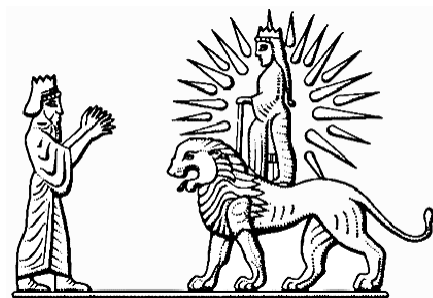


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“Babylonia and Elam. The Evidence of the Calendars”

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Published in Melammu Symposia 3:

A. Panaino and G. Pettinato (eds.),

Ideologies as Intercultural Phenomena.

Proceedings of the Third Annual Symposium of the

Assyrian and Babylonian Intellectual Heritage Project.

Held in Chicago, USA, October 27-31, 2000

(Milan: Università di Bologna & IsIao 2002), pp. 13-36.

Publisher: <http://www.mimesisedizioni.it/>

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GIAN PIETRO BASELLO Napoli

Elam and Babylonia: the Evidence of the Calendars*

Pochi sanno stimare al giusto
l'immenso beneficio, che ogni momento godiamo,
dell'aria respirabile, e dell'acqua, non meno necessaria alla vita;
così pure pochi si fanno un'idea adeguata delle agevolezze e dei vantaggi
che all'odierno vivere procura il computo uniforme e la divisione regolare dei tempi.
Giovanni V. Schiaparelli, 1892¹

Babylonians and Elamites in Venice

Every historical research starts from a certain point in the present in order to reach a far-away past. But a journey has some intermediate stages. In order to go eastward, which place is better to start than Venice, the ancient Seafaring Republic? If you went to Venice, you would surely take a look at San Marco. After entering the church, you would probably raise your eyes, struck by the golden light floating all around: you would see the Holy Spirit descending upon peoples through the preaching apostles. You would be looking at the 12th century mosaic of the Pentecost

Dome² just above your head. Would you be surprised at the sight of two polished figures representing the residents of Mesopotamia among other ancient peoples?

In order to understand this symbolic representation, we must go back to the end of the 1st century AD, perhaps in Rome, when the evangelist described this scene in the Acts of the Apostles and compiled a list of the attending peoples.³ If you had an edition of Paulus Alexandrinus' *Εἰσαγωγή εἰς τὴν ἀποτελεσματικὴν* (an "Introduction to Astrology" dated at 378 AD)⁴ within your reach, you should

* I would like to thank Prof. Antonio Panaino (University of Bologna, branch of Ravenna) for his support and for giving me the opportunity to speak about Elamites in Chicago, a city which has a strong tradition in Elamite studies. For this reason, I would also like to thank the Assyrian Community of Chicago: I shall not forget the enthusiasm for those who, as Dr. Norman Solhkhah said, "discovering, cleaning and reading – as we read English or speak Aramaic [i.e. modern Assyrian] – dusty tablets, study our history." I wish to express my gratitude to Dr. François de Blois (School of Oriental and African Studies, London) for the draft of his essay on Iranian calendars, and to Dr. Grazia Giovino (Istituto Universitario Orientale, Napoli) for the researches on *ra-hal*. A special thank goes to Dr. Maria Cristina Casaburi, Dr. Giancarlo Lacerenza (Istituto Universitario Orientale,

Napoli) and Franco Morisi for many reasons. Thanks to Federica Sarti for having kindly checked my English, and to Mons. Antonio Meneguolo (Procuratoria di San Marco, Venezia) for iconographical researches.

¹ Schiaparelli 1926: 237-238.

² Demus 1984: 148-159; Niero 1986: 30; Bertoli 1986: 203-207; Vio 1991: 145.

³ Acts 2:9-11. GNT: "(9) Πάρθοι καὶ Μηδοὶ καὶ Ἑλαμίται καὶ οἱ κατοικοῦντες τὴν Μεσοποταμίαν, Ἰουδαίαν τε καὶ Καπαδοκίαν, Πόντον καὶ τὴν Ἀσίαν, (10) Φρυγίαν τε καὶ Παμφυλίαν, Αἴγυπτον καὶ τὰ μέρη τῆς Λιβύης τῆς κατὰ Κυρήνην, καὶ οἱ ἐπιδημοῦντες Ῥωμαῖοι, (11) Ἰουδαῖοί τε καὶ προσήλυτοι, Κρήτες καὶ Ἀραβες, ἀκούομεν λαλοῦντων αὐτῶν ταῖς ἡμετέραις γλώσσαις τὰ μεγαλεῖα τοῦ θεοῦ."

⁴ Boer 1958. Italian translation in Bezza 2000.

open it near the end of chapter β' entitled Περί τῶν δώδεκα ζῳδίων "On the twelve zodiacal signs," and you would find a similar list⁵ which attests a common background originating from Babylonian-Hellenistic astral geography. Concluding this vein of conjectures, if the scholars⁶ who say that Luke copied the list from an astral geography were wrong,⁷ we might imagine that some Babylonian Jews were in Jerusalem to accomplish the pilgrimage on the Feast of Weeks (*Šāvu'ōt*) near 30 AD. Anyway, more than 2500 years after the end of the Babylonian kingdom, one can go to Venice and see two Babylonians!

Babylonia, Jerusalem, Rome, Venice, Chicago: the authors of the famous Hebrew captivity ended up in a book, then in a mosaic, and now we are talking about them. But our journey has to go further in space and in time to see a Babylonian heritage in the East. Going back to the mosaic, to the left of the Mesopotamians one can see another peo-

ple: the writing "ELAMIT" at the top of the figures helps us in recognizing two gray-dressed Elamites.

If there were Babylonian Jews in Jerusalem at Pentecost, there could be Jews from Elam as well⁸: in the book of prophet Isaiah⁹ we find mention of some Jews scattered in Elam, as it is suggested also from Esther's story set at the Persian court in Susa.¹⁰ On the other hand, the usage of the ethnonym Elamites is not anachronistic: although Elam as a political organization disappeared in the 6th century BC, it survived as a geographic denomination (perhaps also with an ethnic connotation) till the 14th century AD, when the name Elam identified the ecclesiastical province of the Nestorian church located in Khūzistān (the ancient Susiana).¹¹ It is noteworthy that Elamites together with Parthians and Medes replace Paulus Alexandrinus' Persis in the Acts, which should attest a more recent form of the tradition.¹²

Introduction

The proximity of the Elamite and the Mesopotamian peoples hides a deeper significance. One might say that Elamite culture can not be known without looking both westward at the ancient Mesopotamian civilizations at first and then east-

ward at the incoming Persians. The same might be said about the Elamite calendar. Here I shall briefly discuss the development of the Elamite calendar during the 2nd millennium and the first half of the 1st millennium BC on the grounds of the

⁵ Boer 1958: 8, lines 1-8. This is a summary (with some omissions here restored in square brackets) of the preceding sign by sign treatment: Προσπαθεῖ δὲ ταῖς χώραις τὰ ζῳδία· ὁ μὲν Κριὸς τῇ Περιοίδι, ὁ δὲ Ταῦρος τῇ Βαβυλῶνι, οἱ δὲ Δίδυμοι τῇ Καππαδοκίᾳ, ὁ δὲ Καρκίνος τῇ Ἀρμενίᾳ, ὁ δὲ Λέων τῇ Ἀσίᾳ, ἡ δὲ Παρθένος τῇ Ἑλλάδι [καὶ Ἰωνίᾳ], ὁ δὲ Ζυγὸς τῇ Λιβύῃ [καὶ Κυρήνῃ], ὁ δὲ Σκορπίος τῇ Ἰταλίᾳ, ὁ δὲ Τοξότης τῇ [Κιλικίᾳ καὶ] Κρήτῃ, τοῦ Αἰγοκέρωτος τῇ Συρίᾳ ἀπονενεμημένου, τοῦ Ὑδροχόου τὴν Αἴγυπτον λαχόντος, τῶν Ἰχθύων τὴν [Ἐρυθρὰν θάλασσαν καὶ] Ἰνδικὴν χώραν προσφκειωμένων.

⁶ Weinstock 1948; Brinkman 1963. See also Cumont 1909.

⁷ Metzger 1970. Further references in Bossuyt/Radermakers 1996: 227, footnote 115.

⁸ See also Gutmann 1930: 383-384 and Neusner 1965-1970, I: 14.

⁹ Isaiah 11:11.

¹⁰ Esther 2:5-7.

¹¹ Potts 1999, chapter 11. About the uninterrupted use of the name Elam to identify different entities see Vallat 1998: 302 and Potts 1999, chapter 1.

¹² Also Weinstock 1948: 44, Brinkman 1963: 423-424.

occurrences of both Elamite and Babylonian month-names. At the end of this time span, the Old Persian calendar made its appearance abruptly, interposing between the other two.

I must take the assumption that Elamites used a luni-solar calendar for granted.¹³ Unfortunately there is no direct evidence for this and we must be careful not to take the Elamite calendar as a whole, without internal subdivisions by periods and areas.

Because of a strong Mesopotamian influence starting from the second half of the 3rd millennium BC, Elamites should have adopted a luni-solar calendar like Sumerians and Babylonians.¹⁴ On the other hand, Mesopotamian menologies¹⁵ of the 1st millennium BC and the intercalary scheme K. 3923 make sense only from this point of view.

The Elamite calendar in Achaemenid

time is generally associated with the Old Persian calendar, which is in turn superimposable to the Babylonian calendar.¹⁶ The lunar fashion of the Old Persian calendar can be inferred from Darius' Bīsotūn inscription where day numbers in the Old Persian version coincide with those in the Babylonian one. After more than 20 years, the Aramaic glosses in some Persepolis Fortification tablets¹⁷ attest correspondences between Old Persian and Babylonian month-names which are coherent with the Bīsotūn ones. So the intercalation system should be quite similar, if not the same.¹⁸

I shall outline the Elamite calendar in a wider perspective because the study of a local calendar is not a local matter: reckoning time involves politics, cultic needs, cultural influences and social dynamics (in Elam also sociolinguistics¹⁹).

Time, Gods and Power

Our time flows meekly within the embankments of days, months and years, according to a regular rhythm in which the only foreseeable variation is represented by the added day in leap years. We

owe this to a relatively unknown astronomer from Naples, Aloysius Lilius (1510-1576). Nevertheless, if we want to name our calendar, we will use the name of Pope Gregory XIII, who supported the

¹³ For an introduction to luni-solar and Babylonian calendars, see Neugebauer 1969: 106-109, Hunger 1976-1980: 297-299 and Rochberg 1995: 1931-1932.

¹⁴ De Blois, unpublished.

¹⁵ See footnote 90.

¹⁶ Dandamaev/Lukonin 1989: 290; Bickerman 1967: 205. Cf. Hartner 1985: 745-746, n. III.8. About Old Persian calendar see Panaino 1990: 658-660 with further references.

¹⁷ PF 855, PF 857, PF 858 and PF 968, all belonging to the 23rd regnal year of Darius.

¹⁸ Here I can not go deeply into the debated question of *be-ip-ti-ka*. See Hallock 1969: 75, Hartner 1985: 746-748 (however W. Hartner seems to forget that there is another word indicating an intercalary month, *mešana*, and it is attested exactly in the 19th year with the 6th Old Persian month in PF 660:8, PF 894:11 and PF 1943:3; see also PF 1790:18 with

2-um-me-na), Hinz/Koch 1987: 181-182, "be-ip-ti-qa" (however they consider as scribal errors 6 on 7 occurrences; the miscalculations in PF 1073 could have nothing to do with improper use of language). De Blois, unpublished, gives an accurate meaning to *bēptika* on the ground of the etymology of the corresponding Old Persian word *hm'içiy-* in Darius' Bīsotūn inscription (for example DB §54). After Parker/Dubberstein 1956, a list of intercalations is in Walker 1997: 23 (see column *Persepolis*) which however missed the following: two intercalations in the 22nd year (probably, PF 873:9 and PF 875:11 marked by *KI.MIN*) and one (probably, PF 879:10 marked by *2-e-da-na*) in the 27th year of Darius.

¹⁹ About ethnic and linguistic stratifications in Achaemenid time see Rossi 1981 and 1984, Potts 1999: 337-345.

1582 reform. In order to understand the role of politics in reckoning time, we must consider the time of gestation and the troubles which the new calendar met around the world.²⁰ A calendar needs the support of political powers.²¹

The calendar was the human endeavour to dominate time, intended as the immediate expression of the divine world. Royal ideology implied this control. Consider these needs: taxing people, computing loan interest, regulating trade between remote lands, fixing a diplomatic appointment and celebrating a ritual feast.

The Babylonian calendar with its month-names was a powerful standard in ancient near East since the beginning of the 2nd millennium BC. Maintaining a different calendar system was a mark of

political autonomy, while having different month-names implied at least a strong local community.

Excursus: Deified Month-Names

In Achaemenid Elamite the words *ITU* “month” and *na-an* “day” are almost always marked by a star,²² the cuneiform sign *AN*, a reminder of the tight tie with the heavenly gods who ruled over time rhythms, specifically Moon and Sun. But even month-names, both the Old Persian and the Elamite ones, were often preceded by this divine determinative: such habit is unprecedented before Darius’ Bīsotūn inscription and apart from its Elamite version.

month-names	divine determinative		incoherent	sum
	yes	no		
Old Persian	662 73.0%	203 22.4%	42 4.6%	907 tablets
Elamite	139 67.1%	64 30.9%	4 1.9%	207 tablets
sum	801 71.9%	267 24.0%	46 4.1%	1114 tablets

Elamite texts from Tall-i Malyān (11th century BC) employed in case the locative determinative *AŠ* before *ITU* (however, afterwards it became an integral part of the sign *ITU*) or *UD* “day,” but never before a month-name.²³

In Achaemenid period from Persepolis, 72% of the published²⁴ Elamite tablets (510-494 and 492-458 BC) bearing

month-names have the divine determinative before month-names. This percentage is omogeneous even into separate regnal years, i.e. there is no significant evolution in time.

Even if Old Persian script does not have the capability to write determinatives, indeed this habit seems to originate with Old Persian month-names: one could

²⁰ See Coyne/Hoskin/Pedersen 1983, especially Hoskin 1983 and Gingerich 1983. Duncan 1998 is a more novelized reference which however underlines very well the political factor in reckoning time.

²¹ Hoskin 1983: 263.

²² Hinz/Koch 1987: 795, “ITU” and p. 968, “d.na-an”; Hallock 1969: 706, “ITU” and p. 736, “I. nan”. In PF 1779:8 there is one of the extremely rare occurrences of *ITU* without the divine determinative; *na-*

an is attested sometimes also with the locative determinative.

²³ Stolper 1984: 14b.

²⁴ Both Fortification and Treasury tablets, including data inferred from unpublished tablets quoted in Hinz/Koch 1987 and in Hallock’s glossary (Hallock 1969: 663-776). This is the data base of “Lankelli” (Basello 2000), queried throughout this paper.

refer to the Zoroastrian calendar where each month and each day in a month²⁵ is entitled to a god or related to religious concepts. It could be that each month was represented by a god, but I think that it is

first of all the “sealing” of the Moon god over the monthly cycle. It is noteworthy that in Achaemenid Elamite *be-ul* “year” is never preceded by determinatives other than the locative *AŠ*.

Old Elamite Period

The earliest information about Elamite month-names comes from the tablets²⁶ dealing with juridical matters discovered at Susa, written in Babylonian and belonging to the *SUKKAL.MAH* dynasty (ca. 1770-1600).²⁷ The dating formulae provide us with a great number of month-names,²⁸ more than the twelve we might expect. The month-names occurred alone, so we do not have lists of months except in very few tablets.

Some month-names (*addaru*,²⁹ *abu*³⁰ and *šabātu*³¹) are the same of the standard Babylonian calendar, unless we follow Cohen’s opinion that the route of this month-names was inverse: they were originally Elamite; then the Babylonian king Samsu-iluna (1749-1712 BC) included them in the Babylonian calendar, in order to create a composite calendar of wide acceptance.³² Other month-names

are linguistically Babylonian (for example *šer’i ša ešēdi*, the month of “the furrow (ready) for reaping,” or *pīt bābi*, the month of “the opening of the gate”³³), while the remaining names seem to be truly Elamite even if it is difficult to give a tentative etymology of them.³⁴

There is also a solitary occurrence of *APIN*,³⁵ the logogram for the 8th standard Babylonian month, in a tablet which mentions three other month-names: *ha-al-ba-tum*, *e-la-ma-tum* and *pa-pa-kum* which “sound” as Elamite. So, rather than a standard Babylonian month-name, I prefer at least to suppose that *APIN* is a shortened form of a month-name like *A.ŠÁ DINGIR.RA URU₄.A* or *šer’i ša erēši* (written also *še-er-ḫu-um URU₄.A*) where *URU₄* is another reading of the sign *APIN*.

The Babylonian cultural influence

²⁵ Belardi 1977: 63. On Zoroastrian calendar see Panaino 1990: 660-663 and de Blois 1996.

²⁶ Published in MDP X (1908) as *Tablettes de l’époque d’Adda Pakšu* (i.e. *ad-da.hu-šu* in Hinz/Koch 1987: 27 or *Atta-ḫušu* in Vallat 1998; these are accounting tablets) by V. Scheil, MDP XVIII (1927) as *Textes économiques* by G. Dossin, MDP XXII (1930; S.jur. 1-165), MDP XXIII (1932; S.jur. 166-327), MDP XXIV (1933; S.jur. 328-395) and MDP XXVIII (1939; S.jur. 396-551) as *Actes juridiques susiens* by V. Scheil.

²⁷ Cuq 1931: 48, Vallat 1996. See Vallat 1998 as historical framework throughout this paper.

²⁸ Besides the first cataloguing in MDP X, the main studies about this month-names are: Landsberger 1915: 87-88 (also 1949: 262, “c”, and p. 280, footnote 107), Scheil 1926: 41-42, Langdon 1935: 42-47, Hinz 1963 (see also Hinz 1971: 678), Reiner 1973: 97-102, Cohen 1993: 362-364. Apart from these, there is the

debate published on *Memnon*: Bork 1910 (which is labelled “verfehlt” in Hinz/Koch 1987: 1340), Weidner 1911, Hrozný 1911 and Bork 1911 (“nicht stichhaltigen” according to Hinz/Koch 1987: 1340).

²⁹ *a-da-ru-um* in MDP X 3: rev. 3 and 14: rev. 3 and passim. *a-da-ri* in MDP XXIII 179: obv. 3 and passim.

³⁰ *a-bu-um* in MDP X 24 and 32. *a-bi* in MDP XXII 96:8 and 129:13.

³¹ MDP XXIII 31:5; MDP XXVIII 508:11 and passim. It “is amply attested in the Old Babylonian Susa texts, but was so far taken as belonging into the Babylonian (Nippur) calendar and thus not recognized as part of the local Elamite calendar” (Reiner 1973: 98).

³² Cohen 1993: 303, 340 and 362; p. 13 theory in general.

³³ Cohen 1993: 362-363.

³⁴ Reiner 1973: 99 and de Blois, unpublished.

³⁵ MDP XXVIII 550.

seems to be strong, as Babylonian was the official written language³⁶; the calendar system probably originated in Mesopotamia, too, but it was adjusted to local needs with the adoption of local month-names. In fact, Elam was ruled by a steady Elamite dynasty, whose kings bore Elamite names.

The question is: how can we cut off a coherent group of twelve month-names? W. Hinz³⁷ suggested two sets (“Bezeichnung”) of months: a) a Babylonian calque of an Elamite month-name; and b) an approximate Babylonian rendering (translation) of the first set. Instead, F. de Blois follows E. Reiner³⁸ in defining a group of twelve months looking at a stela belonging to the beginning of the middle Elamite period; the other month-names might be alternate spellings.

Among these, the month-names related

to the agricultural activities in the “field of god” (the temple fields), *A.ŠÁ DINGIR.RA ŠE.KIN.KUD.A* and *A.ŠÁ DINGIR.RA URU₄.A*, deserve further attention. E. Reiner³⁹ underlines the striking parallelism with *šer'i ša ešēdi* and *šer'i ša erēši* (written *še-er-i-URU₄* on the middle Elamite stela) and takes them for unabridged variants. However, in two tablets⁴⁰ *A.ŠÁ DINGIR.RA URU₄.A* occurs in a sequence between *lallubû* and *šer'i ša erēši* (written *še-er-ḥu-um URU₄.A*). S. Langdon⁴¹ takes into account this evidence only for *A.ŠÁ DINGIR.RA URU₄.A*, while I think that, according to W. Hinz,⁴² we can state that the months *A.ŠÁ DINGIR.RA* precede the respective months *šer'i*.

The intercalary month *dar-bi-tum*. *DIRIG* is noteworthy, as well.⁴³

Middle Elamite Period

In Babylonian from Haft Tepe

In the middle Elamite period we have a clearer situation. From a royal Elamite tomb at Haft Tepe, the ancient town of Kabnak near Susa, E.O. Negahban found a stela⁴⁴ with an inscription in contemporary Babylonian reporting a list of ritual

provisions. The mention of king Tepti-Ahar dates it around 1365 BC.⁴⁵ The list is ordered by month: it begins with *a-da-ri* (similar to the last Babylonian month) and ends with *šà-ba-a-ti* (similar to the 11th Babylonian month). Later findings of administrative tablets⁴⁶ written in Babylonian with single occurrences of month-names⁴⁷ confirmed the names on the stela and filled a gap on the list.

³⁶ Lambert 1991. About Babylonian texts in Elam see Lackenbacher 1998.

³⁷ Hinz 1963.

³⁸ De Blois, unpublished, and Reiner 1973.

³⁹ Reiner 1973: 99, footnote 7.

⁴⁰ MDP X 6 and 21.

⁴¹ Langdon 1935: 43-44, n. 2, “a-šag dingir-ra še-gur-kud,” and p. 45, n. 7, according to the Babylonian reading *eqli ili erēši*.

⁴² Hinz 1963: 14 and 15.

⁴³ MDP XVIII 93:2. De Blois, unpublished; Langdon 1935: 46, n. 12 (a).

⁴⁴ Published in Reiner 1973 with full commentary. About Haft Tepe see Negahban 1997.

⁴⁵ Reiner 1973: 94-95 updated in Herrero 1976: 112 and Steve/Gasche/de Meyer 1980: 97-98 and footnote 57. Cf. also Vallat 1998: 307 with Steve/Gasche/de Meyer 1980: 99-100. Tepti-Ahar is mentioned in line 27 of the stela.

⁴⁶ Published in Herrero 1976, Herrero/Glassner 1990, 1991, 1993 and 1996.

⁴⁷ Listing of the occurrences in Herrero/Glassner 1991: 79-80.

Only the 6th month-name is still missing. P. Herrero and J.J. Glassner⁴⁸ suggest that it may be the following (outside the list of ritual provision) occurrence in the stela of the word *ta-aš-ri-i-ti* (the name of the 7th Babylonian month). Nevertheless *tašrītu* is not attested in the tablets. To me, the occurrence of *tašrītu* in the stela seems to be simply the name of a ritual feast, not a month-name⁴⁹; in fact it is not preceded by the usual logogram *ITU* “month.” Therefore, I suggest *la-al-lu-u-bi-e*, attested unfortunately only in one tablet,⁵⁰ as the name of the missing 6th month.

As I mentioned above, it is relevant that the month-names listed in the stela are also attested with slight variations in the Old Babylonian tablets from Susa. The only exception is the 7th month-name in the stela, *še-bu-še-bi-i*: perhaps the month-name having the same relative position in the Old Babylonian tablets from Susa could be *A.ŠÁ DINGIR.RA URU₄.A*. Anyway, on this ground we can define a set of twelve month-names which I suggest to name “Susiana group.”

In Elamite from Tall-i Malyān

Afterwards, Babylonian influence decreased and Susiana became more Elamite. The Elamite language appeared in royal and votive inscriptions. F. Vallat⁵¹ speaks of “Elamization” of Susiana. The relationship with Mesopotomian peoples became more and more a state of disagreement. The apex of this escalation was when the Babylonian king Nebu-

chadnezzar I defeated Elamites and took Susa around 1110 BC.

Therefore, we are not astonished by the discovery of administrative tablets⁵² in Elamite language from Tall-i Malyān, probably the ancient town of Anšan, 43 km west of Persepolis. These tablets belong to the very end of the middle Elamite period, near 1000 BC⁵³ (M.-J. Stève⁵⁴ regards them as the first neo-Elamite texts). They were found in two separate parts of level IVa and scattered in the next level IIIa. The dating formulae provide us with month and day⁵⁵; the absence of year indication makes M.W. Stolper⁵⁶ suggest that we are in presence of temporary archives. We have now left Susiana to reach the eastern district of Elam, farther from Mesopotamia.

Apart from the odd occurrence of *APIN* discussed above, the Malyān tablets, despite being written in Elamite, attest the first appearance in Elam of some logograms for standard Babylonian month-names, both in abbreviated (*GU₄*, *KIN*) and full (*BÁR.ZAG.GAR*, *GU₄.SI.SÁ*) form.

Aside from the few occurrences of Babylonian logograms, there are two month-names (written consistently *a-pi* and *la-lu-be*) recurring several times, which are similar to those of the Susiana group but written in Elamite. They are attested only in the first group of tablets from level IVa.

Other month-names are less attested: besides the unclassifiable *ka₄-te-en-ka₄*, they (*[m]a-an-šar-ki* and *ma-an-ša-ar-<ki>*, *s[i-b]a-ri*, *še-er-man*[?], *gam-ma-ma*, *a-da-ri*) are almost identical to the

⁴⁸ Herrero/Glassner 1991: 80.

⁴⁹ Already Reiner 1973: 93, n. 3 d). About *tašrītu* as a festival, see Cohen 1993: 326-330: its observance in Elam is noteworthy.

⁵⁰ HT 28:10 (= Herrero 1976, n. 1). *a-al-lu-u-bi-e* in Herrero/Glassner 1991: 80 is a misprint.

⁵¹ Vallat 1998: 307.

⁵² Published in Stolper 1984.

⁵³ Stolper 1984: 9.

⁵⁴ Steve 1986: 19 and 1992: 21, “N I A. Malyan.”

⁵⁵ Remarks in Stolper 1984: 14-15; listing of the occurrences in published texts at p. 196, “ITI.”

⁵⁶ Stolper 1984: 26-28.

Elamite month-names attested five centuries later in the Persepolis Fortification tablets. Some of these appear only in the unpublished tablet⁵⁷ M-603 from level IIIa, where we find this sequence:

s[i-b]a-ri še-ru-um še-ru-um-x[...] gam-ma-ma

A comparison with *ši-ba-ri*, *še-ir-mu* and *ku-ut-ma-ma*⁵⁸ (the 9th, 10th and 11th Elamite month-names in the Persepolis Fortification tablets) is made by W. Hinz and H. Koch,⁵⁹ that restore *še-ru-um*. *D[IRIG]* as an intercalary month. The form *še-ru-um* could be a coupling ring between the Susiana (written in Babylonian) and the Persepolis (written in Elamite) groups of month-names, for it seems to be an abridged form of *šer'i ša erēši*.⁶⁰ In this connection, it is noteworthy that at Malyān the form *še-er-man*² is attested, as well.⁶¹

Neo-Elamite Period

The neo-Elamite period comes after a dark age: when the light of written sources comes back, we can see that Elamite language is still spread. Despite this, in the neo-Elamite administrative tablets from the acropolis of Susa (S 1-298, plus S

The same function of coupling ring could also be assigned to the solitary occurrence of *a-da-ri*⁶² (related to the 3rd Persepolis Elamite month-name *ha-da-ir*, in turn scarcely attested⁶³), but especially to *belili* which is attested 8 times, both in the first and second group of level IVa. The written forms *be-li-li*⁶⁴ or *be-lī-lī*⁶⁵ should be the Elamite phonetic transcription of the Susiana month-name *DINGIR.MAH*.⁶⁶ The remaining written form *NIN.ī-lī*⁶⁷ fits very well with this hypothesis. According to F. de Blois, the month-name *be-el-ti.DINGIR*⁶⁸ (i.e. *bēlti ilī* “mistress of the gods”) attested at Haft Tepe beside *DINGIR.MAH*⁶⁹ is another transition form. At the other end of this chain, we find the 6th Persepolis Elamite month-name *be-li-li-ut*.⁷⁰ It is noteworthy that *be-li-li-ut* and *ha-da-ir* are the only Elamite Persepolis month-names written without variants.

309),⁷¹ the abbreviated logograms for standard Babylonian month-names are widely used except, strangely, for the 7th month. It was probably replaced by the occurrence of the month *ra-hal*⁷² which is attested as many times as the average of

⁵⁷ Quoted in Stolper 1984: 15a.

⁵⁸ As in PF 1001, dated at the 22nd regnal year of Darius. *ši-ba-ri* is the main written form (26 occurrences on 39) besides *ši-ba-ir* (10 occurrences) and *ši-ba-ir-ri*, *ši-ba-ri-me*, *ši-bar* (each with a single occurrence). *še-ir-mu* is attested 11 times, against 21 of the main form *še-ir-mi*, besides *še-ir-ma* (2 occurrences), *še-ir-me* (2) and *še-iš-mi* (1). *ku-ut-ma-ma* is attested 18 times, besides *kam-ma-ma* and *ku-ut-na-ma* (each with a single occurrence). Data from Basello 2000.

⁵⁹ Hinz/Koch 1987: 1153, “še-ru-um.”

⁶⁰ Cf. again *še-er-ḥu-um URU₄A* from Susa and *še-er-i-URU₄* on the Haft Tepe stela (already Stolper 1984: 15a).

⁶¹ M-1468 (unpublished).

⁶² M-1461 (unpublished).

⁶³ Only 5 occurrences (PF 1275, PF 1401, PF 1524,

Fort. 2403 and Fort. 5634). Data from Basello 2000.

⁶⁴ TTM I 53:7 and 79:10.

⁶⁵ TTM I 4:7.

⁶⁶ Langdon 1935: 44, n. 4; Stolper 1984: 14-15 with further references and Herrero/Glassner 1991: 79, footnote 4. Cf. Reiner 1973: 99, footnote 20a.

⁶⁷ TTM I 24:4 and 50:4.

⁶⁸ HT 42:5' (=Herrero/Glassner 1990, n. 37).

⁶⁹ HT 27:10 (=Herrero/Glassner 1990, n. 65), HT 37:8 (=n. 36), HT 148:12 (=n. 44; restored).

⁷⁰ Attested 14 times. Data from Basello 2000.

⁷¹ Published in MDP IX (=Scheil 1907) as *Textes élamites-anzanites* by V. Scheil; S 309, of unknown origin and published in MDP XI (=Scheil 1911), must be added to this group (Steve 1986: 8). Published also in Yusifov 1963.

⁷² Scheil 1907: 32.

the Babylonian logograms.⁷³ These tablets belong to the 7th or even to the beginning of the 6th century BC.⁷⁴ As the Malyān tablets, there is no year indica-

tion and there is always one month-name per tablet. However, Malyān tablets are nearly always dated with day number, while here only few tablets are.⁷⁵

month	Babylonian logogram	occurrences in			
		S 1-298, S 309	S 301-307, S add. 3	Ururu	Omen
1st	BĀR	13			yes
2nd	GU ₄	15			yes
3rd	SIG ₄	16			yes
4th	ŠU	18	1		yes
5th	NE	21			yes
6th	KIN	7			yes
7th	DU ₆	no			yes
? 7th	ra-hal	14	1	1	no
8th	APIN	9	1		yes
9th	KAM for GAN	14			yes
10th	AB	15			yes
11th	ZÍZ	19	1		yes
12th	ŠE	17	3		yes
	ŠE DIRIG	2			
	? DIRIG	2			

The same scenario appears in seven loan tablets from the apadāna of Susa (S 301-307),⁷⁶ very similar to the Mesopotamian contemporary typology of texts,⁷⁷ and in one tablet from the Achaemenid village (S add. 3),⁷⁸ dated shortly afterwards the tablets from the acropolis.⁷⁹ S 302 and S 303 have two month-names each: the latter is dated at the 11th Babylonian month, with an interest applied from the 12th month; S 302 is dated at the 12th Babylonian month followed by *ra-hal*. Unfortunately, V. Scheil is not sure about the reading of the sign *HAL* and nothing let us understand how many months elapsed.

Ra-hal is a really curious case: it is also the only month-name in the Ururu's

bronze plaque,⁸⁰ found at Persepolis but dated at the second half of the 7th century BC. At least in this occurrence, it is strange that the plain sign *HAL* is so close to the preceding sign *RA*. Strangely enough, *ra-hal* is attested also in the Persepolis Fortification tablets, beside the Elamite and the Old Persian groups.

However, on the obverse of the only Elamite tablet reporting astrological omens⁸¹ (dated at the 8th or first half of the 7th century BC⁸²), we find a whole series of the Babylonian logograms twice. According to V. Scheil, these first two omens are an Elamite copy of a Mesopotamian original. On the reverse, we find two other omens. One is badly damaged, the other attests two new month-names:

⁷³ Survey based on Scheil 1907 and Yusifov 1963 (the only discrepancy is in S 126, but see Yusifov's translation). This data differs sometimes from the occurrences of month-names given in Hinz/Koch 1987.

⁷⁴ Steve 1986: 8; Hinz/Koch 1987: 1327, "S"; Steve 1992: 22; Vallat 1998: 311a.

⁷⁵ For example, S 13 (day 14), S 41 (29), S 59 (22), S 70 (21), S 77 (2), S 85 (5), S 97 (3), S 296 (5).

⁷⁶ Published in MDP XI (=Scheil 1911). See p. 89.

⁷⁷ Reiner 1969: 61.

⁷⁸ Published in Paper 1954.

⁷⁹ Steve 1986: 8.

⁸⁰ Ururu (Oruro in Hinz/Koch 1987), reverse 11; still unpublished, a brief commentary and legible photographs are in Cameron 1957.

⁸¹ Published in Scheil 1917.

⁸² Hinz/Koch 1987: 1326, "Omen"; Steve 1992: 22, "N II. n. 11."

ITU ^dŠi-mut-na GAM ITU Šu-ni²-na²⁸³

In the Elamite syllabary, the signs for *DU*₆ and *APIN* appear only as Babylonian month-names and only in this period. Nevertheless, the appearance goes back to their old Babylonian shape.

According to M.-J. Stève,⁸⁴ the sign *KAM* is always used in place of the logogram *GAN* for the 9th Babylonian month. In my opinion, this is because the sign *GAN* belongs only incidentally to the Elamite syllabary, while *KAM* is widely used.

An intercalary month *DIRIG* is attested in four tablets⁸⁵ from the acropolis.

Few other month-names are attested in Susiana. As soon as we leave economic texts, Elamite tradition peeps out again: the Susiana month-name *la-lu-bi-e* seems to survive still in *la-lu-pe*, from an Elamite inscription of the priest Šutruru⁸⁶ (kingdom of Šutruk-Nahhunte II, 717-699 BC); in an Elamite inscription of the king Tepti-Humban-Inšušinak⁸⁷ (664-653 BC) from the acropolis of Susa we find *ku²-na-ma²-na*. It could be an intermediate form between Malyān *gam-ma-ma* and Persepolis *ku-ut-ma-ma*.⁸⁸ In this connec-

tion, the single occurrence of *kam-ma-ma* attested in a Persepolis Fortification tablet⁸⁹ is perhaps more interesting.

Elamite Month-Names in Mesopotamia

While Elamites used Babylonian logograms, Babylonian menologies⁹⁰ and neo-Assyrian sources, both inscriptions and astrological reports,⁹¹ employed sometimes the Susiana month-names. Some menologies give us the complete listing with Babylonian equivalents. The relative order corroborates that of Haft Tepe but, in some tablets, the absolute position is different. In tablet Sp. II 381 two lacking Elamite month-names correspond to the 1st Babylonian month-name; the Elamite month-name corresponding to the 2nd Babylonian month-name is *addaru* and so on. The neo-babylonian commentary on Elamite month-names Rm. 2,127 confirms that the 1st month is the well-known *šabātu* together with *BAR.SAG.SAG*, an apparently new month-name.⁹²

Achaemenid Period

Reckoning and recording time seems to be an important matter in this period.⁹³ Darius' Bīsoṭūn inscription is rich of

dating formulae, accurate down to the day. A new group of month-names appears here: the Old Persian one,⁹⁴ both in

⁸³ Omen, reverse, §2, 10. See also Hinz/Koch 1987: 1166, "d.šī-mut," p. 1180, "šu(?)-ni(?)-na" and p. 423, "GAM."

⁸⁴ Stève 1992: 149, n. 143/105 "KAN" and p. 158, n. 406 "KAM." Cf. Hinz/Koch 1987: 429, "GAN."

⁸⁵ S 11: reverse 4, S 53:13, S 219:9 and S 243:4.

⁸⁶ Published in König 1965: 155, n. 74, §65, with German translation. See also MDP V, plates XI-XII.

⁸⁷ Published in König 1965: 170, n. 79, VII, with German translation.

⁸⁸ Cf. Hinz/Koch 1987: 513, "ku(?)-na-ma(?)-na."

⁸⁹ PF 1523:7 (22nd regnal year of Darius). Stolper 1984: 15a.

⁹⁰ Especially Sp. II 381 = BM 34874 (published in

Pinches 1912), K. 104 (copy in R V 43; see Weidner 1912) and the intercalary scheme K. 3923 (published in Hunger/Reiner 1975). The listings of month-names are quoted in Reiner 1973 with further references.

⁹¹ Reiner 1973: 101 and footnote 21; Villard 1991.

⁹² Reiner 1973: 101-102.

⁹³ Regarding reckoning time, see Hartner 1985: 742-744, Dandamaev/Lukonin 1989: 289-290, Walker 1997: 22-24; regarding recording time, Windfuhr 1988. See also Bowen/Goldstein 1988.

⁹⁴ About Old Persian month-names, see Oppert 1897, Poebel 1938, Cameron 1948: 41 and pp. 44-45, "Table 4," Hinz 1973: 64-70, Panaino 1990: 658-660 with further references.

the Old Persian and the Elamite (as a calque) versions.⁹⁵ Instead, the Babylonian version keeps its own logograms for standard Babylonian calendar.

While Babylonian logograms in Elamite texts only underwent the Elamite development of sign shapes, Old Persian month-names suffered a lot of variants in syllabic rendering.⁹⁶

Even if Darius did not impose his language to the administration of the empire, the Old Persian month-names are widely

spread in the Elamite administrative texts from Persepolis, both the Fortification (510-494 BC) and the Treasury tablets (492-458 BC). The Old Persian month *anāmaka-*, written 'A'NAMAKA, was recognized by G.G. Cameron also on the unique tablet in Phrygian letters and language.⁹⁷ However, as we have already seen, in the Persepolis Fortification tablets a group of month-names, which R.T. Hallock⁹⁸ considers “native Elamite,” is attested, as well.

Darius' regnal year	total number of PF + PFa tablets ⁹⁹	PF + PFa tablets with month-names	
		Old Persian	Elamite
13th	2	0	0
14th	4	1	0
15th	20	3	0
16th	21	12	0
17th	40	13	0
18th	89	25	4
19th	122	46	2
20th	82	28	1
21st	152	40	8
22nd	429	130	66
23th	443	206	23
24th	167	55	1
25th	67	35	0
26th	8	2	0
27th	30	7	10
28th	61	37	8
tablets with year	1737	640	123
without year ¹⁰⁰	383	119	13
sum	2120	759	136

⁹⁵ It would be interesting to know if there are differences in the dating formulae of the first Elamite version (cf. Cameron 1960: 59-61).

⁹⁶ Cameron 1948: 41, even if this is partly true also for Elamite month-names. As an example, Basello 2000 counts 19 different written forms on 140 occurrences of the 2nd Old Persian month-name: the most frequent is *tu-ru-ma-ir*, attested 25 times, while the form attested in the Bīsotūn inscription is *tu-ir-ma-ir* with 21 occurrences; other 8 variants are unpub-

lished.

⁹⁷ Cameron 1973: 52-53. Tablet published in Friedrich 1965.

⁹⁸ Hallock 1950: 241 and 1969: 74. See also Cameron 1948: 41.

⁹⁹ From Hallock 1969: 74 (the right sum is 1714) plus the evidence from Hallock 1978.

¹⁰⁰ Including damaged tablets which might have had it originally.

The regnal year is often written at the end of the tablets,¹⁰¹ even if the name of the related king is always unexpressed. Day number is very rare¹⁰²: when we find it, the dating formula is often similar to the Bīsoṭūn one. We have either texts with a single month-name, lists of consecutive (occasionally one in and one out¹⁰³) months or “from-to” periods in the formula:

${}^dITU^{ME\check{S} (d)}$ month-name-(*ik*-(*ki*-))*mar*
ku-iš ${}^dITU^{ME\check{S} (d)}$ month-name

often remarked by the total number of months elapsed. Lists or periods beginning in one year and ending in the following one are rare¹⁰⁴ but very useful for us: a list such as in PF 1790 proves that *ha-du-kān-nu-iš* is the 1st month of the year.¹⁰⁵ The month seems to be the basic unit in order to measure time for administrative purposes, while day numbers are required in dating the glorious undertakings of king Darius.

The two groups of month-names are well-defined, with twelve months each,¹⁰⁶ so we do not know how the 8 or 9 occurrences of *ra-hal* can be classed.¹⁰⁷ Here

ra-hal is nearly always followed by the sign *MEŠ*,¹⁰⁸ i.e. the determinative usually placed after logograms from neo-Elamite period on.¹⁰⁹

The surviving of an Elamite group is explained as being in “documents which have their origin in regions populated entirely by Elamites.”¹¹⁰ Therefore my suggestion is to name it “Anšan group,” comprising in it the corresponding month-names from Malyān. Notice that this group seems to include some Susiana month-names.

In my opinion, it is not easy to know for sure the absolute positions (i.e. fixing the first month of the year) of Elamite month-names.¹¹¹ At least in three instances the text of a tablet with Elamite month-names is included in a summary tablet replacing the original Elamite month-names with Old Persian ones: so we know that in the 22nd year of Darius *zi-ik-li* and *za-ir-pa-ki-um* correspond to the 1st and 2nd Old Persian month,¹¹² but these are first of all correspondences which can not prove that Elamite year began with *zi-ik-li*.

¹⁰¹ Regnal year lacks with higher frequency in some text categories, as Hallock’s category Q, “Travel Rations.”

¹⁰² For example, PF 1281: 12-15. Cf. PF 1156: 7.

¹⁰³ PF 1116, PF 1117 and PF 1129 with the odd months and PF 1098 with the even ones.

¹⁰⁴ For example, with explicit mention of both year numbers, PF 1083, PF 1779 and PF 1790. With explicit mention of just one year number (the latter one? See Hallock’s addition in the translation of PF 306:15): PF 306, PF 398: 14, PF 757, PF 804, PF 1039 (with a sixteen-month period), PF 1040, PF 1041: 10, PF 1189 (with a twelve-month period) and PF 1778: 13. Never in the Treasury tablets.

¹⁰⁵ Notice also the complete list of month-names and the intercalation of the 19th year. Hallock’s category T, “Letters.”

¹⁰⁶ A few doubts remain about *ha-da-ir*, the 3rd Elamite month-name, which is never attested with other month-names, except for the unpublished tablet

Fort. 2403 (=PF NN L₂-610; cited in Hallock 1969: 75, footnote 13).

¹⁰⁷ Hallock 1969: 75, updated in Hallock 1978: 111. Hinz/Koch 1987: 1024, “*ra-hal*” and “*ra-hal-la*,” lists only 7 occurrences. These are the documented occurrences: PF 321 (22nd regnal year of Darius), PF 1330 (21st), PF 1366 (22nd), PF 1466 (23rd), PF 1486 (23rd), Fort. 6516 (=PF NN P-1690), Fort. 7250.

¹⁰⁸ Except for PF 321:8 where it is written exceptionally *ra-hal-^lla*.

¹⁰⁹ Steve 1992: 162, n. 533.

¹¹⁰ Dandamaev/Lukonin 1989: 290. Already Hallock 1978: 114.

¹¹¹ Cf. Hallock 1969: 75.

¹¹² PF 1677 (Hallock’s category S1, “Regular Rations for Animals”), PF 1080 (category L3, “Other Regular Monthly Rations”), PF 1011 (category L2, “Regular Monthly Rations with *Galma*”) in PFa 29 (category V, “Journals”) according to Hallock 1978: 114.

Babylonian Month-Names

Besides Old Persian and Elamite groups, there are some occurrences of Babylonian standard month-names. In phonetic writing: Greek tablet Fort. 1771 (*TEBHT*; no year indication),¹¹³ unpublished monolingual Aramaic tablets,¹¹⁴ Aramaic glosses in Fortification tablets,¹¹⁵ Elamite tablet YBC 16813:7 (*^dnu-šá-an-na*¹²; 15th year).¹¹⁶ As logograms: PF 2055:10-11 (*SIG₄-na*; 23rd year),¹¹⁷ PF

1803:11-12 (*SIG₄-na*, recognized only by W. Hinz and H. Koch; 23rd year),¹¹⁸ PFa 11:11 (*(^r^d1GUD^{MEŠ}-na*; no year indication).¹¹⁹

The only logogram occurrence followed by logogram determinative *MEŠ* is PFa 11. In PF 2055 the month-name is strangely linked to regnal year number by *a-ak* “and.” PF 1803 is puzzling because the 3rd Babylonian month-name follows the 4th Old Persian month-name.

The Babylonian Month-Names in Elam and the Elamite ones in Assyria

The logograms for the Babylonian month-names are attested in Elam starting from the 11th century BC. They might have been introduced as a consequence of the cruel capture of Susa¹²⁰ by the Babylonian king Nebuchadnezzar I in 1110 BC. They are firstly partially attested in the distant Anšan, where the Elamite king Hutelutuš-Inšušinak took refuge¹²¹; afterwards they became widely employed in Susa. Indeed, they are confined to the administrative practice: notice that Elamite month-names still survive at Susa in royal and votive inscriptions.

In my opinion, until we understand the interference of *ra-hal*, these Babylonian

logograms simply represent Babylonian month-names, and not aliases for Elamite names.¹²² We do not know how scribes and officials read them or what kind of month-names were used by people. Anyway, Babylonian logograms were written in local administrative and legal texts. This is an official use which attests the convenience and spread of Babylonian month-names and calendar.

According to M.E. Cohen,¹²³ the occurrence of Elamite month-names in Assyria is an effort of showing independence from the dominating Babylonian culture. So the royal Assyrian ideology preferred learned or foreign month-names rather than standard Babylonian ones.

¹¹³ Lewis 1977: 12-13. Quoted in Hallock 1969: 2 and published in Balcer 1979: 280.

¹¹⁴ Some “traces” of these tablets can be found in Herzfeld 1934: 232, Cameron 1948: 23a and footnote 139, Bowman 1970: 19, footnote 26. About month-names, see Jones/Stolper 1986: 251.

¹¹⁵ PF 855, PF 857, PF 858 and PF 968. About Aramaic glosses, see Hallock 1969: 82.

¹¹⁶ Published in Jones/Stolper 1986: 247-253. In Cohen 1993: 306 and footnote 3, it seems to be quoted wrongly and without stating that the source is in Elamite.

¹¹⁷ Cameron 1948: 41, footnote 5 (tablet quoted as Fort. 4696); Hallock 1978: 111.

¹¹⁸ Hinz/Koch 1987: 1070, “SIG₄.”

¹¹⁹ Hallock 1978: 120.

¹²⁰ Vallat 1998: 309a and Potts 1999: 252-253.

¹²¹ Lambert 1972.

¹²² Cf. Dandamaev/Lukonin 1989: 290; however *ra-hal*, the supposed 7th month in the economic tablets from Susa, does not seem to belong to Persepolis Elamite group. Referring to these month-names as “Susan” could be misleading: for example, cf. Hallock 1978: 111 with Stolper 1984: 15a about *GUD/GU₄*.

¹²³ Cohen 1993: 299. Cf. Langdon 1935: 47, Reiner 1973: 97 and 101; see also Van Driel 1969: 156-157, footnote 38.

Elamite versus Babylonian Calendar

The first point to make regards the month-names from Tall-i Malyān. M.W. Stolper¹²⁴ puts provisionally *belili* in the 4th position as in the Haft Tepe stela and *manšarki* in the 7th position as in the Persepolis Fortification tablets. However, the two are separated by nearly 1000 years and 500 kilometers. At Persepolis *belilit* was shifted to the 6th position. It is hard to derive the absolute position, but the relative order seems to be clear and should be maintained. This interpretation leads to the overlapping of the two months *abi* and *manšarki*, for which I have no explanation: *abi* belongs to the Susiana group while *manšarki* belongs to the Anšan one.

As an exemplification, we can have a brief survey on a widely attested month like *addaru*. In Babylonia it is the last month of the year. In the stela from Haft Tepe it is the 1st month in the list. In Babylonian menologies it is the 1st or 2nd month. In the Persepolis Fortification tablets it should be *ha-da-ir*, the 3rd month of the Elamite group.

According to F. de Blois's accurate analysis,¹²⁵ we have three shiftings at the beginning of the year. The first takes place at least by the time of king Tepti-Ahar, as the Haft Tepe stela attests; the second is perhaps reflected in the menology Sp. II 381 (surely the viewpoint was Babylonian; it is not clear if the Elamite year actually began with it), while the third can be seen in the Elamite month-names from the Persepolis Fortification tablets.

These shiftings can be explained by

supposing that Elamites added three more intercalary months than Babylonians in about 1500 years. Perhaps there were other discrepancies, but they were recovered in some way. Nevertheless these three shiftings remained. I can hardly imagine how such a traumatic event as the change of the 1st month of the year could happen, especially if you think of the religious festival attached to the beginning of the year. Eventually the resynchronization happened only in Darius' time, due to the strong imperial Persian ideology.

Otherwise, we have to suppose periods in which autonomy was emphasized by the political choice of using the Elamite calendar and periods in which Babylonians conquered Elam imposing their own calendar. During autonomy, the Elamite calendar went on its way and added one intercalary month more than the Babylonian calendar. This could be due to the lack of communication or to the desire of showing cultural independence. Then Babylonians came and retained their beginning of the year. During dependence, nobody implemented the Elamite intercalations so, when new autonomy arose, it was easier to keep the Babylonian beginning of the year in order not to change payments and accounts. It is likely that after the second shifting the Babylonian logograms were preferred in administrative and legal practice in order to avoid the problem of the different beginning of the year.

New questions arise in Achaemenid time: why were not Elamite month-names

¹²⁴ Stolper 1984: 15.

¹²⁵ De Blois, unpublished.

employed in the Elamite version of Darius' Bīsotūn inscription? Perhaps because they were not "Elamite" in general, but belonged only to Anšan? How could the administrative practice tolerate two groups of month-names? Was it an ingrained local habit of the Persepolis hinterland, an habit which needed time to be eradicated? Were the correspondences with Babylo-

nian or Old Persian month-names easy to recall? Or were there discrepancies due to a different intercalation system? But who could oversee such independent systems? Mechanical rules of intercalation are soon going to be born. However, our journey comes to an end at Persepolis and tentative answers to these questions go beyond the scope of this paper.

Coming Back

I tried to locate some tesseras of the Elamite calendar mosaic. But these have to be placed into a bigger mosaic, representing also other near eastern peoples and cultures, as in the Pentecost Dome in Venice. However, these figures are not on a golden background, but on a background which has all the shading and dynamics of history.

It is time to leave the past behind and

to return to the present. But even today, whether you are on top of a modern skyscraper or along a silent country road, if you look at the golden light of the sunset and see a very thin lunar crescent just above the western horizon, you know that it would have been the beginning of a new month for both ancient Babylonians and Elamites.¹²⁶

¹²⁶ The speech from which this paper is taken was given in Chicago on 2000, October 28. For a curious chance, that evening, after a boat ride and while the participants of the Symposium had dinner at a Persian restaurant, a new lunar month began. The sun set at 5:49 pm local time (Universal Time – 5 hours); the

moon set at 7:01 pm. At sunset, the height of the moon was 10.4°, with an azimuth difference from the sun of 15.6°. The new moon was on October 27 at 2:58 am. Calculations made by *Guide 7.0* (Gray 1998); crescent visibility according to the values used in Langdon/Fotheringham/Schoch 1928.

ABBREVIATIONS

BM	Tablets in the British Museum, London.
DB	Darius' Bīsotūn inscriptions. Old Persian text published in Kent 1953 and Schmitt 1991; Elamite text in Grillot-Susini/Herrenschmidt/Malbran-Labat 1993; Babylonian text in Von Voigtlander 1978 (see also Malbran-Labat 1994). Weissbach 1911 is still useful.
Fort.	First cataloguing of the Persepolis Fortification tablets, partly reordered in PF (concordance in Hallock 1969: 12) and almost completely in PF-NN (concordance in Hinz/Koch 1987: 1370-1392).
GNT	The critical edition of the new testament according to Eberhard and Erwin NESTLE / Barbara and Kurt ALAND, <i>Novum Testamentum Graece</i> , Stuttgart 1994 [27th edition].

- HT Tablets from Haft Tepe published partly in Herrero 1976, Herrero/Glassner 1990, 1991, 1993 and 1996. In Hinz/Koch 1987 this abbreviation refers to progressive numbering in Herrero 1976.
- K. Tablets from the *Kouyunjik collection* of the British Museum, London.
- M- Excavation number of tablets from Tall-i Malyān (see Stolper 1984: 155).
- MDP *Mémoires de la Délégation en Perse, Mémoires de la Mission archéologique de Susiane, Mémoires de la Mission archéologique de Perse, Mémoires de la Délégation archéologique en Iran*, Paris.
- PF Tablets from the Persepolis fortification wall published in Hallock 1969.
- PFa 33 tablets from the Persepolis fortification wall published in Hallock 1978.
- PF-NN New cataloguing for the unpublished Persepolis Fortification tablets (see Hallock 1978: 109).
- R Tablets published in Henry Creswicke RAWLINSON, *The Cuneiform Inscriptions of Western Asia*, London 1861-1884 (-1909 2nd edition).
- Rm. Tablets from the *Rassam Collection* of the British Museum, London.
- S Tablets from Susa published in MDP IX (S 1-298) and XI: 89-101 (S 299-309).
- S add. 3 tablets from Susa published in Paper 1954 (=MDP XXXVI: 79-82).
- Sp. Tablets from the *Spartali Collection* of the British Museum, London.
- TTM I Tablets from Tall-i Malyān published in Stolper 1984.

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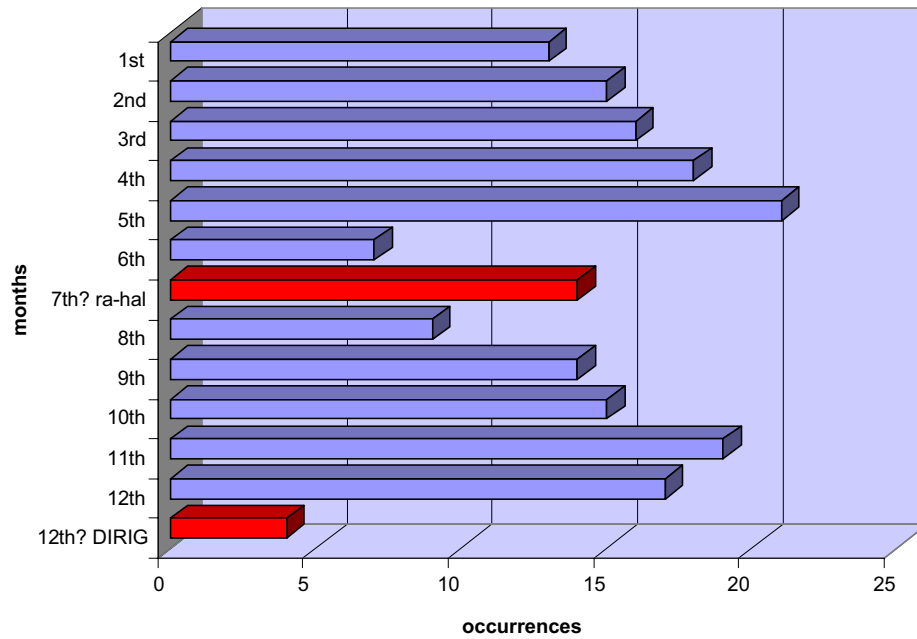
Pentecost Dome. San Marco, Venice.
Courtesy of Procuratoria di San Marco.



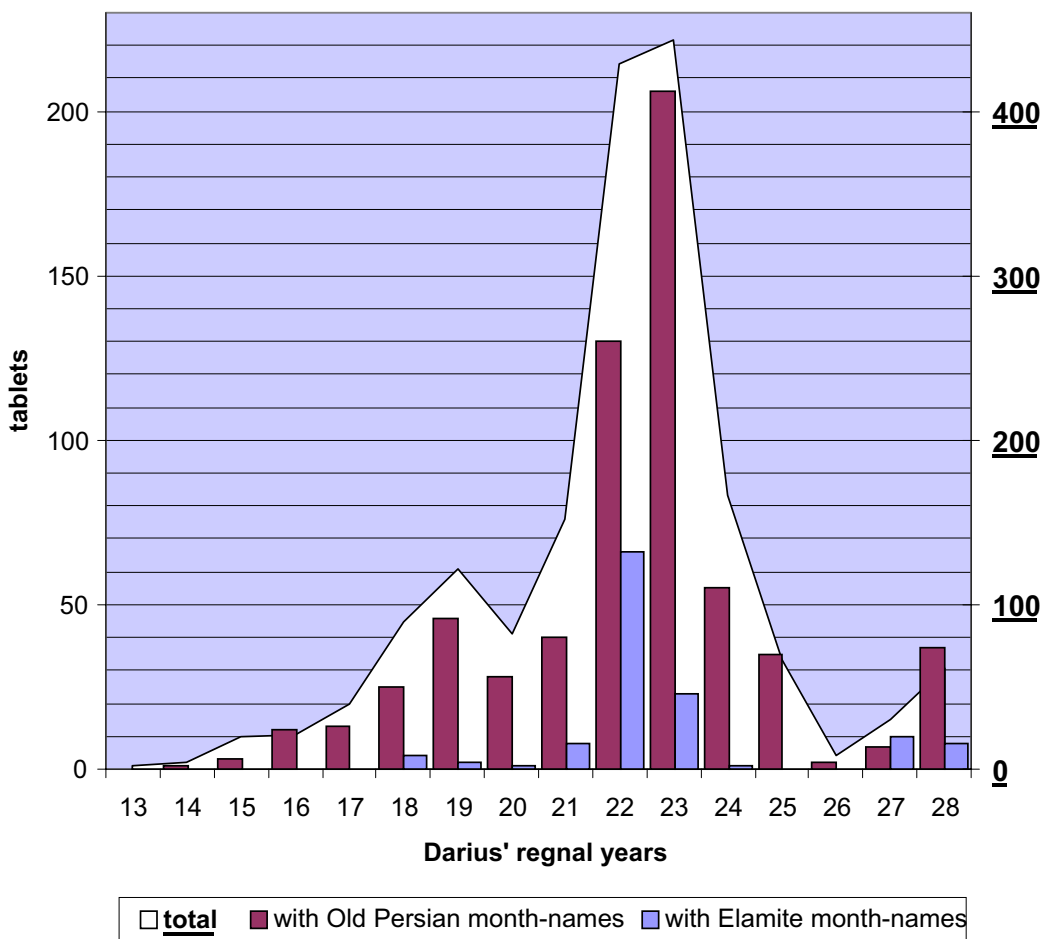
Pentecost Dome. San Marco, Venice.
The Elamite and Mesopotamian peoples.
Courtesy of Procuratoria di San Marco.



Babylonian month-names in the neo-Elamite administrative tablets.



Proportion of tablets with Old Persian and Elamite month-names to the whole Persepolis Fortification tablets.



Synopsis of the month-names in Elam.

century language		20th-17th Babylonian	14th Babylonian	11th Elamite	1st millennium Babylonian	6th-5th Elamite
Babylonian standard	originary (?)	Susa	Haft Tepe	Tall-i Malyān	Mesopotamian sources	Persepolis
1st nisannu (BÁR)	šer'i ša ešēdi / šer'i ebūri	addaru / A.ŠÁ DINGIR.RA ŠE.KIN.KUD.A ?	a-da-ri	(BÁR.ZAG.GAR)	šabātu / BAR.SAG.SAG	zikli
2nd ayaru (GU ₄)	pīt bābi	šer'i ša ešēdi / šer'i ebūri	še-er-i-EBUR	adari (GU ₄)	adari	zarpakim
3rd simānu (SIG ₄)	DINGIR.MAḤ	pīt bābi	pi-it-ba-ba		šer'i EBUR	hadar
4th du'uzu (ŠU)	?	DINGIR.MAḤ	DINGIR.MAḤ / be-el-ti.DINGIR		pīt bābi	hallime
5th abu (NE)	lanlube	abu	a-bi	belili	DINGIR.MAḤ	zillatam
6th ulūlu (KIN)	?	lanlube	la-al-lu-u-bi-e	api (KIN) / manšarki	abu	belilit
7th tašrītu (DU ₆)	šer'i ša erēši	A.ŠÁ DINGIR.RA URU ₄ .A ?	še-bu-še-bi-i	lalube	lal(l)ubû	manšarki
8th araḥsamna (APIN)	tamḥīru	šer'i ša erēši	še-er-i-URU ₄	sibari	sibūtu / šebūtu	lankelli
9th kis(s)ilimu (GAN)	zililitum	tamḥīru	tam-ḥi-ri	šerum / šerman	šer'i ša erēši / AB.SÍN URU ₄ -ši	šibari
10th ṭebētu (AB)	ḥultuppû	sililītu	sí-li-li-ti	gammama	tamḥīru	šermi
11th šabātu (ZÍZ)	šabātu	ḥultuppû	ḥu-ul-tu-up-pi-e		sililītu	kutmama
12th addaru (ŠE)	addaru	šabātu	šà-(a)-ba-a-ti		ḥultuppû / ḤUL.DÚB.E	aššetukpi