

THE NAMES AND THE ORDER OF THE OLD PERSIAN
AND ELAMITE MONTHS DURING THE
ACHAEMENIAN PERIOD

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As is well known, Darius I in the great trilingual rock inscription of Bisutûn dates by month and day certain events immediately preceding and following his accession to the throne. In those cases in which the date is preserved in each of the three versions—the Old Persian, the Elamite, and the Akkadian—or, since the names of the months in Old Persian and Elamite are basically identical, even in those cases in which the Babylonian version and only one of the two other versions have preserved the date, the inscription gave us a thoroughly authentic means of establishing the correspondences between the Old Persian–Elamite months, on the one hand, and the Babylonian months, on the other hand. Unfortunately, however, this ideal condition existed only in the case of five out of the twelve months of the year, and thus until recently only the following correspondences could be established with complete certainty:¹

| Old Persian Name | Elamite Name | Akkadian Name |
|--------------------------------|---------------------------------|---------------------|
| 1. | | Nisannu |
| 2. <i>turayâhara</i> | <i>turmar</i> | Ajâru |
| 3. <i>tâigarçiš</i> | <i>saikurrišiš</i> ² | Šimannu |
| 4. | | Du ³ ûzu |
| 5. | | Âbu |
| 6. | | Ulûlu |
| 7. | | Tašrîtu |
| 8. | | Arahsamna |
| 9. <i>â^sixâdiia</i> | <i>ħaššiixatiiaš</i> | Kislîmu |
| 10. <i>anâmaka</i> | <i>ħanamakkaš</i> | Tebêtu |
| 11. | | Šabâtu |
| 12. <i>xiiaakna</i> | <i>mi(ia)kannaš</i> | Addâru ³ |

¹ The Old Persian and Elamite month names are given above in the form in which they are found in Weissbach, *Die Keilinschriften der Achämeniden* (quoted hereafter as *KA*). On the whole, Weissbach's transliteration has been used throughout this study; note, however, the replacement—for the sake of convenience—of *k* by *ç*, of *p* by *f*, and of *˘* by *ˆ*.

² Thus rendered by Weissbach (*KA*, p. lxxi; cf. also Index, p. 153) and others (cf. e.g. King and Thompson, *SIDG*, p. lxxv) in spite of the writing ^d*sa-a-kur-ri-ši-iš* (Bis. §28 [Elam. vers., col. 2, l. 35]).

³ The definite establishment of some of these correspondences became possible only in 1907 with the publication of King and Thompson, *The Sculptures and Inscription of Darius the Great on the Rock of Behistûn in Persia*, in which the authors published the results of a complete collation of the Bisutûn inscriptions.

In addition, four month names whose equivalents in the Babylonian version are not preserved, and which therefore could not readily be identified, are found in the preserved parts of the Elamite version, three of them occurring also in the Old Persian version. They are as follows:

| | |
|------------------------------|--------------------|
| Old Persian Name | Elamite Name |
| <i>garmapada</i> | <i>karmapaddaš</i> |
| <i>adukan^aiša</i> | <i>hadukannaš</i> |
| <i>bāgaiādiš</i> | <i>bagiātiš</i> |
| | <i>markazanaš</i> |

Naturally it was tempting to identify these also with Babylonian months, and a good many scholars have made elaborate attempts in this direction based, e.g., on etymologies and their combination with facts relating to climate and religion, on comparisons with the quite different Avesta months, on the actual or assumed dates of known historical events, on dates of Babylonian contracts written in the reigns of the insurgent Babylonian kings mentioned by Darius, etc. The more or less final result of these reasonings may be found in the equations given in Weissbach, *KA* (1911), p. lxxi:

| | | |
|------------------------|---|---------------------|
| Babyl. | = | Elam. |
| 1. Nisannu | = | <i>karmapaddaš</i> |
| 4. Du ^o ūzu | } | = <i>hadukannaš</i> |
| 5. Ābu | | |
| 6. Ulūlu | | |
| 7. Tašrītu | = | <i>bagiātiš</i> |
| 8. Araḥsamna | = | <i>markazanaš</i> |
| 11. Šabātu | = | _____ ⁴ |

⁴ For the older period cf., e.g., the list of identifications given in Justi, *Die altpersischen Monate* (*ZMDG*, LI [1897], 233–51):

| | | | |
|----------------------|------------------|-------------------|-------------------|
| Rawlinson | Oppert | Unger | Justi |
| 1. <i>bāgaiādi</i> | <i>garmapada</i> | <i>tārayāhara</i> | <i>tārayāhara</i> |
| 2. <i>tārayāhara</i> | <i>tārayhara</i> | <i>tāigrači</i> | <i>tāigrači</i> |
| 3. <i>tāigrači</i> | <i>tāigrači</i> | <i>ādūkani</i> | <i>ādūkani</i> |
| 4. <i>ādūkani</i> | | <i>margazana</i> | |
| 5. <i>garmapada</i> | | <i>garmapada</i> | <i>garmapada</i> |
| 6. . . . | | | |
| 7. . . . | <i>bāgaiādi</i> | <i>bāgaiādi</i> | <i>bāgaiādi</i> |
| 8. <i>margazana</i> | <i>ādūkani</i> | | |
| 9. <i>ātrīādiā</i> | <i>ātrīādiā</i> | <i>ātrīādiā</i> | <i>ātrīādiā</i> |
| 10. <i>anāmaka</i> | <i>anāmaka</i> | <i>anāmaka</i> | <i>anāmaka</i> |
| 11. . . . | <i>margazana</i> | | <i>margazana</i> |
| 12. <i>yiāḫna</i> | <i>yiāḫna</i> | <i>yiāḫna</i> | <i>yiāḫna</i> |

(The names are given here in the form in which they appear in Justi's list, though with changes in the transliteration of certain consonants.)

In King and Thompson, *op. cit.* (1907), p. xxxviii, finally, the statement is made that "there is something to be said for the view which identifies Garmapada with Tammuz, Bāgayādish with Tisri, Adukannisha with Marchesvan, and [Markazana] with Sebat."

The new Elamite tablets found at Persepolis in the course of the excavations of the Oriental Institute of the University of Chicago now enable us to settle the question of the Elamite months definitely. For not only do they give us the full list of month names but by the manner in which two or more months are mentioned on a number of tablets we can also establish their order and thus their correspondences with the Babylonian months. Since the result to which our new knowledge leads us differs in important points from that of all previous attempts at establishing the order of the Old Persian–Elamite month names, we shall take as our starting-point the list of five months—given on page 130—whose Babylonian correspondences are fully attested by the Bisutûn inscription. This list contains three gaps; two of them comprise only one month—the first and the eleventh—while a large gap comprises the fourth to eighth months.

I. THE FIRST MONTH

Following Oppert and Marquart, Weissbach (*KA*, p. lxxi) gives as equivalents of the Babylonian Nisannu the Old Persian Garmapada and the Elamite Karmapaddaš,⁵ and even comments on this equation with the words: “Von diesen [i.e., the four months mentioned in the preceding sentence] haben Oppert und Marquart . . .—unabhängig von einander—den garmapada aus unanfechtbaren Gründen dem bab(ylonischen) nisannu gleichgesetzt.” But the Persepolis text 3159⁶

⁵ The transliteration of Elamite words in this study as a rule follows the principle observed also by Weissbach in *KA* of rendering each sign of the Elamite system of writing with only that phonetic value which it had in the usual Akkadian systems of writing. For instance, KAR is rendered with *kar* only, TI with *ti*, KUR with *kur*, UL with *ul*, UD with *ut*, etc., although it is quite evident from the rendering of foreign words that, e.g., *kar-ma-ba-daš* represents **gar-ma-pa-daš*; *ba-gi-ia-ti-iš*, *ba-gi-ia-di-iš*; *sa-a-kur-ri-ši-iš*, *sa-a-gor(-*r^e)-ši-iš*; *be-ul*, *be-*el*; *di-ut*, *di-*it*, etc. But as long as neither all peculiarities of Elamite phonetics nor all peculiarities of Elamite grammar have been clearly recognized and brought into a system, it is of course impossible or at least useless to work out a system of phonetic values for the signs of the Elamite system of writing. For example, to date it has not yet been established whether the fact that the Elamites use only a sign *da* but no *ta*, and only a sign *ti* but not *di*, indicates that they had only one dental—*t* or *d* or some intermediary consonant—or whether the use of one sign is merely due to the fact that they used a simplified system of writing which—like the Old Akkadian—neglects the difference between voiced and voiceless consonants. For this reason it is still advisable to adhere to the method described above, which at least has the advantage of rendering the signs with values familiar to Assyriologists.

⁶ The Persepolis tablets arrived at the Oriental Institute packed in consecutively numbered boxes, each containing from one to more than twenty tablets. On approximately the first 2,200 boxes had been placed, in addition to the box number, also a number, or group of numbers, to be assigned to the tablet or tablets contained in each box. The tablets were not, however, individually numbered. Thus, e.g., the twenty-four tablets

shows conclusively that actually *Hadukannuša*, not *Garmapada*, was the Elamite equivalent of the Babylonian *Nisannu*. The text reads as follows:

| | |
|---|----------------------------------|
| 12-mar-ri-iš | 12 marriš ⁷ |
| GIŠGEŠTIN ^{idgr8} kur-múk ⁹ | (of) wine, ⁹ |
| 𐎠 ir-da-kur-MÁ(?) ¹⁰ -du- | 𐎠Irdakur . . . duš ¹¹ |
| iš hi-še 𐎠 ma-ku-iš | by name, the Magian |
| ⁵ AN.la-an ba.ri.ra | ⁵ |
| da.u.šá.um AN. ¹² | |

contained in Box 631 were designated merely as 3157–3180. In the Institute individual numbers within such groups have up to the present been assigned only to those tablets which have been taken out for the purpose of study. References such as Pers. (i.e., Persepolis) 3159 are to tablet numbers arrived at in this way.

It will also be of interest to know that all the tablets (about 30,000 whole pieces or fragments) must be returned to the Iran government probably within a very short time. We welcome any collaboration of scholars in our plan to achieve the publication of as many tablets as possible before they have to be returned.

⁷ *Marriš* is evidently a measure for liquids, since in the tablets hitherto examined by me it is found exclusively before GIŠGEŠTIN^{idgr}, "wine," and KAŠ^{idgr}, "šikaru." Does it mean "(big) jar," etc.? In Pers. 7151, l. 1 (19 *mar-ri-iš* 2 QA KAŠ^{idgr}) it is combined with QA, "(the measure) QA (SILA)."

⁸ The sign here identified with GEŠTIN usually looks like a combination of Elamite TIN and Assyrian KAK but has of course developed from Babylonian GEŠTIN. Note that it is preceded by the determinative GIŠ, although it is not equivalent to *karđnu*, "vine stock," "grapevine," but to *karđnu*, "wine."

⁹ For *kur-múk* <*kurmu-k* cf. *le-ul-múk*, Bis., § 60, col. 3, ll. 74 f. (*KA*, p. 159); note, however, that the reading of SAL as *múk*, although it is very likely, cannot yet be proved conclusively. Also note that the sign rendered with *kur*, although usually appearing in the forms of No. 43 of Weissbach's list, often appears in the form of No. 46. The word *kur-múk* occurs in most of the Persepolis tablets and is found very frequently also in the Susa tablets published in *Mémoires*, Vol. IX (Scheil there takes the two signs as the sign GIR with the meaning "fonctionnaire," "intendant," and in the force of an anticipated apposition to the following personal name). Outside of our tablet it is always followed by a personal proper name with genitive element *-na*, and the whole genitive phrase is in apposition to the objects or materials mentioned at the beginning of the tablets. Judging from Pers. 6663, a text quite similar to ours, it seems that in our text after *kur-múk* a whole line containing a personal name with genitive element has erroneously been omitted. Evidently *kur-múk* is an abstract noun (in the meaning of a passive participle), but in spite of its frequent occurrence its exact meaning has not yet been established. Possible meanings seem to be "assignment," "stipend," "order," etc.; a meaning "sealing" is very doubtful, since on two tablets bearing the same seal, the names after *kur-múk* are different.

¹⁰ The sign corresponds to No. 32 (MÁ) of Weissbach's list except that the head of the last horizontal wedge lies between the last two perpendicular wedges. The sign is not *ri*, the last wedge of which is slanting, with its head at the same height as that of the preceding perpendicular wedge. The wedges are so close to each other that it is impossible to read two signs (*bar- . . .*).

¹¹ *Irda* (= *irta*), the first element of the name is evidently identical with Old Persian *arta*, "law," in the names *artakšaša* (Elamite ^m*ir-da-ik-ša-iš-ša*, *ir-tak-ša-aš-ša*, etc.), "Artaxerxes" (*KA*, p. 139), and *artayartiša* (Elamite ^m*ir-du-mar-ti-ja*, *ibid.*).

¹² Although there is a scratch above the second horizontal wedge, the sign cannot be *-na* because the horizontal wedges are almost as high as the head of the vertical wedge.

| | |
|---|--|
| <i>la-an-na du-iš-da</i> | . . . ¹³ has received; |
| ^d ITU ^{idgr} ^d ḥa- | from the month |
| <i>du-kán-nu-ia - ik-</i> | Ḫadukannuia |
| ¹⁰ ki - mar ku-iš ^d | ¹⁰ unto the (month) ¹⁴ |
| <i>mī-kán-na-iš</i> | Mikannaš, |
| PAB 12- ^d ITU ^{idgr} -na | (i.e.,) altogether in (a period of) |
| | 12 months, |
| <i>be-ul-19-na</i> | in the 19th year |
| ^d ITU ^{idgr} -1-na | per month |
| ¹⁵ 1-mar-ri-iš | ¹⁵ 1 marriš |
| <i>du-man-ra</i> | he receives ¹⁵ |

The tablet plainly states that the period described with the words "from Ḫadukannuia to Mikannaš" comprises twelve months, i.e., under ordinary circumstances, a full year. Furthermore, with the words "in the 19th year" it plainly indicates that the twelve months in question do not cover parts of two years but either are identical with, or lie within, one single calendar year. If we had only these two statements and no other information concerning either of the two months, we could already conclude from them with some degree of certainty that Ḫadukannuia, with which the twelve-month period begins, is the first month of the year and Mikannaš, with which it ends, is the last month of the year, since apart from leap years a year does not have more than twelve months. But from Bís., § 11 (Elam. vers., col. 1, ll. 28 f.; Akk. vers., col. 1, l. 15) we know that Mikannaš,

¹³ The untranslated passage may perhaps give us some interesting detail of information relating in some way to the Magi. But suggestions which I would have for an analysis of the passage would go far beyond the compass of this study. Note, however, that in the similar text Pers. 6663 AN.la-an ba-ri-ra and da.u.šá.um AN.la-an-na are separated by a place name. (This tablet was copied and studied by Dr. Cameron and kindly placed at my disposal for this study.)

¹⁴ Where two months are mentioned, the word ^dITU^{idgr}, "month," usually is not repeated before the second month.

¹⁵ For the verb *du-ma* (= *du* and the "auxiliary" verb *ma*) cf. the preterit form *du-ma*, "I took," "I received," in the phrase *me-ni sa-ap* ^msunki-me *du-ma*, "later when I had received the kingship" (Bís., § 10 [col. 1, l. 22]), instead of the usual *mar-ri-ia*, "I seized," as in *a-ak za-u-mi-in* [^du]-ra-mas-da-na ^mú ^msunki-me *mar-ri-ia* = [ina šilli šá ^dú-ri-mi-iz-da šarru]-tu a-ga-a-[ta] ana-ku aš-bat(u)-šú, "and by the will of Ahuramazda I seized (received) the kingship" (Bís., § 9 [col. 1, l. 21]). Cf. also the preterit forms *du-ma-iš-šá* (Pers. 3429, ll. 4 f.) and *du-ma-šá* (Pers. 3333, l. 4) instead of the usual *du-iš-šá*, *du-šá*, etc., and the substantive *du-man*, "possession," literally "that which has been taken," in *du-man-e ḫu-ud-daš*, "(the lands) he made his (own) property" (Bís., § 12 [col. 1, l. 36]). Bab. vers.: *a-na ša ra-ma-ni-šu ul-ter*, "he turned it into a possession of his own," Pers. vers.: *uḫāpašījam | akutā*, "he made it his own possession."

up to which the twelve-month period is reckoned, is the last month of the year, corresponding to the Babylonian Addâr. In addition we know that the second month of the year is Turmar (Bis., § 30: Elam. vers., col. 2, l. 47; Bab. vers., col. 2, l. 56), a fact which eliminates the possibility that the 19th year might have had a second Ulûl, in which case the Ḥadukannuja of our tablet would be the second instead of the first month of the year. No doubt whatever can exist, therefore, that Ḥadukannuja is the first month of the year.

II. THE ELEVENTH MONTH

Lines 8–12 of Pers. 6058 read as follows:

| | |
|---|-------------------------|
| ^d ITU ^{idgr} | in the month(s) |
| ^d ḥa-na-ma-kaš | Hanamakaš |
| ^d sa-mi-ša-maš ¹⁶ -na | and Samijamaš |
| 𐎠 be-ul-22-um- | in the 22d |
| me-man-na | year |

The two months mentioned here are consecutive, as is always the case where two months are mentioned together. Moreover, without any exception the months are mentioned in their chronological order. Since, however, Ḥanama(k)kaš, as we know from Bis., § 26 (Elam. vers., col. 2, l. 19; Bab. vers., col. 1, l. 46), is identical with Ṭebêtu, i.e., the tenth month of the Babylonian calendar, Samijamaš, which according to our tablet immediately precedes it, must necessarily correspond to Šabâtu, the eleventh month of the Babylonian year.

The same follows from Pers. 7122, which closes with the following lines (ll. 15–19):

| | |
|---|---|
| ^d sa-mi-ma ^d mi- | “ . . . in (the months) Samima, Miqana, |
| qa-na ^d ḥa-du-kân-nu- | and Ḥadukannuja, |
| ša PAB 3- ^d ITU ^{idgr} -ḥa- | (i.e.,) altogether for three months, |
| tu 𐎠 be-ul-22-me- | in the 22d |
| man-na | year” |

This text shows Samima as the month preceding Mikannaš, the twelfth month of the year. This again makes it the eleventh month.

¹⁶ The sign could be taken for *nu*, *me*, or *maš*. Since a phonetic value beginning with *m* is required, and since in the same text month names as a rule are given either all with or all without final *š*, we evidently have to read *maš*.

III. THE FOURTH TO EIGHTH MONTHS

After the two small gaps of one month each have been filled, all other months up to this point not yet definitely identified must of course belong in the still remaining large gap, which comprises the five months from the fourth to the eighth. The names of these months are: Karmabadaš, Turnabašiš, Qarbašiaš (Kurbašiš), Bagijatiš, and Marqasanaš. Only three of them—the first, fourth, and fifth—were known from the Great Bîsutûn Inscription; the names of Turnabašiš and Qarbašiaš have been obtained from the new Persepolis tablets.

The following are all the cases thus far discovered by me in the new material, in which these five months are mentioned in groups of two or three consecutive months:

a) Karmabadaš and Turnabašiš. Cf. Pers. 3160, lines 8–12:

| | |
|--|-------------------|
| ^d | “... in the month |
| ITU ^{idgr} d ^d kar-ma- | Karmabadaš |
| ba-daš-na a-ak ^d tur- | and in |
| na-ba-ši-iš-na ▶ | Turnabašiš, |
| be-ul-19-me-man-na | in the 19th year” |

b) Qarbašijaš and Bagijatiš. Cf. Pers. 3158, lines 9–13:

| | |
|--|-------------------|
| ... ^d ITU ^{idgr} d | “... in the month |
| qa-ir-ba-ši-ia-iš- | Second Qarbašijaš |
| me-šá-na ¹⁷ a-ak ^d | and in |
| ba-gi-ia-ti-iš-na | Bagijatiš, |
| ▶ be-ul-19-me-man-na | in the 19th year” |

and 5402, lines 6 f.:¹⁸

| | |
|---|---------------------------|
| ^d ITU-2-na | “... in the two months |
| ^d qa ¹⁹ -ir-ba-ši-ia ^(d) ba-gi-ia-ti ²⁰ | Qarbašija (and) Bagijati” |

¹⁷ *Me-šá-na* is written over an erasure.

¹⁸ This tablet is dated in ll. 18 f.: ... ▶ *be-ul-23-um-me-man-na*, “in the 23d year.”

¹⁹ When making the lower horizontal wedge of the *qa* the point of the stylus first struck a small stone and then sank into the clay a little farther to the right, leaving, however, below the stone the impression of the end of a wedge. The sign therefore has some resemblance to *na*.

²⁰ After the *ti* is a break. The whole name is written over an erasure. The sign for god seems to be the remnant of an erased sign which the scribe forgot to correct into a clear AN. The sign now consists mainly of one horizontal stroke. The following line, two-thirds of which is not inscribed, has at its beginning the signs *ri-ši-iš*, which the scribe evidently forgot to erase.

c) Bagijatiš, Marqašanaš, and 𐎧𐎱𐎠𐎿. Cf. Pers. 3333, lines 7–11:

| | |
|-----------------------------------|------------------|
| 𐎠𐎹𐎡𐎹-25- | “ . . . the 25th |
| [u]m-me-na 𐎠ITU ^{idgr} 𐎠 | year, the months |
| [b]a-gi-ja-ti-ja-iš | Bagijatišaš, |
| 𐎠mar-qa-ša-na-iš | Marqašanaš, |
| 𐎠ha-ši-ja-ti-iš | (and) 𐎧𐎱𐎠𐎿iš” |

Since 𐎧𐎱𐎠𐎿, the last of the three consecutive months mentioned in the last passage, according to Bís., § 18 (Elam. vers., col. 1, l. 71; Bab. vers., col. 1, l. 36), corresponds to Kislimu, which is the ninth month of the Babylonian calendar, it follows that Marqašanaš, which according to the passage under (c) immediately precedes 𐎧𐎱𐎠𐎿, is the eighth month, corresponding to the Babylonian Arahsamna, while Bagijatiš, since according to the same text it again precedes Marqašanaš, is the seventh month, corresponding to the Babylonian Tašritu. Similarly, since according to the tablets mentioned under (b) Qarbašiaš immediately precedes Bagijatiš, the former is the sixth month, corresponding to the Babylonian Ulûlu.

Further proof exists for this last correspondence. In the second of the two passages quoted under (b) the month immediately preceding Bagijatiš is 𐎠qa-ir-ba-ši-ja, but in the first passage it is qa-ir-ba-ši-ja-iš-me-ša. Qarbašiaš without added *me-ša* is the regular month Qarbašiš or Qarbašiaš, which occurs quite frequently on the Persepolis tablets. Qarbašiaš-meša, on the other hand, can be only a so-called “second” or “later” or “additional” Qarbašiaš, i.e., an intercalary month. The *me-ša* which is here added to the name of the regular month doubtless corresponds to the similarly added Akkadian *šanû* (Sumerian *min-kam*), “second,” “other,” of the intercalary month ITU-KIN II-KAM, “the second (or other) Ulûlu” (e.g., Strassmaier, Nabonidus, Nos. 436, ll. 4 f., and 1099, l. 17; Cyrus, Nos. 54, l. 4; 55, l. 5; 56, l. 4; 57, l. 3; 58, l. 8; 59, l. 4, and 60, l. 17; Cambyses, Nos. 5, l. 4; 177, l. 10, and 422, l. 21) as well as to Akkadian *arkû*, “later,” in ITU-ŠE *ar-ku-û* (variant *ár-ku-û*), “the later Addâr” (e.g., Strassmaier, Nabonidus, No. 51, l. 14; Cyrus, Nos. 148, l. 17; 149, l. 14, and 151, l. 14), and finally to Sumerian *diri(g)*, “(being in) excess,” “additional,” in *itu-diri-še-gur-kud*, “excess month Addâr” (Poebel, *BLBD*, Nos. 53, l. 38, and 70, l. 32). To all

appearances *me-sá* itself has a meaning such as "the second," "the other," "that which follows (something)," "later," "further," "additional," etc.²¹ As is known from the numerous contemporary Babylonian tablets the only intercalary months in use during the Persian period were the second Ulûl and the second Addâr, which were interpolated after the sixth and the twelfth month, respectively. Since the twelfth month is Miġakannaš, Qarbašiaš-meša must necessarily be the second Ulûl.²²

With the sixth, seventh, and eighth months thus definitely identified, the lacuna is now restricted to the fourth and fifth months. In it we have, of course, to place the only two months remaining, Karmabadaš and Turnabašiš. The passage quoted under (*a*) proves that the latter immediately follows the former. Karmabadaš therefore is the fourth month, corresponding to the Babylonian Du^uzu (Tammûz), and Turnabašiš the fifth month, corresponding to the Babylonian Âbu. An additional proof that the group Karmabadaš-Turnabašiš (= *a*) precedes the group Qarbašiaš-Bagiġatiš (= *b*) is furnished by the dates given in the Bîsutûn inscription for the following three events in the career of the Magian Gaumâta, who claimed to be Bardija (Smerdis), son of Cyrus:

| | |
|-------------------------------------|-------------------|
| (§ 11) Gaumâta revolts: | 14th of Mikannaš |
| (§ 11) Gaumâta seizes the kingship: | 9th of Karmabadaš |
| (§ 13) Darius kills Gaumâta: | 10th of Bagiġatiš |

²¹ The meaning "after," "later" seems to be based chiefly on the first element *me-*, as may be seen from the frequent *me-ni* (Old Pers. vers., *pasâya*, Bab. vers., *âr-ki*), "afterward," "then"; from *me-mi*, "after (him)," in *me-ni* ^mú ^mtaš-šu-ⁱp *me-mi da-aĥ*, "then I sent the army after (him)" (Old Pers. vers., *nîpadîi* [*pad* = "foot"; cf. German "auf dem Fusse folgen"]), Bis., § 32 (col. 2, ll. 54 f.); and from *me-ri-ir-da-qa* (Old Pers. vers., *nîpadîi* || *i[ia]i*), "close after him (them)," in [^mtaš-šu-ⁱp] *i-da-qa me-ri-ir-da-qa sa-ak*, "with the army he marched away closely upon his heels," Bis., § 47 (col. 3, l. 32). Note also *me-iš-ši-in* (Old Persian *apara*), "afterward," "later" (in the Babylonian version rendered with *ar-ki-ia*, "after me"), Bis., § 65 (=col. 4, l. 84; it occurs also in §§ 55 f. and 58). The whole word *me-šá* seems to occur in *me-šá-me-ra-qa* ^m*par-sin ik-qa-mar* (Old Persian *apataram* | *hača* | *pârsâ*), "elsewhere than (in) Persia," or "farther away from Persia" (Bab. vers., *e-lat matu par-su*, "in addition to Persia"), Darius, NRa, § 3 (ll. 13 f.), and in ^p*me-šá-qa-rak(?)*-*qa* (Old Pers. vers., *abîa[para]*; Bab. vers., *ina dūr(!)-ri(!) ul-lu-ú*), "in a distant (or more probably: 'later') period"), Artaxerxes II, Susa a, l. 3.

For *par-sin* instead of the suggested *par-zi*(?) cf. ^m*dš-šu-ra-ip* (§ 6), ^m*dš-šu-ra* (§ 21), and ^p*dš-šu-ra-an* (§ 29).

²² The identity of Qarbašiaš with Ulûlu had been concluded in the manner indicated before other evidence was available.

These three events took place within a period of less than one year;²³ and since Gaumâta's career according to the Bisutûn inscription begins in Mikannaš, the last month of the year, the events that occurred in Karmabaddaš and Bagijatiš must necessarily have occurred in the following calendar year. Then, however, Karmabaddaš, in which Gaumâta "seized the kingship," must have preceded Bagijatiš among the months of the year.

IV. THE COMPLETE LIST OF MONTHS

With all gaps filled in, the full list of the Old Persian—as far as they are known—and Elamite calendar months and their Babylonian equivalents represents itself as follows:

| Old Persian | Elamite | Babylonian |
|---------------------------|----------------------------|------------|
| 1. Adukan*iša | Ḫadukannaš | Nisannu |
| 2. Turauâhara | Turmâr | Ajjâru |
| 3. Tâigarčiš | Sâkurrišiš | Simannu |
| 4. Garmapada | Karmabadaš | Du'ûzu |
| 5. | Turnabašiš | Âbu |
| 6. | Qarbaši(ja)š | Ulûlu |
| 7. Bâgajâdiš | Bagijâtiš | Tašritu |
| 8. | Marqašanaš | Araḫsamna |
| 9. A ^S ijâdija | Ḫaššijâti(ja)š | Kislîmu |
| 10. Anâmaka | Ḫanâmakaš | Ṭebêtu |
| 11. | Samimaš | Šabâtu |
| 12. Uijakna | Mi(ja)kannaš ²⁴ | Addâru |

²³ According to Herodotus iii. 67 the Magian Smerdis ruled the seven months which were wanting to make Cambyses' 8th year complete, and then was killed in the eighth month (*ibid.* 68). As we know from the original sources, Herodotus was mistaken in placing all the eight calendar months in (!) which Smerdis ruled after the death of Cambyses. But the number of months, if understood as just indicated, is correct, since the 7th year, in the month Addâr of which Bardija began his career, had a second Addâr according to Strassmaier, *Camb.*, No. 400. In this connection it may be mentioned that Herodotus is mistaken also in considering the seven years and five months he mentions in iii. 66 as the time Cambyses actually ruled; but if these figures are understood as referring to the seven completed official years of reign of Cambyses and the first five months of the eighth year, in which he was still alive (evidently they were so communicated to him by his authorities), they too most probably are correct. If Gaumâta openly proclaimed himself king on the 9th of Karmabaddaš, the fourth month of the year, it will have taken some time before the news of this event could reach Cambyses in the town "Agbatana" in Syria (Herodotus iii. 64), and since Herodotus himself states that he stayed there twenty days before he addressed the Persian nobles, and that he died "soon" after that, it is quite possible that Cambyses' death occurred at the end of the fifth (or at the beginning of the sixth) month. The 9th of Karmabaddaš is of course not the date of Cambyses' death, since the inscription expressly states that he died later.

²⁴ Convenient additional evidence for this order of the months is now offered by Pers. 3667, which enumerates the four months ^dhanamaqa to ^dhaduqanu, and Pers. 5231,

It will be observed that among the seven months not immediately identifiable from the Bisutûn inscription Bâgajâdiš had been correctly placed by Oppert (and all later writers), while Marqašanaš has been correctly identified by Rawlinson and later again by Weissbach, and Garmapada correctly equated, though in a guarded manner, with Du³ûzu by King and Thompson. But in no instance did the same scholar correctly place more than one or two of the four unidentified months. The most serious deviations from the correct order of the months were represented by the identification of Garmapada with Nîsannu by Oppert (Marquart and Weissbach), the placing of Adukan³iša in the gap represented by the fourth to the sixth months by Weissbach, and the identification of the same month with Araḥsamna by King and Thompson (Rawlinson identified it with the fourth month, Unger and Justi with the third month). Much better was the identification of Garmapada with the fifth (instead of the fourth) month by Rawlinson, Unger, and Justi. These scholars arrived at this more correct result by etymologizing the month name as "Wärmestand," which seemed to them to recommend an identification with Âbu, the month of the Fire God (Sargon, Cylinder Inscription [1 R 26], l. 61); cf. Justi, *ZDMG*, LI (1897), 247; Tolman, *Ancient Persian Lexicon and Texts*, p. 87.

The discovery of the new month names as well as the new order of the months will, I hope, be an inducement to Iranologists to take up again the philological treatment of the Old Persian month names. I believe that for the correct establishment of the Old Persian forms of the names and, subsequently, their interpretation, at least some of the considerably deviating variant writings and variant forms of the Elamite names will prove of some help. To give a complete list of these variants is at present impossible, since to date only a comparatively small portion of the tablets has been examined. Note, however, the following variants (most of them occurring in the passages quoted in this study):

which enumerates the seven months ^d*haduqannuia* to ^d*qarbašia*. These tablets were copied by Dr. Cameron and placed at my disposal after delivery of the manuscript of this study to *AJSL*.

^dha-du-qa-nu, ^dha-du-qa-nu-ia, ^dha-du-kán-nu-ia, ^dha-du-kán-na-iš
^dtu-ir-ma-ir, ^dtu-ra-ma-ir,²⁵ ^dšu-ru-ma-ir²⁵
^dsa-ak-ri-ši-iš,²⁵ ^dsa-kur(. . .)?,²⁵ ^dsa-a-kur-ri-ši-iš²⁶
^dqa-ir-ma-ba-da, ^dkar-ma-ba-daš, ^dkar-ma-bad-daš
^dtur-na-ba-ši-iš, ^dtur-na-ba-ši-is
^dkur-ba-ši-iš, ^dqa-ir-ba-ši-ia, ^dqa-ir-ba-ši-ia-iš, ^dqa-ir-pi-ši-ia-iš²⁵
^dba-gi-ia-ti, ^dba-gi-ia-ti-iš, ^dba-gi-ia-ti-ia-iš
^dmar-qa-ša-na, ^dmar-qa-ša-na-iš, ^dmar-qa-za-na-iš^{25, 27}
^dha-na-ma-qa, ^dan-na-ma-ak-qa, ^dha-na-ma-ak-kaš
^dsa-mi-ma, ^dsa-mi-ia-maš, ^dsa-mi-ia-man-da,²⁵ ^dsa-mi-man-taš,
^dsa-mi-ia-man-taš²⁵
^dmi-qa-na, ^dmi-kán-na-iš, ^dmi-ia-kán-na-iš

Apparently ^dsami^{ia}manda and ^dsami(^{ia})mantaš represent an oblique case (genitive) or oblique cases of ^dsami(^{ia})maš. It may be hoped that the variants of the name of the first month make it possible now to establish the exact form of the name in Old Persian; could Bis., § 31 (Old Pers. vers., col. 2, 1. 69) have *a-du-u-ka-[nu-]lu-ia!-ha-ia?* The variants ^dba-gi-ia-ti-ia-iš, ^dqa-ir-ba-ši-ia-iš, etc., may indicate a long (contracted) vowel in the last syllable of the Old Persian names; but more probably they are the genitive forms belonging to the nominatives ^dba-gi-ia-ti-iš, etc.

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²⁵ From tablets copied and studied by Dr. Cameron.

²⁶ Bisutûn Inscription.

²⁷ The usual writing of the name in the Persepolis tablets is with *ša*; apart from some doubtful instances the writing with *za* has thus far been found on one tablet only.