’)*
- 7 ²*Spe sarδ (əsp ‘horse’)*
- 8 *Pāse sarδ (pās ‘cattle, shee’)*
- 9 *Makar sarδ (Skt. markāṭa- ‘monkey’)*
- 10 *Mərye sarδ (məγ ‘bird’)*
- 11 *Kute sarδ (kut ‘dog’)*
- 12 *Kās sarδ (kās ‘pig, pork’)*

The Sogdian transcription of the **ten stems** (Chinese: *tiāngān*) is thus:

⁷. « Un texte bouddhique de caractère astronomique traduit en 759 et 764 et où les influences iraniennes abondent dit que, “dans les pays d’Occident, on compte les années avec les douze [animaux] dépendant de la série *tseu, tch’eou*, etc., et qu’on compte la semaine au moyen des luminaires stellaires”. ... les vraisemblances ... sont pour que les ‘pays d’occident’ ici visés soient les pays iraniens et en particulier la Sogdiane. » P. Pelliot, « Neuf notes sur des Questions d’Asie Centrale », *T’oung Pao*, XXVI, 1929, II. Le plus ancien exemple du cycle des douze animaux chez les Turcs, (204-212), 204.

- 1 k'p (Uyγ. kap, Chin. *jiǎ*)
- 2 'yr (Uyγ. ir, Chin. *yǐ*)
- 3 pyy (Uyγ. pi/ pii, piŋ, Chin. *bǐng*)
- 4 tyy (Uyγ. ti, tiŋ, Chin. *dīng*)
- 5 bw (Uyγ. buu, Chin. *wù*)
- 6 kyy (Uyγ. ki, Chin. *jǐ*)
- 7 kyy (Uyγ. qi, qiŋ, Chin. *gēng*)
- 8 syn (Uyγ. tsin, sin, Chin. *xīn*)
- 9 jym (Uyγ. ž/zim, āžim, Chin. *rén*)
- 10 kwy (Uyγ. küi, Chin. *guǐ*)

The **five “elements”** corresponding to the Chinese Wu Xing are:

- 1 *ḍārūk* ‘wood’ (Chin. *mù*)
- 2 *ātər* ‘fire’ (Chin. *huǒ*)
- 3 *xurm* ‘earth’ (Chin. *tǔ*)
- 4 *zērn* ‘gold’ (Chin. *jīn* ‘metal’)
- 5 *āp* ‘water’ (Chin. *shuǐ*)

The association of the twelve animals with the five elements is thus:

	<i>zērn</i>	<i>āp</i>	<i>ātər</i>	<i>xurm</i>	<i>ḍārūk</i>
<i>mūš</i>	1	13	25	37	49
<i>γāv</i>	2	14	26	38	50
<i>muyu</i>	39	51	3	15	27
<i>xaryōše</i>	40	52	4	16	28
<i>nāk</i>	17	29	41	53	5
<i>kirm</i>	18	30	42	54	6
<i>°spe</i>	31	43	55	7	19
<i>pəse</i>	32	44	56	8	20
<i>makar</i>	9	21	33	45	57
<i>mərye</i>	10	22	34	46	58
<i>kute</i>	47	59	11	23	35
<i>kās</i>	48	60	12	24	36

The civil day and the lunar month in these two calendars are different. The Chinese civil days are reckoned from midnight to midnight; the Sogdians used both morning epoch in their 365 vague year calendar and evening epoch for the reckoning of the days of lunar months (that is, days were reckoned from sunset to sunset). The first day of the Chinese month is the day on which the Sun and the Moon are astronomically conjunct (“New Moon”); the Sogdians (or, rather, the Manichaeans of Sogdiana) reckoned the “lunar” months from the first visibility of the moon (“New Light”). However, the beginning of the lunar month in two Sogdian fragments (M 147 and M 796) coincides with the “Dark Moon” of the Chinese calendar.

The Manichaeans designated lunar days of the week by number and Šambəd, with only the sixth day, Āḍēne, having a specific name.

We also find a system of planetary week: days of the week are designated by the names of the “seven planets”. In the calendar tables the week days are numbered in sequence (1 to 7).

The names of **weekdays**:

Ēv-šambeδ ‘Sunday’: *Mihr-žamənu/ Mīr(-žamənu)* (*mīr* ‘Miθra; sun’)

Δva-šambeδ ‘Monday’: *Māx-žamənu* (*māx* ‘moon’)

°Θre/ Še-šambeδ ‘Tuesday’: *Vəšayn/ Vənxān (-žamənu)* (*vəšayn* ‘Mars’)

Caťfār-šambeδ ‘Wednesday’: *Tīr* (*tīr* ‘Mercury’)

Panj-šambeδ ‘Thursday’: *Urmazd (-žamənu)* (*urmazd* ‘Jupiter’)

Ādēne ‘Friday’: *Nāxīδ (-žamənu)* (*nāxīδ* ‘Venus’)

Šambeδ ‘Saturday’: *Kēvān (-žamənu)* (*kēvān* ‘Saturn’)

In historical records, **dates** were specified by counts of years from a succession of eras established by reigning kings. In these later texts, the “Era of Yazdegird” is mentioned. We should notice that the Sogdian calendar differs from the Persian calendar with regard to the beginning of the year and the beginnings of the five additional days. The first day of the Sogdian year was five days after that of the Persian year. Bērōnī explains this discrepancy thus:

“They did so for no other reason but this, that they honoured their kings to such a degree that they would not do the same things which the kings did. They preferred to use as New Year that moment when Jam (Yima) returned successful, whilst the kings preferred as New Year that moment when Jam started (set out).

Some people maintain that these two different New Years were to be traced to a difference that was discovered in the astronomical observations. For the ancient Persians used a solar year of 365 days 6 hours 1 minute, and it was their universal practice to reckon these hours plus the 1 minute as a unit (i.e. to disregard the 1 minute in reckoning).

But afterwards, when Zardušt (Zoroaster) appeared and introduced the religion of the Magi, when the kings transferred their residence from Balx (Bactria) to Persis and Babylon and occupied themselves with the affairs of their religion, they ordered new observations to be made, and then they found that the summer solstice preceded by five days the beginning of the year, which was the third year after intercalation. In consequence, they gave up their former system and adopted what astronomical observation had taught them, while the people of Transoxiana kept the old system and disregarded the state of that same year (i.e. its deviation from real time), on which their calendar was based. Hence the difference of the beginnings of the Persian and the Sogdian years.

Other people maintain that originally both the Persian and Sogdian year had the same beginning, until the time when Zardušt appeared. After Zardušt the Persians began to transfer the five Epagomenæ to each of the leap months, as we have before mentioned. The Sogdians

left them in their original place and did not transfer them. So they kept them at the end of the months of their years, whilst the Persians, after they began to neglect intercalation, retained them at the end of the month *Ābān*. God know best.”⁸

The Persian and Sogdian eras are:

Persian: Yazdegird 1: Fravardīn 1, Kali day 1363598 (JD 1952063), 632 June 16, Tuesday.

Sogdian: Yazdegird 1: Nausarōic 1, KD 13635603 (JD 1952068), 632 June 21, Sunday.

The difference of 5 days caused the difference of dates (Persian and Sogdian A. Y.): The year before A.D. 632 June 21 is A.Y. 1. For example:

A.D. 988 March 24 is the beginning of A.Y. 358 (Uyy. N° 9);

A.D. 998 March 22 is the beginning of A.Y. 368 (Sogd. M 148).

Thus the later Sogdians did not know when exactly the Sogdian calendar disrupted its agreement with the Persian calendar. The Sogdians indeed kept the older system; and as I have shown elsewhere, the difference appeared after the last reform of the Persian calendar at some time in the Sasanian period (probably about A.D. 500).

Concerning the **festivals** (Sogd. *āyām*) in the months of the Sogdians Bērōnī has written one chapter in his *Vestiges of the Past* (الآثار الباقية). We also have to hand other reports in Chinese and Persian.

1 Nausarō:

“The first day of this month is called *Nōgrōc* ‘new-day’, which is the Great New Year Day.

“The 28th day is a feast for the Magians of Buxārā, called Rāmiš-āyām, during which they assemble in a Fire-temple in the village Rāmiš. These festivals are the most important of the festivals, which they celebrate alternately in each village, assembling in the house of each chieftain, eating and drinking.”⁹

“Every fifteen days there is a fair in this village (*Viraxša*), but when the market is at the end of the year they hold it on the 20th day. The Twenty-first day is then New year’s day, and they call it the New Year’s day of the farmers (نوروز کشاورزان). The farmers of Buxārā reckon from that (day) and count from it. The New Year’s day of the Magians (نوروز مغان) is five days later.”¹⁰

3 Nisan:

“The 12th day is the first m’xyrj.”¹¹ (*Māx-rōc* ‘the day of moon’)

“The people of Buxārā call the Sogdian months the first, the second, and the third, and do not call them by their proper names; in

⁸ . ۱-۳ ، ۱۰ ، الآثار الباقية، بيروني، (Sachau, 220-221).

⁹ . ۴ ، ۱۰ ، الآثار الباقية، بيروني، (Sachau, 221).

¹⁰ . تاريخ بخارا، (Ch. Scheffer, *Chrestomathie persane*, I, Paris, 1883, 31; R.N. Frye tr., *The History of Bukhara*, Cambridge, 1954, 13).

¹¹ . ۵ ، ۱۰ ، الآثار الباقية، بيروني، (Sachau, 221).

these they hold bazars, among which are the first and second m'xyrh, at which we are told stolen articles are sold, all counterfeit things are brought and no returns are made.”¹²

“In Buxārā ther was a bazar called the bazar of Māx. Twice a year for one day there was a fair, and every time there was this fair idols were sold in it.”¹³

4 Pusāk:

“The 7th day the bykng (*Paykanc*) *āyām*, a feast of theirs at Paykanδ, where they assemble.

The 12th day is the second m'xyrj.

The 15th day is the feast *Γafs-x'āra*, when they eat leavened bread after abstaining from eating and drinking and from everything that is touched by the fire except fruits and vegetables.”¹⁴

5 Šnāxand:

“The 18th day is the feast *f'nh-x'āra*, also called *Bāmī-x'āra*, i.e. drinking the good, pure must.

The 26th day is *krm-x'āra*.”¹⁵

6 Məzēxand:

“The 3rd day is the feast *Kəšmēn*, when they hold a fair in the village *kəmjkaθ*.

On the 15th day they hold a fair in Arkūd (Arab. *Ṭawāwīs*). There the merchants of all countries gather and hold a fair of seven days duration.”¹⁶

“The fair of *Ṭawāwīs*, a large and prosperous town (in the district of Buxārā), lasts for seven days from the 15th day of *Məzēxandā* the sixth month.”¹⁷

“In the former times there used to be a fair for ten days in the season of *Tirmāh*¹⁸. The rule of that fair was such that all defective goods, such as curtains, covers, and other goods with defects, were sold in this fair. There was no way or means to return goods in the fair, for neither the seller nor the buyer would (return or) accept them back on any condition.”¹⁹

7 Bayakān:

“The first day is called *Nēm-sarδ* (نیم سرده), i.e. the half of the year.

¹² . بیرونی، التفهیم، ۲۶۶ .

¹³ . (Frye, 20) نرشخی، تاریخ بخارا، ۴۳ .

¹⁴ . (Sachau, 221) بیرونی، الآثار الباقية، ۱۰، ۵ .

¹⁵ . (Sachau, 221) بیرونی، الآثار الباقية، ۱۰، ۵ .

¹⁶ . (Sachau, 221) بیرونی، الآثار الباقية، ۱۰، ۵ .

¹⁷ . بیرونی، التفهیم، ۲۶۶ .

¹⁸ . *tīr-māh* means here, not ‘the month of Tīr’, but ‘autumn’.

¹⁹ . (Frye, 13) نرشخی، تاریخ بخارا، ۳۱ .

The 2nd day is a feast called mn‘yd (myazd?)-x^vāra, when they assemble in their fire-temples and eat a certain dish which they prepare of the flour of millet (جاورس < Pers. *gāvars*), of butter and sugar.²⁰

Some people put Nēm-sarō five days earlier, i.e. on the first day of the (Persian) month Mihr, to make it agree with the Persian calendar.

The 9th day is the feast ysns (/ tsys)-āγām.

The 25th day is the first day of krm-x^vāra.”²¹

8 Āpānc:

“The 9th day is the last day of krm-x^vāra.”²²

10 Məšβōγ:

“From the 5th till the 15th of this month they have a feast.”²³

Bērōnī adds: “After that the Muslims hold a fair of seven days in Cary.” However, Muḥammad ibn Ja‘far attributes this fair to older times: “They had a market here (in Cary) in the olden days, where every year for ten days in the winter people came from far districts to trade and bargain ... In our time there is a market every Friday and merchants come from the city and surrounding districts.”²⁴

11 Žimdā:

“The 24th day is the b’δ’z/(m)k’m.”²⁵

12 Xšūm:

“On the last day of this month the Sogdians cry over those who died in past times, they lament over them and lacerate their faces. They lay out for them dishes and drinks, as the Persians do in Fravardīgān.

For the five days, which are the stolen (intercalary) days to the Sogdians, they fix at the end of this month.

Besides, the Sogdians hold fairs in the villages of Buxārā and Suyd on those days that have only one name in every month (i.e. the 8th, 15th and 23rd, which are called *Datš*).”²⁶

Wei Jie, a high-ranking servant of Yangdi (604-617) of the Sui dynasty, who travelled as head of a diplomatic mission to the western foreign lands and wrote the “Record of the Western Barbarians” (*Xifan ji*), says about the kingdom of the Sogdians (Kangguo) this²⁷:

« Les gens du royaume de K’ang sont tous d’habiles commerçants; quant un garçon atteint l’âge de cinq ans, on le met à l’école des livres ; quand il commence à les comprendre, on l’envoie étudier le commerce ; gagner des bénéfices est considéré par la plupart des habitants comme une chose excellente. Ces gens aiment la musique.

²⁰ . Possibly the ceremonial tasting of the Drōn.

²¹ . ٦ ، ١٠ ، الأثار الباقية، بيروني، (Sachau, 221).

²² . ٧ ، ١٠ ، الأثار الباقية، بيروني، (Sachau, 222).

²³ . ٧ ، ١٠ ، الأثار الباقية، بيروني، (Sachau, 222).

²⁴ . ٣٤-٣٥ ، تاريخ بخارا، (Frye, 15).

²⁵ . ٧ ، ١٠ ، الأثار الباقية، بيروني، (Sachau, 222).

²⁶ . ٨ ، ١٠ ، الأثار الباقية، بيروني، (Sachau, 222).

²⁷ . Preserved in the book of Du You, *Tongdian*, ciciiii.

Ils font du premier jour du sixième mois le commencement de l'année. Lorsqu'arrive ce jour, le roi et le peuple revêtent tous des habits nouveaux et se coupent les cheveux et la barbe ; au pied d'une forêt qui est à l'est de la capitale, on tire de l'arc à cheval pendant sept jours ; lorsqu'arrive le dernier jour, on place une pièce de monnaie en or sur la feuille de papier (servant de cible) ; celui qui l'atteint a droit à être roi pendant un jour.

Ils ont coutume de rendre un culte au dieu céleste et l'honorent extrêmement. Ils disent que l'enfant divin est mort le septième mois et qu'on a perdu son corps (littéralement : ses ossements) ; les hommes chargés de rendre un culte au dieu, chaque fois qu'arrive ce mois revêtent tous des habits noirs formant des plis ; ils vont pieds nus, se frappant la poitrine et se lamentant ; les larmes et la pituite coulent en se mêlant (sur leurs visages) ; des hommes et des femmes, au nombre de trois à cinq cents personnes, se dispersent dans la campagne pour rechercher le corps de l'enfant céleste ; le septième jour, (cette cérémonie) prend fin.

En dehors de la capitale il y a, logées à l'écart, plus de deux cents familles qui ont la spécialité de s'occuper des funérailles ; ces gens ont construit dans un endroit isolé une enceinte dans laquelle ils élèvent des chiens ; chaque fois qu'un homme est mort, ils vont prendre son cadavre, le placent dans cette enceinte, et le font dévorer par les chiens ; après cela on recueille tous les ossements qu'on enterre en leur faisant un convoi funèbre ; on ne les met dans aucun cercueil. »²⁸

If the saying of Wei Jie be accepted à la lettre, then it may relate to the Sogdian year beginning in A. D. 621, June 24 (Wednesday) which fell on the first day of the 6th month of the Chinese calendar (56-18-06-01).²⁹ The next month, Xorežn (≈ Pers. Urdvahišt) corresponded to the 7th Chinese month in Wei Jie's days. We do not find a particular important festival in this month in any Persian or Arabic source. Wei Jie more probably spoke of the 7th Sogdian month, Bayakān, and not of the 7th Chinese lunar month. These two Sogdian festivals of the first and seventh month were the principal festivals of the year, and corresponded to the Persian ones, Nōgrōz and Mihragān. The account on Sogdiana in the New Book of Tang (*Xīn Tángshū*) shows more details than that in the *Xifan ji*: "They take the 12th month as the beginning of the year. They honor the Buddhist religion; and they worship the god of heaven (Ahura Mazdā). They are also skilled craftsmen. In the 11th month they drum and dance, seeking the cold to drive off the evil. They splash each other with water in fun way."³⁰ The 12th month of this account corresponded to the 7th Sogdian month, the first day of which was called Nēmsarō, 'half-year' day, and it was considered as the New Year's day.

The ceremony of mourning for the "divine child" as reported by Wei Jie was compared by A.N. Belenitskij with the mourning for

²⁸ . traduit par É. Chavannes, *Documents sur les Tou-kiue (Turcs) occidentaux*, St.-Pétersbourg, 1903, « Notices sur la Sogdiane » (132-147), 133.

²⁹ . I prefer an earlier date: A.D. 610, June 27 (Saturday) which fell on the first day of the 6th « Sogdian lunar » month (Chin. 56-07-06-03).

³⁰ . Ouyang Xiu, Song Qi, *Xin tang shu*, transl. by Chavannes, op. cit., 135.

Tammuz³¹; W. B. Henning saw in it a “fair description of Adonia”.³² But in A.D. 621, the month of Tammuz corresponded to the first Sogdian month Nausarδ, and also to the 6th Chinese month –the third day of Nausarδ fell on the first of Hebrew Tammuz, 4381. We know two ceremonies of mourning in Sogdiana from other sources: one, for Syāvaršan –every year before the rising of the sun, on the New Year’s day, every person in Buxārā brought a cock to the citadel and killed it in memory of Syāvaršan-³³; the other, for somebody on a bridge, performed by Nana the Lady accompanied by her women.³⁴

The two-day Manichaean fasts are mentioned in some Sogdian and Uyğur calendar lists: Sogd.-Uyğ. *yimki* / Parth. *yamag* (from O.Ir. *yama-* ‘twin’, GAv. *yāma-*). These fasts (Pers. *yimagānīg rōzān* ‘days of Yimki fasts’) were fixed according to the luni-solar calendar.³⁵

Terminology of the Sogdian calendar:

βayē nāvē ‘New God’³⁶ is used as a synonym of *māx nāvē/ nāvē-māx* ‘New Moon’.

panjūg (Uyğ. *pnčw*) 1/5, a fraction of an hour (1 *panjūg* = 12 minutes, or 72 *ratu*); *panjūgān* ‘fifths’ (T ii D 66).

ratu (Uyğ. *qolu*) ≈ 10 seconds. The order of *ratus* is thus :

72, 72, 216, 216, 0, 0, 144, 144, 288, 288

Pers. (Sogd. frag. T ii D 66.a) *bun-marag ī māh* ‘the basic number of the moon’ (Ōtani 6191 *yīšō* ‘*bunmarag*’; Uyğ. *ay tāñri bun sanı* ‘the basic number of the Moon God’). It is expressed as $x y/5^h$.

Sogd. (M 767 i 9) *mišē βayē βunmarag* ‘the basic number of the sun’ (Pers. *bunmarag īg x^y arxšēd*, Uyğ. *kün tāñri bun sanı* ‘the basic number of the Sun God’). It is expressed as $x y/4^d$.

sayt/ saxt ‘passed’ used in dates for the days of the month

Ex. D (Pelliot Chi. 2782)³⁷:

pr βyy n’ m m’kr srδ wxšmyk m’xy

20 syδ’

‘In the name of God. (In) the Monkey year, (in) the sixth month, on the 20(th day) passed (= the day 20).’

tasūg (Uyğ. *tsw*) ‘quarter’ of a “solar” day

xartē ‘passed’ used in dates (Uyğ. *ärtmištā*).

Ex. (T ii D 66 a): *iv-šmbδ xšp’ 9-myk jmny’* ◦ ◦ 288 *rtw xrtyh* ‘Wednesday night 9th hour 288 *ratu* passed’ = Wednesday, 02 :48.

pnzšmbδ myδyy ◦ ◦ 9-myk *jmny’* ◦ ◦ 288 *rtw xrtyh* ‘Thursday day 9th hour 288 *ratu* passed’ = Thursday, 14:48.

³¹ . See B.I. Marshak, 151.

³² . W.B. Henning, « A Sogdian God », BSOAS, 1965, (242-54), 252.

³³ . ٤٧، ٣٨، تاريخ بخارا، نرشخی، See also دیوان لغات الترک، کاشغری، (Besim Atalay, Ankara, 3, 1941, 111/150).

³⁴ . We only have to hand a Manichaean testimony (M 549). See Henning, “The Murder of the Magi”, JRAS, 1944, (133-44), 142-44.

³⁵ . See ٣٣-٣٤، كتاب الفهرست، G. Flügel, Leipzig, 1871)

³⁶ . Cf. Yt 7.5 *māñhām ... bayām raēvantām* ‘the moon ... the rich god’.

³⁷ . See N. Sims-Williams & J. Hamilton, *Documents turco-sogdiens du IXe-Xe siècle de Touen-houang*, CII, Part II, vol. III, 1990, 39-40.

žamənu ‘time; hour’

Uyg. **uluy** ‘grand, big’; **kičig** ‘small’ (Pers. *kōcak*). The Uyğur fragments specify the length of the day of the month in which reappears the light of Moon: when the thin crescent of the New Moon after conjunction becomes visible after sunset, it is “big”; and when the new light appears during the day, it is “small”.

xvarsan ‘sunrise’, the time of sunrise was taken to be at 6 am; **nēmēθ** ‘midday, noon’ (Uyg. Hamilton: *myðnč’ty*, Yutaka: *myð’wnty*); **xvartəxiz** ‘sunset, **xšām** ‘evening’, the time of sunset was taken to be at 6 pm; **γrān-xšām** (Uyg. *γr’nxš’m/ γr’n ’xš’m*) ‘deep evening’; **nēmexšab** ‘midnight’.

Calculations are based on the meridian 66° 56' 51" East (Samarkand) and 89° 30' East (Qočo/ Čīnānčkanθ).

Raham Asha