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al-Bayrūnī, the twelve apostles and the twelve months of the Julian year

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In the year 1000 of the Christian era, the Muslim astronomer, mathematician and polymath Abū Rayḥān al-Bayrūnī (or al-Bīrūnī) wrote what is probably the most important book ever on historical and technical chronology with the title *al-ʿāḡāru l-bāqiyah ʿani l-qurūni l-xāliyah*. This famous work was edited by the great Semitist Eduard Sachau in 1878<sup>1</sup>, and translated by him into English under the title *The Chronology of Ancient Nations*, published in 1879<sup>2</sup>; currently I am working on a new edition of this work, based on the oldest manuscripts, as part of the European Research Council funded project “Calendars in Late Antiquity and the Middle Ages”, hosted by University College London.

In the course of his book, al-Bayrūnī touches on many questions of Christian and Syriac interest, of which I will discuss only one. This is in Chapter XIII, which is devoted to what in Greek are called *parapegmata*, that is: long-term weather predictions on the basis of an almanac, and in the course of his discussion<sup>3</sup> the author raises the question of why the Julian month February has fewer days than all the others, and of why this month, and not, as one might expect, the last month of the year, is treated as the leap month.

His answer to the first of these questions is not exactly convincing. al-Bayrūnī argues that if the Greeks had given 30 or 31 days to February, then it would not be distinguishable from the other months. If they had given it 29 days in a common year, it would be indistinguishable from the other

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<sup>1</sup> *Chronologie orientalischer Völker von Albêrûni*, herausg. von Eduard Sachau, Leipzig 1878.

<sup>2</sup> *The Chronology of Ancient Nations*, translated and edited, with notes and index, by E. Sachau, London 1879.

<sup>3</sup> Edition, pp. 251-2; translation, pp. 241-2.

months in a leap year, when it would have 30 days. Thus, it can only have 28 days in a common year. Underlying this is apparently the assumption that if the leap month were not set apart in some way from the other months then people would forget where to insert the extra day every four years.

As to the question of why they made February the leap month, al-Bayrūnī has a somewhat better answer, namely: “the *kabs* (here: leap-day) is appended to Šubāt (February), and not to any other month, because the First Adar, which is the *kabs* (here: intercalated month) of the Jews in the intercalated year (*‘ibbūr*), falls in it (sc. February) and (in one of the two months) on either side of it”<sup>4</sup>. In other words: the adjustment of the Julian solar calendar by adding one additional day occurs (when it occurs) at about the same time as the adjustment of the Jewish lunar calendar by the insertion of a thirteenth month (when it occurs). Our author is of course aware that these two events are not necessarily simultaneous. The Julian calendar adds the extra day once every four years, while the Jewish calendar adds its extra month seven times in 19 years. His point is simply that the slot (if we may call it thus) for the addition is at roughly the same point in both calendars. The argument seems to assume that someone (either the Greeks or the Jews) consciously arranged their calendar so as to agree in this matter with the other calendar, but al-Bayrūnī does not pursue this line of reasoning.

From the vantage point of our historical knowledge we would say that this agreement between the Jewish calendar and what we know as the Roman (Julian) calendar is not fortuitous. The oldest form of the Roman calendar must have begun the year in March (at about the time of the spring equinox), as is evident from the names of the months September to December (which are the 7<sup>th</sup> to 10<sup>th</sup> months counting from March), while the Babylonian ancestor of the Jewish calendar began the year in Nisannu, again at around the time of the spring equinox. So in both cases the natural place for inserting an intercalary month (in the Babylonian case, and evidently also in the oldest form of the Roman calendar) would be immediately preceding the beginning of the new year; when the Romans switched to a purely solar calendar they retained the old tradition of executing any manipulation of the calendar in February.

The question of what sets February apart from all the other months is addressed also in Syriac church literature, not from a mathematical or historical point of view, but from a purely theological perspective. I think that al-Bayrūnī would have found this interesting.

The Syriac churches have preserved, as part of the liturgy for Holy Week, a decidedly curious text which lists the names of the twelve apostles and associates each one of them with one of the twelve

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<sup>4</sup> *wa 'innamā 'uđīfā l-kabsu 'ilā šubāta dūna γayrihī mina š-šuhūri li 'anna 'āđara l-'awwala wa huwa šahru kabsi l-yahūdi fī l-'ibbūri yaqa 'u fīhi wa ḥawālayhi.* Sachau’s translation (“falls on Shubāt and near it”) is wrong.

months of the Julian calendar. This text was translated (from the East-Syrian service book, or *ḥudrā*<sup>5</sup>), and briefly commentated by Sebastian Brock in one of the annexes to his article “A dispute of the months and some related Syriac texts”, published in 1985<sup>6</sup>, and fourteen years later, Brock drew attention to the fact that the same text is found also in a West-Syrian service book in the Bodleian library, again in the same liturgical context, that is: the prayers for Holy Thursday<sup>7</sup>. To these we can now add the Syriac fragment from Turfan, with the siglum SyrHT 165, an incomplete folio from a service book, containing part of the liturgy for Holy Thursday, including a nearly complete copy of this same text. It is identified in the forthcoming catalogue of the Syriac fragments from Turfan by Erica Hunter and Mark Dickens, with a partial edition and translation of the text<sup>8</sup>. The fact that this text has been preserved both by the West-Syrian and the East-Syrian churches, and in both cases in the same liturgical context, suggests that it is old, in any case older than the separation of the Western and Eastern churches at Ephesus.

Although this is not explicitly noted in the previous literature, it is evidently a hymn, composed of verses with in principle five syllables each, but several of the lines have six or seven syllables, suggesting that it has suffered some degree of textual corruption. Eventually it should be possible to produce a critical edition; for the moment I will restrict myself to reproducing the text as given in the Turfan fragment, with restoration of the damaged passages on the basis of the printed *ḥudrā*.

The hymn is embedded in a retelling of the story of the Last Supper. Jesus announces that one of his disciples will betray him, whereupon John addresses him with these words:

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<sup>5</sup> See Dharmo’s edition of the *Ḥudrā*, II, ١ ٤٨ ult. et seq.

<sup>6</sup> *JSS* 30, 1985, pp. 181 – 211, where the text under discussion is on p. 188. The article is reprinted as no. VIII of Brock’s collection *From Ephrem to Romanos*, Aldershot 1999.

<sup>7</sup> See the addenda to the 1999 volume, p. 5.

<sup>8</sup> *Verzeichnis der orientalischen Handschriften in Deutschland Band V,2: Syrische Handschriften Teil 2: Texte der Berliner Turfansammlung* by E.C.D. Hunter and M. Dickens (in the press), no. 160.

Tell us, Master,  
 Tell us, Lord<sup>9</sup>:  
 Who shall betray Thee  
 and separate Thee from us?  
 Perchance Adhar Judas?  
 Or Nisan Simon?  
 Iyyar Andrew?  
 Haziran Philip?  
 Or Tammuz Matthew?  
 Or Abh Bartholomew?  
 Perchance Elul Thomas?  
 Or Teshri and Teshri:  
 the two sons of Zebedee<sup>10</sup>?  
 Perchance Kanun and Kanun:  
 James son of Alphaeus  
 and Simon the Canaanite?  
 Perchance Shebhat Judas,  
 the month of sorrows  
 will betray Thee  
 and separate Thee from us?

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 12  
 13  
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 16

The names given here to the twelve apostles agree with those listed in Lc 6:14-16 and Ac 1:13, where we have two apostles by the name of Judas (Judas son of James, and Judas Iscariot), and disagrees with Mc 3:16-19 and Mt 10:2-4, which list only one Judas (Iscariot) and complete the list with Thaddaeus (in Mark) or Lebbaeus (in Matthew).

The notion that there are twelve apostles, and that this is linked in some way with the fact that there are twelve months, twelve signs of the zodiac, twelve hours of the day and twelve of the night, is

<sup>9</sup> The printed Ḥudrā has: “Tell us, Master, tell us, our true shepherd”.

<sup>10</sup> Ḥudrā adds: “James and John”.

<sup>11</sup> : 11  
<sup>12</sup> : 12  
<sup>13</sup> : 13  
<sup>14</sup> : 14  
<sup>15</sup> : 15  
<sup>16</sup> : 16

something that we find, not often but now and then, in early Christian writings. There is a very interesting article by Jean Daniélou, “Les douze apôtres et la zodiaque”<sup>17</sup>, where a fair number of such passages are collected. The collection could be expanded, for example with a passage from Narsai quoted by Brock in his afore-mentioned article. Essentially this is a rather banal notion, linked with the number mysticism that was so prevalent in late antiquity and the middle ages: there are twelve months, twelve hours, etc., etc., and so it is no accident that the Lord had twelve apostles. The twelve apostles fit into a prearranged cosmic scheme. However, in none of the passages cited by Daniélou, nor any other passage known to me, do we find a one-to-one identification of the apostles with the individual months, as we find it in our text. As far as I can see, our text is unique in this regard.

But is there any logic to the identification of Simon Peter with April, Andrew with May, and so on? I have played with various possibilities. I wondered whether each apostle had been assigned the month in which his commemoration happens to fall, but it became clear to me that this is not the case. In any event, one would not expect the saint’s days of the apostles to be distributed evenly among the twelve months, and more importantly, Judas Iscariot is not a saint and does not have a saint’s day. There are, as far as I can see, only two things in our text that reveal a certain rationale in the distribution of the apostles amongst the months. First, there is the fact that the two Tishris – Tishri the first (October) and Tishri the second (November) – are equated with “the two sons of Zebedee”, that is: James and his brother John. However, the other pair of twined months – Kanun the first (December) and Kanun the second (January) – are equated with James son of Alphaeus and Simon the Zelote, without there being any intrinsic connection between these two, except perhaps for the fact that at least in the two Lucan lists of apostles (Lc 6 and Ac 1) James and Simon are named in succession. But the decisive rationale of our list is that the unfaithful apostle Judas is identified with Shebhat (February), the shortest of the months. So essentially the implied logic of our hymn is that Judas is to the apostles what February is to the months, that is: defective. And this realisation explains another oddity of the hymn, namely that the enumeration of the months begins not with the beginning of the Syro-Julian year in October, but rather with Adhar (March), evidently for no other reason than to make February the last month in the list, and to end the hymn with the dramatic reference to Judas and his betrayal.

So in short: our hymn is about an analogy between Judas and February, “the month of sorrows”, as it is called here. The other eleven apostles have been assigned their months more or less at random. The hymn is not really about them, but about Judas.

In the early Christian material collected by Daniélou there is one passage which, although it does not explicitly mention Judas, nor does it explicitly associate the individual apostles with individual

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<sup>17</sup> *Vigiliae christianae* 13, 1959, pp. 14-21.

months, does rest on very much the same assumptions. This is a passage in the pseudo-Clementine *Homilies* describing the (in the view of the author) false prophet John the Baptist<sup>18</sup>.

καὶ ὡσπερ τῷ κυρίῳ γεγόνασιν δώδεκα ἀπόστολοι, τῶν τοῦ ἡλίου δώδεκα μηνῶν φέροντες τὸν ἀριθμὸν, ὡσαύτως καὶ αὐτῷ ἕξαρχοι ἄνδρες γεγόνασιν τριάκοντα, τὸν μηνιαῖον τῆς σελήνης ἀποπληροῦντες λόγον. ἐν ᾧ ἀριθμῷ μία τις ἦν γυνὴ λεγομένη Ἑλένη, ἵνα μηδὲ τοῦτο ἀνοικονόμητον ᾗ. ἥμισυ γὰρ ἀνδρὸς οὖσα ἡ γυνὴ ἀτελεῖ τὸν τῆς τριακοντάδος τέθεικεν ἀριθμὸν, ὡσπερ καὶ τῆς σελήνης, ἧς ἡ πορεία τοῦ μηνὸς οὐ τέλειον ποιεῖται τὸν δρόμον.

“Just as the Lord (Jesus) had twelve apostles, in agreement with the number of the twelve months of the sun, in the same way he (sc., John) had thirty principal men, completing the monthly counting of the moon. Amongst this number there was one woman called Helene, that this might all be in order. For since the woman is only half of a man, the number thirty remains incomplete, just as in the case of the moon, the revolution of which leaves the course of the month incomplete.”

To understand what this means we need to take a look at some of the principal tenets of the sect represented by the Pseudo-Clementine literature. From the beginning, God is accompanied by two cosmic principles, a male-female syzygy. The male principle manifests himself in a series of true prophets, from Adam to Moses to Jesus, while the female principle manifests herself in a parallel series of false prophets. The true prophet Adam is accompanied by the false prophet Eve, and the true prophet Jesus, the “son of man”, is accompanied by the false prophet John, “among those born of woman”<sup>19</sup>. John, as we have just read, had 30 disciples, corresponding to the days of the lunar month. But the lunar cycle is actually only about 29½ days, so one of John’s disciples is only half a man, namely a woman.

The cited passage from the Pseudo-Clementines and our Syriac hymn read almost like the two halves of the same text. Let us fit them back together. The *Homilies* tell us that John, the embodiment of false (female) prophesy, had 30 disciples, corresponding to the 30 days of the lunar month. The moon (σελήνη) is of feminine gender. But one of these 30 days is only half a day, a defective (female) day, and this is represented by a female disciple. Jesus, the incorporation of true (male) prophesy, had twelve disciples, corresponding to the twelve months of the solar year. The sun (ἥλιος) is of

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<sup>18</sup> Ps.-Clement, *Hom. 2, 23*. In the *Recognitions of Clement 2,8* (lost in the Greek original, but preserved in the Latin translation by Rufinus as well as in the fragmentary Syriac translation) this passage has been censored by the author: the 30 disciples are attributed not to John, but to the heretic Dositheus. Here the female disciple is called Luna in the Latin version and *sahrā* in the Syriac (both: “moon”), suggesting that Ἑλένη in the Greek *Homilies* should be emended to Σελήνη.

<sup>19</sup> *Hom. 2, 16*, quoting Mt 11, 11.

masculine gender. But (and here our Syriac hymn fills in the gap) one of the solar (Julian) months is the defective month February, and this is represented by the unfaithful prophet Judas Iscariot.

I do not think there is any need to assume a literary dependence of our hymn on the Pseudo-Clementine literature, although the Clementine texts were known, at least to some, in Syriac translation. Nor am I claiming an affiliation of our hymn, or indeed of early Syriac Christianity as a whole, to the so-called Jewish-Christian movement, or, as I prefer to call it, Petrine Christianity, although an influence of Petrine Christianity on early Syriac Christianity is certainly possible. It is more likely that the notion of comparing the twelve apostles to the twelve months, and specifically of equating Judas with the defective month February originated in what one might call a “neutral” Christian environment, but then inspired the author of the Pseudo-Clementines to invent a similar model for the false apostles of John, this in keeping with the Petrine-Christian notion of parallel male-female lines of prophecy. In that case our hymn would have preserved the original form of the analogy. But it is an analogy which never really caught on.