

On the *Kabīsa* of the Saffarid Amīr Khalaf ibn Aḥmad

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Abstract The Persian *risāla* titled *Nawrūznāma* is a classical work of *adab*, featuring an account on the history of Iranian calendar and materials (notices, anecdotes etc.) about courtly and popular customs linked with the Iranian New Year Day. Here we will discuss an isolated notice about an intervention on the solar calendar of the Iranian tradition performed by Khalaf ibn Aḥmad, *amīr* of Sīstān. The inaccuracy of the *Nawrūznāma* on historical and astronomical matters does not reduce the importance of this ancient source as a literary work, revealing of its own time's mindset. In fact, the text gives us a plausible clue about the importance of the long reign of Khusraw I for the history of Persian chronology, thus supporting some of the hypotheses traced out by modern scholars. Moreover, it recounts of actual celebrations of the beginning of Spring – to be called Nawrūz – at the time of Abbasid caliph al-Ma'mūn. The conclusion is that, although roughly, the *Nawrūznāma* not only corroborates other extant sources on the existence of alternative – or parallel – ways of time-reckoning in the Iranian world, but also opens the way for a more precise reconstruction of the relation between a well-ordered social life and kingly governance, that, in Seljuk times, was going to be increasingly thought as essential.

Keywords Khalaf ibn Aḥmad. Nawrūz. Kabīsa. Nawrūznāma. Iranian calendar. Zoroastrian calendar.

In the first part of a *risāla* attributed to 'Umar b. Ibrāhīm al-Khayyām(i) and titled *Nawrūznāma*¹ (hereinafter *NN*) after the main topic discussed in it, there is a brief report on the reform of the Iranian calendar ordered in 1075 CE by Jalāl al-Dawla Malikshāh al-Saljūqī (r. 465-485 H./1072-1092 CE). As it is well known, the necessary operations were carried out by a

1 The *risāla* is preserved in two extant manuscripts, the Berlin Ms. (hereinafter B) Staatsbibliothek Cod. Or. 8° nr. 2450 (copied in 1365 CE according to Rosen 1930, 5, 16; but according to Mīrzā Muḥammad Khān Qazwīnī, it is “decisively not posterior to the 7th c. of Hijra [13th c. CE]”; see Mīnawī 1312/1933, 30; cf. Minorsky 1936, 1054), and the London Ms. (L in the follow) British Library Add. 23,568. The authorship of this *risāla* is attributed to al-Khayyām(i) only in the incipit of the Berlin Ms. (the incipit is missing in the London Ms.). The title *Nawrūznāma* does not appear in the London Ms., where the work is generically titled *Risāla dar taḥqīq-i nawrūz* (Treaty on the Nawrūz). A short passage of *NN* is preserved at pp. 620-1 of a miscellaneous work, specially containing texts from the Zoroastrian tradition, written in 1718 CE by the Parsee savant Rustam Gushtāsp Ardashīr. The passage was published by Unvala (1900, 235); an abridged English translation of it is available in Unvala 1908, 202-4.

commission of astronomers, to which the presumed author of the *NN* took part too.² The astronomers fulfilled their work in 1079 CE. Since then, the Spring equinox day (15 March 1079 CE) has been considered as the first New Year Day (Nawrūz) of the new calendar. This new solar calendar has been called with several attributes (*jalālī*, *malikshāhī*, *sulṭānī*, *malikī*) after the name or in honour of the Seljuk ruler. From that time onwards, Nawrūz fell on a date to be yearly individuated on the basis of the astronomical observation of the exact moment in which the Sun apparently reaches the Spring equinoctial point. This system to determine the beginning of the year is officially in use nowadays in the Islamic Republic of Iran and the Islamic Republic of Afghanistan.

In the *NN* the brief report on Malikshāh's reform is preceded by a section,³ featuring a long account on Nawrūz and its history since the institution until the final positioning on the Spring equinox. So, this account gives us a picture of the traditional history of the Iranian calendar, since its quite mythical beginnings until Seljuk times. In this para-historical reconstruction, the first historical figures we meet are Alexander the Great and two of the most outstanding Sasanian kings, Ardashīr I and Khusraw I. Then, one after the other, we are told about all the adjustments – may they be only attempted or successfully carried out – on the Iranian calendar the author of the *NN* knew.⁴ Doing so, he gives us some generic notices on the well-known research activity in the field of astronomy at the court of the Abbasid caliph al-Ma'mūn, on the reform of the fiscal calendar (which was based on the Iranian calendar) denied by al-Mutawakkil, and on the famous reform of the fiscal calendar carried out under al-Mu'taḍid. Then, immediately before mentioning the momentous reform ordered by Malikshāh al-Saljūqī, he shortly mentions a reform carried out in southeastern Iranian regions by the Saffarid *amīr* Khalaf ibn Aḥmad. The passage is as follows:

After that [i.e. the calendrical reform ordered by al-Mu'taḍid], the *amīr* of Sīstān Khalaf ibn Aḥmad did another intercalation (*kabīsa*). Nowadays, starting from Nawrūz, there are sixteen days of difference from where it was at that time, but it is not clear to me how it happened.⁵

2 So according, for instance, to the *Kitāb al-tuḥfat al-shāhiyya fī al-hay'a* by Quṭb al-Dīn Maḥmūd al-Shīrāzī (d. 1311), and other Arabic and Persian works. On this matter, see Taqizadeh 1939, 108-17.

3 B ff. 78a-105b; L ff. 86a-101b (892 H./1487 CE).

4 For example, the author of *NN* does not mention the shifting of the five epagomenal days (*panja*, *andargāh*, *khamṣa al-mustaraqa*) in the Iranian calendar, occurred around 1006 CE in some Iranian regions.

5 The English translation is mine. Probably, the ending part of this passage (“... but it is not clear to me how it happened”) is a gloss, because it appears in the London Ms. only: “Wa pas az ān {L: shanīd ki} Khalaf ibn-i Aḥmad-i amīr-i Sīstān kabīsa-yi dīgar bikard {B: ki}

Khalaf ibn Aḥmad ruled over the Sīstān in the last part of the tenth and the beginning of the eleventh century CE.⁶ At that time, the Nawrūz of the traditional solar calendar ended up, after more than a millennium, to coincide with the first degrees of Aries, because of its slow backward motion. The exact moment of such a momentous coincidence⁷ is the period 1004-1007 CE. However, in that period Khalaf – who was still alive – was not ruling any more over the Sistanic region, that had fallen under the rule of Maḥmud al-Ghaznawī in 1003 CE.

From a more general perspective, in those times in the oriental regions of the Islamic world a fundamental calendrical reassessment happened. Indeed, the five epagomenal days of the Iranian calendar, that since the Sasanian age (at least since the time of Khusraw I and afterwards) were placed between the eighth and the ninth month of the traditional calendar, were shifted to the end of the twelfth month. Then, Nawrūz moved back again, gradually coinciding four years by four years with the 30°, the 29°, the 28°... of Pisces.

Now, the *NN* is the sole available source on a Khalaf ibn Aḥmad's *kabīsa*,⁸ and the nature of this presumed *kabīsa* is not clear. Indeed, which sort of calendrical intervention was the one attributed to Khalaf? And what does the author mean by speaking of "sixteen days of difference"? Moreover, it is noteworthy that the text does not speak of other famous reforms or readjustments of the Iranian calendar, such as that of the aforementioned shifting of the five epagomenal days. The paucity of information given by the *NN* can be summed in the following two data: the name of the responsible of the *kabīsa* (Khalaf ibn Aḥmad) and a number of days (16) between two ill-defined calendrical occurrences (Nawrūz and the moment of the year in which it occurred "at that time"). On this basis, one can speculate which pieces of information the author of the *NN* had: was he aware of the name of the ruler who ordered the *kabīsa*, and deduced the number of 16 days? Or, on the contrary, was he aware of that number of days of difference from the last *kabīsa* – that of Malikshāh? – and this number let him to find out Khalaf as the one who ordered the former *kabīsa*?

aknūn shānzdah rūz {B: -i} {L: az nawrūz} tafāwut az ānjā karda-st {L: ammā chigūnagī-yi ān ma-rā muqarrar na-gasht}"; see B f. 83a; L f. 89b (the words between curly brackets are only in the given manuscripts).

6 Khalaf ibn Aḥmad, *amīr* of Sīstān (r. 352-393 H./963-1002 CE; d. 399 H./1009 CE), has been the last reigning ruler of the Khalafid stock of the Saffarid family; on this figure see Bosworth 2011.

7 Celebrated by one of the most beautiful still existing monuments of that time, the so-called *Mīl-i Qābūs* in the modern Iranian city of Gonbad-e Kāvus. On this matter see Cristoforetti 2016.

8 It is noteworthy that the *NN* does not mention the shifting of the five epagomenal days from the end of the eighth month to the end of the year in the Iranian calendar happened when Khalaf was still alive.

More than ten years ago, I wrote some pages on the matter, taking into account that isolated notice and offering three possible explanations for the questions that it arose. The matter was not fully decided, and all the three hypotheses proposed there were equally acceptable.⁹ Now, having completed an Italian translation of the *risāla* on the basis of both the existing manuscripts (Cristoforetti 2015), I have to ask the following methodological question: does this notice have more credibility in term of historicity just because, being isolated, it is not denied by any kind of sources? In other cases (see below), we can easily note that the author of the *NN* is not accurate. Consequently, the notice on Khalaf should not be taken neither as more nor as less accurate than others from the same source. Therefore, I think that is possible to give a convincing explanation of the quoted passage of the *NN* by following step by step the very account on the Iranian calendar given by the author of the *risāla*.

In order to adequately introduce the reader to the way the matter is exposed in the text, I will resume below some passages from the initial part of the *NN* regarding the history of the Iranian calendar, and containing relevant information on the calendrical matter in relation to the aforementioned question. *Ça va sans dire*, the omitted passages report mostly traditional information on the ancient kings and the other figures quoted in the text, and contain also materials – some of these of extreme interest for their links to Zoroastrian, Indian and Hellenistic traditions – on astronomical and astrological aspects of the Iranian calendar.

At the beginning of his report, the author of the *NN* explains the primordial, ideal connection existing between the first day of the year of the Iranian calendar (i.e. Nawrūz) and the Spring equinoctial point (1° of Aries). Then, he gives the measure of the solar tropical year as 365.25 days, and mentions the fact that the solar year of 365 days only (the solar 'vague' year) is the basis of the Iranian calendar, explaining the 1,461-yearly cycle depending on it. This is the main cycle of the Iranian calendar and the measure of time Nawrūz needs to regain its ideal position at the Spring equinox after moving backward throughout all the four seasons of the year (indeed, the aforementioned employ of the solar vague year in the calendar implied a slow backward motion of Nawrūz accounting for one day every

9 I exposed the matter at the 5th Conference of the Societas Iranologica Europæa (held in Ravenna, Oct. 6-11, 2003). The hypothetical explanations I offered in that occasion were all in relation to the reform carried out by the *Khwarazmshāh* Abū Sa'īd Aḥmad ibn Muḥammad ibn 'Irāq ibn Manṣūr (for the uncertain dates of his reign, see Fedorov 2000, 73-4). As noticed by Bīrūnī in his *Kitāb al-āthār al-bāqīya* (see Abū Rayḥān Bīrūnī 1879, 229-30), in 1270 *Æra Alexandri* (958-959 CE) that reform fixed the New Year Day of the local solar calendar at the beginning of the Syriac month *Nisān* in coincidence with the 19° of Aries. On the whole matter, see Cristoforetti 2006.

four years with respect to a fixed seasonal point).¹⁰ This great calendrical cycle is called “the cycle of the calendar of Gayūmarth” by the author of the *NN*;¹¹ and this is the first clear indication of the way the author sees the whole matter: the right seasonal position of Nawrūz is at the Spring equinox and the history of the Iranian calendar is marked by long cycles determined by its return to that seasonal point.

Then, after mentioning the deeds of the first kingly figures of Iranian tradition (Gayūmarth, Hūshang, Ṭahmūrath), he speaks of king Jamshīd and his long, fabulous reign. According to the text, it was on the 421th year of his reign that the first day of the Iranian year for the first time after 1,461 years regained its original position at the Spring equinox. Therefore, Jamshīd named that day Nawrūz, i.e. ‘New-Day’,¹² and instituted its yearly celebration at the beginning of the first month of the calendar in order to remember such an epochal coincidence.

After the fall of Jamshīd and the millennial reign of the usurper Bīwarāsb, then the time of the righteous Afrīdūn followed. In 164th year of Afrīdūn’s reign the second cycle of the Gayūmarth’s calendar came to an end. After “his epoch and those of the other kings”, it was the time of the king Gushtāsp, the last pseudo-historical figure mentioned in this reconstruction of the history of the Iranian calendar. His 30th year was the moment of the coming of Zoroaster, coinciding with the 940th year of the third cycle of the Gayūmarth’s calendar. This was a time of big changes in the calendar, because the king ordered to displace Nawrūz in coincidence with the first degree of Cancer (Summer solstice) for both religious and fiscal purposes, and introduced an intercalary mechanism (*kabīsa*) in the Iranian calendar.¹³ The mechanism worked by the insertion of one month every 120 years (indeed, $0.25 \text{ day} \times 120 \text{ years} = 30 \text{ days}$), in order to maintain Nawrūz in an acceptable proximity to the beginning of Summer (= 1° of Cancer). This practice was performed until the time of Alexander the Great. With the mention of Alexander the Great the ‘mythical’ part of this history of the Iranian calendar comes to an end.¹⁴

10 I recently discussed this passage; see Cristoforetti 2014, 146-7 and note 5.

11 “Dawr-i ta’rīkh-i Gayūmarth”; see B f. 82a l. 3; L f. 88b l. 19.

12 Looking at this story, it could be fathomed that “naw-rūz” is an elliptic form of a more precise expression such as “the day of the new cycle”, see B: f. 81a-b; L: L f. 88b.

13 “Gushtāsp ordered to do a *kabīsa* [...] because the [1° of] Cancer is the Ascendant of the World, and for landowners and farmers it is easier to pay taxes in that moment” (B f. 82b ll. 4-5; L f. 89a ll. 13-14). On the Ascendant of the World in Zoroastrian tradition, see Raffaelli 2001. The equity of the fiscal levy is a leitmotiv in the sources on the calendrical reforms of the Abbasid period. On this matter, see Borroni 2015, 156-62.

14 The text seems to suggest that during the Zoroastrian age, since the king Gushtāsp and afterwards, nothing changed in the calendar.

In the following part of his account, the author of the *NN* calls *kabīsa* every kind of intervention on the calendar,¹⁵ and this is the second clear indication of the way the author understands the whole matter: when a king operated on the calendar, he did a *kabīsa*, i.e. he brought the wandering Nawrūz of the Iranian calendar back to its 'rightful' seasonal position. It is to note that this second part of the account lacks any kind of reference to the great cycles of Gayūmarth's calendar, not to say any reference to other calendrical systems.

As usual in the Iranian tradition, the Arsacid period is underrepresented in the text, and the passage on Alexander is followed by the account on two historical figures pertaining to Sasanian times, Ardashīr I (r. 224-241 CE) and Khusraw I (r. 531-579 CE). The first of the Sasanians, Ardashīr, did the *kabīsa*, and the custom was regularly performed until the reign of Khusraw I ('Nūshīn Ruwān the Righteous'). The last – surprisingly enough – did not put into effect the requested *kabīsa*, and ordered to allow Nawrūz to move backward until it would reach the Spring equinox, i.e. the position it occupied at the time of the ancient kings Gayūmarth and Jamshīd.

After this point the author briefly relates on what happened during the Islamic age. The aforementioned passage on the *kabīsa* of Khalaf ibn Aḥmad is to be found in this part of the *NN*. So, I offer here an English translation of the text regarding the Sasanian age afterwards:¹⁶

The time of Ardashīr, the son of Pābag, arrived. He did the *kabīsa* with a great festival, and regulated the matter putting it in writing, and celebrated that day. The custom continued until the time of Nūshīn Ruwān the Righteous. When the palace (*īwān*) of Ctesiphon was finished, he did Nawrūz and followed the habit of celebrating it as it was customary. But he did not the *kabīsa* and said: "Let the norm be like this up until the end of the cycle, when the Sun will return to the beginning of Farwardīn [i.e. Aries].¹⁷ Indeed, the remote scope of the original Nawrūz was certainly not that the Sun should enter in the first degree of Cancer [at Farwardīn], so to abolish what Gayūmarth and Jamshīd indicated!"

15 On the meaning of the term *kabīsa*, see Cristoforetti 2009.

16 B f. 82b l. 15-f. 83a l. 13; L f. 89b ll. 3-16. Omitted passages are indicated by [...]; the words between square brackets are mine.

17 As in other passages of the text, Farwardīn is here synonymous with Aries. The author of the *NN* uses the word 'Farwardīn' with two different meanings; in some cases, he uses it in order to indicate the historical Farwardīn (i.e. the first month of the solar vague Iranian calendar, moving backward throughout the seasons), and in some other cases he uses it *sic et simpliciter* as synonymous with Aries. This last meaning can be explained by making reference to the idea of a rightful calendar of the origins (the same one employed at the time of the author of the *NN*), in which the month of *Farwardīn* coincided with Aries (in a passage, he clearly shows this way of thinking, speaking of a Farwardīn as "Sun's own", see B: f. 81a ll. 12-13, L: f. 88a ll. 17-18).

He said so, and did not the *kabīsa*.¹⁸

The time of caliph Ma'mūn arrived. He ordered to do astronomical observations and commanded to celebrate Nawrūz yearly, when the Sun is coming in Aries. He prepared the astronomical tables which are named after him and on which basis the calendar is established up till now.¹⁹

The time of Mutawakkil 'alā-Allāh arrived. Mutawakkil had a minister named Muḥammad ibn 'Abd al-Malik, who told him that the fiscal levy occurred in a moment far from the harvest, causing the people to suffer, and the kings of Persia were accustomed to do a *kabīsa*, so that the year was [periodically] put back in order and paying taxes was easier for the people; indeed, [by doing so, at Nawrūz] they would have crops in abundance. Mutawakkil neither agreed nor changed his mind afterwards.

The time of Mu'taḍid arrived, and his minister Abū al-Qāsim 'Ubaydallāh ibn Sulaymān ibn Wahb²⁰ posed him again the question of the *kabīsa*. He agreed and ordered to do a *kabīsa*, bringing the Sun back from Cancer to Farwardīn.²¹ The people came to be well again, and the custom kept.

After that, the *amīr* of Sīstān Khalaf ibn Aḥmad did another *kabīsa*. Nowadays, starting from Nawrūz, there are sixteen days of difference from where it was at that time, but it is not clear to me how it happened.

They informed the prosperous sultan Mu'izz al-Dīn Malikshāh – *may God render bright his evidence* – on the matter. He ordered to do a *kabīsa*

18 This passage in Berlin Ms. is partially missing a line (this gap was probably due to close presence of two identical series of words in the original, i.e. "ki āftab bi-awwal..."); the text is as follows: "wa guft īn ā'in {B: bi-jā mānad} {L: bi-jāy mānid} tā {B: bi-} sar-i dawr {L: ki āftab bi-awwal-i farwardīn āyad chi maqṣūd-i andarnahād-i nawrūz-i aṣlī na īn būda ast} ki āftab bi-awwal-i saraṭān āyad tā ān ishārat {B: -i} {L: ki} Gayūmarth u Jamshīd {L: kardand az meanie} bar khīzad; īn {L: bi-} guft u {L: bīsh} kabīsa nakard"; see B f. 82b ll. 13-15; L f. 89a l. 21-89b ll. 1-3 (the words between curly brackets are those of the indicated manuscripts).

19 No doubt, it is a reference to *The Ma'munic Astronomical Table (al-Zīj al-ma'mūnī li-'l-mumtaḥin)*, a work dedicated to caliph al-Ma'mūn, presenting the results of the astronomical observations carried out in Baghdād during the first years of the ninth century CE by a commission directed by the astronomer Yaḥyā ibn Abī Maṣṣūr (d. 830 CE ca.). Only some fragments of this work are still existent, and they are preserved in the first ff. of the *Codex Arabe 927* of Escorial; see Kennedy 1956, 10.

20 'Ubaydallāh ibn Sulaymān ibn Wahb (d. Rabī II 288 H./April 901 CE) has been *wazīr* under caliph al-Mu'tamid and remained in charge when al-Mu'taḍid became caliph; see Sourdel 1959, 329.

21 As in other passages of the text, here too Farwardīn is synonymous with Aries.

and to put the calendar back in order, to get the most learned men of his time to come from Khurāsān, to construct any sort of instruments needed for the astronomical observation, as mural quadrants, armillary spheres and suchlike, and to bring Nawrūz back to Farwardīn. However, destiny did not allow the king the time he needed, and the *kabīsa* remained unfinished.²²

In this second part of the account on the calendar, one can easily see how the attention of the author swings between an astronomical approach to the matter (al-Ma'mūn, Malikshāh) and a fiscal one (al-Mutawakkil, al-Mu'taḍid). Both themes have been already exposed during the retelling of the history of the Iranian calendar offered by the author in the first section of the *NN*. Being presented from the beginning of the text onwards, the 'rightful' Nawrūz as the 1° of Aries (Spring equinox) is the main theme, shaping the decrees of the first ancient kings, and, later, the project of Khusraw I. The theme of a fair fiscal levy occurring at the beginning of the month of Cancer (Summer solstice) appears with the king Gushtāsp and his *kabīsa*. At any rate, the two positions are mutually incompatible, and there is some confusion in the way the various calendrical operations are exposed and on what was their scope.

Coming back to the main question posed by Khalaf's *kabīsa*, in order to try and answer the questions posed above (why there is an isolated mention of Khalaf's *kabīsa* in the sources? Which sort of calendrical intervention was that performed by Khalaf? And what does the author mean by speaking of "sixteen days of difference"?), I think that one should pay special attention to the passages in which the author speaks of Khusraw I and al-Mu'taḍid, in both cases mentioning the zodiacal month of Cancer.

According to the author of the *NN*, Khusraw I did not agree to do a *kabīsa* - which at that time was necessary as the text clearly suggests. So doing, the king abolished the intercalary custom introduced by Gushtāsp,²³

22 The questions posed by this statement have been discussed by a number of scholars, such as, for example, Mīnawī (1933, 24) and Rosenfeld (2002, 898). In my opinion, it is probably understandable as a cautious echo of the harsh reaction against the partisans of the late Nizām al-Mulk (d. Ramaḍān 485 H./Oct. 1092 CE), the powerful minister of Malikshāh, arranged by the widow of the Seljuk ruler Turkān Khātūn and her minister Tāj al-Mulk immediately after his death. One can speculate, indeed, that in the period of disorders immediately after the unexpected death of Malikshāh, preceded by about a month by his minister's, the new calendar was no more officially used. At any rate, the famous astronomical observatory built at this purpose in Iṣfahān was completely abandoned and destroyed. On the importance of this observatory for solar observation, see Dallal 2002, 145.

23 In a very broad sense, this statement of the text can be considered historically correct. Indeed, from that time afterwards the Iranian calendar was no more object of structural modifications at least until 1006-1007 CE, when the five epagomenal days were displaced from the place they occupied in the time of Khusraw I between the 8th and the 9th month

who did so in order to maintain Nawrūz in an acceptable correspondence with the beginning of Cancer for reasons of fiscal justice. The refusal by Khusraw I of the needed *kaḇīsa* was dictated by his desire to restore the custom of the ancient kings. Indeed, by avoiding to intercalate a month every 120 years (or “to do *kaḇīsa*”) in order to maintain the first month of the calendar in coincidence with the zodiacal month of Cancer, Nawrūz would start again to slowly move back throughout the seasons, returning to the 1° of Aries, where it was in the ancient times.

In the following part of the text – where al-Ma'mūn and al-Mutawakkil are mentioned – the author did not speak openly of *kaḇīsa*, until the reign of al-Mu'taḍid. He “did the *kaḇīsa*”, and brought back Nawrūz “from Cancer to Farwardīn (= Aries), and it went well for the people”; but this statement openly contradicts what the author had previously said regarding king Gushtāsp about the problem of a fair fiscal levy at the beginning of Summer. Moreover, the notice is historically inaccurate. Indeed, contrary to the statement of the author of the *NN*, the scope of the reform carried out by al-Mu'taḍid had not been the positioning of Nawrūz at the beginning of Spring – even though Nawrūz was actually fixed. In 895 CE, indeed, Nawrūz – which occurred on 12 April – was displaced into a fix date of the Syriac calendar, i.e. 11 Ḥazīrān (11 June).²⁴ At that time, this last date coincided with 1 Khurdād, the third month of the Iranian calendar. Consequently, from the Iranian calendrical perspective, Nawrūz has been simply *posticipated* of two months (from 1 Farwardīn to 1 Khurdād). Then, the author of the *NN* seems not to be fully acquainted with the technical reasoning of the reform of al-Mu'taḍid, since he just knows that at that time a reform (*kaḇīsa*) of the Iranian calendar was carried out by the Abbasid caliph. At any rate, he was acquainted with the advantage the people obtained by means of it! Does this all mean that he was likewise unaware of the year in which the reform occurred? It is a fact that at the beginning of Khusraw I's reign Nawrūz occurred around the 19° of Cancer, and at the beginning of al-Mu'taḍid's reign it occurred around the 28° of Aries. Moreover, the author of the *NN* notices very precisely the names of both the ministers involved in the matter. However, the mention in both cases of the zodiacal month of Cancer and *kaḇīsa* can unveil the way of thinking of the author. Indeed, the time elapsed between the beginning of the reigns of these rulers is 360 years, equivalent to three intercalary turns ($120 \times 3 = 360$), and this number of years is linked to the month distance between Cancer and Aries, or, in other words, to the number of months

of the calendar (this is the *communis opinio* attested by the Arabic astronomical tradition) to the end of the 12th month.

²⁴ The aforementioned contradictory statement by the author about the well-being of the people would have found a better context here, as commentary to al-Mu'taḍid's intervention on the calendar.

(3) that would be affected by how many *kabīsas* (3) had been rendered necessary by the elapsing of 360 years.²⁵

Even if the author does not give any dating in his account, this fact does not necessary mean that he was completely unaware of the informal chronology known at his time, such as that about the reigns of the last Sasanians kings and the Abbasid caliphs, i.e. of “the kings of Persia”, as they are collectively presented in the text.²⁶

Now, let us pass to the case of the reform of al-Mu‘taḍid and the role that its exact dating may or may not have played in these matters. The date of the reform is 282 H./895 CE.²⁷ If the author interpreted the reform of al-Mu‘taḍid as a *kabīsa* displacing Nawrūz from Cancer to Aries, he necessarily considered it a triple *kabīsa*, i.e. a *kabīsa* valid for three intercalary turns, amounting to 360 years. So then – our author may have thought – by subtracting this number of years from the year in which the reform was carried out, one can find the year of the precedent *kabīsa*, that is the fifth year of the reign of Khusraw I.²⁸ On this point, it is noteworthy that our text presents the Nawrūz celebrations and the skip of a *kabīsa* by Khusraw I as subsequent to the end of the building of Ctesiphon *īwān*, that is some time after the beginning of his reign. Otherwise, starting from the year of al-Mu‘taḍid’s enthronement (Rajab 279 H./ Oct. 892 CE), one finds the second year of the reign of Khusraw I as moment of the precedent *kabīsa*.

25 For ease of reading, in what follows the given calculations refer exclusively to the Christian era, because the *NN* does not give explicit chronological references. At any rate, the reform of al-Mu‘taḍid was carried out in the year 264 of the era of Yazdgard III, and the first Nawrūz of the new calendar of Malikshāh has been celebrated in coincidence with 19 Farwardīn of the year 448 of the era of Yazdegard III.

26 See B f. 83a ll. 15-16; L f. 89b ll. 17-18.

27 Bīrūnī, *The Chronology of Ancient Nations*, 37-9; al-‘Askarī, *Kitāb al-awa’īl*, 220. A complete listing of Arabic sources on the matter is available in Borroni 2015, 183-6.

28 In the Persian work titled *Gayhān-shinākht*, based on the *Tatimmat shiwān al-ḥikma* by ‘Ayn al-Zamān Abū ‘Alī Ḥasan ibn ‘Alī al-Qaṭṭān al-Marwazī (d. 548 H./1153-1154 CE), and composed in the first part of twelfth century CE, it is said that the last *kabīsa* had been carried out at the time of Khusraw I, when the Sun entered in the 1° of Aries in the month of Ābān; see *Gayhān-shinākht*, 240-1. According to the tradition reported by Fakhr al-Dīn Injū in his *Farhang-i Jahāngīrī* (*apud* Taqīzada 1937-1938, 27 note 63), the last *kabīsa* had been carried out by the Persians during the reign of Khusraw I. This tradition is coherent with the statement by ‘Abd al-Jabbār al-Thābitī al-Kharaqī, author of the *Muntahā al-idrāk fī taqāsīm al-aflāk* (Ms. Or. 110 of the Biblioteca Medicea Laurenziana in Florence, f. 93b l. 13), who speaks of a *kabīsa* in the 24th year of the reign of Yazdgard III, since 120 years before that date was the year 535 CE, the 5th of the reign of Khusraw I. In a Persian astronomical work titled *Sharḥ-i sī faṣl* (Commentary to the Thirty Chapters), that is probably an anonymous commentary to *Sī faṣl dar ma’rifat-i taqwīm* by Khwāja Nasīr al-Dīn-i Ṭūsī composed in 824 H./1421 CE, it is said: “until the turn of kingship came to Anūshīrwān [i.e. Khusraw I]. He intercalated the month of Ābān and posed the five epagomenal days at the end of Ābān”; see the quotation from Ms. Add. 7700 of the British Museum Library in London, in Taqīzadeh 2014, 268.

If I am correct in believing that this had been the way of thinking of the author of the *NN*, then it becomes possible to explain the passage concerning the last *kabīsa* carried out before the one ordered by Malikshāh. In fact, if the author of the *NN* interpreted the nature of the reform of al-Mu'taḍid as a simple dislocation of Nawrūz on the Spring equinox on the basis of a rough calculation of the intercalary turns elapsed after Khusrau I, it would make sense to presume that he thought in a similar fashion that the next *kabīsa* happened 120 years (i.e. one intercalary turn) either after the first year of al-Mu'taḍid's reign or after the year of his reform. In the first case we have 1012 CE, in the second 1015 CE. On the basis of similar dates, a simple calculation (maybe too simple, but in accordance with the general attitude of the text) of the years elapsed between 1012/1015 and 1076/1079²⁹ gives 64, and dividing it by 4 in order to reckon the number of days Nawrūz moved back through the seasons, one gets 16, that is the number of days indicated by the author of the *NN*.

At this point, however, a problem with the chronology presumably came out. On one hand, that presumed 'traditional' *kabīsa* (1012 or 1015 CE) occurred later than the death of the Saffarid *amīr* Khalaf, who, on the other hand, was a famous maecenas and a pious learned man, whose biographic data were unlikely to be unknown. And this could very well explain the uncertainty expressed by the copist of the London manuscript: "but it is not clear to me how it happened".³⁰

The appearance of a famous figure – such as Khalaf was – in connection to a *kabīsa* derived from some sort of calculation can not be considered surprising. As H. Taqizadeh said, "this genre of deductions based on pure calculation – not so infrequent in the works of some ancient authors of the Islamic age – is not to be considered as a historical truth or, conversely, as a mere legend" (Taqizadeh 1937-1938, 37 note 68; transl. mine). Even if the possibility that, during the reign of the Saffarid *amīr* Khalaf, in the Sīstānīc

29 According to the surviving fragment of the astronomical tables (*Kitāb al-zīj al-malikshāhī*) by al-Khayyām(i) (see 'Omar Chajjām 1961-1962, 177-9 for the facsimile of the Ms. 5968 ff. 224a-225a of the Bibliothèque National in Paris, and 225-35 for a Russian translation of the fragment) and other sources (see Abdollahy 1990, 670) Friday 9 Ramaḍān 471 H./15 March 1079 CE (= 19 Farwardīn 448 Yazdegerdī) is the official starting date of the new reformed calendar. It is plausible that the enterprises for the reform of the calendar started yet in 1075 CE (445 Yazdegerdī), but the sources disagree both on the date of the issue of the sultanial decree appointing a special commission of astronomers and on the names of the involved scholars. At any rate, in 1076 CE the Nawrūz was no more celebrated at the court on 26 February, but on 15 March, in the vernal equinox day; see Taqizadeh 1939, 108-17.

30 If the quoted words are not a gloss, contrary to what was suggested above, the historical proximity of Khalaf's reign to the moment in which the author of the *NN* puts the composition of the text (written – as it seems to be understood – little time after the end of Malikshāh's reign) could also explain this apparent uncertainty; however, this would leave unexplained the lack of those same words in the Berlin manuscript.

region some sort of intervention on the fiscal calendar (that was based on the solar traditional calendar) could have been carried out is not to be excluded,³¹ the main focus of the author's attention may not be the *amīr* himself. It is possible that his name came out for mere reasons of prestige³² in connection with a rough calculation of the intercalary turns the author supposed had elapsed.³³ In the *NN*, this rough – and implicit – calculation is clearly connected to a political attempt to praise the righteous and just sovereign, which is the main purpose of this text. In fact, all mentioned *kabīsas* are connected to great kings of the past, who operated thusly in order to guarantee equity and justice for the people. In such model figures one can easily recognize the one of the Saljuk ruler Malikshāh, who must have played an important part in the planning of the text. Since he speaks of the “unfinished” *kabīsa* of Malikshāh (see above), the composition of this work should be dated to the years immediately following the death of Malikshāh, and it may be the work of an exponent of the Nizāmiyya, the partisans and clientes of the descendants of the Seljuk vizier Nizām al-Mulk, who died just a month before his master.³⁴

31 For an account about the interventions carried out in the neighbouring Buwayhid territories at the half of the tenth century CE by Rukn al-Dawla and, later (after 373 H., 984 CE), by Ismā'il ibn 'Abbād, *wazīr* of Fakhr al-Dawla, see *Ta'rikh-i Qumm*, 144-5. The famous learned man Ismā'il ibn 'Abbād al-Tālaqānī was friend and personal assistant of the Buwayhid ruler of Iṣfahān and Rayy Mu'ayyid al-Dawla – the brother of Fakhr al-Dawla and 'Aḍud al-Dawla –, and became his *wazīr* only after the death of his father, Rukn al-Dawla, in 366 H. (976 CE). Then, after the death of 'Aḍud al-Dawla (372 H., 983 CE) and Mu'ayyid al-Dawla (373 H., 984 CE), he became *wazīr* of Fakhr al-Dawla; his interventions on the fiscal calendar date to this period.

32 On the great role played by Khalaf in the literary field of his time, Clifford E. Bosworth says that he “achieved an international reputation within the Islamic world as a maecenas and as an encourager of learning and literature” (Bosworth 2010) and that “scholars and literary men flocked to his court, including the famed poet and secretary Abu'l-Faḥḥ Bostī, and the celebrated poet and author of maqāmāt, Badi' al-Zamān Hamadāni, who named his Ḳalafiyya maqāma (Hamadāni, p. 210) after the Amir. Above all, Ḳalaf achieved fame far beyond Sistān for commissioning an immense, hundred-volume Koran commentary; this non-extant work is said to have incorporated all earlier variants and commentaries. There was apparently a copy in the Šābuniya madrasa in Nišāpur in 'Oṭbī's time, and it is said to have been extant until the beginning of the seventh/thirteenth century, its size doubtless militating against its being copied” (Bosworth 2011, 362).

33 If the author of the *NN* was not a consumed astronomer – as it is evident in numerous passages of the *NN* characterized by a disconcerting approximation or veritable inaccuracies – he was surely able to perform some simple arithmetical calculations.

34 During 1092-1093 CE the military action in favour of the Nizāmiyya was guided by the *ghulām* Ergush, who, in 1093, won the army of Turkān Khātūn at Iṣfahān and deposed the five-year-old Maḥmūd, one of the sons of Malikshāh and Turkān Khātūn. In 1094, the eldest of Malikshāh's sons, Barkiyāruq (his mother was Zubaydā Khātūn), who was fifteen-year-old at that time, takes control of the situation, despite some of his relatives put up a serious resistance to him. For a brief description of the political situation during the last years of Malikshāh's reign and immediately after it, see Lambton 1988, 43-5.

So, the prevailing of a political purpose over historical and astronomical accuracy may explain this unique mention of Khalaf's *kaḇīsa* in known sources: no other records on the matter being available in known Islamic sources. At this regard, any attempt to infer which sort of calendrical intervention was that performed by Khalaf according to the *NN* may be pointless. When it comes to Khalaf's reform, further records to check what the author of the *NN* says about it are nowhere to be found. In the cases of Khusraw I, al-Ma'mūn, and al-Mu'taḍid we are able to compare what the author says with other sources, that, however, relate divergent information. As a matter of fact, the author is equally inaccurate when he speaks about Khalaf's deeds and when he speaks about Khusraw I, al-Ma'mūn, and al-Mu'taḍid. The only difference between those cases is that about Khalaf's *kaḇīsa* we have no source to confront it with, while about Khusraw I, al-Ma'mūn, and al-Mu'taḍid, we have sources, and these sources talk about a different state of things, relating facts at odds with the version related by the author of the *NN*.

At any rate, the inaccuracy of the *NN* on historical and astronomical matters does not reduce the importance of this ancient source as a literary work, revealing of its own time's mindset. In fact, the text gives us a plausible clue about the importance of the long reign of Khusraw I for the history of Persian chronology, thus supporting some of the hypotheses traced out by modern scholars.³⁵ Moreover, it recounts of actual celebrations of the beginning of Spring – to be called Nawrūz – at the time of Abbasid caliph al-Ma'mūn. This passage becomes an explicit source toward explaining by means of a royal order (in the case issued by al-Ma'mūn) the otherwise well-known and richly testified presence of Springtime celebrations of Nawrūz that were distinct from those of the wandering Nawrūz of the traditional 1 Farwardīn. The presence of such distinct celebrations is testified by numerous other sources,³⁶ among which the most interesting and ancient is the one by the Shi'ite traditionist Ibn Bābawayhi.³⁷ Another

35 See, for instance, Panaino 1996 and 2014.

36 On the matter see Cristoforetti 2000, 124-37.

37 This author (d. 381 H./991 CE) relates a very interesting tradition attributed to 'Alī al-Riḍā, when he was at the court of al-Ma'mūn. This tradition regards the legendary people called Aṣḥāb al-Rass and their twelve villages, whose names were as follows: Ābān, Ādhar, Day, Bahman, Isfandār[*madh*], Farwardīn, Urdibihisht, [Kh]jurdād, Murdād, Tīr, Mihr, Shahriwar. The most important village – “in which their king T.rkūz dwelt” – was Isfandār[*madh*]. In the name of this fabulous king one can easily recognize a defective form Nugrūz (< Middle-Persian Nōg-rōč), *i.e.* Nawrūz. The link between the names of the villages and the months of the Iranian calendar is openly affirmed by the tradition itself. Hereafter, it is said that every year each village did a festival in one of the twelve month, and “the Persian month are named after these villages, because they customary said each other: ‘This is the festival of this or that month’” (*apud* Scarcia Amoretti, 28-29; translation and reconstruction of the Persian forms of the names of the months are mine).

later and apodictic source can be found in the work of the astronomer Muḥammad ibn Ayyūb al-Ḥāsib al-Ṭabarī.³⁸ On the matter, one should not forget that some fifty years after the reign of al-Ma'mūn the beginning of Spring fell approximately on 1 Isfandārmadh (the 12th month of the Iranian calendar) and that it was celebrated as a Spring festival. The conclusion is that, although roughly, the *NN* not only corroborates other extant sources on the existence of alternative - or parallel - ways of time-reckoning in the Iranian world, but also opens the way for a more precise reconstruction of the relation between a well-ordered social life and kingly governance, that, in Seljuk times, was going to be increasingly thought as essential.

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³⁸ In the first part of the thirteenth century CE, Muḥammad ibn Ayyūb al-Ḥāsib al-Ṭabarī composed a Persian set of astronomical tables titled (*al-*)*Zij al-mufrad* (Kennedy 1956, 134). There 1 Isfandārmadh is called *bahārjashn*, i.e. 'Spring festival'; see Ms. (Browne) O.1 (10) of the Cambridge University Library, f. 6b ll. 20-21. Such identification of 1 Isfandārmadh as the Spring day clearly suggests a connection between this day and the beginning of Spring not only from the astronomical point of view (the coincidence between the vernal equinox and 1 Isfandārmadh occurred in the second part of the ninth century CE), but also on the social level, being *bahārjashn* the festival celebrating *that* seasonal moment.

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