

La naissance et le développement de l'écriture dans le Proche-Orient antique :

les nouvelles données iraniennes.



3000-
2000
av. J.-C.

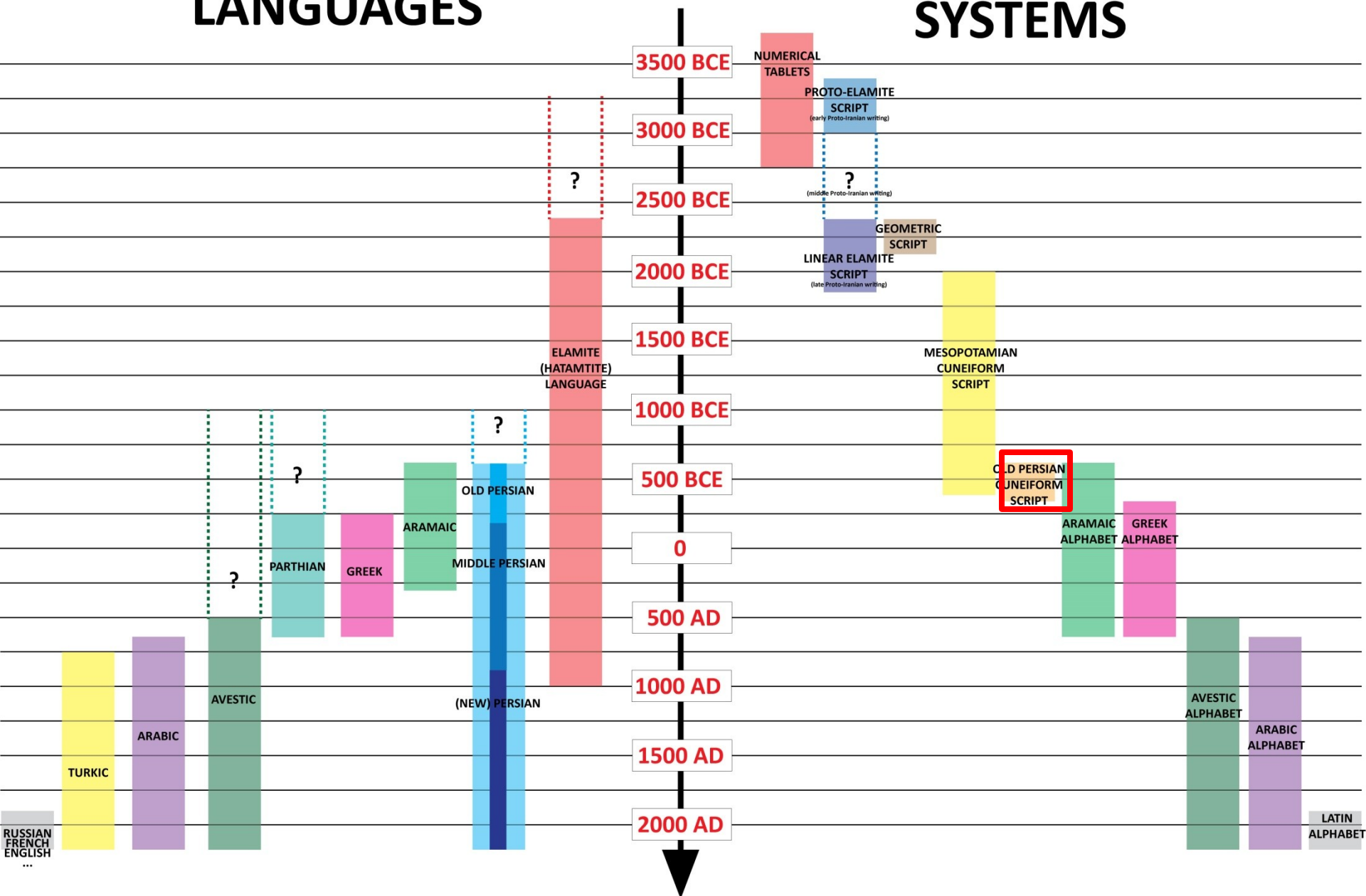
- l'histoire du Plateau iranien peut être envisagée selon deux cycles d'urbanisation:
- Du 10ème au 2ème millénaire av. J.-C.;
- Du 2ème millénaire av. J.-C. à aujourd'hui;
- Le premier cycle est caractérisé par l'apparition de la sédentarisation, de l'agriculture et de l'élevage ;
- L'apogée de ce premier cycle correspond au 3ème

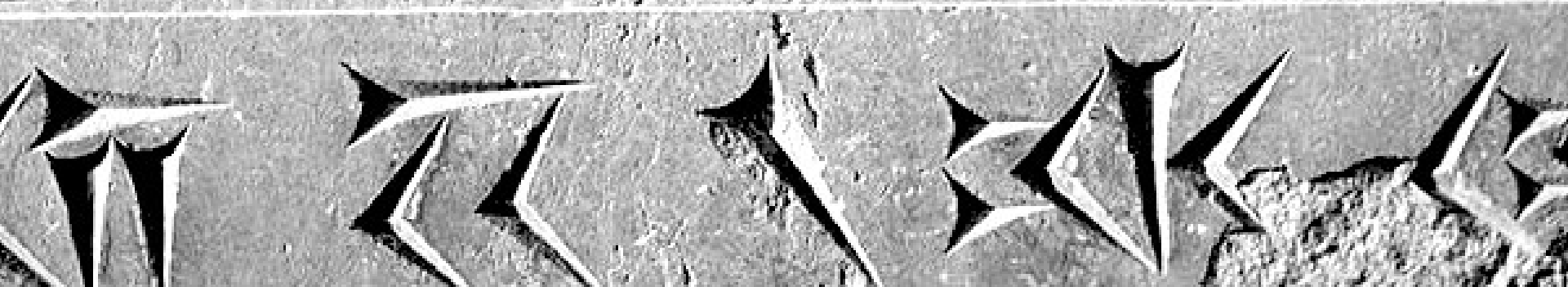
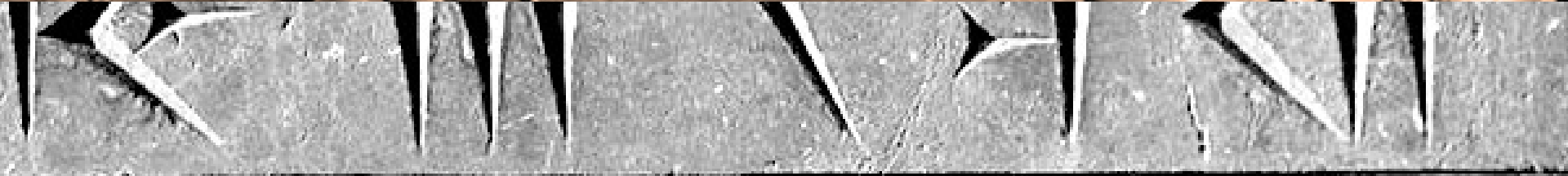


1500 av. J.-C.

LANGUAGES

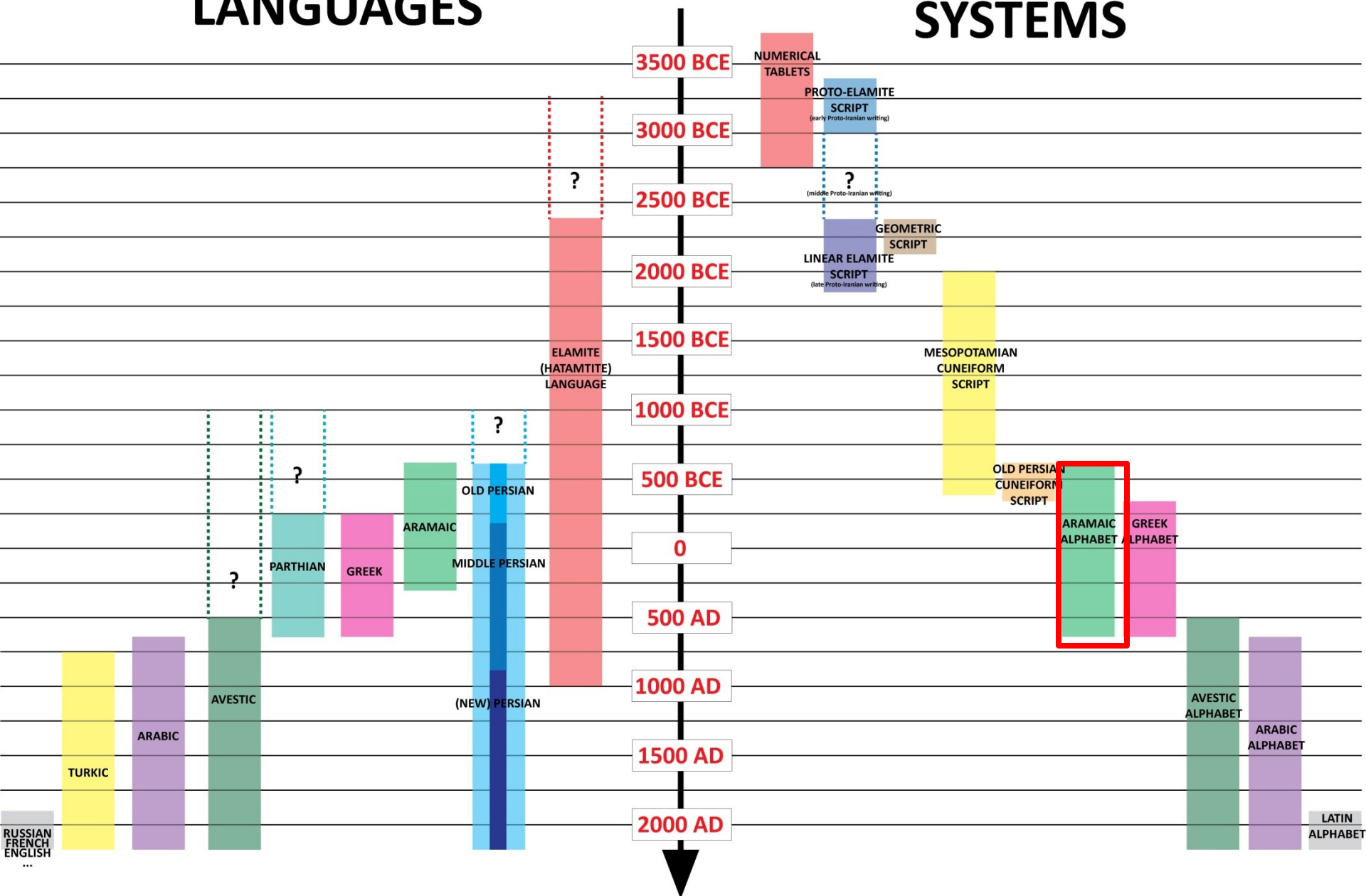
WRITING SYSTEMS





LANGUAGES

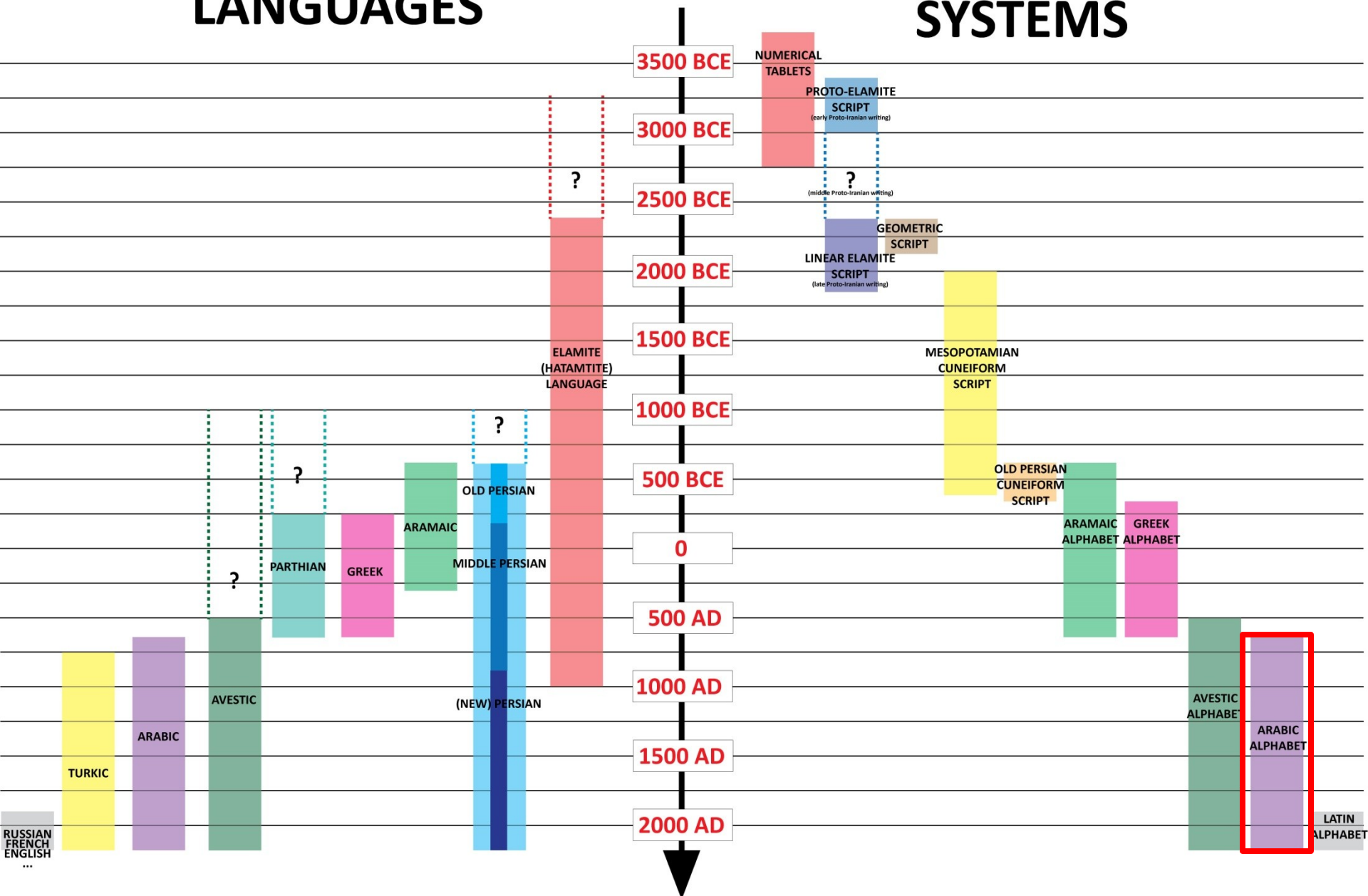
WRITING SYSTEMS



Handwritten text in a cursive script, likely a historical document or manuscript. The text is written in dark ink on a light-colored, textured surface. The script is dense and flowing, with many characters that are difficult to decipher due to the cursive style and the angle of the writing. The text appears to be organized into several lines, with some words or phrases being more prominent than others. The overall appearance is that of an old, handwritten record or letter.

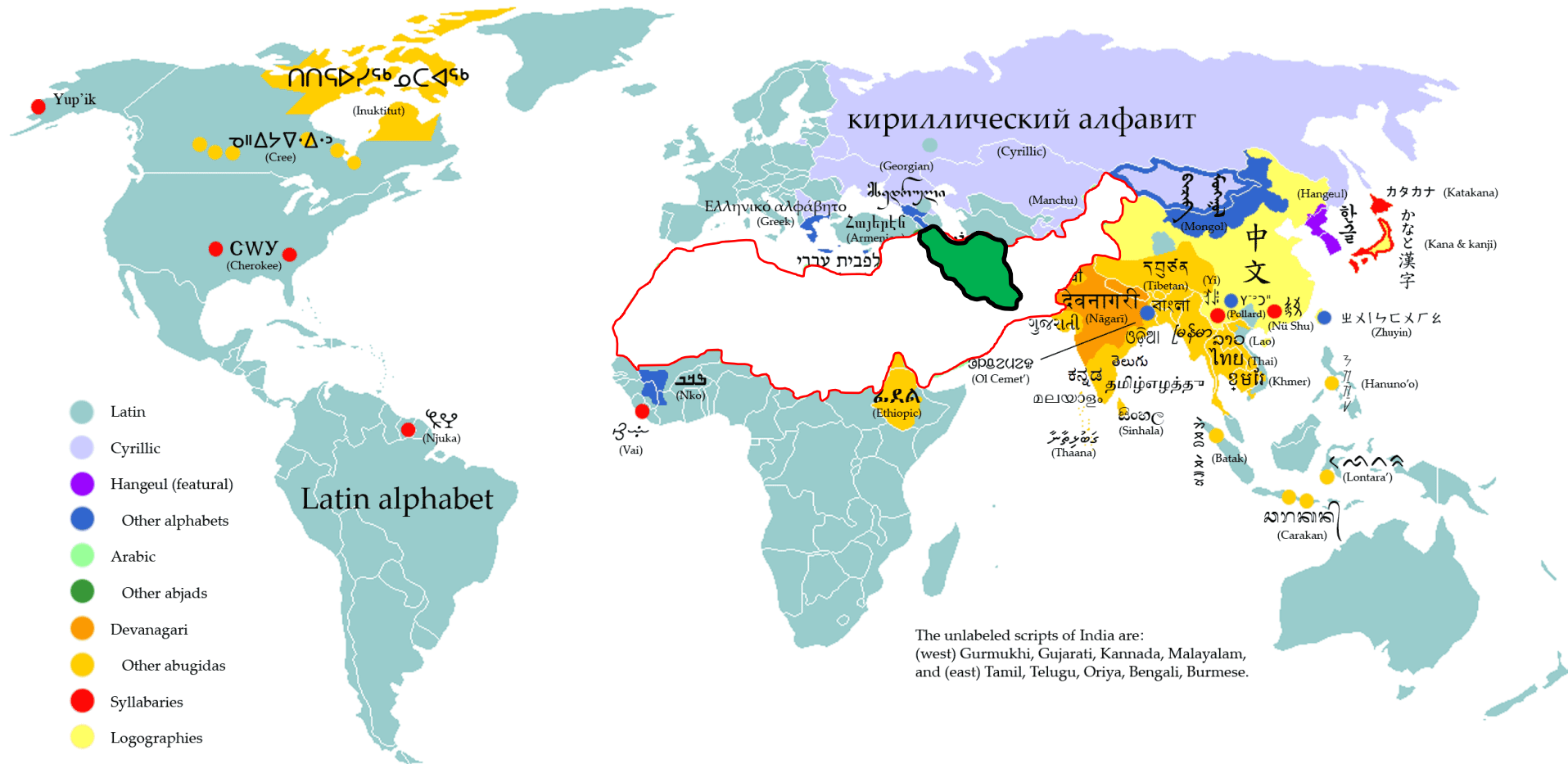
LANGUAGES

WRITING SYSTEMS





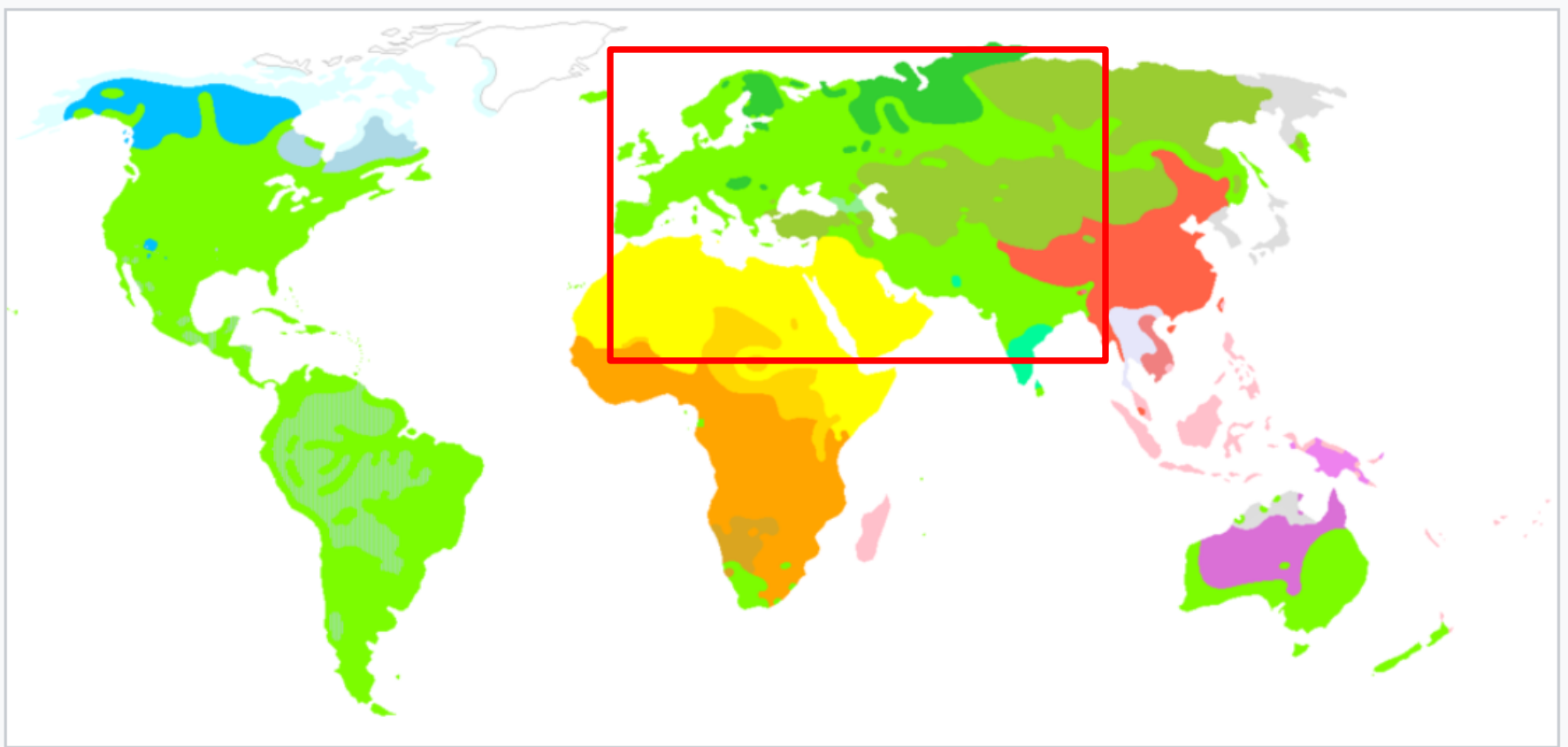
Current writing systems distribution in the world



- Iran is today in the Arabic alphabet community.

A big mistake:
confusion between language and writing

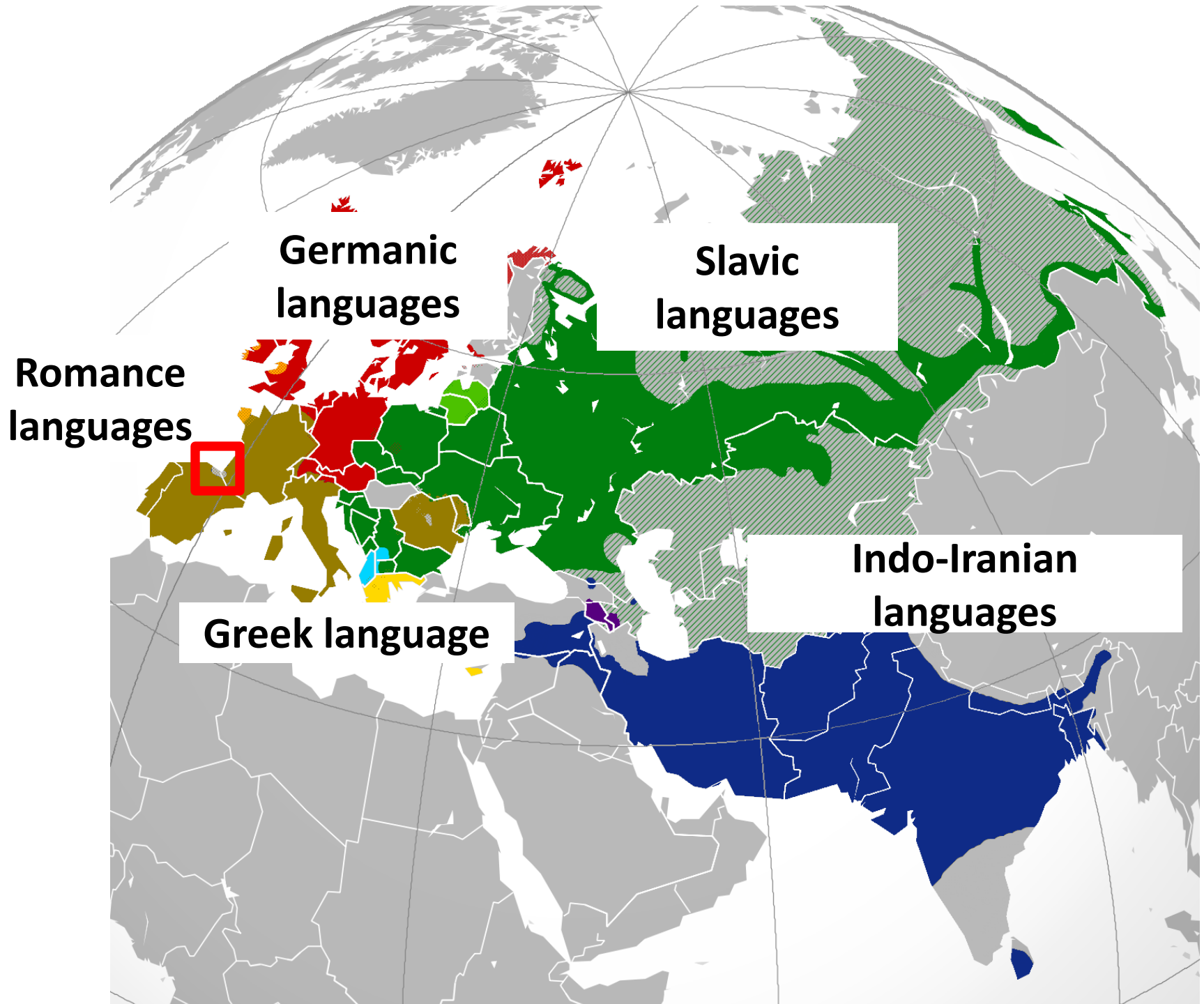
LANGUAGE



Langues du monde par familles :



 Afro-asiatiques	 Altaïques	 Papoues
 Nigéro-congolaises	 Ouraliennes	 Tai-Kadai
 Nilo-sahariennes	 Dravidiennes	 Amérindiennes
 Khoïsan	 Sino-tibétaines	 Na-dené
 Indo-européennes	 Austroasiatiques	 Eskimo-aléoutes
 Caucasiennes	 Austronésiennes	 Isolats
	 Pama-nyungan	





La langue Hatamtite/Elamite, pourrait être considérée comme une sorte de « Basque du Proche-Orient », la langue parlée localement avant l'arrivée des populations indo-européenne (Iranien).

WRITING SYSTEMS



sa - lu



sa



wa

?

سألو سا وا ؟

? *a-w a-s ou-l-a-s*

salu sa va ?

Salut, ça va ?

- the same language
(**French**),
- different writing systems
(**Linear Elamite**,
Arabic alphabet,
Latin alphabet)

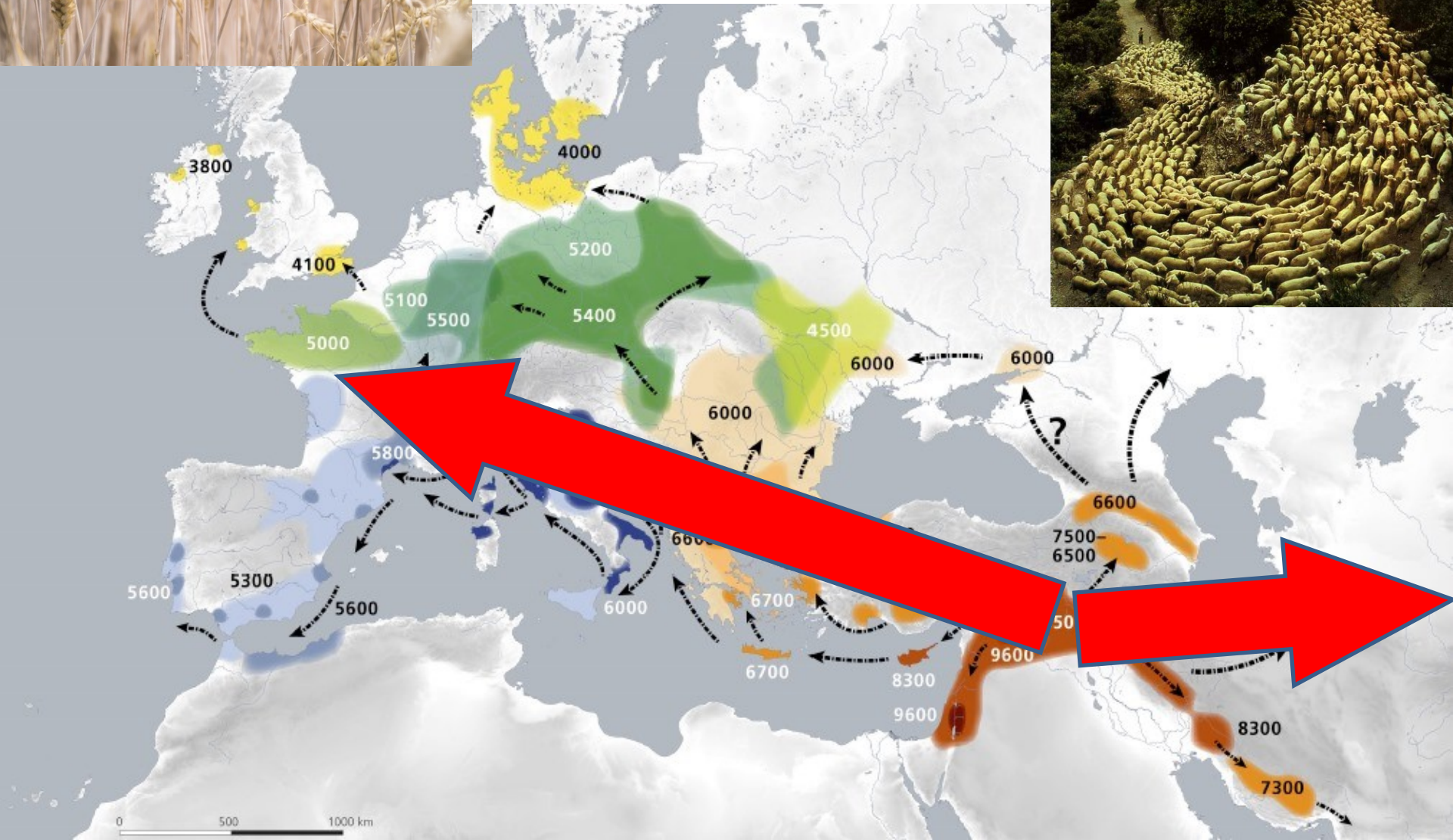
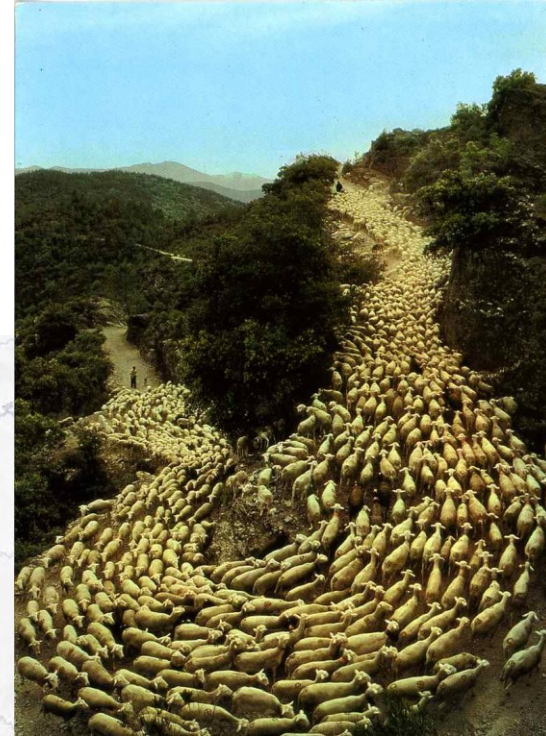
Hi, how are you ?

Salut, ça va ?

Salam, chetor hasti ?

The same writing system (Latin alphabet),
different languages (English, French, Persian).

The ancient Near East: the dawn of civilization

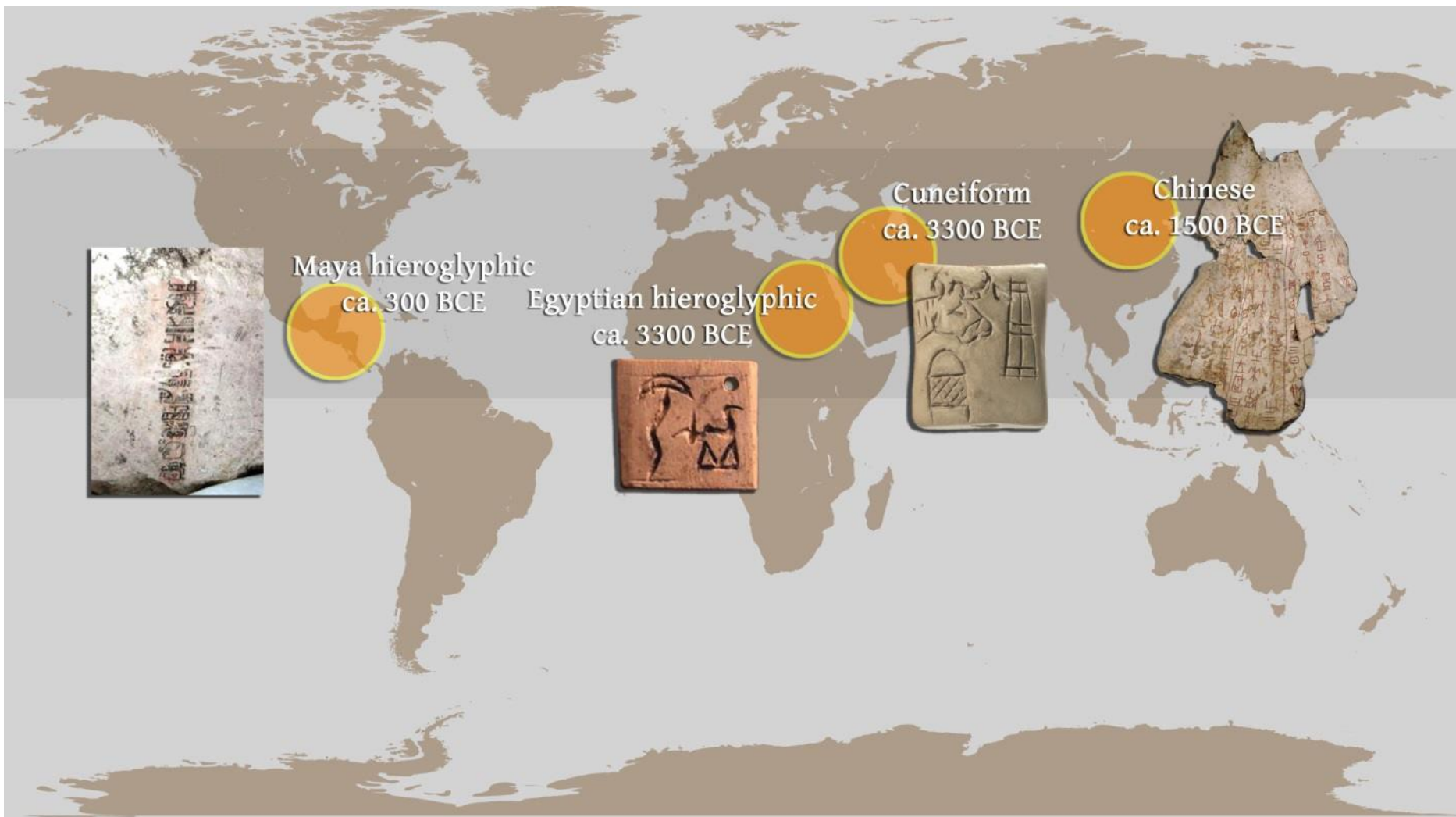


The ancient Near East:
the dawn of civilization

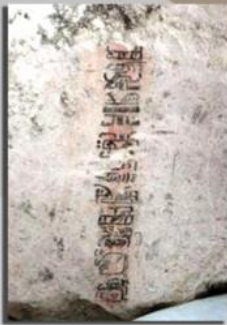
WRITING !!

INVENTIONS OF WRITING





Maya hieroglyphic
ca. 300 BCE



Egyptian hieroglyphic
ca. 3300 BCE



Cuneiform
ca. 3300 BCE



Chinese
ca. 1500 BCE

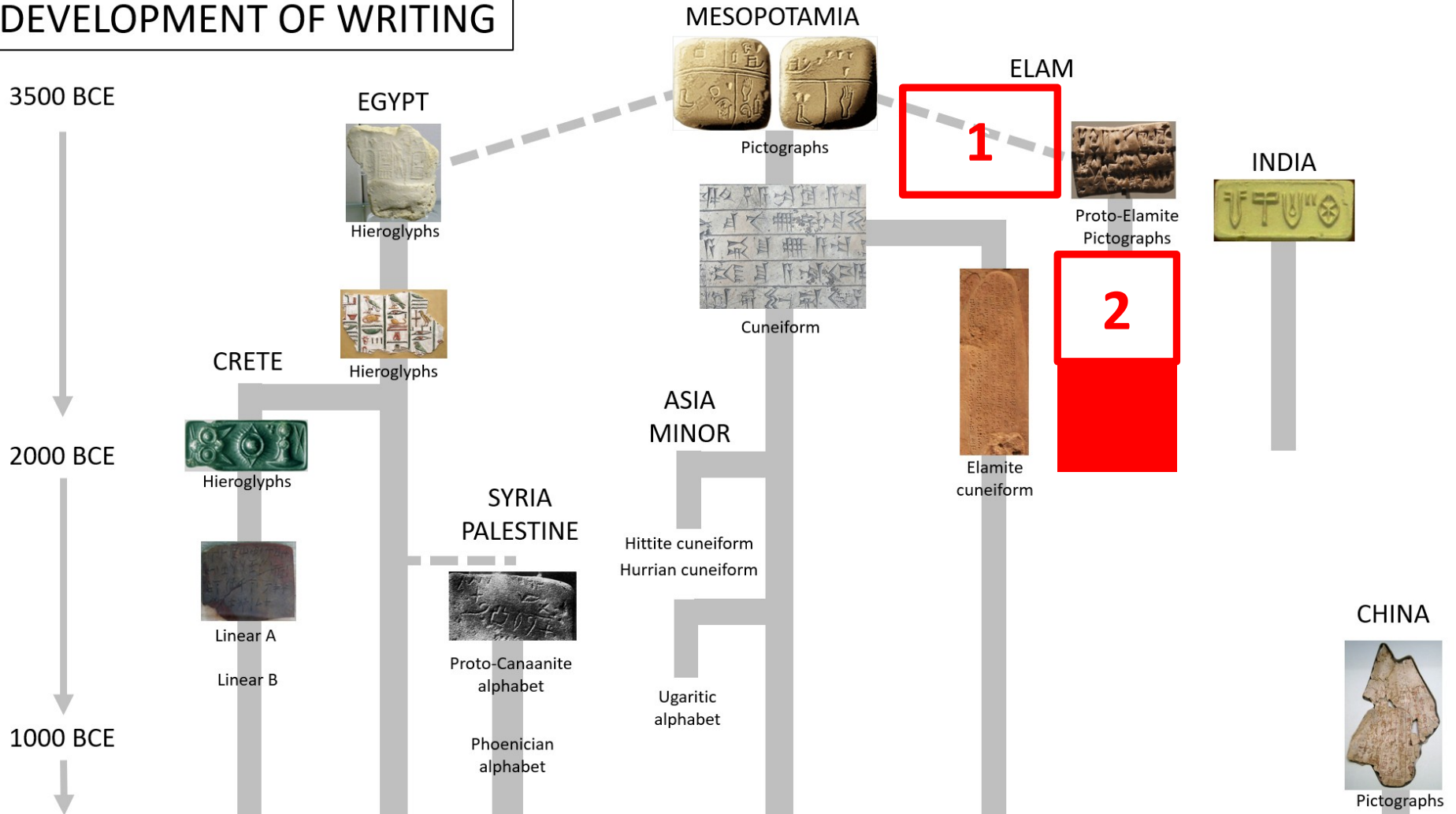




THE CURRENT PARADIGM

(WIKIPEDIA vulgata)

DEVELOPMENT OF WRITING



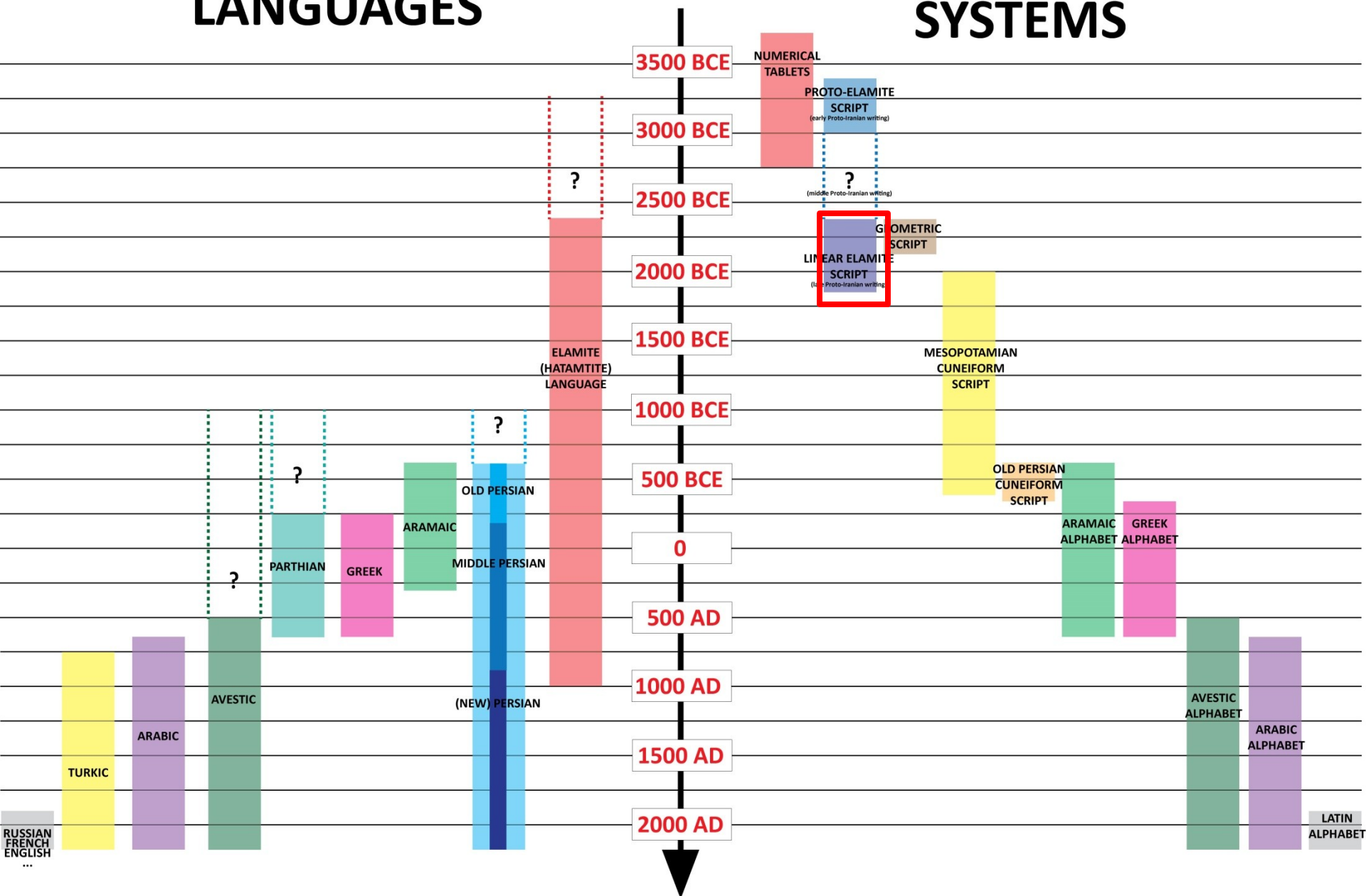
DECIPHERMENTS

I

**The decipherment of Linear Elamite writing
(Iran, ca. 2300-1850 BC)**

LANGUAGES

WRITING SYSTEMS



Linear Elamite writing and its decipherment

Before talking of Linear Elamite writing , let's see some famous decipherments of Near Eastern writing systems and understand how they proceeded:

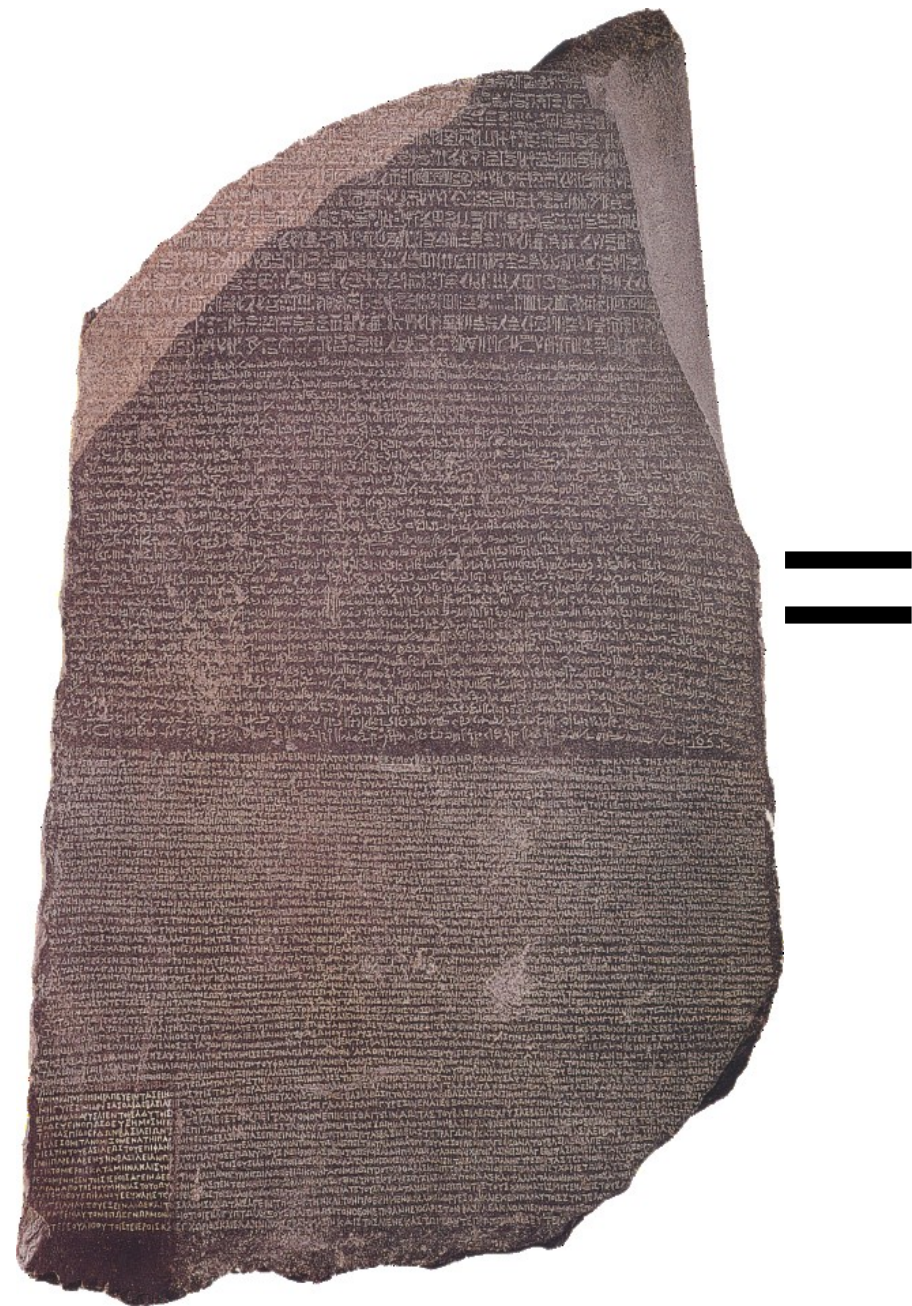
- Egyptian hieroglyphs: J.-F. Champollion (/T. Young)
- Near Eastern cuneiform: Grotefend/Rawlinson (and others...)

Each decipherment always proceeds in the same way:

FROM THE KNOWN TO THE UNKNOWN

We will see in each case:

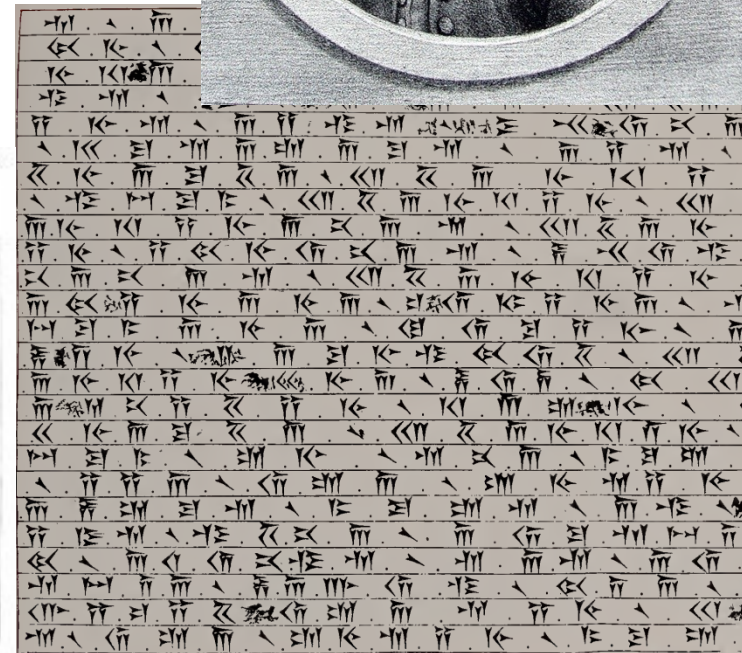
- 1) if the language recorded with this writing system was previously known ?
- 2) if proper names (of kings, gods, places) recorded with this writing system were previously known ?
- 3) if there were bilingual texts ?



Trilingual inscriptions of Darius I and Xerxes I at Ganjnameh (Hamedan), Iran.

Decipherment, Old Persian

- u **Carsten Niebuhr** (1733–1815) was the first to produce accurate drawings of the cuneiform inscriptions in Persia. Reliable renderings are essential for successful work on deciphering an ancient writing system.
- u Established direction of script Left-to-Right
- u Distinguished three different types of scripts



Handwritten text in a cursive script, likely a historical document or manuscript. The text is written in dark ink on a light-colored, textured surface. The script is highly stylized and difficult to decipher, but appears to be a form of early modern European cursive. The text is arranged in several lines, with some words appearing to be repeated or emphasized. The overall appearance is that of a historical record or a personal letter.

IRAN

Middle Persian

- u During the time of the Sassanian empire (224–651 CE) kings left several victory reliefs below the tombs.
- u Some of these inscriptions are trilingual: Middle Persian, Parthian and Greek



Middle Persian

- u Silvestre de **Sacy**, Professor of Arabic, School of Living Oriental Languages, Paris.
- u 1787–1791: Decipherment of the Pahlavi inscriptions of the Sassanian kings.
- u Some of these inscriptions are attached like labels to the depictions, e.g.,

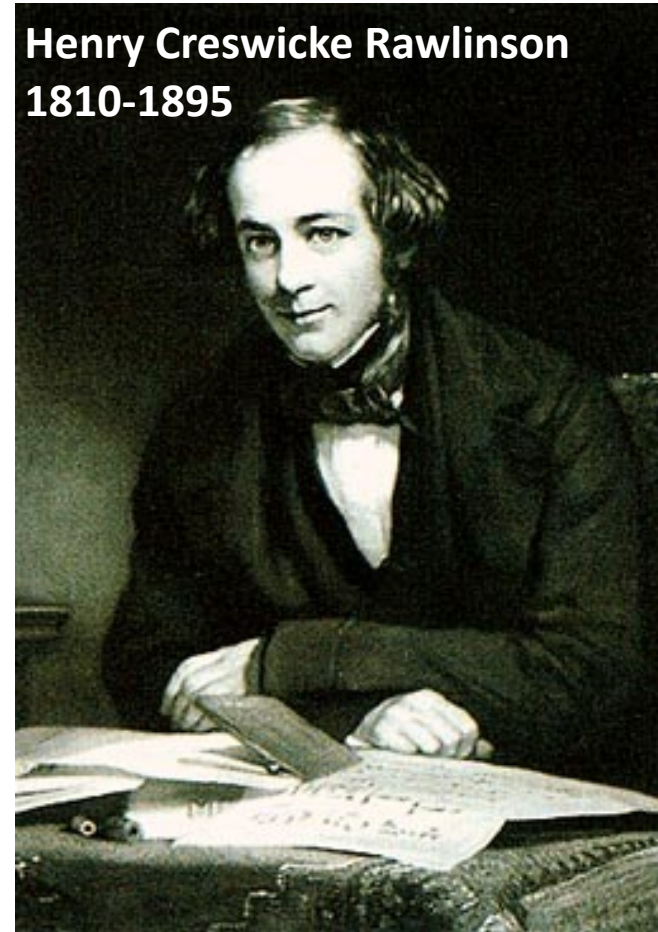
This is the figure of the servant of Ormuzd, the god Ardeshir, king of kings of Iran, of the race of the gods, son of the god Babec, the king.



CUNEIFORM WRITING



Old Persian



**Old Persian
Akkadian**

Georg Friedrich Grotefend (1775–1853), German philologist, teacher in Göttingen.

The understanding of the structure of monumental inscriptions in Old Persian was based on the work of Anquetil-Duperron, who had studied Old Persian through the Zoroastrian Avesta (Avestic language), and Antoine Isaac Silvestre de Sacy, who had deciphered the monumental Pahlavi inscriptions of the Sassanid kings.

By 1802, Grotefend (based on the work of Niehbur) conjectured that, based on the known inscriptions of much later rulers (the Pahlavi inscriptions of the Sassanid kings), that a king's name is often followed by "great king, king of kings" and the name of the king's father.

Grotefend looked for the word for “king” and the title “king of kings,” which would repeat the word twice in two different inflections :

«|| «|| || |
(x -š-a-y-θ-i-y : x -š-a-y-θ-i-y-a-n-m
/xšāyaθiya xšāyaθiyānām/; compare to later Persian šāhan šāh).

Achaemenid kings were known from Greek historians. The Old Persian form must have sounded similar.

Xerxes's name started with the same two signs as the word for king (x-š):

«|| » ||| «-| «-| «-| «-| (x-š-a-y-θ-i-y; /Xšāyaθiya/)

𐬰𐬀𐬭𐬀𐬎𐬌𐬵𐬀𐬊𐬎𐬭𐬀𐬢𐬵𐬀 (**x-š-y-a-r-š-a**; /Xšayāršā/)

Grotefend's initial decipherment did not yield a full list of alphabetic signs; just a third.

[illegible][illegible]

1

**AVESTAN, SANSKRIT,
PAHLAVI MIDDLE PERSIAN**

**GREEK, HEBREW
(achaemenid kings names)**

2

B) Old Persian language in modified cuneiform system

1) Language previously known ?

more or less, in a recent version : Middle Persian and contemporary related languages : Avestic and Vedic languages

2) Proper names previously known (names of kings, gods, places) ?

yes (Darius, Xerxes...), through the Greek and Latin sources

3) Bilingual texts ?

No



**OLD PERSIAN
CUNEIFORM SYLLABARY/ALPHABET**

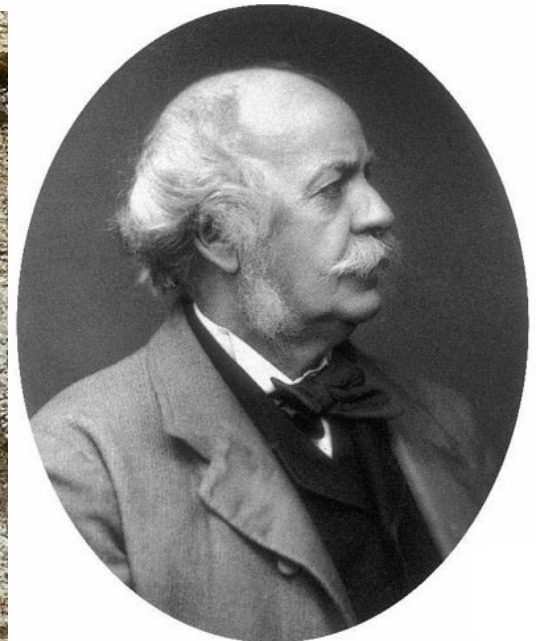
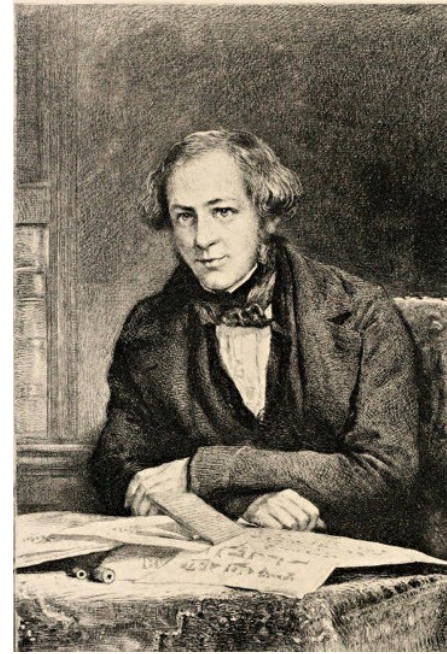
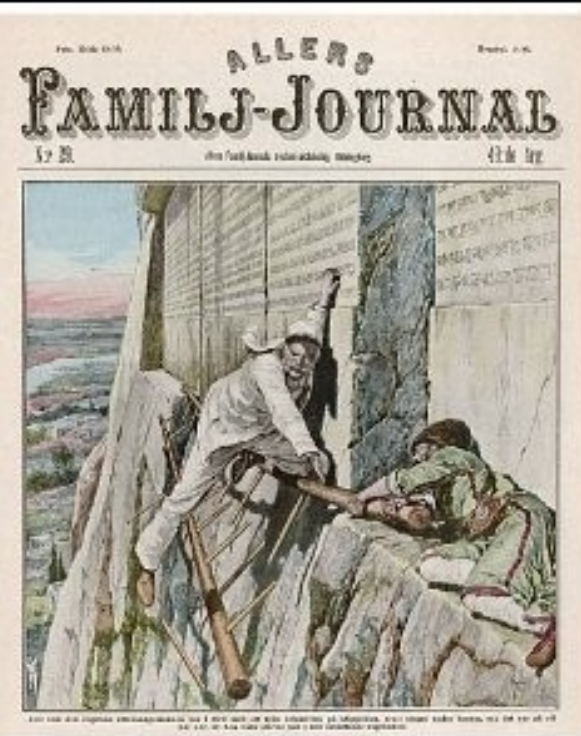
NIEBUHR,
GROTEFEND,
RAWLINSON

**AVESTAN, SANSKRIT,
PAHLAVI MIDDLE PERSIAN**

**GREEK, HEBREW
(achaemenid kings names)**



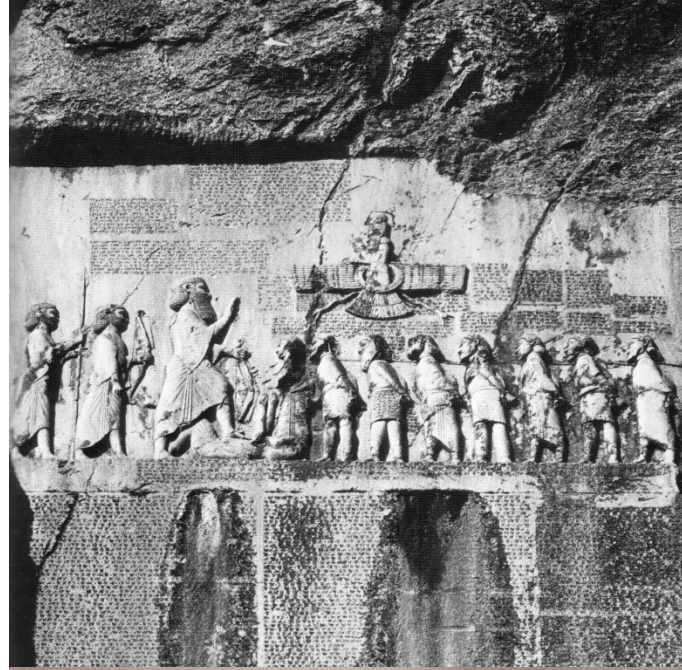
SIR HENRY WASHINGTON ON THE BOOK OF GERSON



Rawlinson (and other scholars) successfully completed the decipherment of Old Persian cuneiform thanks to the inscription of Darius I at Bisotun (1835 ; published in 1847 and 1849).

As the Achaemenid inscriptions are trilingual (Old Persian / Akkadian / Elamite), this decipherment enabled to work on Akkadian and Elamite languages recorded with cuneiform writing, notably through the proper names.

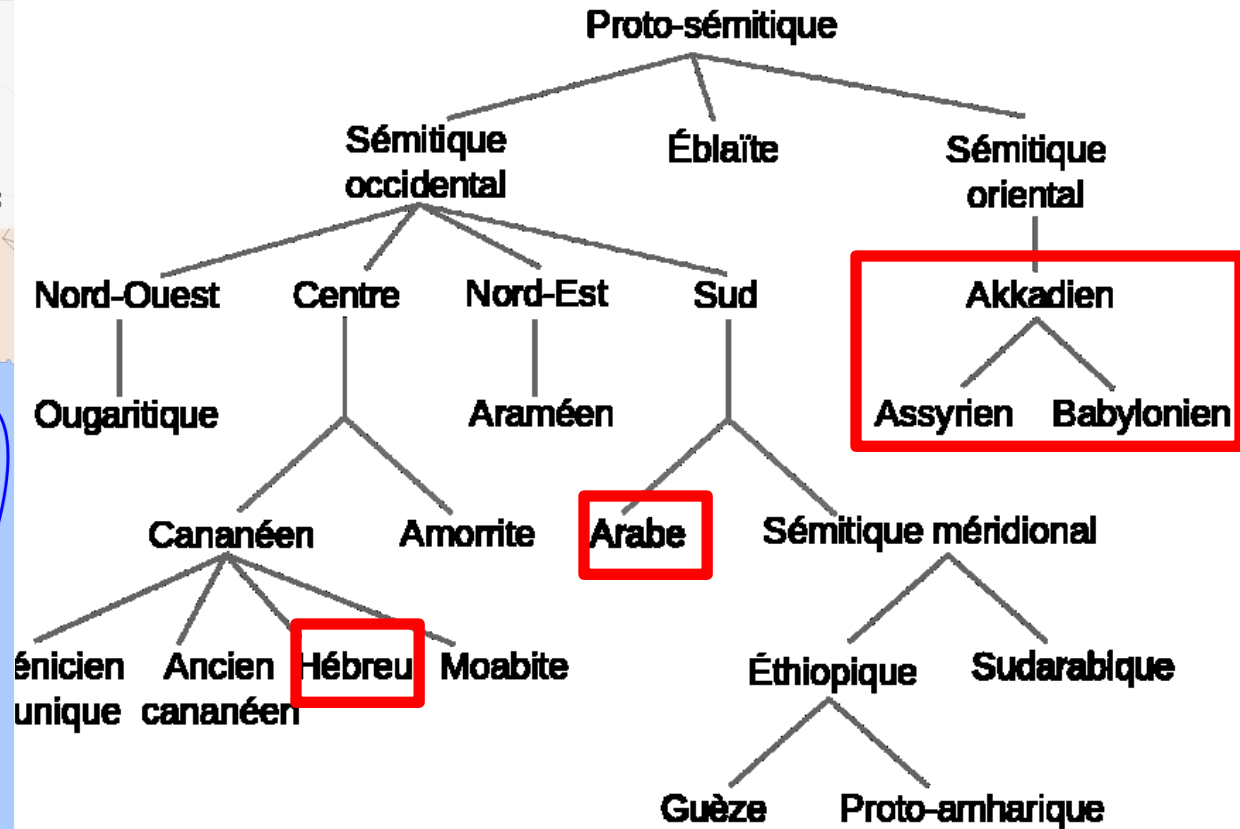
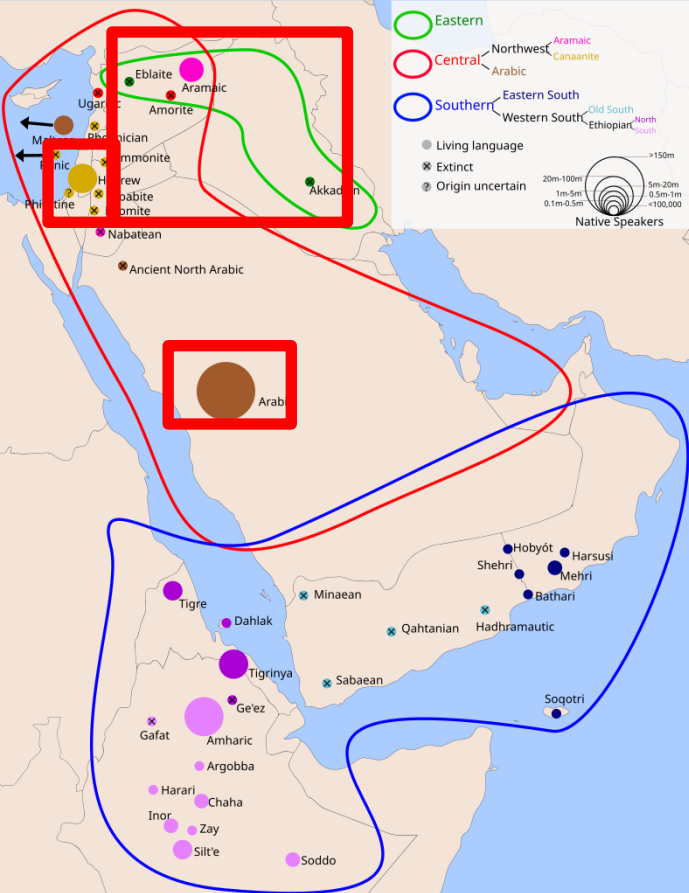
As Akkadian is a Semitic language, like Arabic and Hebrew, it was more easily understood and read than Elamite language which is an isolate. The Akkadian language recorded in Cuneiform was officially recognized as understood in 1857, through a famous test led by the Royal Asiatic Society on an inscription of Tiglath-Pileser I and read by Hincks, Rawlinson, Talbot and Oppert.



The prism of Tiglath-Pileser I
(ca. 1100 BC)

THE OLD PERSIAN TEXT, DNaV 24-36	
10. uva-jm[]-h-m-m-m-m[]-a-k-m-m-m[]-h-d-d-a[]-m-m-m-m-m-m-m-m-m[]-p-m	24. v-a-[]-m-m[]-d-d-r-x-x[]-t-t-a[]-a-v[]-h-d-a[]-k-a-r-t-t-a[]-y-b-i-s-a[]-y-b-i-s-t-e-r-
11. a-v[]-g-l-h-b-r-p-a-v[]-a-v-a-p-a-a[]-a[]-u-t-a[]-a-v-a-m-m-m[]-d-	25. y-m[]-p-s-a-a[]-a-v-s-y[]-l[]-s-k-l-a[]-a-d-m[]-a-p-m-m[]-a-n-i-s-t-m[]-a-g-e-
12. u-t-a[]-p-s-m-m-m[]-m-m-d-l-m-m[]-a-g-t-t-a[]-a-v[]-a-m[]-a-m[]-a-b-a-	26. r-b-a-v[]-h-o-v[]-h-b-a-t[]-a-n-e-s-t-a[]-a-b-a-y[]-m-m-m[]-u-t-
13. y[]-m-m[]-p-s-a-a-v-s-d-m[]-a-d-m[]-l[]-a-v-a-l-p-m-m[]-p-s-a-y[]-d-h-y-a-	27. a-s[]-a-m[]-h-e-y[]-m-a[]-u-t-t[]-a-h[]-l[]-s-k-l[]-a-v[]-m-m-m[]-a-v-m[]-a-g-e-
14. u-k[]-m-m-a[]-a-b-a[]-m-m[]-a-t-t-y[]-d-a-l-t-y-v-u-k[]-x-b-a-y-b-i-	28. r-b-a-d-y[]-h-a-t[]-m[]-l[]-a-m-y[]-a-b-i-y[]-m-m-m[]-a-v-d-a[]-a-n-i-s-y-m[]-m-b-
15. y[]-a-v-e-r[]-l-a-v-s-p-p-r-a[]-a-r-m-k-a[]-a-h[]-u-t-a[]-a-m[]-a-n-m-	29. i-s-t-e[]-m[]-a-d-m-m-m[]-y-y-b-a[]-m-m-m[]-l-k-a-m[]-a-h[]-p-s-a-a[]-d-
16. z-a-b-a[]-m-l-y[]-a-v-l-b-l-y[]-a-d-m-m-m-m-m-m[]-a-v-d-y[]-x-b-a-a-	30. h-y-a[]-u-k[]-m-l-a[]-a[]-h-b-a[]-m-m[]-a-t-t-y[]-d-a-r-y-v-u-k[]-x-b-a-y-
17. u-r-m-m-m-d-a-d-h[]-y-l-b-a[]-m-m-m[]-l-k-a-m[]-a-v-l-b-a-d-i-k[]-a-d-m-m-m-	31. h-a-y[]-a-v-y[]-l-s-k-l-a[]-a-r-m-k-a[]-a-h[]-l[]-a-b-a[]-m-y[]-a-n-e-m-m-d-
18. m-m[]-a-t-t-y[]-d-a-r-y-v-u-k[]-x-b-a-y-b-i-y[]-h-e-y[]-a-n-e-m-m-d-	32. a[]-l-a-m[]-a-y[]-d-l-y[]-a-n-e-m[]-d-d-l-a-m[]-a-v-d-y[]-x-b-a-a[]-m-m-
19. m[]-y-d-l-t-y[]-y-a-d-m[]-a-v-h-a[]-a-l[]-a-b-y[]-u-t-a[]-p-r-o-b-	33. z-a-d-a[]-h[]-y-l-b-a[]-m-m[]-l-k-a-m[]-a-v-d-a-d-d-l[]-a-k-t-u-n-e-m[]-m-m[]-a-t-
20. y-a[]-l[]-u-t-a[]-m-m-m-m-m-m[]-m-m[]-a-t-t-y[]-d-a-r-y-v-u-k[]-x-b-	34. i-y[]-d-a-l-t-y-v-u-k[]-x[]-s-a-y-b-i-y[]-h-e-y[]-a-n-e-m-m-d-a-m[]-y-d-a-t-
21. a-y-b-y[]-p-r-o-b[]-h-d-a[]-a-l-a[]-a-d-m[]-l-a-l-t-y-v-m[]-a-b-i-y[]-x-b-	35. i-y[]-a-v-h-y[]-a[]-l[]-y-a-n[]-m[]-l-a-b-i-y[]-l[]-u-t-a[]-p-r-o-b-h-y-a[]-u-t-a-
22. a-m[]-p-s-a-l-a[]-s-k-a[]-t-y-l-o[]-x[]-l[]-s-k-l-a-m[]-t-a-g-e-s-a-m[]-d-r-t-	36. i-m-m[]-h-y[]-a
23. y[]-l-g-m-m-y[]-p-r-o-b[]-m-m[]-a-l-s-k[]-y-l-d-l-y[]-a-b-y[]-d-r-y-a-	

/tūti Dārayavaus xšāyaθiya: pasāva hadā kārā adam ašiyavam abi Sakām, pasāva Sakā, tayay xaudām tigrām baranti, imaj patiš mān āiša, yadi abi draya avārsam, draxta ava hadā kārā višā viyatarānam, pasāva avaj Sakā adam ājanam, anīyam agtbāya, hāj hūta anyatā abi mām, utāšm haya matišta āha, Šicuxa nāma, avam agtbāya, bastām anaya abi mām, avadā anīyam matištam akunavam, yatā mām kāma āha, pasava dahyāuš manā abava./	§ 74	V 20-30	Proclaims Darius, the king: Afterwards with an army I went against Scythia; after that the Scythians who wear the pointed cap, these came against me, when I had come down to the sea. By means of a tree-trunk with the whole army I crossed it. After- wards I defeated those Scythians; another (part of them) they captured; that was led to me in fetters. And (the man) who was their chief, Skunkha by name, him they captured (and) led to me in fetters. There I made another (their) chief, as was my desire. After that the country became mine.
/tūti Dārayavaus xšāyaθiya: avaj Sakā arikkā āha, utā naj Auramazdāšm ayadiya, Auramazdām ayadaj, vašnā Auru- mazdāha yatā mām kāma, avāšidāš akunavam./	§ 75	V 30-33	Proclaims Darius, the king: Those Scythians were disloyal, and Auramazda was not worshipped by them. I (, however), wor- shipped Auramazda. By the favour of Auramazda, (as was) my desire, so I treated them.
/tūti Dārayavaus xšāyaθiya: haya Auramazdām yadātā, avahyā yānam ahātī utā jivahyā utā mātahyā./	§ 76	V 33-36	Proclaims Darius, the king: Who shall worship Auramazda, his shall be the (object of his) prayer, both (while he is) living and (when he is) dead.



English	Proto-Semitic	Akkadian	Arabic	Aramaic	Sûret	Hebrew	Ge'ez	Mehri	Maltese
father	*'ab-	ab-	'ab-	'ab-ā'	bābā	'āḇ	'ab	ḥa-yb	bu, (missier)
heart	*lib(a)b-	libb-	lubb-, (qalb-)	lebb-ā'	lēbā	lēḇ, lēḇāḇ	ləbb	ḥa-wbēb	ilbieba, (qalb)
house	*bayt-	bītu, bētu	bayt-, (dār-)	bayt-ā'	bētā	báyit	bet	beyt, bêt	bejt, (dar)
peace	*šalām-	šalām-	salām-	šlām-ā'	šlāmā	šālôm	salām	səlôm	sliem
tongue	*lišān-/lašān-	lišān-	lisān-	leššān-ā'	lišānā	lāšôn	ləssān	əwšēn	ilsien
water	*may-/māy-	mû (root *mā-/māy-)	mā'-/māy	māy-ā'	mēyā	máyim	māy	ḥə-mō	ilma

1

**AVESTAN, SANSKRIT,
PAHLAVI MIDDLE PERSIAN**

**GREEK, HEBREW
(achaemenid kings names)**



3

C) Akkadian language with cuneiform writing

1) Language previously known ?

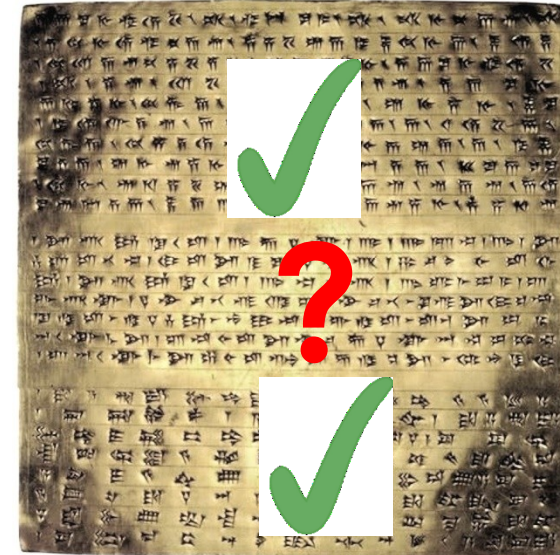
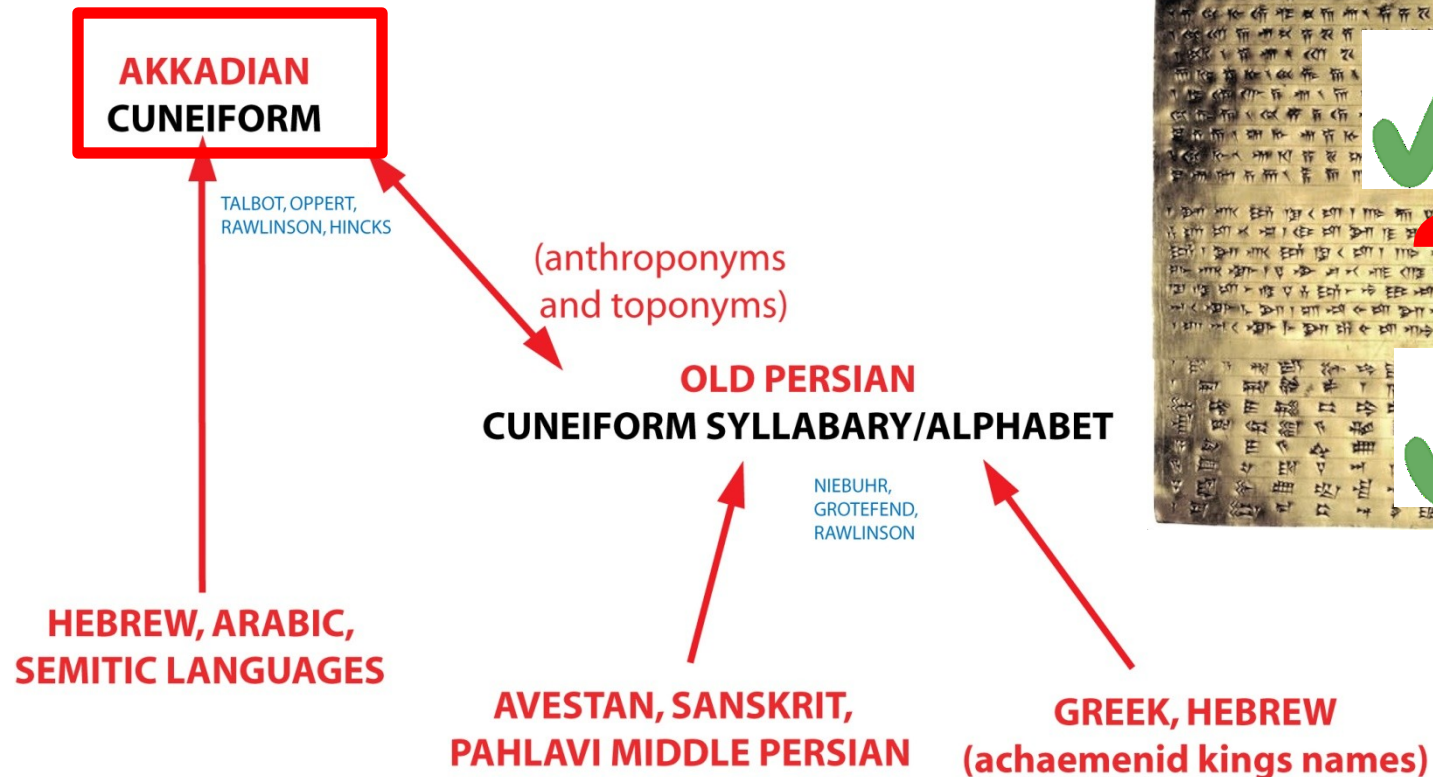
yes, with other semitic languages still spoken today, such as Arabic or Hebrew

2) Proper names previously known (names of kings, gods, places) ?

yes (Darius, Xerxes, and many toponyms...), through Old Persian, Greek and Latin sources

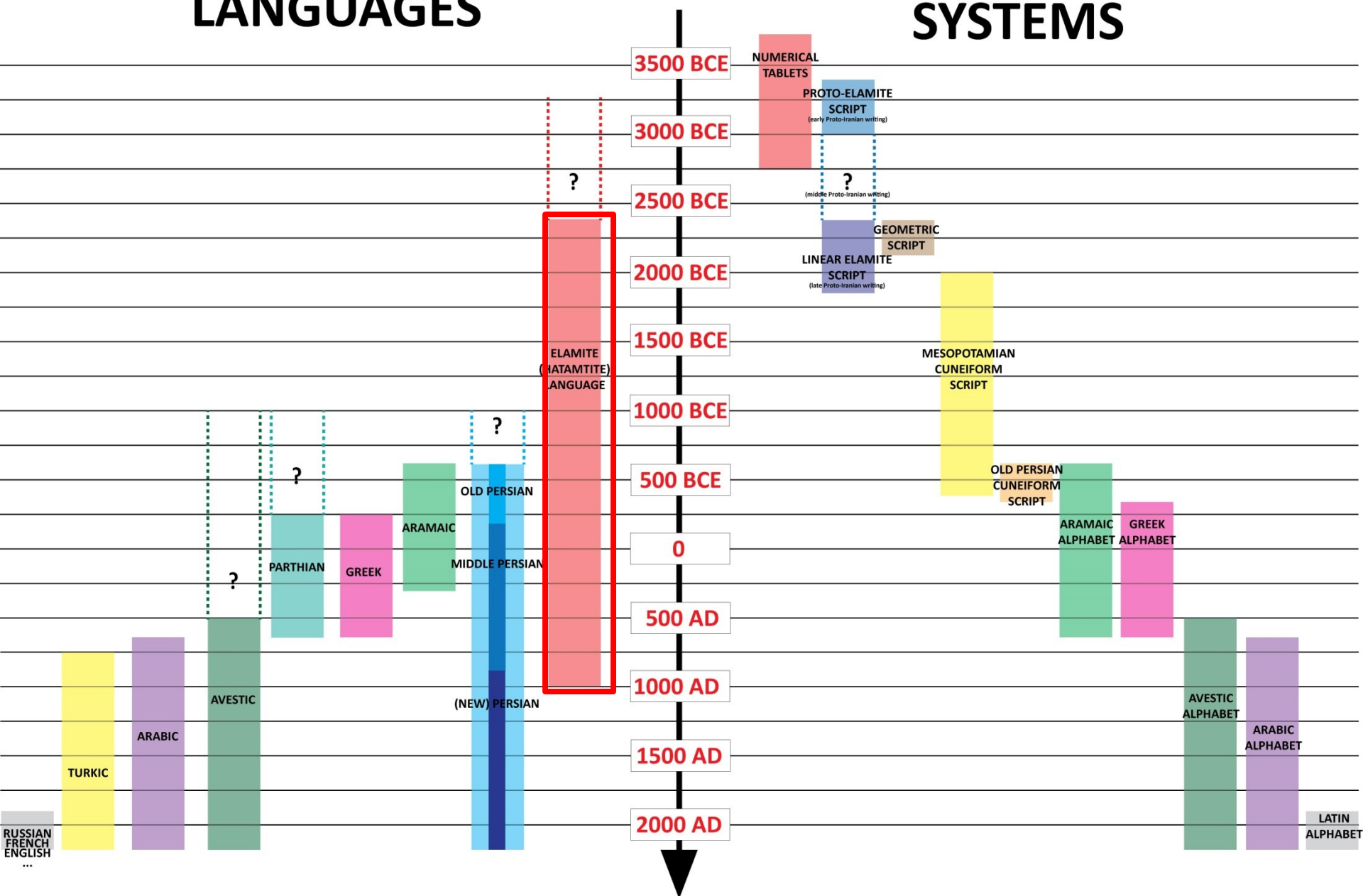
3) Bilingual texts ?

Yes, the Achaemenid trilingual inscriptions (Bisotun)



LANGUAGES

WRITING SYSTEMS



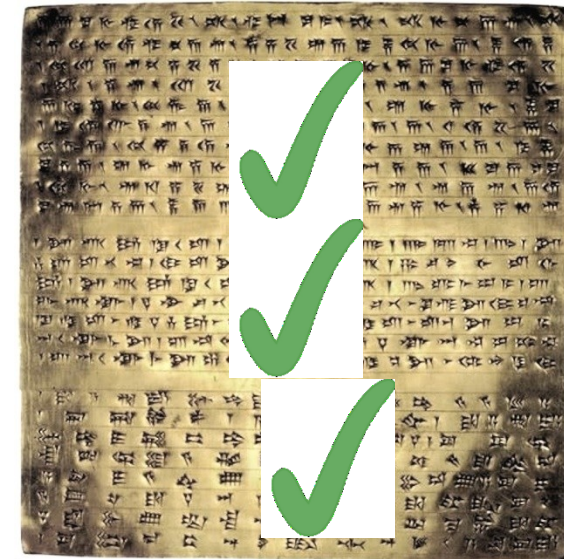
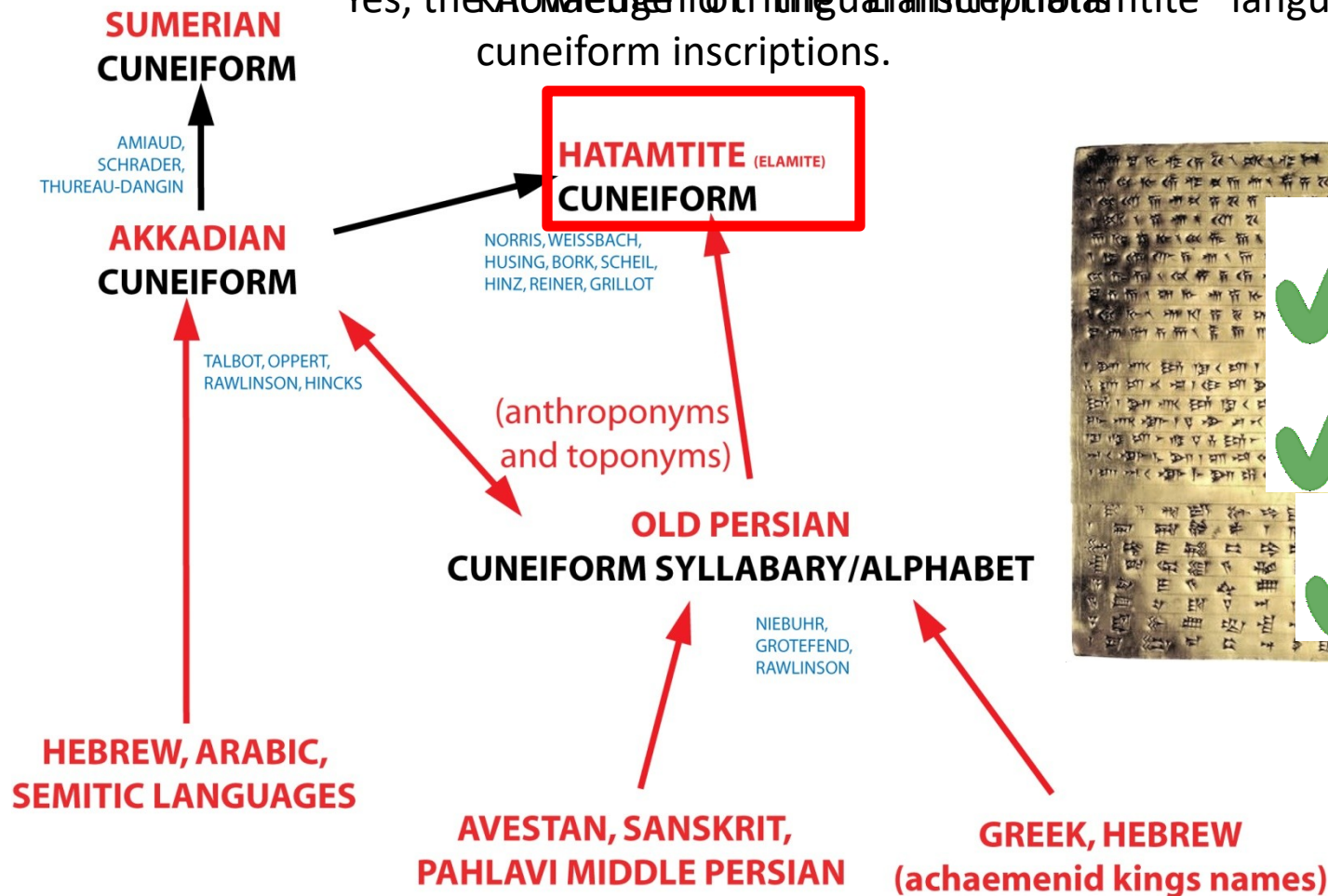
4

D) Elamite / Hatamtite language with Akkadian writing

1) Language previously known to the 'Cuneiform world'.

No (isolate) The cuneiform writing system was used during more than 3000 years knowing which of kings, gods, plates record many yes (Darius, Xerxes, aged, many doing myrably) the isogloss Persian (in Akkadian, Gopet and) and Elamite/Hatamtite (in Iran).

3) Bilingual texts We have consequently a rather good, but still limited, Yes, the knowledge of the Elamite/Hatamtite language through cuneiform inscriptions.



Old Persian:

adam Dārayavauš xšāyaθiya vazrka, xšāyaθiya
xšāyaθiyānām, xšāyaθiya Pārsaiy, xšāyaθiya dahyūnām,
Vištāspahyā puça, 𐬰𐬀𐬎𐬌𐬌𐬎𐬎𐬎 napā, Haxāmanišiya

Elamite :

^{DIŠ}ú ^{DIŠ}Da-ri-ia-ma-u-iš ^{DIŠ}EŠŠANA ir-šá-ir-ra ^{DIŠ}EŠŠANA
^{DIŠ}EŠŠANA-ip-in-na ^{DIŠ}EŠŠANA ^{AŠ}Pár-sìp-ik-ka₄ ^{DIŠ}EŠŠANA
^{DIŠ}da-a-^ˊú-iš^ˊ-be-na ^{DIŠ}Mi-iš-da-áš-ba ^{DIŠ}šá-ak-ri ^{DIŠ}Ir-šá-ma
^{DIŠ}ru-uh-hu-šá-ak-ri ^{DIŠ}Ha-ka₄-man-nu-ši-ia

I am Darius the Great King, King of Kings, King in Persia,
King of countries, son of Hystaspes, grandson of Arsames,
an Achaemenid.

Old Persian:

adam Dārayavauš xšāyaθiya **vazrka**, xšāyaθiya
xšāyaθiyānām, xšāyaθiya Pārsaiy, xšāyaθiya dahyūnām,
Vištāspahyā **puça**, ʔšāmahyā **napā**, Haxāmanišiya

Elamite :

^{DIŠ}**ú** ^{DIŠ}Da-ri-ia-ma-u-iš ^{DIŠ}EŠŠANA **ir-šá-ir-ra** ^{DIŠ}EŠŠANA
^{DIŠ}EŠŠANA-ip-in-na ^{DIŠ}EŠŠANA ^{AŠ}Pár-sìp-ik-ka₄ ^{DIŠ}EŠŠANA
^{DIŠ}da-a-^ʾú-iš^ʾ-be-na ^{DIŠ}Mi-iš-da-áš-ba ^{DIŠ}**šá-ak-ri** ^{DIŠ}Ir-šá-ma
^{DIŠ}**ru-uh-hu-šá-ak-ri** ^{DIŠ}Ha-ka₄-man-nu-ši-ia

u = adam = moi, je

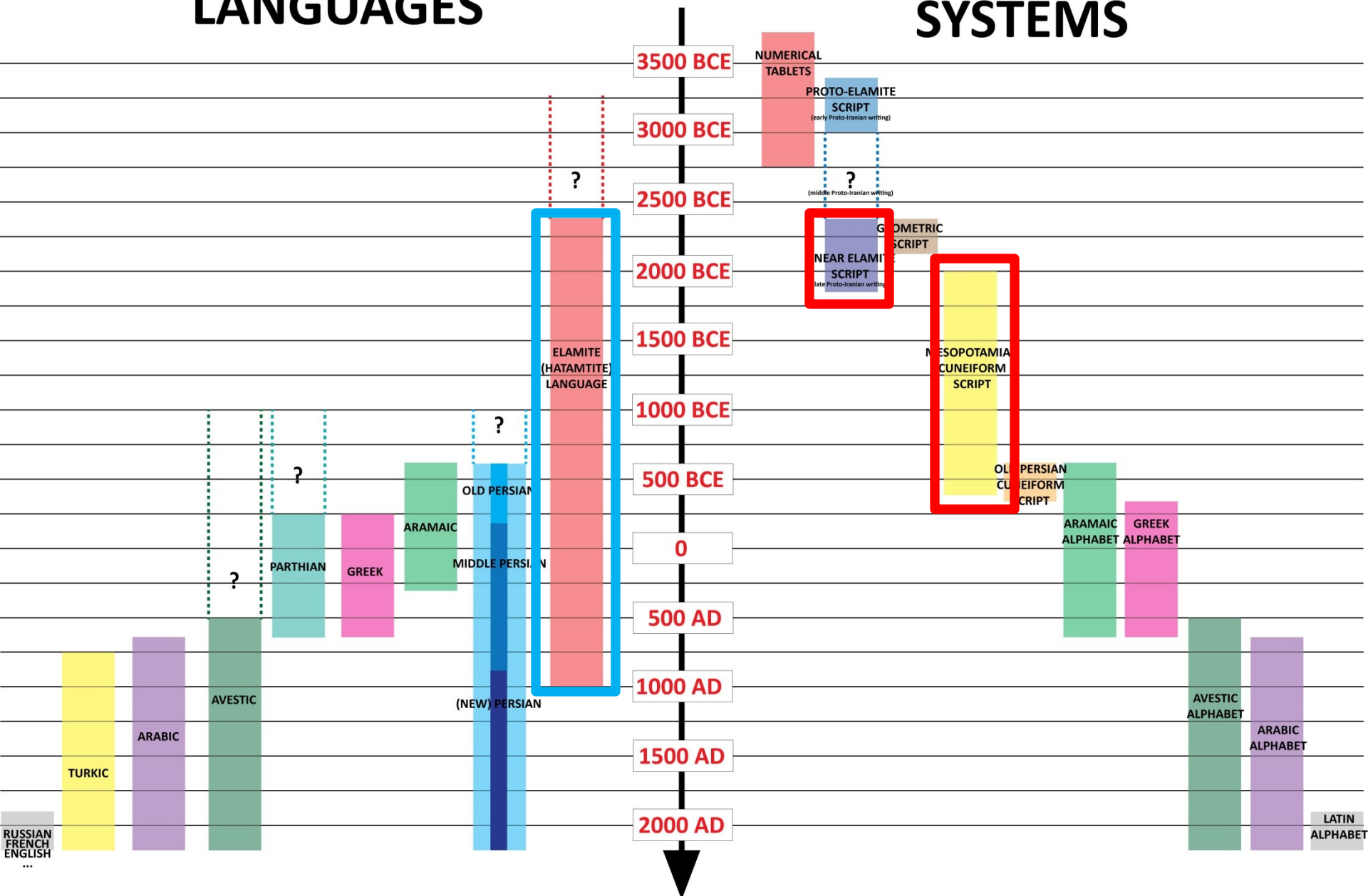
ir-šá-ir-ra = vazrka = grand

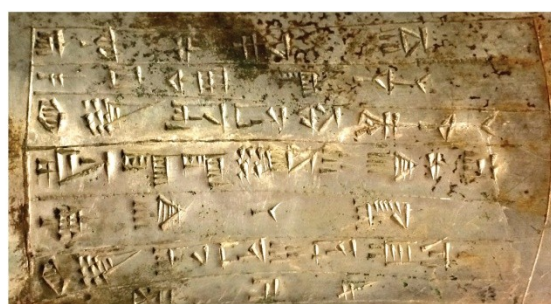
šakr = puça : fils

ruhušakri = napā : petit-fils

LANGUAGES

WRITING SYSTEMS





- 1 𐎶 𐎶 𐎶 𐎶 𐎶
- 2 𐎶 𐎶 𐎶 𐎶 𐎶
- 3 𐎶 𐎶 𐎶 𐎶 𐎶
- 4 𐎶 𐎶 𐎶 𐎶 𐎶
- 5 𐎶 𐎶 𐎶 𐎶 𐎶
- 6 𐎶 𐎶 𐎶 𐎶 𐎶
- 7 𐎶 𐎶 𐎶 𐎶 𐎶
- 8 𐎶 𐎶 𐎶 𐎶 𐎶
- 9 𐎶 𐎶 𐎶 𐎶 𐎶
- 10 𐎶 𐎶 𐎶 𐎶 𐎶
- 11 𐎶 𐎶 𐎶 𐎶 𐎶
- 12 𐎶 𐎶 𐎶 𐎶 𐎶
- 13 𐎶 𐎶 𐎶 𐎶 𐎶
- 14 𐎶 𐎶 𐎶 𐎶 𐎶
- 15 𐎶 𐎶 𐎶 𐎶 𐎶
- 16 𐎶 𐎶 𐎶 𐎶 𐎶
- 17 𐎶 𐎶 𐎶 𐎶 𐎶
- 18 𐎶 𐎶 𐎶 𐎶 𐎶

KINDATU

One of the most ancient texts recording the Elamite/Hatamtite language inscribed with the cuneiform writing:

the kunanki vessel of the Simaškian king Kintatu, ca. 2000 BC

(1)*e Napireša* (2)*nũ kok-ti* (3-4)*Kintatu zemt Alala likawe* (5-6)*aka pet Kintatu i zumpa-š (=zupa-š)* (7-10)*pes(∼l)ᵢ-ni Napireša kok-me nũ-me i? ne pa¹ pes(∼l)ᵢ zapa-n-ti* (11)*ani melũ-n-ti* (12)*le(-)(i)tũ-n-te* (13)*o ũkũ ta pũta-š* (14-16)*o peli(-)in amenane(-)l~s pohũp pohũp i hiša-h-na* (17-18)*kite pokũ pokũ i hiša-h-na*

Archiv für Orientforschung, herausgegeben von Ernst Weidner

Beiheft 16

Die elamischen Königsinschriften

Von

Friedrich Wilhelm König

Neudruck der Ausgabe Graz 1965

Biblio Verlag · Osnabrück · 1977

ELAMISCHES WÖRTERBUCH

(in 2 Teilen)

VON

WALTHER HINZ und HEIDEMARIE KOCH

TEIL I
A – H

1987

VERLAG VON DIETRICH REIMER IN BERLIN

König F. W.

1965

Die elamischen Königsinschriften, Archiv für Orientforschung, herausgegeben von Ernst Weidner, Beiheft 16, Graz.

Hinz W. and Koch H.

1987

Elamisches Wörterbuch, Archäologische Mitteilungen aus Iran, Ergänzungsband 17, Berlin.

Two important tools (in German...) for the knowledge of the Elamite/Hatamtite language:

- a corpus of pre-achaemenid royal inscriptions
- a dictionnary

Attested from the 3rd millennium BC to 330 BC (Alexander's conquest) in the southern half of the Iranian Plateau. Probably spoken in this area at least from the 5th or 4th millennium BC.

Finally disappeared around 1000 AD.

Al-Istakhri, ca. 935-943 AD

He wrote about the people of Khūzistān :

“As for their language, the common people speak Persian and Arabic, although they have another, Khūzī language which is not Hebrew, Aramaic, or Persian”.

Exact geographical distribution unknown (specially its northern and eastern extensions).

Paradoxical situation of
Susa/Susiana : some
dialectal variations ?



A **dead language** (its last speaker probably died ca. 1000 AD). It did not resist the Indo-European/Iranian expansion.

An **isolated language**. No pertinent comparison available with any dead or living languages.

Some hypotheses :

- since 1855 (E. Norris), Dravidian hypotheses : cf. Tamul or Brahui. Since 1975, David McAlpin is advocating this cognation.
- in 2019, Marc Bavant proposed a relation with the Caucasian languages.

Consequently, we face many problems to understand the grammar, lexicon and syntax of this language since no comparison is available. Many problems concerning the translation, which is frequently contextual.

Our current knowledge mainly come from the royal Achaemenid inscriptions, where we can compare the Hatamtite/Elamite texts with the Akkadian and Old Persian versions.



Trilingual inscriptions of Darius I and Xerxes I at Ganjnameh (Hamedan), Iran.

Consequently, we face many problems to understand the grammar, lexicon and syntax of this language since no comparison is available. Many problems concerning the translation, which is frequently contextual.

Our current knowledge mainly come from the royal Achaemenid inscriptions, where we can compare the Hatamtite/Elamite texts with the Akkadian and Old Persian versions.

Anyway, it documents only a recent state of the language. A complete linguistic recovery is still needed.

Estrucan-like situation.

Without a body of bilingual texts, an indigenous scholarly tradition, or a well-known language that is closely related to Hatamtite/Elamite, few pre-Achaemenid Hatamtite/Elamite words can be translated with precision and many can be translated only with guesses and/or based on the context.

Some examples of propositions

Positional language : word order very important :

Subject (+ modifier) / Indirect object (+ modifier) / Direct object (+ modifier) / Resumptive pronoun(s) / adverb / Verb

Resumptive pronouns, placed before the verb, with this order :

Indirect object / Subject / Direct object

- ***o šiyan kuši-h ; Inšušinak ak Simut ap i-n tûni-h*** :
 - “I the temple built ; (to the gods) Insušinak and Šimot to them it (= the temple) (I) gave” >
 - “I built the temple and gave it to Insušinak and Šimot”.
- ***o Šuṣtrūk-Nahunte, Insušinak napi-r o-re o i-r taḥa-n-r-a, Akkat halpû-h*** :
 - “I, Šuṣtrūk-Nahunte, Insušinak the god of mine to me this he commands; Akkad I destroyed” >
 - “I, Šuṣtrūk-Nahunte, (when) Insušinak, my god commanded me, (then) I destroyed Akkad” ;

The Linear Elamite (or late Proto-Iranian) writing system :

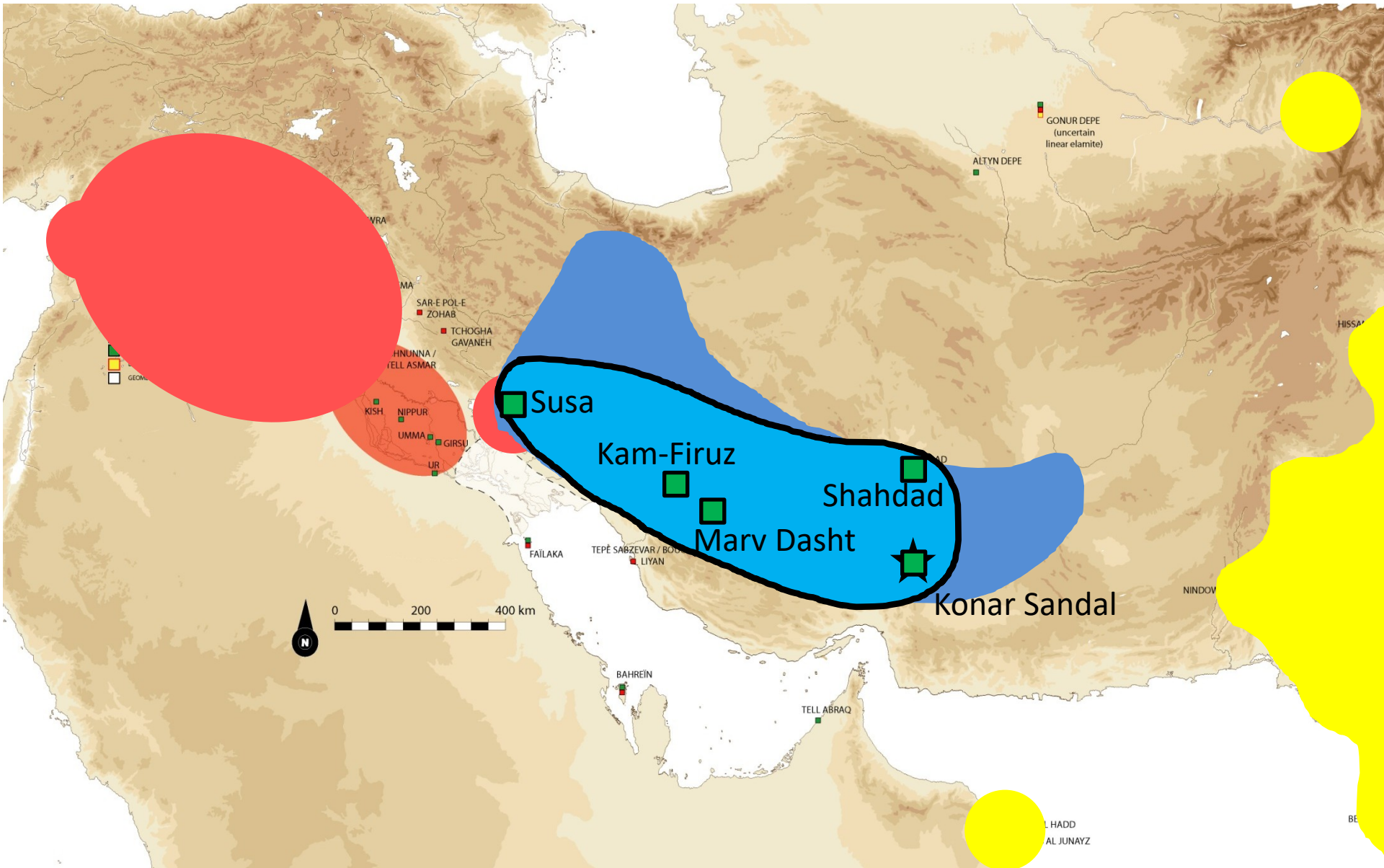
Three steps in its decipherment

- 1903-2017
- 2017-2018
- 2018-2020

Ca. 2900 BC

Ca. 2600/2400 BC

Ca. 2250 BC



In 2024, 43 Linear Elamite inscriptions are known.



Out of the 43 Linear Elamite inscriptions currently known, 19 (44%) are in the Louvre (mainly displayed in room 231 in Antiquités Orientales department).





|

1903-2017



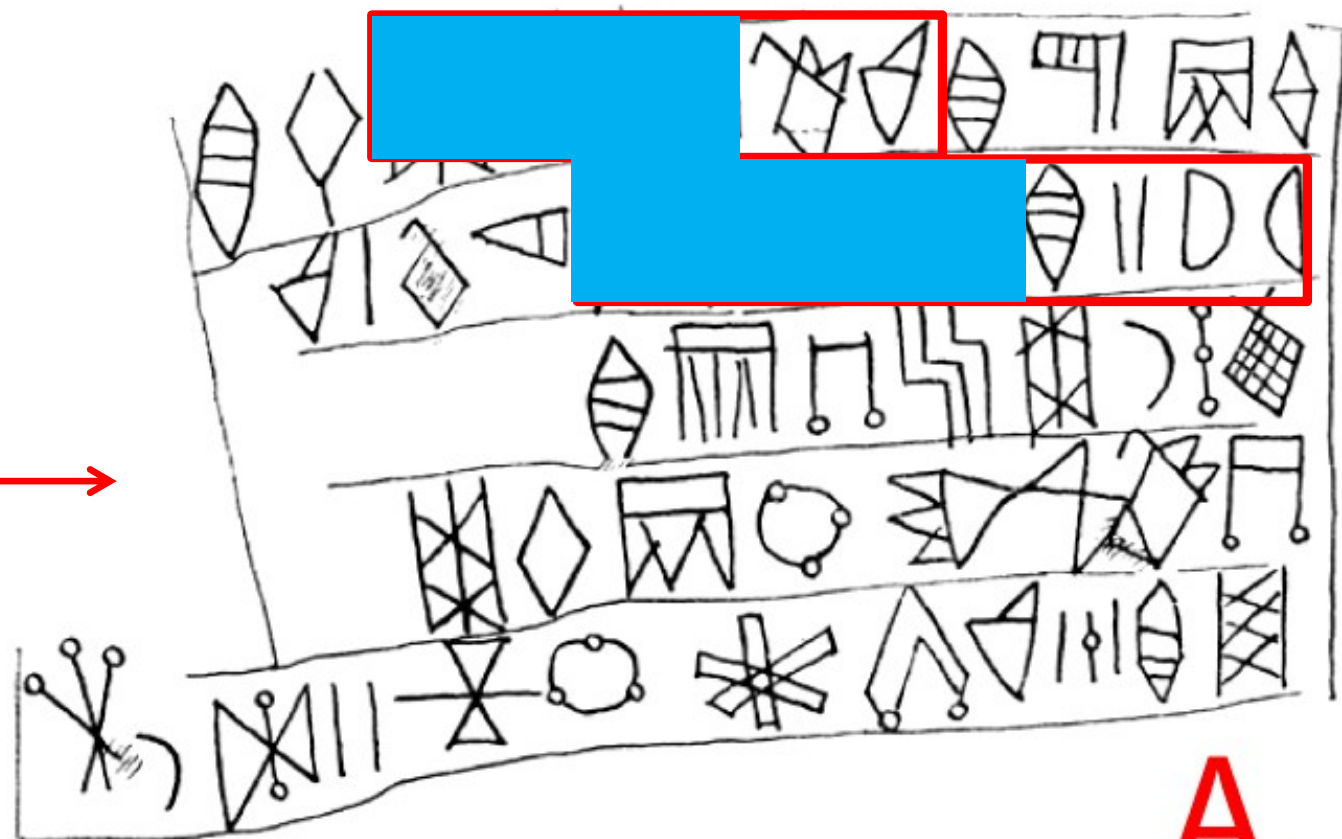
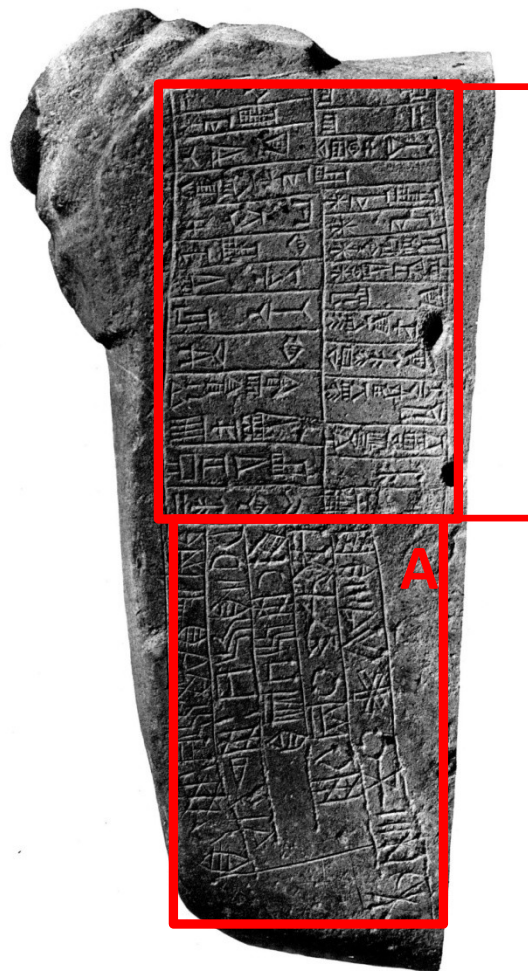
Here is a stone slab found in Susa at the beginning of the 20th century and currently held in the Louvre Museum.

It displays a **cuneiform Akkadian** text.

as well as a **linear elamite** one (A).

The first decipherment attempts were based on Insušinak and Puzur-Sušinak's names :

- Bork identified in 1905 the signs for the sounds *su*, *ši*, *na* and *k* ;



←
reading direction

A

Decipherment

In the 10 Susian linear elamite inscriptions of Puzur-Sušinak, several important points were remaining unknown :

- we did not know what was the language used (the main hypotheses are the Akkadian or the 'Elamite' languages), while language(s) spoken in Eastern Iran in the second half of the 3rd millennium BC (at Shahdad and Konar Sandal notably) are still elusive (is it / are they at least known or knowable language(s)...?) ;

- we do not know which person was used : 1st (Hinz) or 3rd (Meriggi) singular person.

On the basis of the proper names Insušinak, (Puzur)-Sušinak, Simpišhuk and Susa, Hinz proposed in 1969 these (very fragile...) identifications.

While Meriggi more careful in 1971, only accepted these ones.

I was even more cautious than Meriggi in 2012.

Syllabaire de Hinz (1969)

ak	in *	ni *	šu *	in	(i)r(i)
bi	iš *	pi	šo	?	déterminatif divin (NAB) (NAB ?)
du	KIK / kik (ciel)	ri	te *	?	TE (?)
en	li	SUNKI (roi)	uš	(a/i)k	pu / ku (?)
HAL / hal (pays)	me *	ŠAK / šak (fils)	za	ši	uz, zu / te, ti (?)
hu *	na *	še	(i) '	(u)š	pišš HUK (?)
ik *	NAPI / nap (dieu)	ši *	ku / pu	š	hu ŠAK (?)
			ti / uz ?		

II

2017-2018

Nine Linear Elamite Texts Inscribed on Silver “Gunagi” Vessels (X, Y, Z, F’, H’, I’, J’, K’ and L’): New Data on Linear Elamite Writing and the History of the Sukkalmah Dynasty*

François Desset

^aDepartment of L

ABSTRACT

Nine Linear Elamite vessels. In p
beakers. In p
proposed tha
while the na
read among
understandi
considerati
nine Linear E
some of the
examination
the Mahbou

اشكار
بيوند او
برافر وختند
ي و چه پارسي
يشنوي

The captives
their lives.
teach thee
Shah] gave
they were re
with knowle
thirty script
Sughdi, Chin
(Shahnameh)

1. Introduct

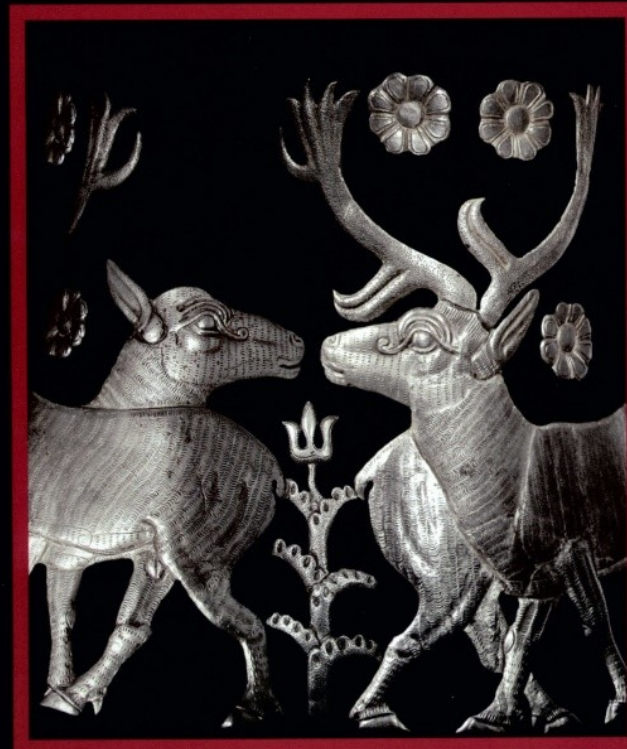
Linear Elamite
Figure 1) be

CONTACT François
*Followed by a tec
¹On Linear Elamite
Puzur-Inshushina
chrift vom Rande
and Vallat, “The r
²This writing was n
writing in Iran”, 2
non-standardized
³Hinz, “Zur Entziffer
Premières écriture
⁴Desset, Premières
⁵Hinz, “Eine neuge
© 2018 British Institut

ELAM

Art and Civilization of Ancient Iran

3000 – 2000 BC



HOUSHANG MAHBOUBIAN

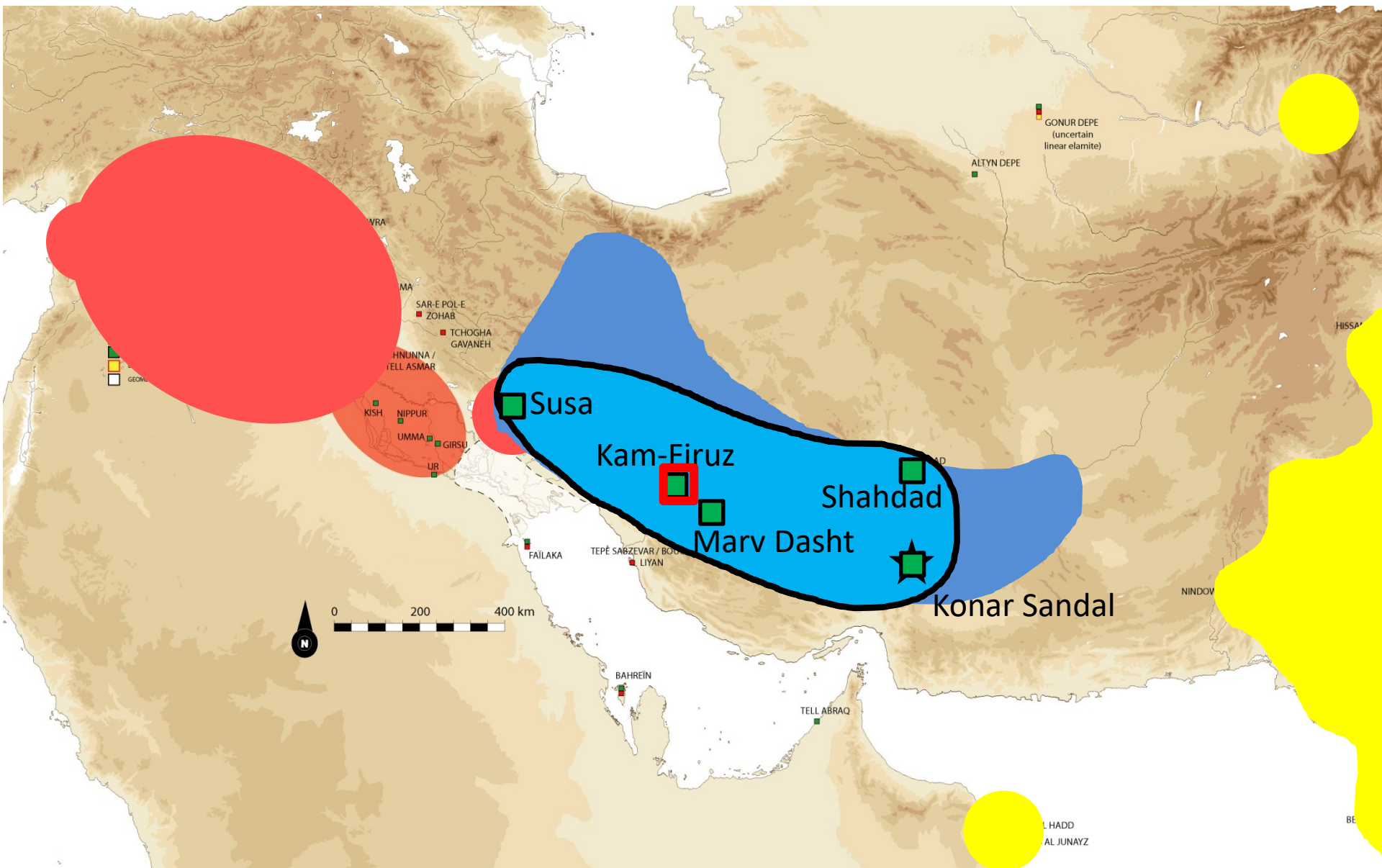
ection.
new inscriptions which I
ul about them...



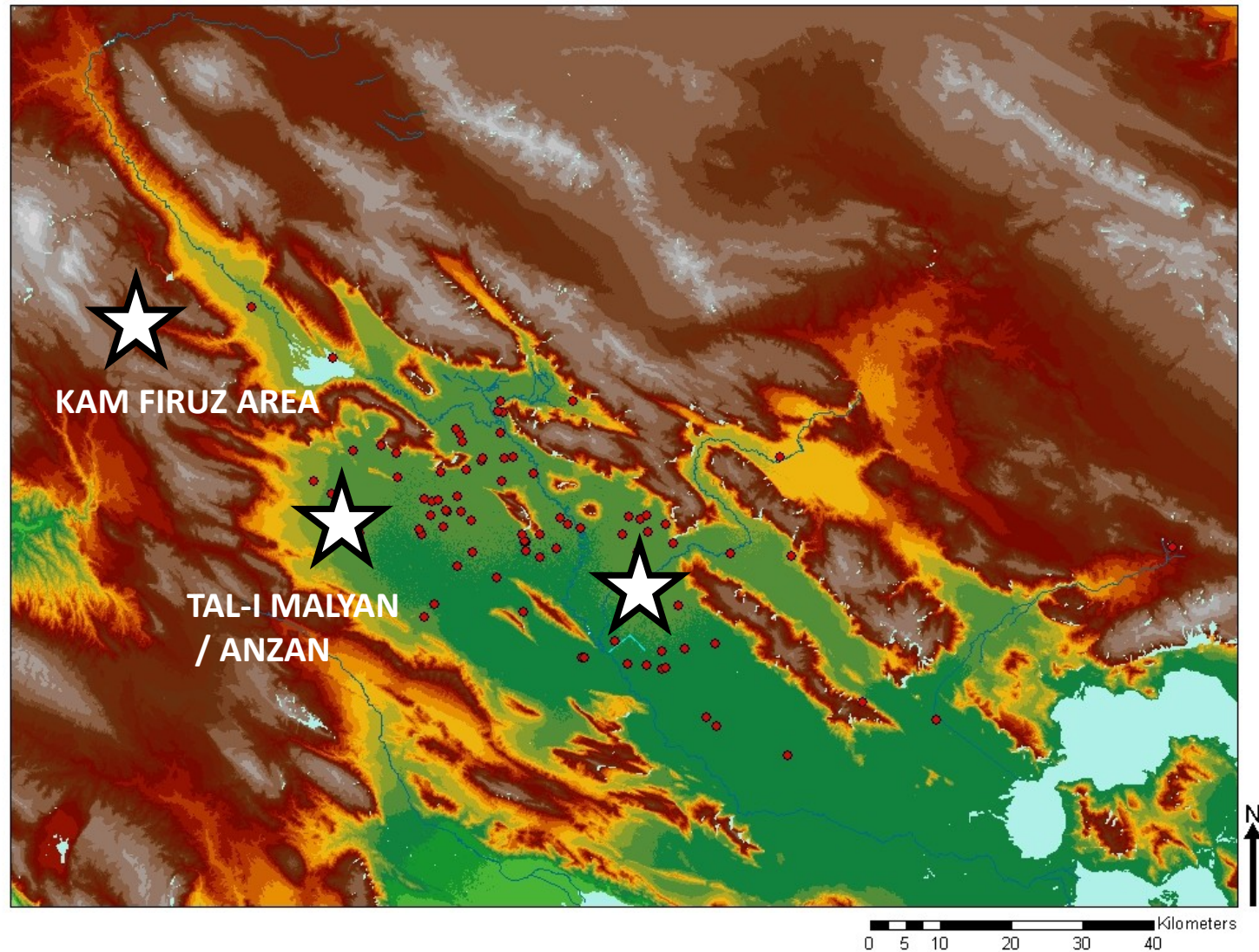
X

I'

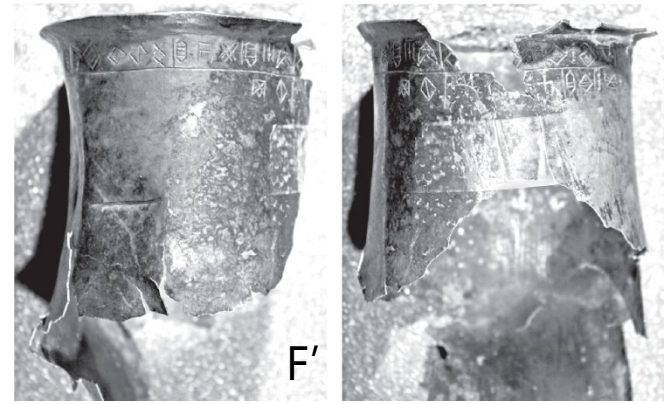
Iran



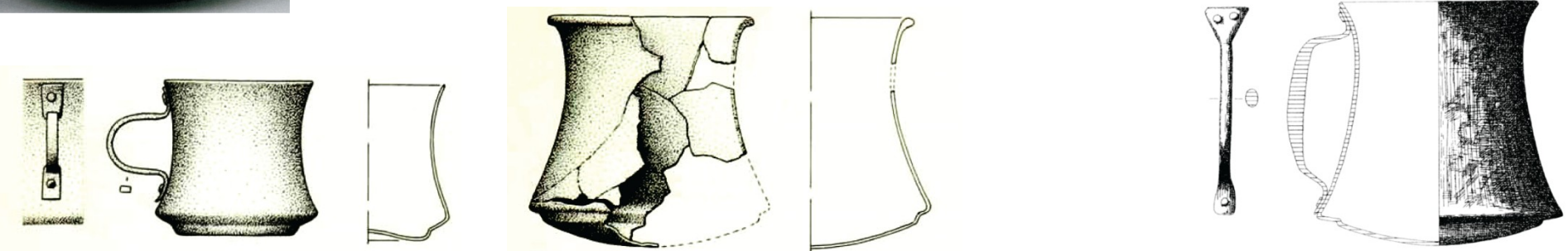
Kaftari Period settlements in the Kur River Basin, Fars, Iran



Settlement data from Sumner KRB site Gazetteer, map courtesy of Toby Hartnell

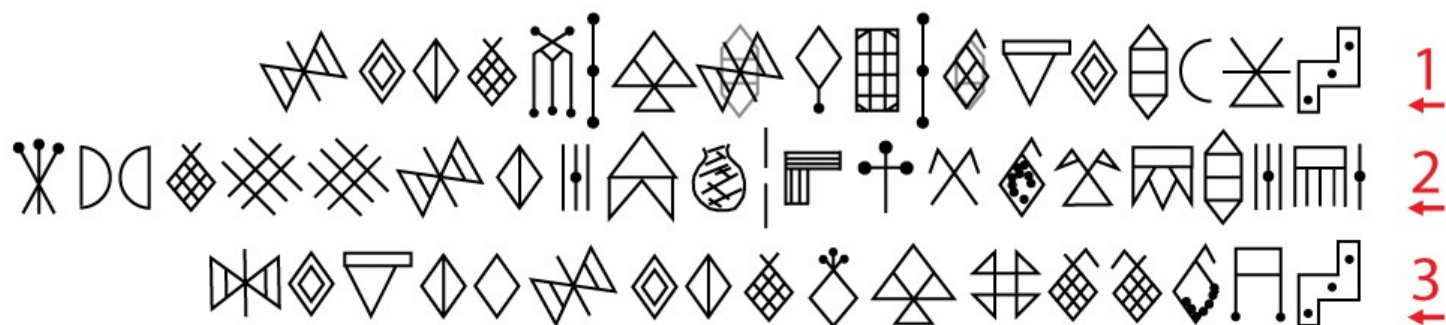


KUNANKI VESSEL





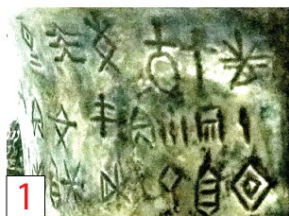
LE inscription : X



LE inscription : Y

1
 2
 3
 4

1
 2
 3
 4

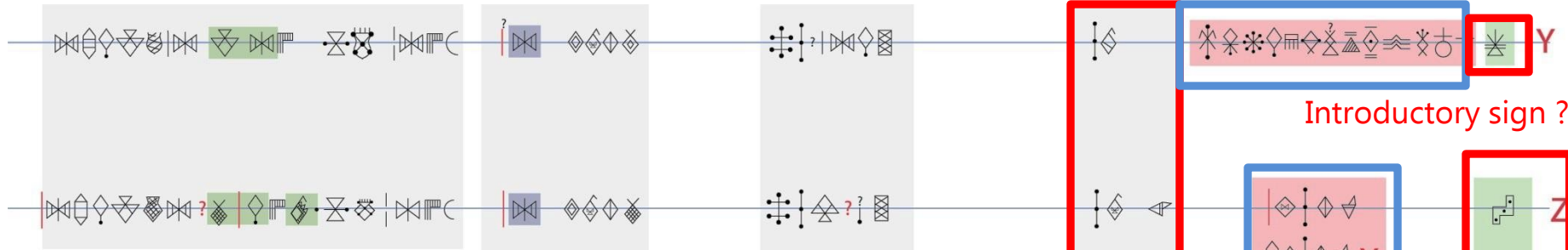




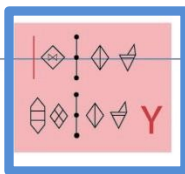
LE inscription : Z

1
 2
 3
 4
 5
 6
 7
 8
 9

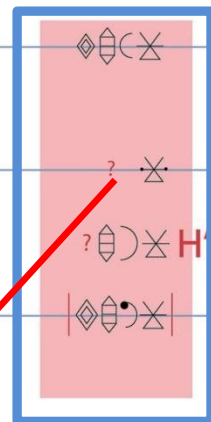




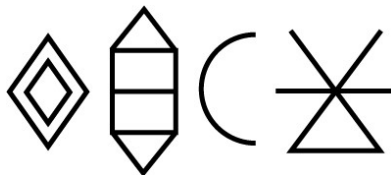
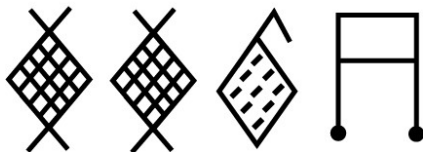
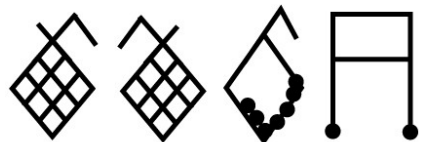
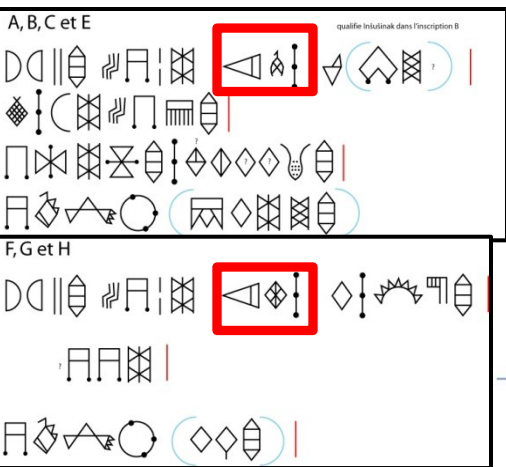
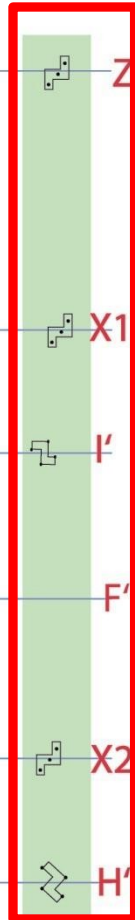
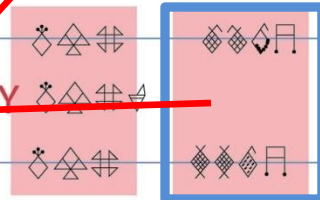
Introductory sign ?

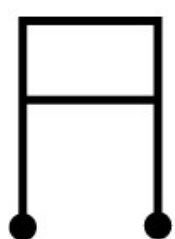


Names ?



A title ?





shi



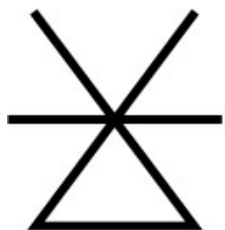
l



ha



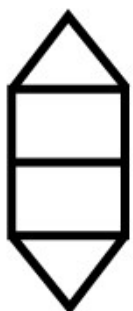
ha



e



pa



r



ti

Kintatu

Itatu

Tan-Ruhurater

Kiten-rakitapi

Eparti

Shilhaha

Ata-hushu

Zemt-Akone

Pala-ishan

Kuk-Kirwash

Kuk-Nahunte

Kuk-Nashur

Shir-uktuh

Sewe-palar-huhpak



HA HA L SHI

HA HA L SHI

Šilhaha !!!!!!!!!!!!!

TI R PA E

TI R PA E

Epartii !!!!!!!!!!!!!!!!!!!!!!!!!!!!!

232 132 133

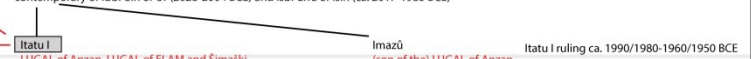
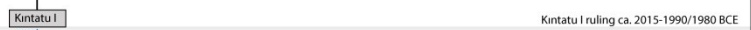
H' H'

Y
n ?
Z
X1
F'
X2

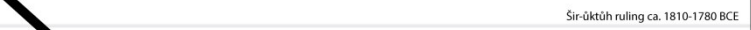
DYNASTY OF ŠIMAŠKI



probable unknown rulers for the beginning of the 21st century BCE



probable unknown rulers for the 19th century BCE



LIKAWE REŠA (/ SUKKALMAḫ) DYNASTY

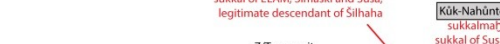
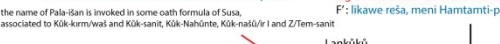
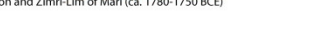
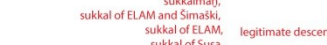
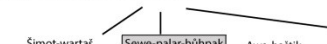
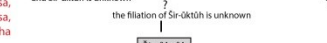
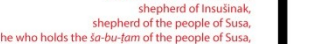


Diagram illustrating a sequence of signs and their corresponding labels (K'2, L', Y, Z, X1, I', F', J'2, X2, H'2) across multiple rows. The diagram is divided into several colored regions: a grey region on the left, a yellow region in the center, and a red region on the right. A red box highlights a specific section of the red region.

Legend:

- verb ?
- introduitory sign
- ?
- name ?
- 1 remark
- title ?

Signs are numbered 4, 9, 10, 12, 12, 4.

ŠA - RE - (R) - PI - NA

183 230 72 259 169
(119, 120) (274, 194, 256, 195)



this sign is only present
in 3 of the 9 occurrences
of this name.

R

NA

(cf. InsušiNAk)



The god Napireša (the Great god)

259
(274, 194, 256, 195)



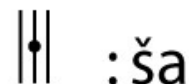
: pi

119 120 230



: re

183



: ša

I published in 2018 the phonetic values of 10
signs:

e, ha, l, pa, pi₂, r, ri, ša, ti, u.

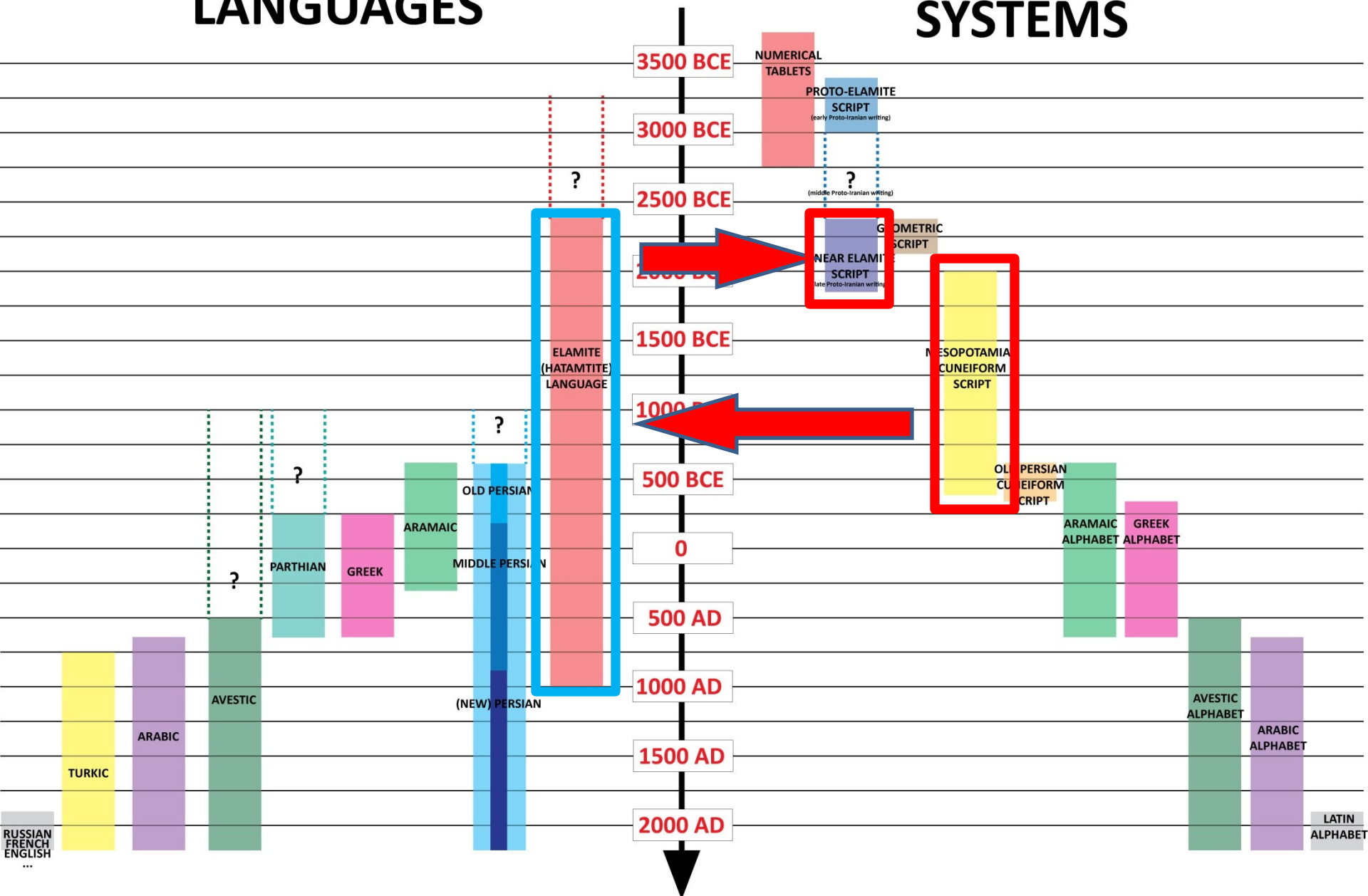
From 2018 to 2020, the decipherment has been
led to its conclusion.

III

2018-2020

LANGUAGES

WRITING SYSTEMS



Abhandlung

François Desset, Kambiz Tabibzadeh, Matthieu Kervran, Gian Pietro Basello, and Gianni Marchesi*

The Decipherment of Linear Elamite Writing

<https://doi.org/10.1515/za-2022-0003>

Abstract: Linear Elamite writing was used in southern Iran in the late 3rd/early 2nd millennium BCE (ca. 2300–1880 BCE). First discovered during the French excavations at Susa from 1903 onwards, it has so far resisted decipherment. The publication of eight inscribed silver beakers in 2018 provided the materials and the starting point for a new attempt; its results are presented in this paper. A full description and analysis of Linear Elamite of writing, employed for recording the Elamite language, is given here for the first time, together with a discussion of Elamite phonology and the biscriptualism that characterizes this language in its earliest documented phase.

Dedicated to Françoise Grillot and François Vallat, and to the memory of Vincent Scheil, Ferdinand Bork, Carl Frank, Walther Hinz, Piero Meriggi, and Marie-Joseph Steve, great pioneers who paved the way.

“Provided sufficient text is available, a phonetic writing can and ultimately must be deciphered if the underlying language is known” (Gelb 1975, 96).

1 Introduction

In 1903, French excavators working in the Acropolis mound of Susa found inscriptions attesting to a new writing system (Scheil 1905), which for a long time was assimilated to that of the so-called ‘Proto-Elamite’ tablets, as a lapidary version of it (see, e. g., de Mecquenem 1956, 200; and Gelb 1963, 89: “a more developed form of Pro-

to-Elamite writing”) until, in the early sixties, it was interpreted as an independent script and renamed *elamische Strichschrift* (Hinz 1962¹) or, in English, *Linear Elamite* (Hinz 1975; henceforth abbreviated as LE when used adjectivally, while PE stands for Proto-Elamite). Used in southern Iran between ca. 2300 and 1880 BCE (for the locations of the sites mentioned in this study, see Fig. 1), despite several decipherment attempts, Linear Elamite remained substantially undeciphered until recently (see Fig. 2).² Here is a summary of the results obtained in previous studies and proven correct by our decipherment (for the numbers that identify the various glyphs, see Fig. 3a).

Bork (1905, 328; 1924), studying inscription A,³ correctly identified the phonemic values *ši* (glyph 83), *še* (glyphs 87f.), *na* (169), and *k* (70, read by Bork as “(a)k”). Moreover, he came very close to establishing the correct readings of the glyphs 137f. (“en” – *ni*), 201 (“šu” – *su*), and 2f. (“ke” – *ki*).

Frank (1912, 20; 1923) came close to identifying two additional values – *n* and *š* – attributing the reading “in”

Article note: Abbreviations are those of the *Reallexikon der Assyriologie und Vorderasiatischen Archäologie* (<https://rla.bawd.de/reallexikon/abkuerzungslisten.html>; note especially EKI = König 1965; and EIW = Hinz/Koch 1987), to which the siglum TZ, for the texts from Choga Zanbil published by Steve (1967), must be added.

*Corresponding author: François Desset, CNRS team Archéorient (Lyon, France; UMR 5133)/University of Tehran; Email: desseffrancois@gmail.com

Kambiz Tabibzadeh, Eastern Kentucky University
Matthieu Kervran, Independent researcher

Gian Pietro Basello, ‘L’Orientale’ University of Naples

Gianni Marchesi, University of Bologna

[The order reflects the moment when each author got engaged in the project: F. Desset and K. Tabibzadeh: end of 2018; M. Kervran: end of 2019; G. P. Basello: beginning of 2020; G. Marchesi: beginning of 2021.]

François Desset

(Liège University)

Kambiz Tabibzadeh

(Eastern Kentucky University)

Matthieu Kervran

(Independent researcher)

Gian Pietro Basello

(«L’Orientale» University of Naples)

Gianni Marchesi

(University of Bologna)

Zeitschrift für Assyriologie und Vorderasiatische Archäologie 112/1 (2022), 11–60.

https://www.academia.edu/82452838/The_Decipherment_of_Linear_Elamite_Writing

Desset F., Tabibzadeh K., Kervran M., Basello G. P. and Marchesi G., and L. Colonna d’Istria

Forthcoming

Linear Elamite inscriptions and related Cuneiform texts volume 1: Linear Elamite texts from Susa, OrientLab Series Maior 9, Ante Quem editor, Dipartimento di Storia Culture e Civiltà dell’Università di Bologna.

Linear Elamite inscriptions and related Cuneiform texts volume 2: Linear Elamite texts from Fars, Kerman and of unknown provenance, OrientLab Series Maior 10, Ante Quem editor, Dipartimento di Storia Culture e Civiltà dell’Università di Bologna.

Linear Elamite inscriptions and related Cuneiform texts volume 3: From Linear Elamite to Cuneiform, OrientLab Series Maior 11, Ante Quem editor, Dipartimento di Storia Culture e Civiltà dell’Università di Bologna.

¹ Note that Bork (1924) already used the term *Strichschrift* to refer to this writing.

² On Linear Elamite, see, most recently, Desset (2012, 92–127; 2018a). See also Hinz 1962; 1969; 1971; 1975; Meriggi 1971; Vallat 1986; André/Salvini 1989; Salvini 1998; and Steve 2000.

³ LE inscriptions are traditionally identified by individual letters of the alphabet. It was Scheil (1905) who started to label the inscriptions with Latin letters following the alphabetical order and this practice has continued to this day.

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VOL. 10

LINEAR ELAMITE INSCRIPTIONS
AND RELATED CUNEIFORM TEXTS
I

LINEAR ELAMITE TEXTS FROM SUSÁ

by
FRANÇOIS DESSET, KAMBIZ TABIBZADEH,
MATTHIEU KERVAN, GIAN PIETRO BASELLO,
AND GIANNI MARCHESI

WITH THE COLLABORATION OF LAURENT COLONNA D'ISTRIA

Ante
Quem

Desset F., Tabibzadeh K., Kervran M., Basello G. P. and
Marchesi G., and L. Colonna d'Istria

2026

*Linear Elamite inscriptions and related Cuneiform texts volume
1: Linear Elamite texts from Susa*, OrientLab Series Maior 10.1,
Ante Quem editor, Dipartimento di Storia Culture e Civiltà
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3: From Linear Elamite to Cuneiform*, OrientLab Series Maior
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Civiltà dell'Università di Bologna.

THE KEY :

INSCRIPTIONS OF THE SIMAŠKIAN KINGS AND SUKKALMAHS (early 2nd MILLENNIUM BC) RECORDING VERY SIMILAR **ELAMITE/HATAMTITE LANGUAGE** TEXTS WRITTEN EITHER WITH **LINEAR ELAMITE** OR **CUNEIFORM SCRIPTS**.

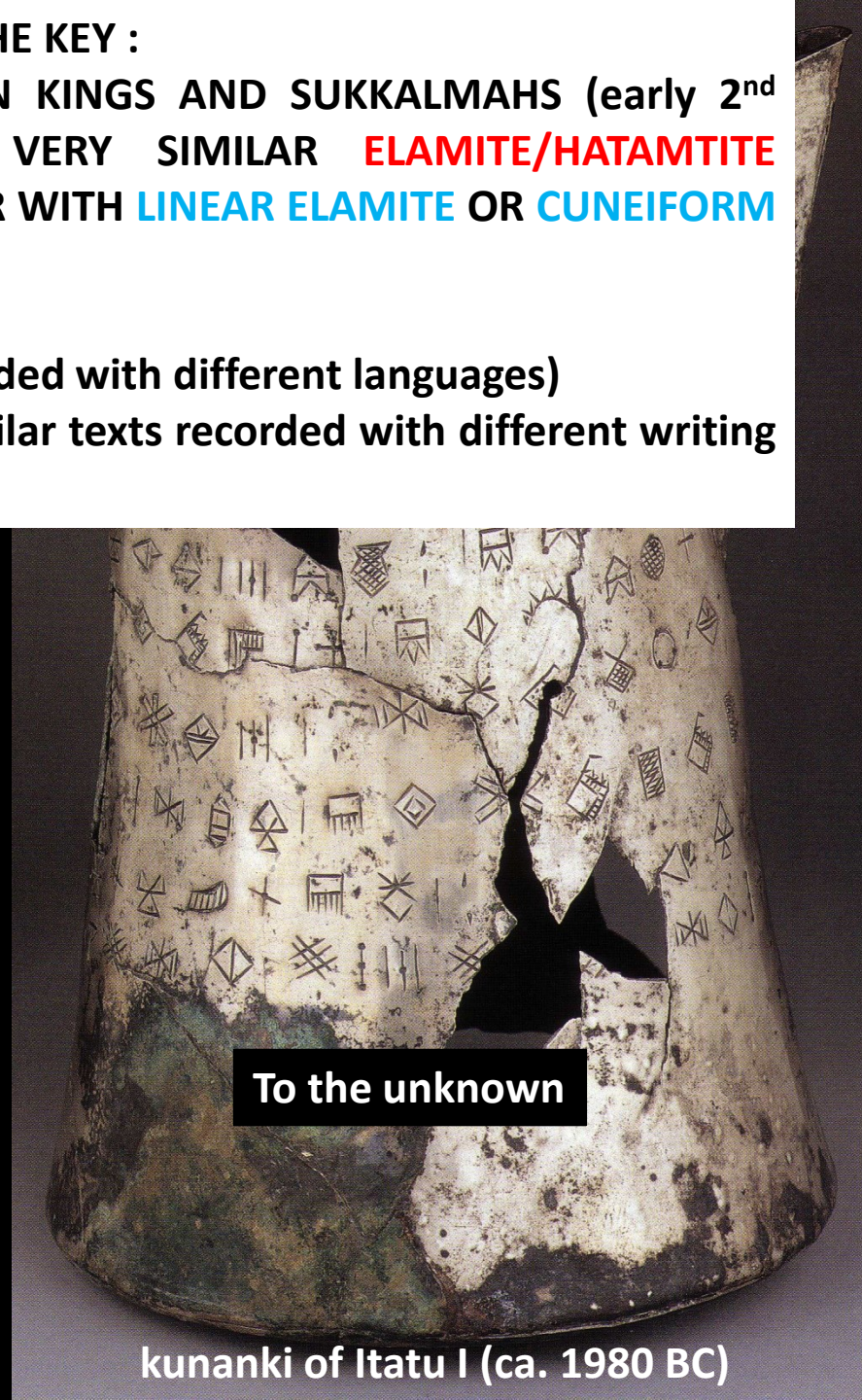
~~BILINGUAL TEXTS~~ (same text recorded with different languages)

→ DIGRAPHIC TEXTS (same or similar texts recorded with different writing systems in the same language)



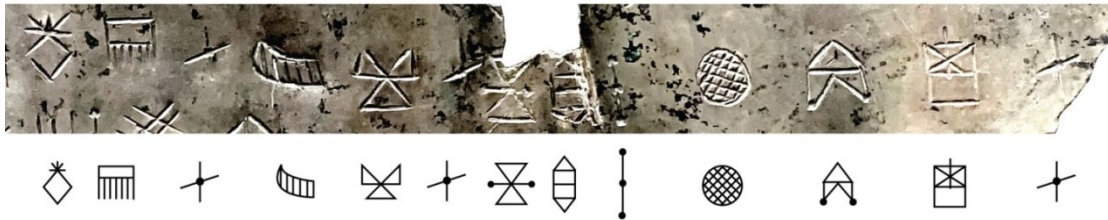
From the known

Vessel of Sewe-palar-hūhpak
(ca. 1780 BC)



To the unknown

kunanki of Itatu I (ca. 1980 BC)



From the known



To the unknown

/mani-p sah-ip hũrt kere-p o-p(e) hũta-k-na/

“The bronze *manis* of my *kere* people may be made”.

Elamite prayer recorded above in a **cuneiform** inscription of Sewe-palar-hũhpak (Cuneiform 9: 58-59; first half of the 18th century BCE)

and two centuries earlier, below, in a **Linear Elamite** inscription of Itatu I (Z: 8-9; ca. 1980 BCE).



sa - lu



sa



wa



سألو سا وا ؟
? *a-w a-s ou-l-a-s*
salu sa va ?

Salut, ça va ?

The same text, in the same language (Elamite), but recorded with two different writing systems (Linear Elamite and Cuneiform):
DIGRAPHIA phenomenon



ma- ni- i- pi sa- hi- i- pi



hu- ur₂- tu₃ ki₂- ri- pi- up hu- ut- ta- ak- na'

A digraphic (**cuneiform** / **Linear Elamite**) prayer in the **Elamite language**.



ma-ni- p sa- hi₂- p hu₂-r- t ki₂- ri- pu₂- p hu- t- ta- k₂-[na]



A digraphic (**Arabic alphabet** / **Latin alphabet**) inscription in **Persian language** at the entrance of a metro station, Tehran, Iran.

II

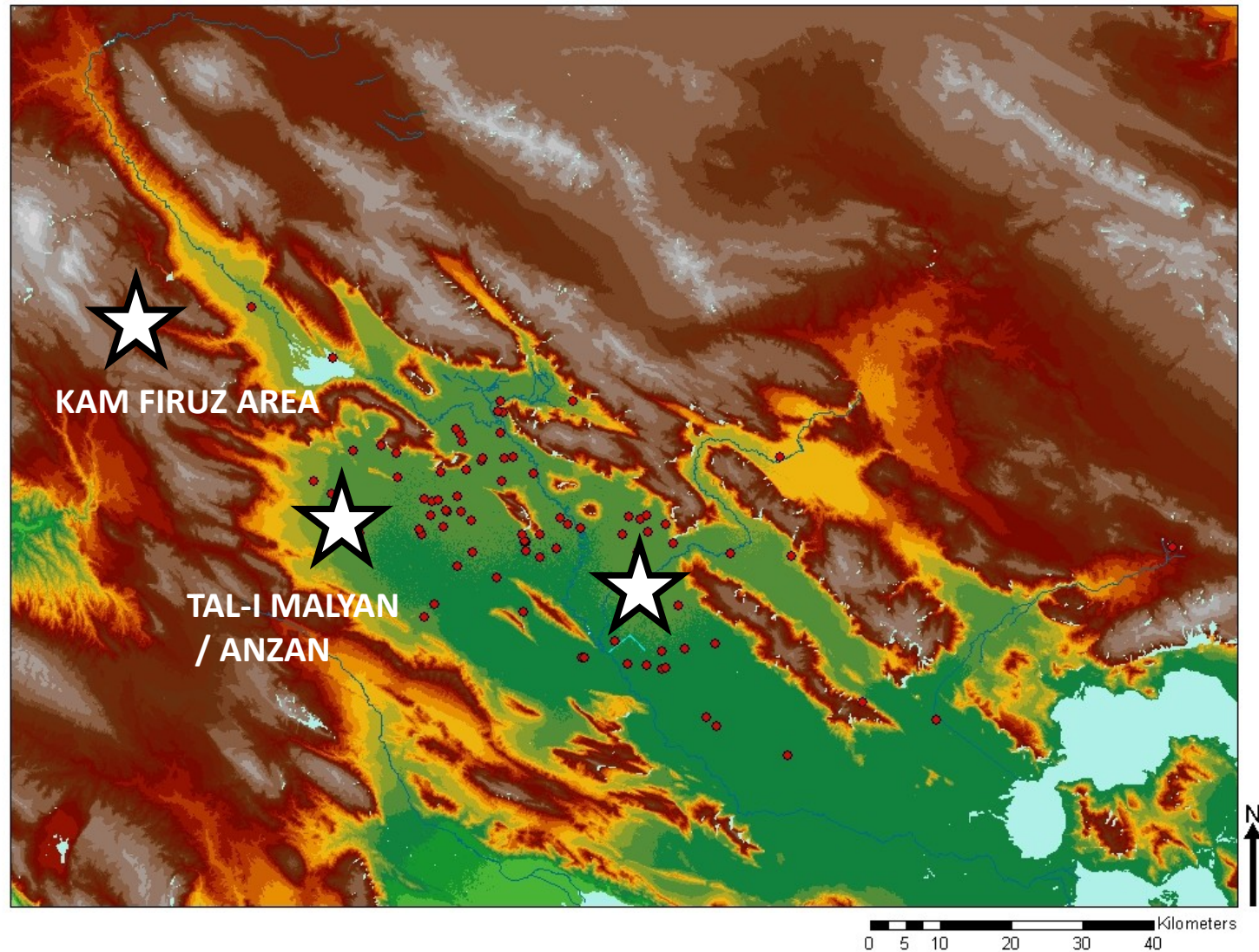
From the decipherment of the Linear Elamite writing to the translation of the Hatamtite/Elamite language.

From the **decipherment** of the Linear Elamite writing to the **translation** of the Hatamtite/Elamite language,

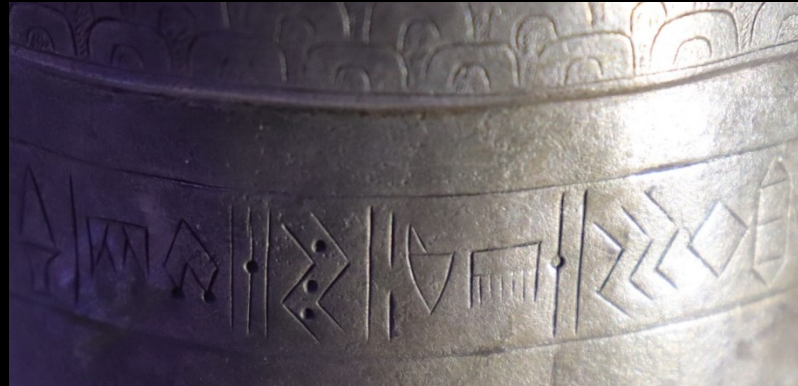
some examples of texts recorded with the **Linear Elamite writing** and the **Hatamtite/Elamite language**:

- Marv Dasht, 21st century BC, Šuwar-Asu;
- Kam-Firuz, ca. 1900-1880 BC, Pala-išan.

Kaftari Period settlements in the Kur River Basin, Fars, Iran



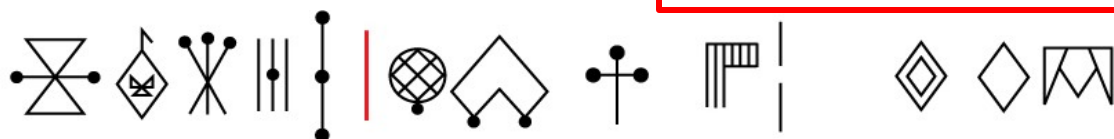
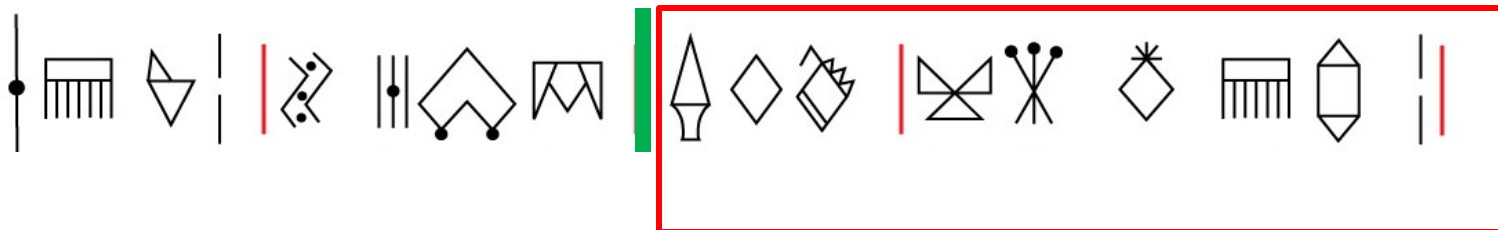
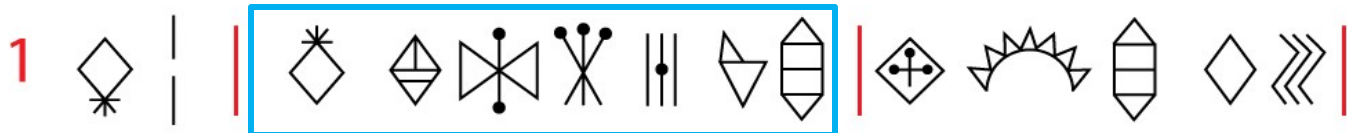
Settlement data from Sumner KRB site Gazetteer, map courtesy of Toby Hartnell



The Marv Dasht vessel

(21st century BC)





- 1. *za-na | ma-ra-p₂-š-ša-i-r | šu-wa-r-a-su | la-ni-i-na | u ša-ri-h |*
si-a-n | hi₂-š(-)ma-ni-ri₂-na | hu₂-m-š-ša-t | ki₂-ri nu te-na ti-a-h

- (1) *zana Marapša(y)i-r Šuwar-Asu laniyina o šare-h.*
siyan Hiš(-)mani-r(i)na Hūmšat kere nū te-na tiya-h.

- (1) (For ?) the lady of Marapša(y)i, Šuwar-Asu, (a) silver (vessel) I shaped. (For/in ?) the temple (of) Hiš(-)mani-r, (for god(goddess)?) Hūmšat, the devotion/worship, (for) you, benevolently, I deposited/gave.

Kam Firuz, ca. 1900-1880 BC



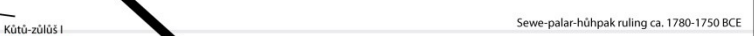
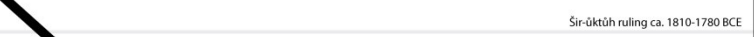
DYNASTY OF ŠIMAŠKI



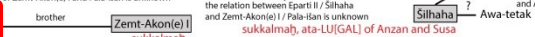
probable unknown rulers for the beginning of the 21st century BCE



probable unknown rulers for the 19th century BCE



LIKAWE REŠA (/ SUKKALMAH) DYNASTY



All the Kam-Firuz *kunanki* silver vessels in Linear Elamite/Late Proto-Iranian writing deal with the same topic.

They are prayers of the Šimaški and early Sukkalmah dynasties rulers asking Napireša to grant them « prosperity, fortune » in exchange for their « devotion, worship ».

K'

e na·pi₂·r·ri·ša ze·m·t ši·l·ha·k₂·ri₂

u pa·la·i·š·ša·n li₂·li·pa·r na·pi₂·r·ri·ša ki

li·ka·we ri·š·ša·ki me·n·ni·k₂ ha·t·ta·m·t·ti·k₂

lan·ni ša·ri₂·h ha·s·?·ki₂·?·wa na·pi₂·r·ri·ša

nu ki₂·ri wa ta·h nu u₂·te·n·ti su·t·me

ša·t·me mu·h·t hi·t·te·k₂·ni u pu₂ ha·li₂·k₂·li₂

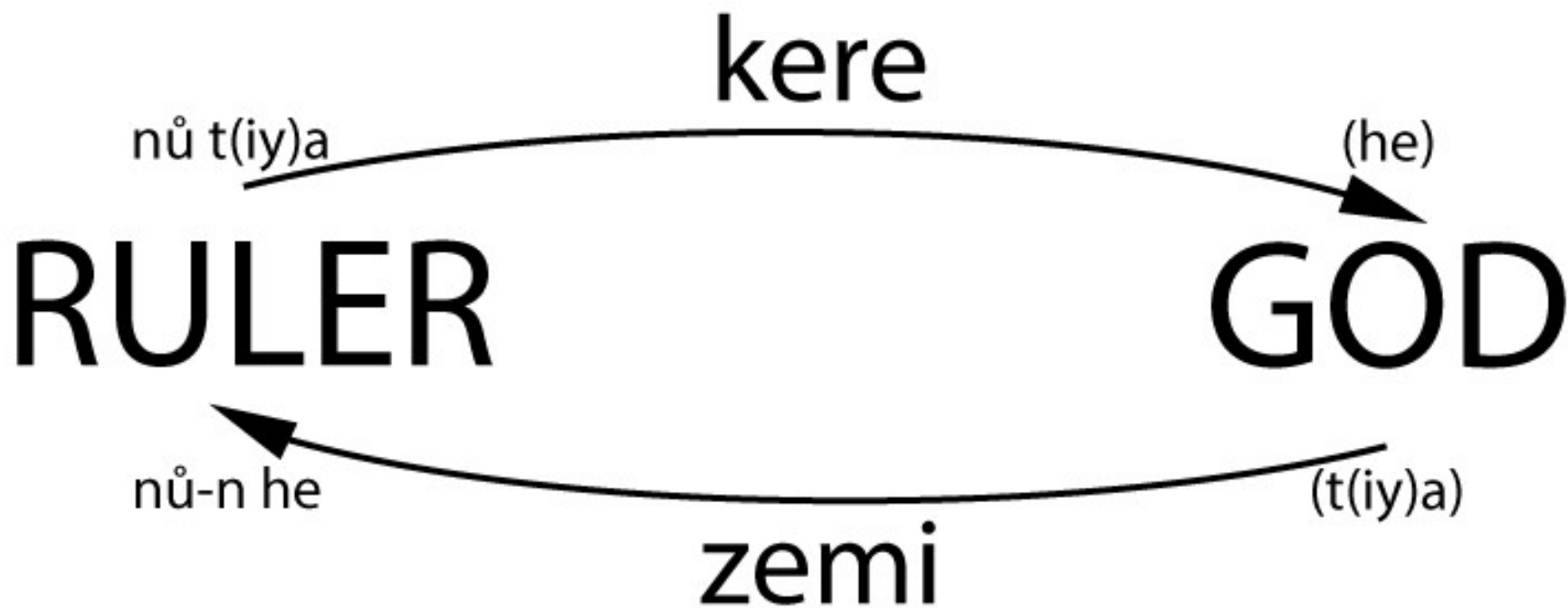
ki·ti·n ze·m·mi nu·n ki·ri·ha hi·h₂·li₂

1

(1

(1

....



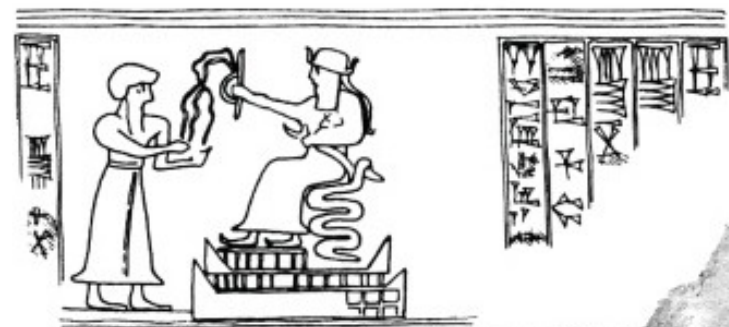
do ut des
kere for zemi



Y



seal of Tepti-Ahar (Zemt-Ahar),
15th century BCE



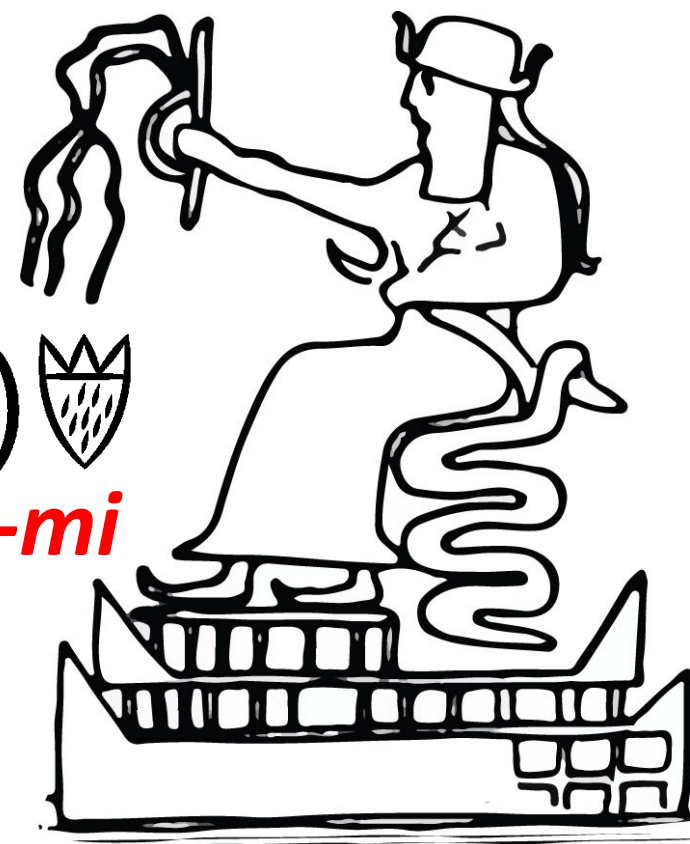
seal of Tan-Ūli, 17/16th century BCE

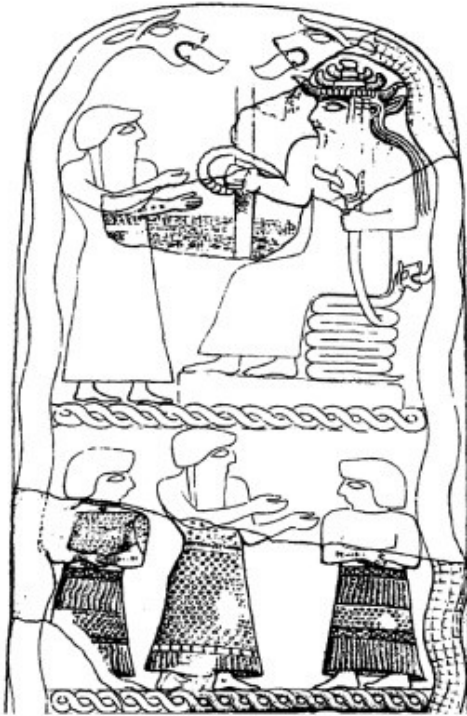


ke -re

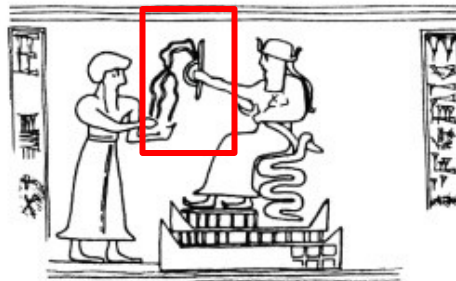


ze (-m)-mi





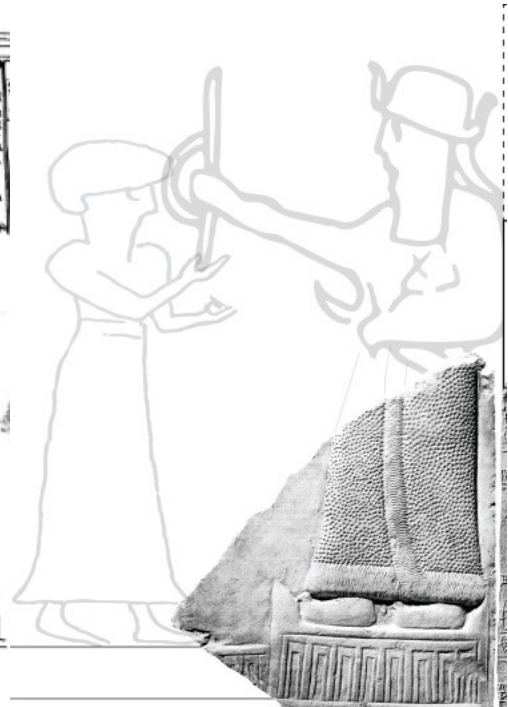
upper part of the stele of Ontaš-Napireša, 14th century BCE



seal of Tan-Ūli, 17/16th century BCE



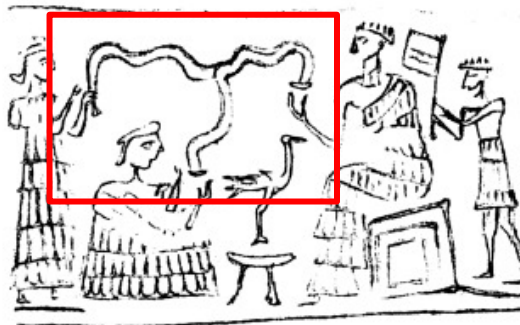
seal of Tepti-Ahar (Zemt-Ahar),
15th century BCE



Stele of Šir-ūktūh (ca. 1800 BC)



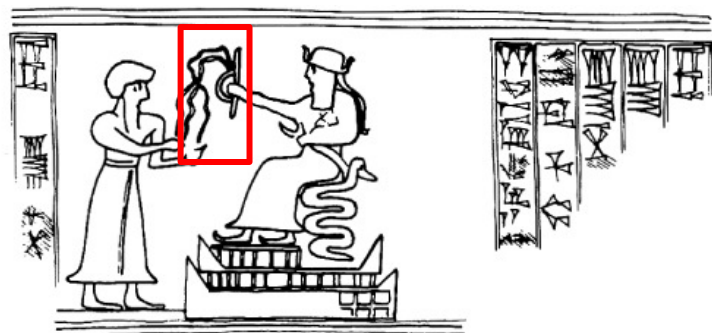
IX : Collection Rosen,
Porada 1990, planche 2, n° 1b



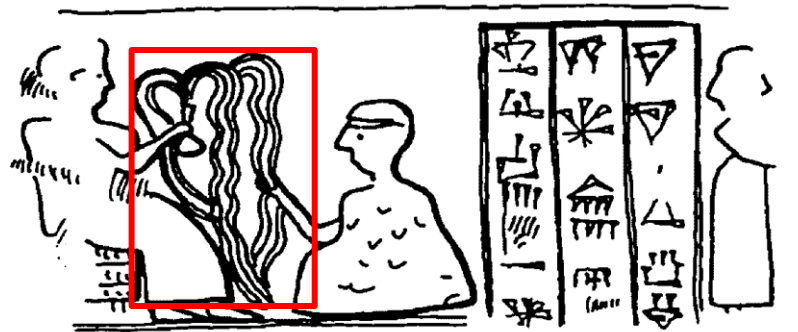
X : Collection Rabenou,
Amiet 2007, fig. 3



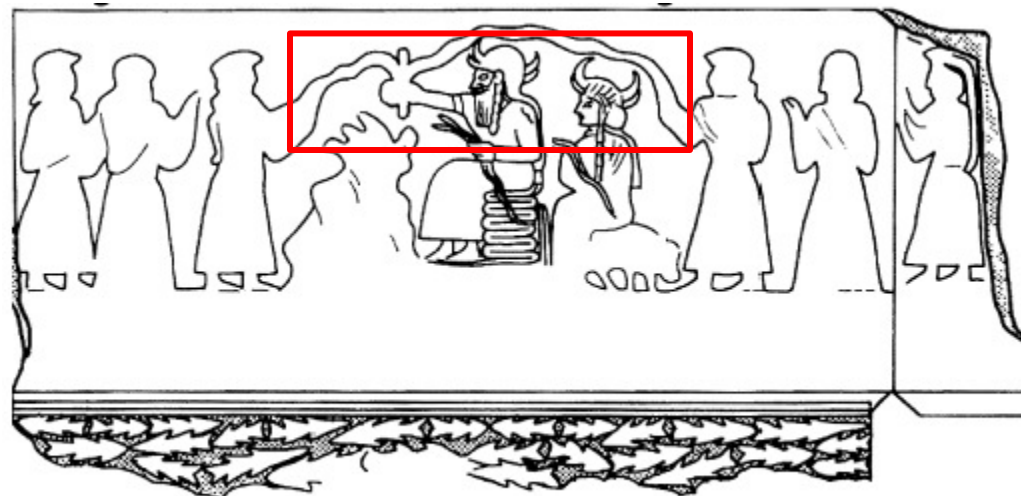
XII : Collection privée,
Porada 1990, planche 3, n° 2



VIII : Suse, sceau du sukkalmah Tan-Uli
(Amiet 1972 MDP 43, n° 2330)



XI : Suse, sceau d'Ilturam, serviteur
de Pala-ishshan, Amiet 1986a, fig. 114.2
et Porada 1990, planche 3, n° 3



IX : relief de Kurangun (Vanden Berghe 1986b, fig. 2)

▽(◇)♠ **zemi** ("prosperity,
fortune, grace") depicted as
streams of (beneficial) water ?

III

**Consequences of the decipherment of the Linear
Elamite writing**

One of the consequences of the
decipherment:

New perspectives on the history
of writing in the World, usually
considered to be a process of
progressive phonetization of
the writing systems.

Logographic writing
vs.
Phonographic writing
(syllabic/alphabetic)

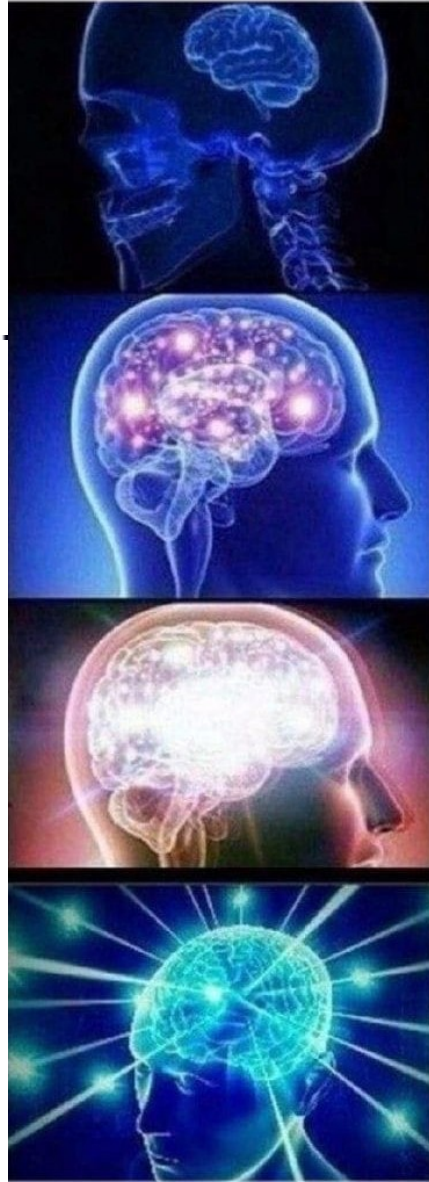
one question:

1000 €

logographic
notation

one thousand euros

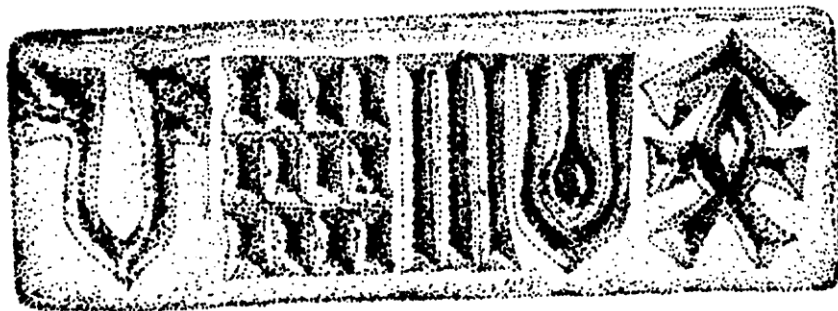
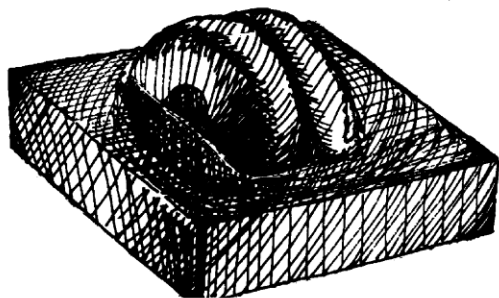
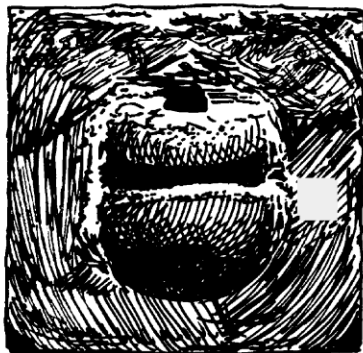
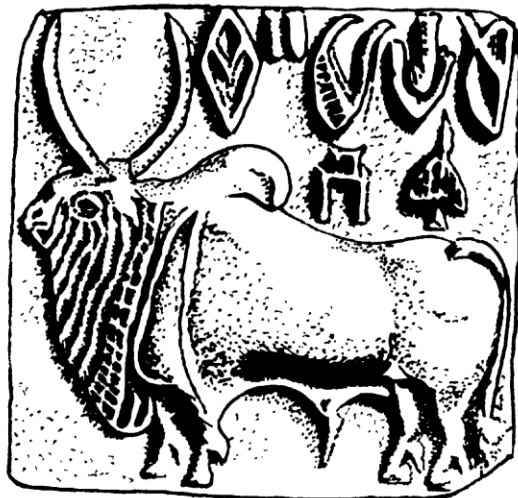
phonographic
notation





The writing systems in the World in the 3rd millennium BC







PUBLICITÉ

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Un million de dollars de récompense pour déchiffrer un mystérieux message

Des écrits découverts sur des tablettes vieilles de plus de 4 000 ans intriguent les archéologues. Les autorités indiennes promettent une récompense à qui les déchiffrera.

Par Baudouin Eschapasse

Publié le 23/01/2025 à 18h00



Près de 2 000 objets portant cette curieuse écriture ont été retrouvés depuis 1920 dans la vallée de l'Indus. Le ministre d'État du Tamil Nadu, une province du sud de l'Inde, promet une grosse somme à qui la décryptera. © DR

Temps de lecture : 3 min

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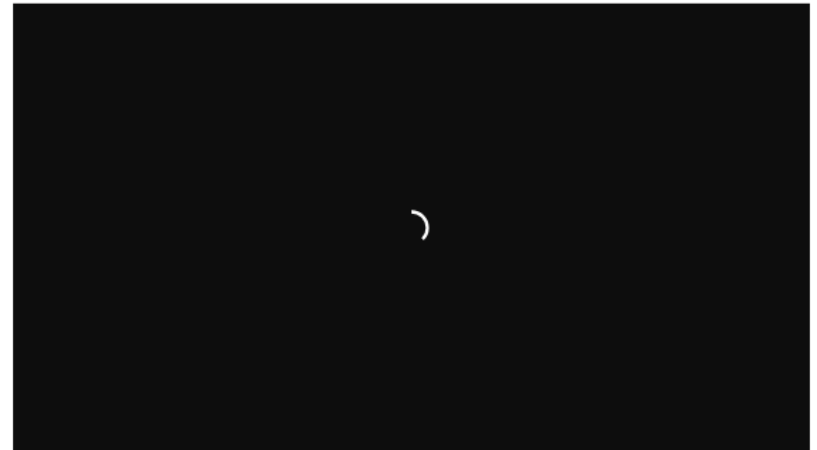
La nature prend son temps...
comme cette publicité !

Accueil > Histoire

Un million de dollars pour percer le secret de l'écriture de l'Indus, au code indéchiffrable depuis 4 000 ans

📁 Archéologie

Suivre ce thème



— Vidéo GEO : Ces termes empruntés par la langue française aux Gaulois

Un million de dollars pour décoder les mystérieux symboles de la civilisation de l'Indus. Tel est le défi lancé par un dirigeant d'un des vingt-huit États indiens pour lever le voile sur un système d'écriture millénaire, qui donne du fil à retordre aux linguistes et archéologues.

MATHILDE RAGOT | Publié le 20/01/2025 à 6h52 - Mis à jour le 20/01/2025

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The writing systems in the World in the 3rd millennium BC





- ▶ Mesopotamian cuneiform signs are polyvalent. Each character can have a multitude of readings depending on the context it appears in.
- ▶ Mesopotamian scribes could choose whether to write a word with **phonograms**, use a **logogram**, or a **logogram** with a **phonetic complement**.

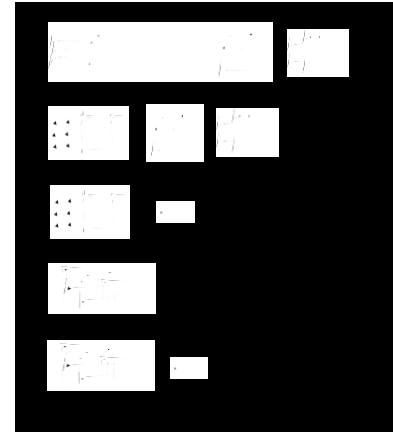
ša-ar-ru-um

šar-ru-um

šar-rum

LUGAL

LUGAL-rum



šarrum, "king"

the king

the 

the -ing

I'm as  you (rebus principle)

Types of signs in hieroglyphic writing:

logograms i.e., signs that represent what they depict.

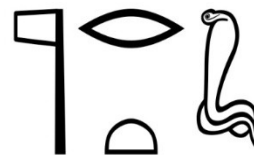
phonograms i.e., signs that render sounds.

classifiers (or determinatives), i.e., signs without phonetic information that help to disambiguate homophonous words.



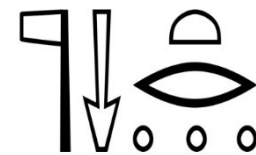
ntr

ntr, "god" (/netjer/)



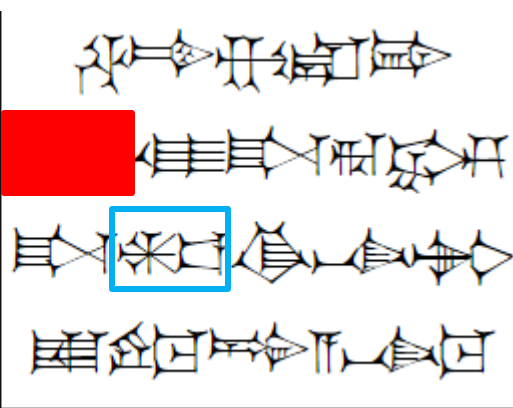
ntr-r-t [**GODDESS**]

ntr.t, "goddess" (/netjeret/)



ntr-sn-t-r [**PLURAL**]

sntr / *sntr*, "incense"

Lapidar	
Transliteration	<i>ha-am-mu-ra-pí</i> LUGAL <i>mi-ša-ri-im</i> <i>ša</i> dUTU <i>ki-na-tim</i> <i>iš-ru-ku-šum a-na-ku</i>
Transcription	Hammurapi king <i>mīšarim</i> <i>ša</i> Sun <i>kīnātim</i> <i>išrukušum anāku</i>

- 1) Hammurapi,
- 2) the  of justice,
- 3) to whom , the truth
- 4) he gave, I am.

I am Hammurapi,
the  of justice,
to whom  granted equity.

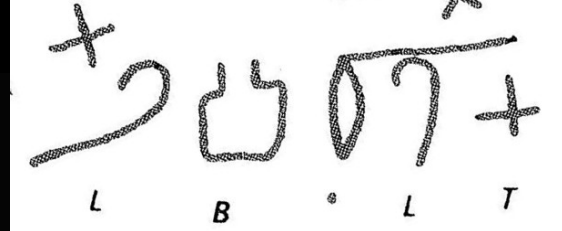


Law code of Hammurapi of Babylon, 18th century BC (Louvre).

Dsoérdre

Seoln une étidue de l'Unviertsié de Cmabrdige, l'odrre des letrtes dnas un mto n'a pas d'ipmoratnce, la selue cshoe imoprntae est que la prmeirée et la denrirée soeint à la bnone plcae. Le retse peut êrte dnas un doésdrre toatl et vuos peouvz tuoujors lrie snas prbolmée. C'est pacre que le cerevau huamin ne lit pas chqaue letrte elle-mmée, mias le mot cmome un tuot.

Hypothesis of the development of writing from logogrammatic ones to phonogrammatic ones, culminating with the development of the alphabetic systems in the 2nd half of the 2nd millennium BC (Proto-Sinaitic alphabet, Phoenician alphabet from which are derived the Greek alphabet and consequently the Latin alphabet)

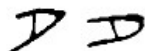


L B'LT

« to my lady »

or

« to (goddess) Baalat »

(1) West Semitic Letter Names	(2) Egyptian Hieroglyphic Prototype	(3) Proto-Sinaitic (Sinai 375a) Catalog No. 89	(4) Izbet Sartah Ostracon	(5) el-Khadr Arrowhead #2 Catalog No. 91	(6) Mesha Stela	(7) Samaria Ostracon Catalog No. 90	(8) Greek Letters and Names
'aleph (ox)	 (Gardiner F1)						A (alpha)
het (fence?)	 (Gardiner O42)						
kaph (palm)	 (Gardiner D46)						
'ayin (eye)	 (Gardiner D4)						

PROTO-CANAANITE	EARLY LETTER NAMES AND MEANINGS	PHOENICIAN	EARLY GREEK	EARLY MONUMENTAL LATIN	MODERN ENGLISH CAPITALS
	alp oxhead				A
	bét house				B
	gaml throwstick				C
	digg fish				D
	hō(?) man calling				E
	wō (waw) mace				F
	zē(n) ?				
	bē(t) fence?				H
	tē(t) spindle?				
	yad arm				I
	kapp palm				K
	lamd ox-goad				L
	mēm water				M
	nahš snake				N
	cēn eye				O
	pī't corner?				P
	sa(d) plant				
	qu(p) ?				Q
	ra'š head of man				R
	tann composite bow				S
	tō (taw) owner's mark				T

- (1) West Semitic letter name (with meaning in parentheses)
- (2) Possible Egyptian hieroglyphic prototype, shapes drawn from the sign list of Gardiner 1957, and correspondences follow the suggestions of Hamilton 2006
- (3) Proto-Sinaitic stone plaque from Serabit el-Khadem (Sinai 375a = Catalog No. 89); signs traced from digital photograph by the author
- (4) Izbet Sartah ostracon; sign shapes drawn after Kochavi 1977, p. 7

- (5) El-Khadr Arrowhead #2; signs traced from digital photograph by the author
- (6) Mesha Stela (ninth century BCE); signs traced from digital photograph by the author
- (7) Incised ostracon from Samaria (Iron Age I); signs traced from digital photograph by the author
- (8) Greek letters (with names)

FIGURE 12.1. Script correspondence chart of select alphabetic

Hypothesis of the development of writing from logogrammatic ones to phonogrammatic ones, culminating with the development of the alphabetic systems in the 2nd half of the 2nd millennium BC (Proto-Sinaitic alphabet, Phoenician alphabet from which are derived the Greek alphabet and consequently the Latin alphabet)

But ...



1  |       |     |

za-na ma-ra-p₂-š-ša-i-r šu-wa-r-a-su

  |    |   |     |

la-ni-i-na u ša-ri-h si-a-n hi₂-š⁽⁺⁾ma-ni-ri₂-na

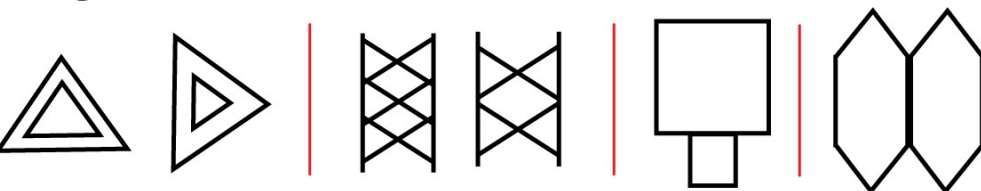
  |    |    |

hu₂-m-š-ša-t ki₂-ri nu te-na ti-a-h

The Linear Elamite writing system is in the end of the 3rd millennium BC the most ancient 'pure' phonogrammatic system in the World, with signs displaying only vocalic, consonantal and syllabic values !

It is more precisely an alpha-syllabary working theoretically with 77 values: 5 vocalic, 12 consonantal and 60 (5x12) syllabic ones.

The Linear Elamite phonetic grid



LE writing functioned as a system according to:

- 5 vocalic phonemes (/a/, /e/, /i/, /o/ and /u/),
- 12 consonantal ones (/h/, /k/, /l/, /m/, /n/, /p/, /r/, /s/, /š/, /t/, /w/ and /z/)
- and 60 (5×12) syllabic values, corresponding in total to 77 phonemic values.

/e/	/u/	/o/	/a/	/i/
/p/	/pe/	/pu/	/po/	/pa/
/l/	/le/	/lu/	/lo/	/la/
/m/	/me/	/mu/	/mo/	/ma/
/n/	/ne/	/nu/	/no/	/na/
/r/	/re/	/ru/	/ro/	/ra/
/s/	/se/	/su/	/so/	/sa/
/š/	/še/	/šu/	/šo/	/ša/
/t/	/te/	/tu/	/to/	/ta/
/w/	/we/	/wu/	/wo/	/wa/
/z/	/ze/	/zu/	/zo/	/za/

But still, 1901 (96.05%) out of 1979 sign occurrences can be currently read.

	A 	E 	I 	O 		
	HA 	HE  / 	HI 		← ?	→ ?
	KA 	KE  / 	KI 	KO 		KU 
L 	LA 	LE  / 			← ?	→ ?
M 	MA 	ME  / 	MI 	MO 		MU 
N  / 	NA 	NE 	NI  / 		← ?	→ ?
P  / 	PA 	PE 		PO 		PU 
R 	RA 	RE  / 	RI 		← ?	→ ?
S  / 	SA 		SI 	SO 		SU 
Š  / 	ŠA 	ŠE 	ŠI 		← ?	→ ?
T 	TA 	TE 	TI 			TU 
	WA  / 	WE 				
Z 	ZA  / 	ZE 		ZO 		ZU 

The decipherment of the Linear Elamite writing changes the history of the development of writing:

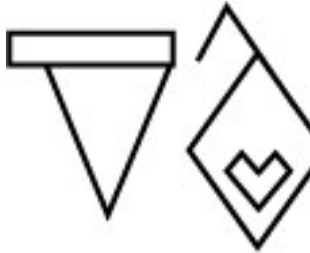
- 1) Logogrammatic system
- 2) Mixed system
- 3) Phonogrammatic system

As soon as the 3rd millennium BC, a 'pure' phonogrammatic system is attested on the Iranian Plateau.



Elamite/Hatamtite phonology

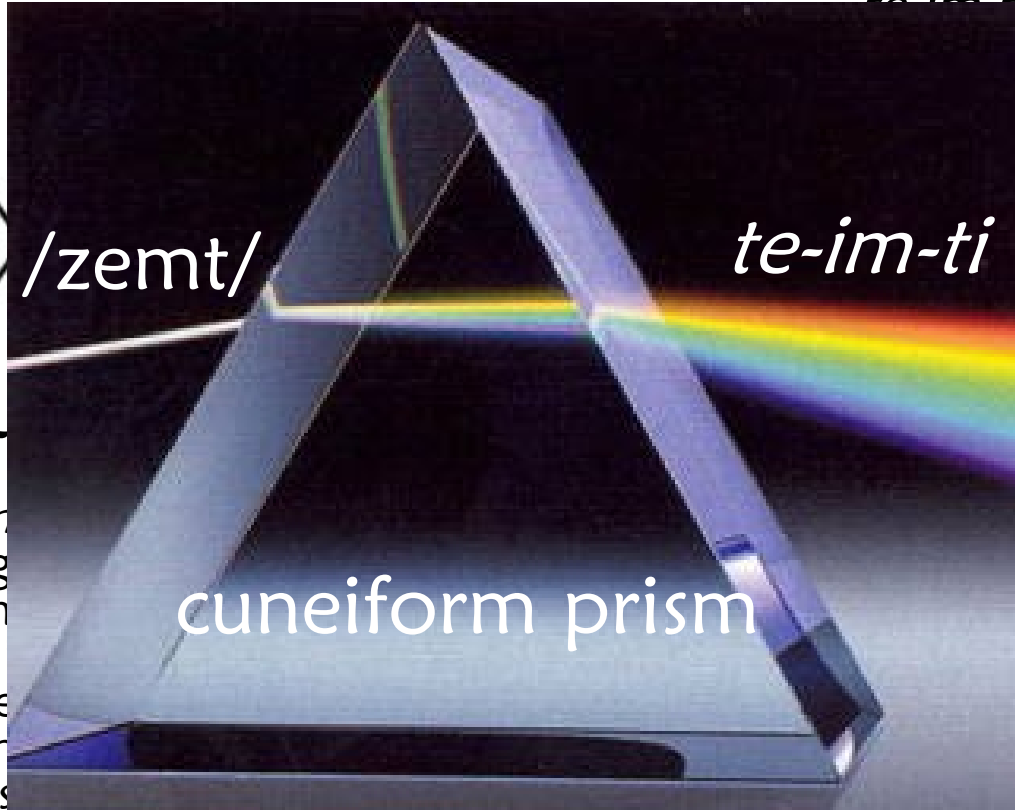
te -



ze- m-

But why *ze-m*?

- 1) no *ze* sign
- varied an
- 2) as there
- phoneme
- consonan
- notations



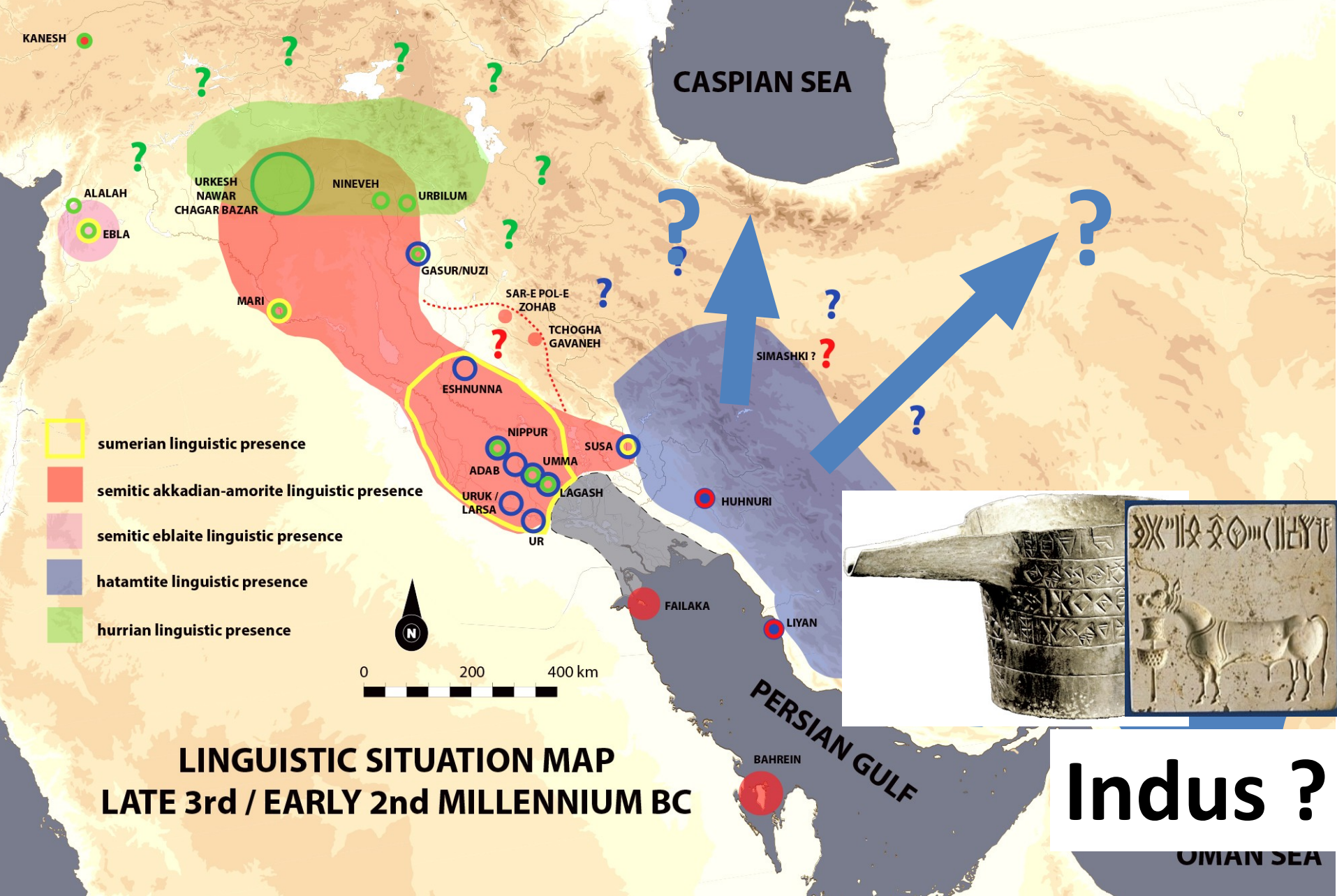
te-im-ti, si-im-ti, še-im-ti
“king, lord”

mt/ or /θemt/)

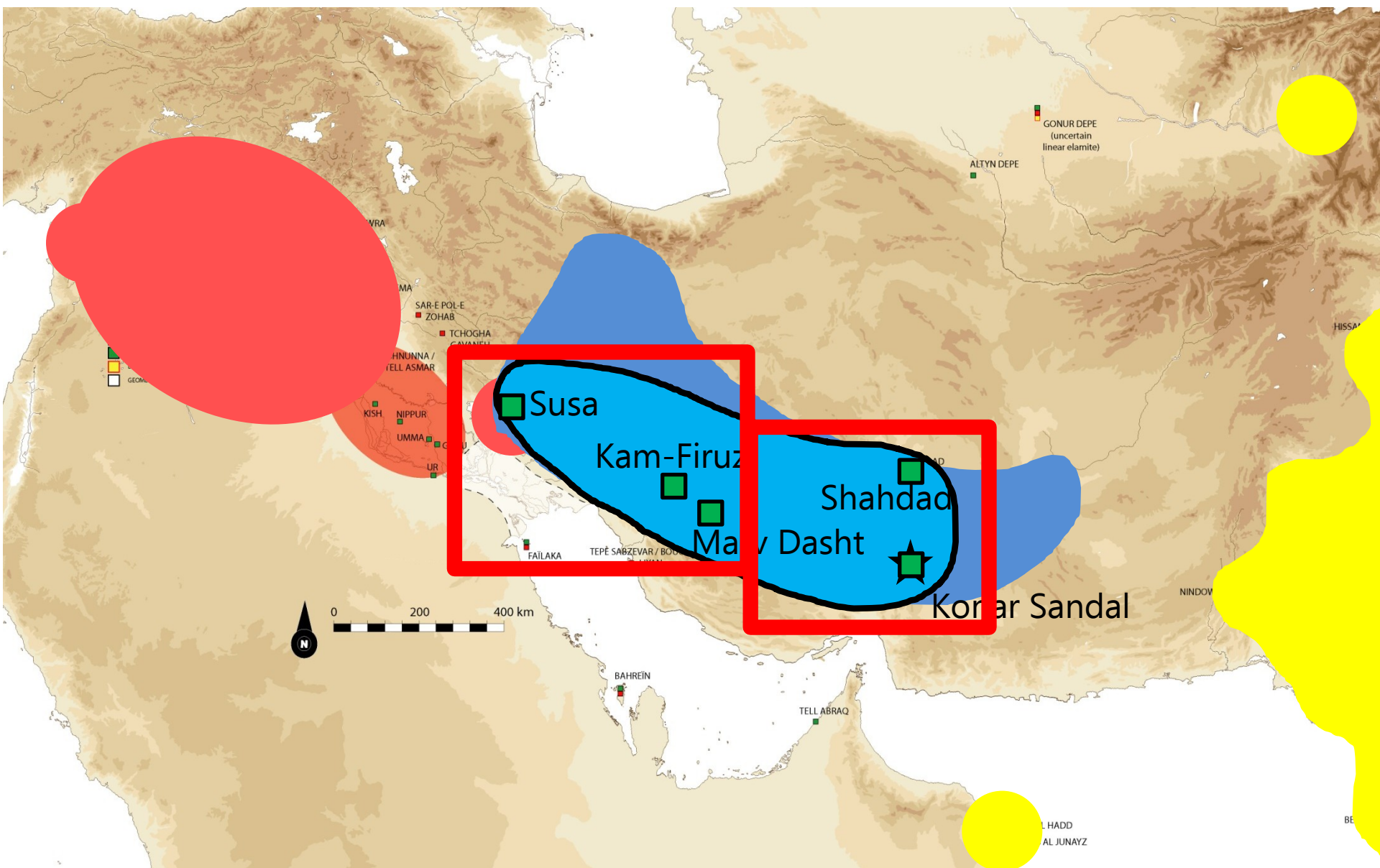
aining why the scribes
);
obliged to record the
ummy vowel’ (vowel-
tually for consonantal

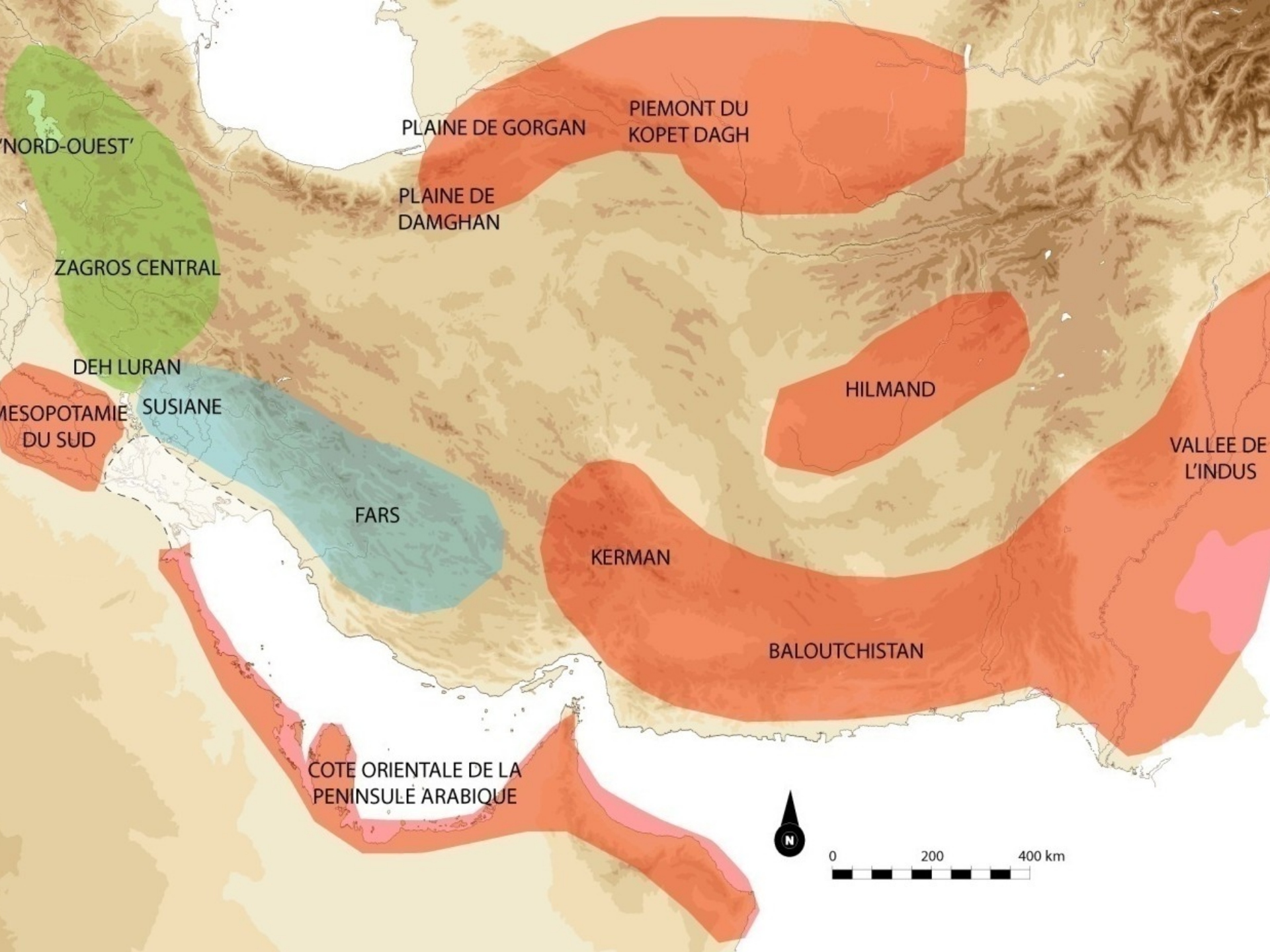
Before the decipherment of Linear Elamite writing, the Elamite word for “lord, king” was hypothesized as /temti/; now we think that /zemt/ is much closer to its original pronunciation. The results of the decipherment must actually be applied to all the cuneiform readings in order to correct them and get a more precise view of the Elamite language.

Defective nature of the cuneiform writing, which work as a distorting prism.
Linear Elamite writing can correct this problem.



“The unsettled question of the eastern extent of the Elamite language area”
 (Stolper 2004, 61)







HATAMTI-LINEAR ELAMITE DATABASE

Signs

Search through the Linear Elamite signs

Words

Search through the Elamite words or their translation in English, Persian or French

Documents

Search the Linear Elamite signs or the Elamite words through the whole corpus of Linear Elamite inscriptions

<https://hatamti-elam.uliege.be/>

Sign List

	A		E		I		O			U							
H			HA		HE					HŮ		HŮ					
K			KA		KE					KO			KU				
L			LA		LE					LI			LŮ				
M			MA		ME					MI			MO		MU		
N			NA		NE				NI				NŮ				
P			PA		PE				PI				PO		PU		
R			RA		RE					RI			RŮ				
S			SA			?			SI			SO			SU		
Š			ŠA		ŠE				ŠI				ŠŮ				
T			TA		TE				TI			?			TU		

Sign li2

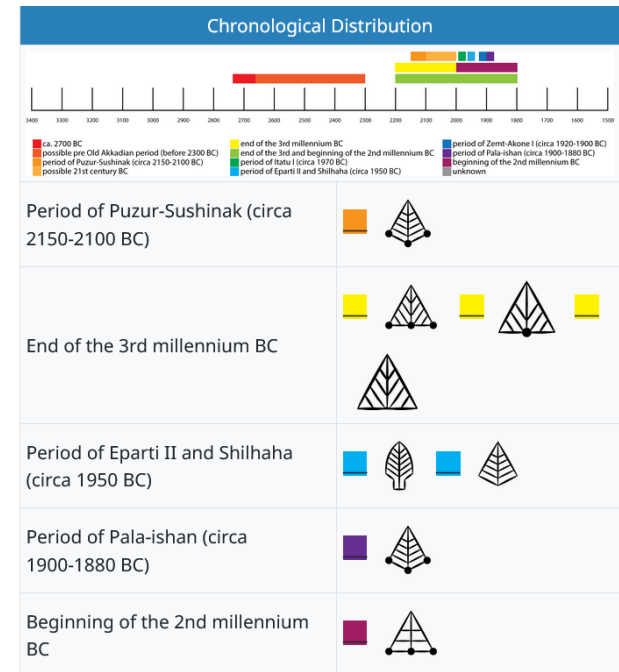


Leaflet | © OpenStreetMap contributors, Tiles style by Humanitarian OpenStreetMap Team hosted by OpenStreetMap France

Allographs List

Chronological Distribution

Allographs List	
li2_a	
li2_b	
li2_c	
li2_d	
li2_e	
li2_f	



Site: Kam-Firuz (30°16'16.18"N ; 52° 5'56.75"E)

Datation: Period of Pala-ishan (circa 1900-1880 BC)

Source: 2

u pa la i š ša n li₂ li pa r napi₂ r ri ša ki li ka we ri š ša ki me

n ni k₂ ha t ta m t ti k₂

Location of token in source: 1340

Transliteration: u pa-la-i-š-ša-n | li₂-li+-pa-r | na-pi₂-r-ri-ša-ki | li-ka-we ri-š-ša-ki | me-n-ni-k₂ | ha-t-ta-m-t-ti-k₂

Transcription: o Pala-išan lipar Napireša-ki likawe reša-ki meni-k Hatamti-k

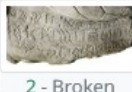
Translation: I Pala-išan, I am the servant of Napireša, I am the grand likawe and the ruler/one endowed with the authority of Hatamti



Documents



1 - Lion table



2 - Broken boulder with decoration of deities



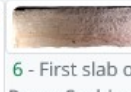
3 - Broken statuette of Puzur-Sushinak



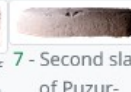
4 - Broken boulder with a snake decoration



5 - Fragment of a door-socket?



6 - First slab of Puzur-Sushinak



7 - Second slab of Puzur-Sushinak



8 - Third slab of Puzur-Sushinak



9 - Statue of Inanna



10 - First cone of Susa



11 - Second cone of Susa



12 - Third cone of Susa



13 - Susa school tablet



14 - Susa fragmentary tablet



15 - Susa archaic tablet



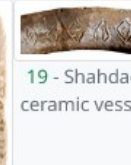
16 - fragment of Susa published by de Mecquenem



17 - Marv Dasht vessel



18 - tablet of Susa published by Hinz



19 - Shahdad ceramic vessel



20 - fragment of Susa published by André and Salvini



21 - Fourth slab of Puzur-Sushinak



22 - Persian Gulf seal



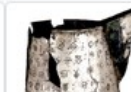
23 - Silver bucket



24 - Kunanki vase of Eparti II/Shilhaha with mistakes



25 - kunanki vase with representation of Itatu I



26 - kunanki vase with spout of Itatu I



27 - Los Angeles Spout Vase



28 - Large tablet of Konar Sandal



29 - Medium tablet of Konar Sandal



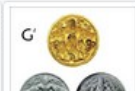
30 - Fragmentary tablet from Konar Sandal



31 - fragment de Konar Sandal sud



32 - Kunanki vase of Zemt-Akone I



33 - Central Asian gold seal



34 - fragments of kunanki vase from Eparti II / Shilhaha



35 - fragments of kunanki vase of Pala-ishah



36 - kunanki vase of Eparti II and Shilhaha



37 - Kunanki vase of Pala-ishah



38 - London spout vase with bovine decoration



39 - London Spout Vase



40 - London spout vase related to the Los Angeles vase

Document 1



A 1

su₂-h-te-r i-n-su-si-na-k-ki-r

2

pu-zu-r-su-si-nak ze-m-t i

3

ha-t-pa-k su-se-ni-r

4

si-n-pi-s h-hu-k

5

?-r-sa i-ri pe-s-e zu-p₂-pa-s

Brief description of the inscription:	Lion table	Discovered during regular excavations:	Yes
Old name:	A	Current location:	Louvre Museum
			Inventory N°: Sb 17
Material:	Limestone/Sandstone	Type of writing:	Western Linear Elamite
Dating:	Period of Puzur-Sushinak (circa 2150-2100 BC)	Number of signs preserved:	50
Site or region:	Susa (32°11'19.06"N ; 48°14'46.96"E)	Writing direction:	Right to left
Bibliography:	Scheil 1905, pl. 2 Hinz 1969, pl. 7 Meriggi 1971, pl. 1		
External Links:	https://collections.louvre.fr/ark:/53355/cl010174448 https://cdli.mpiwg-berlin.mpg.de/artifacts/9390		

Source: 1 Line: 1 [tokens](#) [images](#)

           
su2 h te r i n su ši na k ki r

Transliteration: su2-h-te-r i-n-su-ši-na-k-ki-r

Transcription: sohter Insušinak-ir

Translation: (concerning) the sohter of Insušinak

Source: 2 Line: 2-3 [tokens](#) [images](#)

                    
pu zu r su ši na k ze m t i ha t pa k su še ni r

Transliteration: pu-zu-r-su-ši-na-k ze-m-t i ha-t-pa-k su-še-ni-r

Transcription: Puzur-Sušinak zemt i hatpa-k Sušen-ir

Translation: Puzur-Sušinak, this king, the hatpak of Susa

Source: 3 Line: 4-5 [tokens](#) [images](#)

            
ši n pi s h hu k ? r ša i ri

Transliteration: ši-n-pi-s-h-hu-k X-r-ša i-ri

Transcription: Šin-pishûk ...rša i-re

Translation: of Šin-pishûk, his predecessor

Source: 4 Line: 5 [tokens](#) [images](#)

      
pe s e zu p2 pa š

Transliteration: pe-s-e zu-p2-pa-š

Transcription: pes-e zupa-š

Translation: he (Puzur-Sušinak) fulfilled his (of Šin-pishûk) plans/will



Sina Fakour

a telier national de recherche typographique

A telier national de recherche typographique

ANRT is a post-master's research programme in typography based at ENSAD Nancy (École Nationale Supérieure d'Art et de Design de Nancy) in France. The programme is open to art school graduates in visual communication and graphic design who have completed a master's degree or equivalent, and to professionals — no age limit applies.

Areas covered by the programme include, in particular, typeface design (for Latin or the world's writing systems) and editorial design (paper or screen-based). The post-master's can also hold projects involving the relation of typography to science, to movement, architecture, innovative technologies, writing and art.

The recruitment process is international and the number of places is limited to 6. Each student-researcher receives a personal grant of €4,000 for 2 years (3 semesters), followed by one semester of professionalisation, from October 2023 to September 2025. Four grants are allocated to individual research projects, proposing the candidate and selected by the jury. Two grants are allocated to research programmes conducted in collaboration with partner laboratories.

Call for applications is open from March 15th to June 20th. Applications must be submitted online.

For further information:
www.art-nancy.fr
contact@art-nancy.fr
[@ANRT_type](https://twitter.com/ANRT_type)

Nancy France

Post-master's program

3rd cycle

Le recrutement est international et le nombre de places est limité à 6. Chaque étudiant-e chercheur-e reçoit une allocation individuelle de 4000€ pour 2 ans (3 semestres de cours suivis d'un semestre de professionnalisation, d'octobre 2023 à septembre 2025). Quatre bourses sont décernées à des projets de recherche individuels, proposés par les candidats-e et sélectionnés par le jury. Deux bourses sont consacrées à des programmes de recherche réalisés en lien avec des laboratoires partenaires.

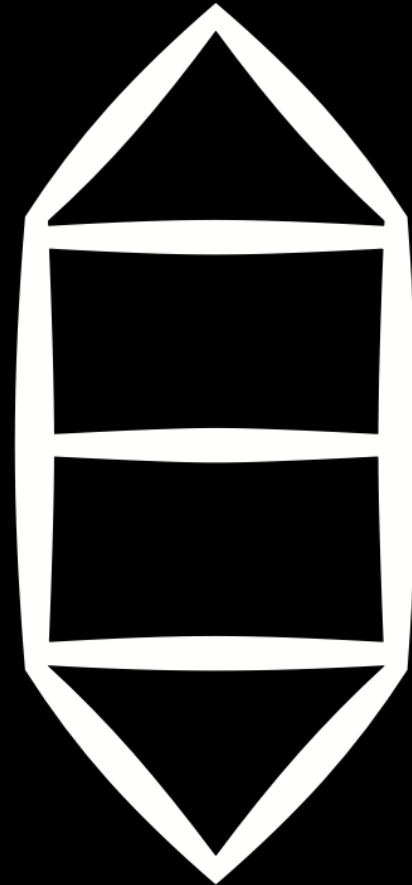
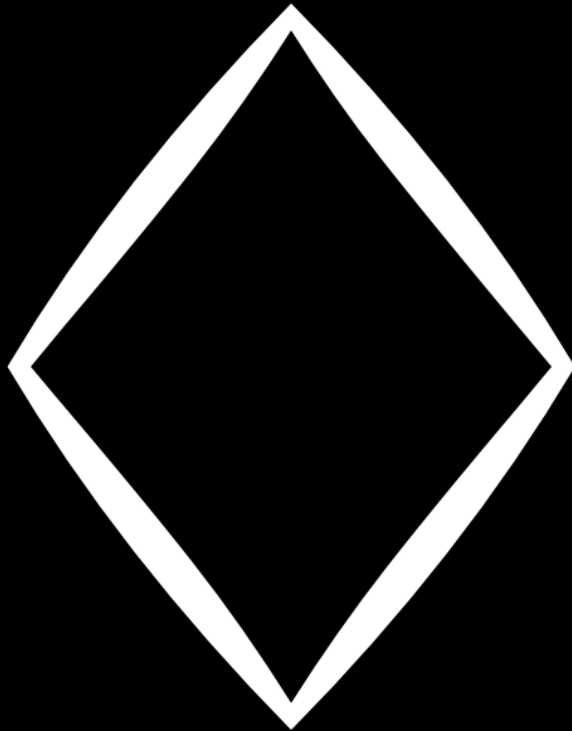
L'appel à candidatures est ouvert du 15 mars au 20 juin. Les candidatures doivent être déposées en ligne.

Pour plus d'informations :
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contact@art-nancy.fr
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National Institute for Typographic Research

Atelier national de recherche typographique
École nationale supérieure d'art et de design de Nancy
1, place Charles-Bresson
54000 Nancy, France

ANRT
Atelier National de Recherche Typographique



1) La forme des signes

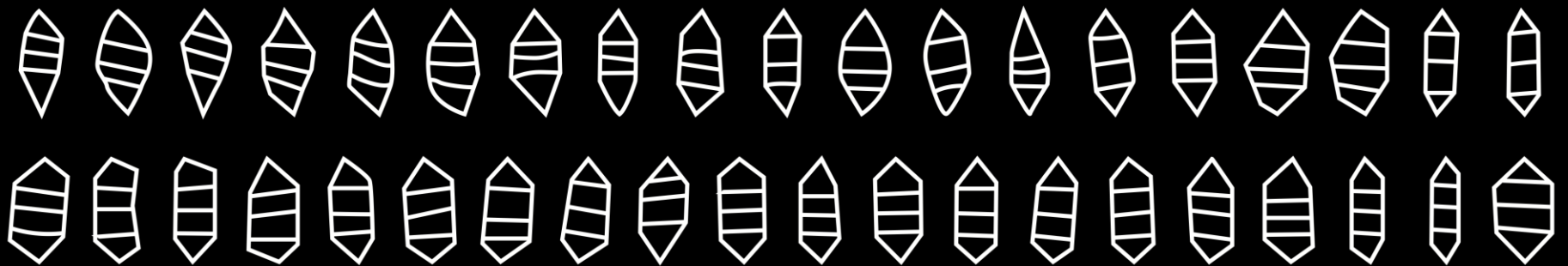
A A A A C C C E F G G I J K N P P Q Q W X X Y Y Y



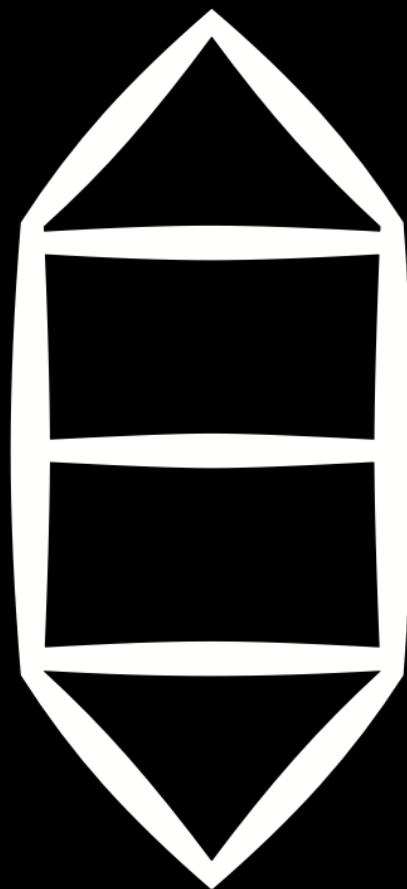
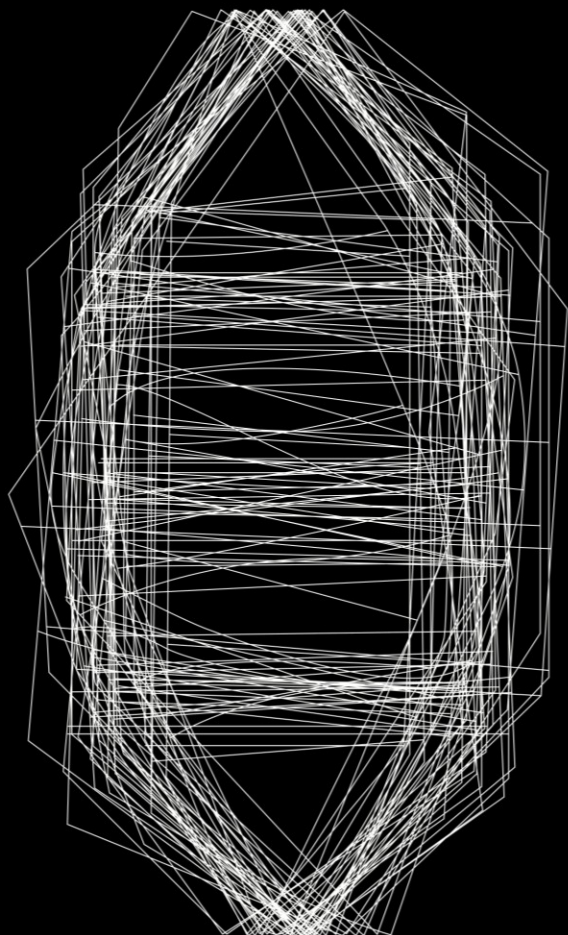
Z Z A' F' F' H' I' I' I' K' K' N' N' O'

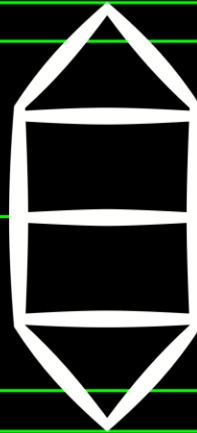
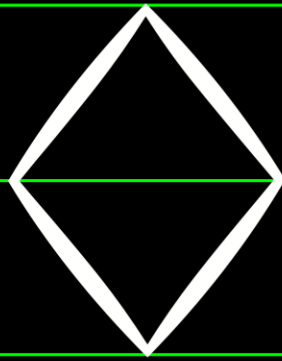


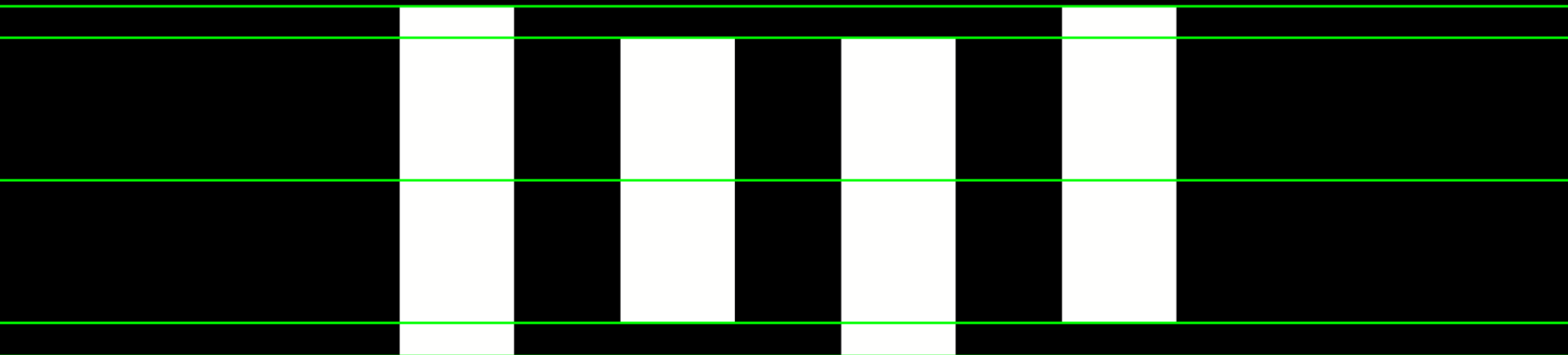
Le signe 𐤀 (représentant le son r) dans différentes inscriptions



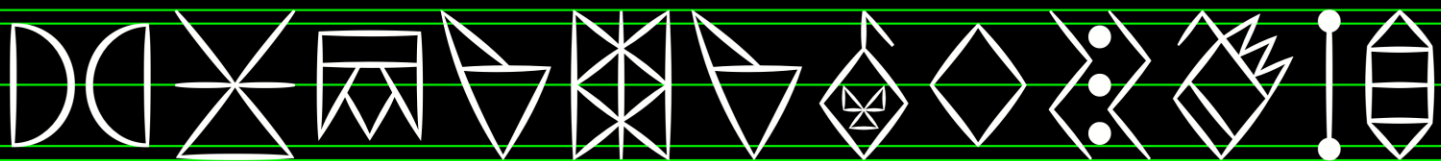
Retracer le squelette du signe 𐌀 dans toutes les inscriptions

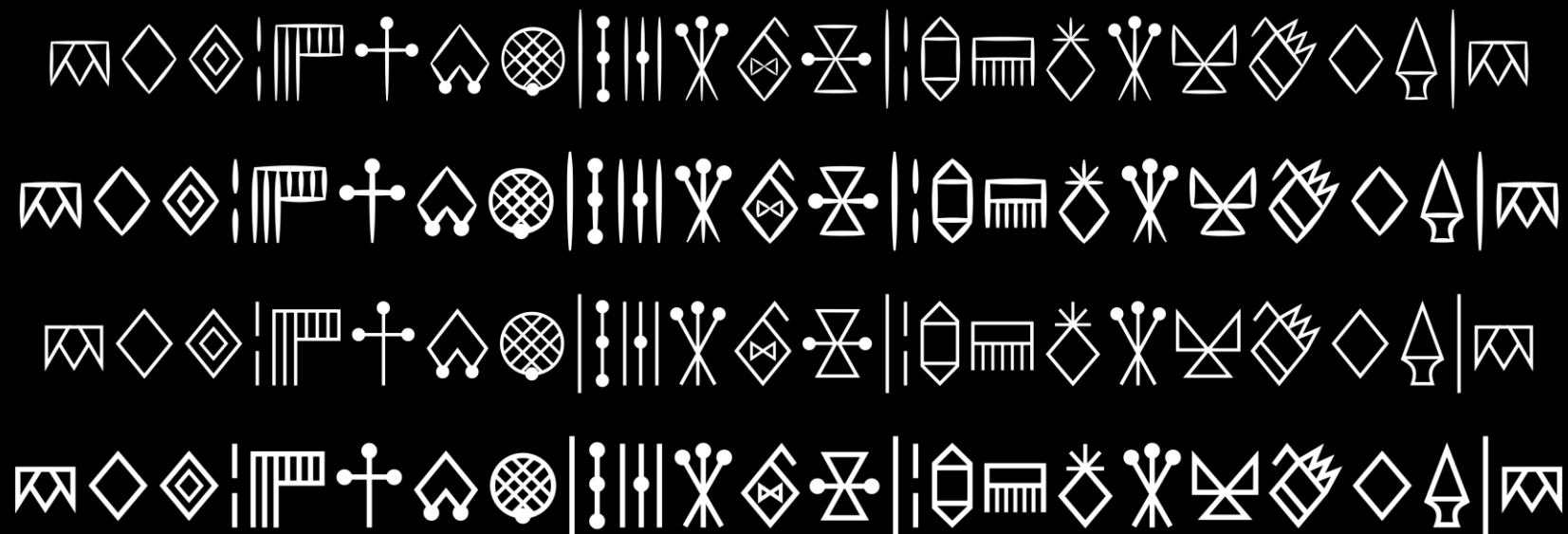






Système pour harmoniser les signes





2 styles, 2 graisses



𐀀𐀁𐀂𐀃𐀄𐀅𐀆𐀇𐀈𐀉𐀊𐀋𐀌𐀍𐀎𐀏𐀐𐀑𐀒𐀓𐀔𐀕𐀖𐀗𐀘𐀙𐀚𐀛𐀜𐀝𐀞𐀟𐀠𐀡𐀢𐀣𐀤𐀥𐀦𐀧𐀨𐀩𐀪𐀫𐀬𐀭𐀮𐀯𐀰𐀱𐀲𐀳𐀴𐀵𐀶𐀷𐀸𐀹𐀺𐀻𐀼𐀽𐀾𐀿𐁀𐁁𐁂𐁃𐁄𐁅𐁆𐁇𐁈𐁉𐁊𐁋𐁌𐁍𐁎𐁏𐁐𐁑𐁒𐁓𐁔𐁕𐁖𐁗𐁘𐁙𐁚𐁛𐁜𐁝𐁞𐁟𐁠𐁡𐁢𐁣𐁤𐁥𐁦𐁧𐁨𐁩𐁪𐁫𐁬𐁭𐁮𐁯𐁰𐁱𐁲𐁳𐁴𐁵𐁶𐁷𐁸𐁹𐁺𐁻𐁼𐁽𐁾𐁿𐂀𐂁𐂂𐂃𐂄𐂅𐂆𐂇𐂈𐂉𐂊𐂋𐂌𐂍𐂎𐂏𐂐𐂑𐂒𐂓𐂔𐂕𐂖𐂗𐂘𐂙𐂚𐂛𐂜𐂝𐂞𐂟𐂠𐂡𐂢𐂣𐂤𐂥𐂦𐂧𐂨𐂩𐂪𐂫𐂬𐂭𐂮𐂯𐂰𐂱𐂲𐂳𐂴𐂵𐂶𐂷𐂸𐂹𐂺𐂻𐂼𐂽𐂾𐂿𐃀𐃁𐃂𐃃𐃄𐃅𐃆𐃇𐃈𐃉𐃊𐃋𐃌𐃍𐃎𐃏𐃐𐃑𐃒𐃓𐃔𐃕𐃖𐃗𐃘𐃙𐃚𐃛𐃜𐃝𐃞𐃟𐃠𐃡𐃢𐃣𐃤𐃥𐃦𐃧𐃨𐃩𐃪𐃫𐃬𐃭𐃮𐃯𐃰𐃱𐃲𐃳𐃴𐃵𐃶𐃷𐃸𐃹𐃺𐃻𐃼𐃽𐃾𐃿𐄀𐄁𐄂𐄃𐄄𐄅𐄆𐄇𐄈𐄉𐄊𐄋𐄌𐄍𐄎𐄏𐄐𐄑𐄒𐄓𐄔𐄕𐄖𐄗𐄘𐄙𐄚𐄛𐄜𐄝𐄞𐄟𐄠𐄡𐄢𐄣𐄤𐄥𐄦𐄧𐄨𐄩𐄪𐄫𐄬𐄭𐄮𐄯𐄰𐄱𐄲𐄳𐄴𐄵𐄶𐄷𐄸𐄹𐄺𐄻𐄼𐄽𐄾𐄿𐅀𐅁𐅂𐅃𐅄𐅅𐅆𐅇𐅈𐅉𐅊𐅋𐅌𐅍𐅎𐅏𐅐𐅑𐅒𐅓𐅔𐅕𐅖𐅗𐅘𐅙𐅚𐅛𐅜𐅝𐅞𐅟𐅠𐅡𐅢𐅣𐅤𐅥𐅦𐅧𐅨𐅩𐅪𐅫𐅬𐅭𐅮𐅯𐅰𐅱𐅲𐅳𐅴𐅵𐅶𐅷𐅸𐅹𐅺𐅻𐅼𐅽𐅾𐅿𐆀𐆁𐆂𐆃𐆄𐆅𐆆𐆇𐆈𐆉𐆊𐆋𐆌𐆍𐆎𐆏𐆐𐆑𐆒𐆓𐆔𐆕𐆖𐆗𐆘𐆙𐆚𐆛𐆜𐆝𐆞𐆟𐆠𐆡𐆢𐆣𐆤𐆥𐆦𐆧𐆨𐆩𐆪𐆫𐆬𐆭𐆮𐆯𐆰𐆱𐆲𐆳𐆴𐆵𐆶𐆷𐆸𐆹𐆺𐆻𐆼𐆽𐆾𐆿𐇀𐇁𐇂𐇃𐇄𐇅𐇆𐇇𐇈𐇉𐇊𐇋𐇌𐇍𐇎𐇏𐇐𐇑𐇒𐇓𐇔𐇕𐇖𐇗𐇘𐇙𐇚𐇛𐇜𐇝𐇞𐇟𐇠𐇡𐇢𐇣𐇤𐇥𐇦𐇧𐇨𐇩𐇪𐇫𐇬𐇭𐇮𐇯𐇰𐇱𐇲𐇳𐇴𐇵𐇶𐇷𐇸𐇹𐇺𐇻𐇼𐇽𐇾𐇿𐈀𐈁𐈂𐈃𐈄𐈅𐈆𐈇𐈈𐈉𐈊𐈋𐈌𐈍𐈎𐈏𐈐𐈑𐈒𐈓𐈔𐈕𐈖𐈗𐈘𐈙𐈚𐈛𐈜𐈝𐈞𐈟𐈠𐈡𐈢𐈣𐈤𐈥𐈦𐈧𐈨𐈩𐈪𐈫𐈬𐈭𐈮𐈯𐈰𐈱𐈲𐈳𐈴𐈵𐈶𐈷𐈸𐈹𐈺𐈻𐈼𐈽𐈾𐈿𐉀𐉁𐉂𐉃𐉄𐉅𐉆𐉇𐉈𐉉𐉊𐉋𐉌𐉍𐉎𐉏𐉐𐉑𐉒𐉓𐉔𐉕𐉖𐉗𐉘𐉙𐉚𐉛𐉜𐉝𐉞𐉟𐉠𐉡𐉢𐉣𐉤𐉥𐉦𐉧𐉨𐉩𐉪𐉫𐉬𐉭𐉮𐉯𐉰𐉱𐉲𐉳𐉴𐉵𐉶𐉷𐉸𐉹𐉺𐉻𐉼𐉽𐉾𐉿𐊀𐊁𐊂𐊃𐊄𐊅𐊆𐊇𐊈𐊉𐊊𐊋𐊌𐊍𐊎𐊏𐊐𐊑𐊒𐊓𐊔𐊕𐊖𐊗𐊘𐊙𐊚𐊛𐊜𐊝𐊞𐊟𐊠𐊡𐊢𐊣𐊤𐊥𐊦𐊧𐊨𐊩𐊪𐊫𐊬𐊭𐊮𐊯𐊰𐊱𐊲𐊳𐊴𐊵𐊶𐊷𐊸𐊹𐊺𐊻𐊼𐊽𐊾𐊿𐋀𐋁𐋂𐋃𐋄𐋅𐋆𐋇𐋈𐋉𐋊𐋋𐋌𐋍𐋎𐋏𐋐𐋑𐋒𐋓𐋔𐋕𐋖𐋗𐋘𐋙𐋚𐋛𐋜𐋝𐋞𐋟𐋠𐋡𐋢𐋣𐋤𐋥𐋦𐋧𐋨𐋩𐋪𐋫𐋬𐋭𐋮𐋯𐋰𐋱𐋲𐋳𐋴𐋵𐋶𐋷𐋸𐋹𐋺𐋻𐋼𐋽𐋾𐋿𐌀𐌁𐌂𐌃𐌄𐌅𐌆𐌇𐌈𐌉𐌊𐌋𐌌𐌍𐌎𐌏𐌐𐌑𐌒𐌓𐌔𐌕𐌖𐌗𐌘𐌙𐌚𐌛𐌜𐌝𐌞𐌟𐌠𐌡𐌢𐌣𐌤𐌥𐌦𐌧𐌨𐌩𐌪𐌫𐌬𐌭𐌮𐌯𐌰𐌱𐌲𐌳𐌴𐌵𐌶𐌷𐌸𐌹𐌺𐌻𐌼𐌽𐌾𐌿𐍀𐍁𐍂𐍃𐍄𐍅𐍆𐍇𐍈𐍉𐍊𐍋𐍌𐍍𐍎𐍏𐍐𐍑𐍒𐍓𐍔𐍕𐍖𐍗𐍘𐍙𐍚𐍛𐍜𐍝𐍞𐍟𐍠𐍡𐍢𐍣𐍤𐍥𐍦𐍧𐍨𐍩𐍪𐍫𐍬𐍭𐍮𐍯𐍰𐍱𐍲𐍳𐍴𐍵𐍶𐍷𐍸𐍹𐍺𐍻𐍼𐍽𐍾𐍿𐎀𐎁𐎂𐎃𐎄𐎅𐎆𐎇𐎈𐎉𐎊𐎋𐎌𐎍𐎎𐎏𐎐𐎑𐎒𐎓𐎔𐎕𐎖𐎗𐎘𐎙𐎚𐎛𐎜𐎝𐎞𐎟𐎠𐎡𐎢𐎣𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿𐏀𐏁𐏂𐏃𐏄𐏅𐏆𐏇𐏈𐏉𐏊𐏋𐏌𐏍𐏎𐏏𐏐𐏑𐏒𐏓𐏔𐏕𐏖𐏗𐏘𐏙𐏚𐏛𐏜𐏝𐏞𐏟𐏠𐏡𐏢𐏣𐏤𐏥𐏦𐏧𐏨𐏩𐏪𐏫𐏬𐏭𐏮𐏯𐏰𐏱𐏲𐏳𐏴𐏵𐏶𐏷𐏸𐏹𐏺𐏻𐏼𐏽𐏾

Transcription du vase d'argent



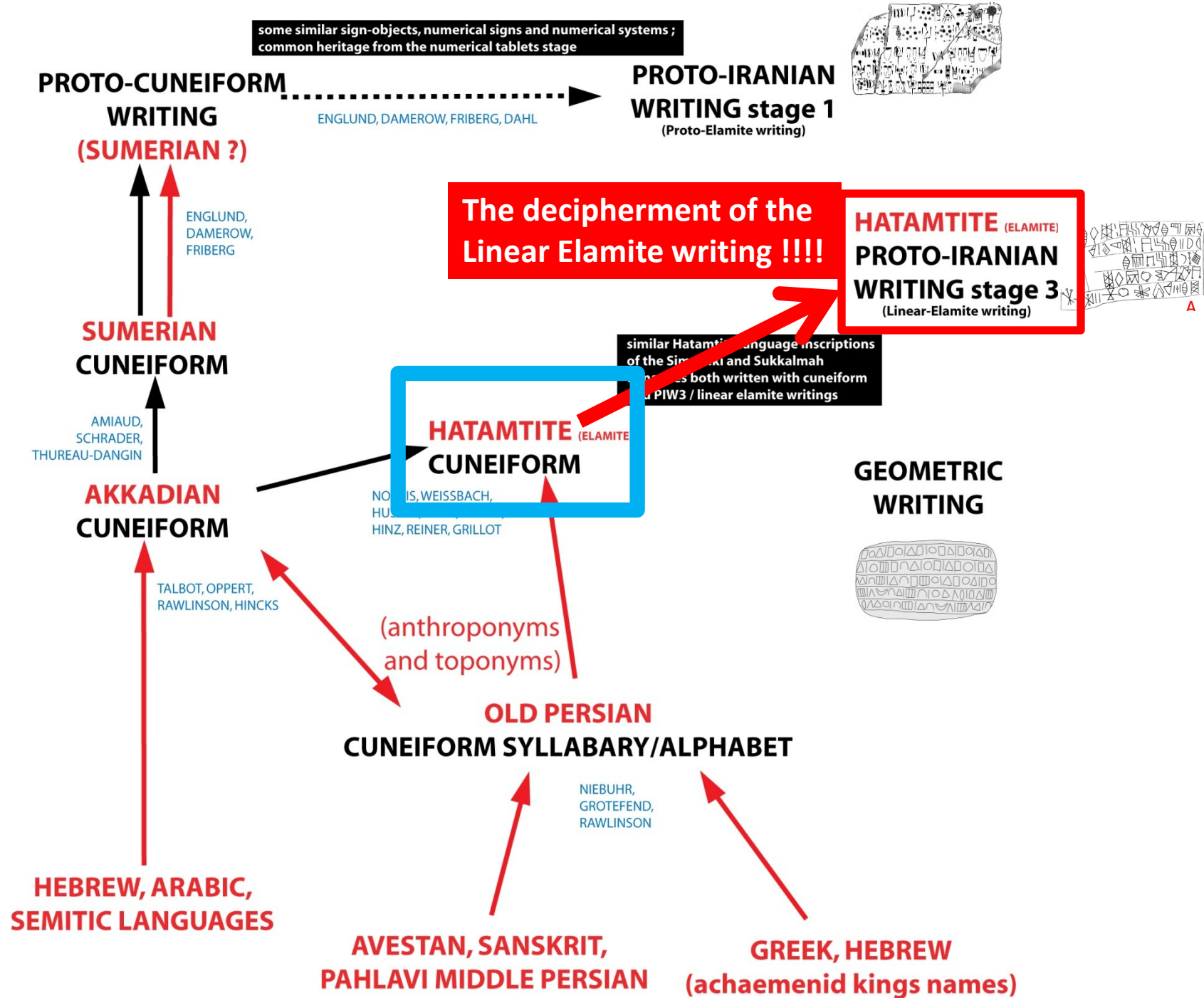
𐎠𐎡𐎢𐎣𐎤𐎥𐎦𐎧𐎨𐎩𐎪𐎫𐎬𐎭𐎮𐎯𐎰𐎱𐎲𐎳𐎴𐎵𐎶𐎷𐎸𐎹𐎺𐎻𐎼𐎽𐎾𐎿𐏀𐏁𐏂𐏃𐏄𐏅𐏆𐏇𐏈𐏉𐏊𐏋𐏌𐏍𐏎𐏏𐏐𐏑𐏒𐏓𐏔𐏕𐏖𐏗𐏘𐏙𐏚𐏛𐏜𐏝𐏞𐏟𐏠𐏡𐏢𐏣𐏤𐏥𐏦𐏧𐏨𐏩𐏪𐏫𐏬𐏭𐏮𐏯𐏰𐏱𐏲𐏳𐏴𐏵𐏶𐏷𐏸𐏹𐏺𐏻𐏼𐏽𐏾𐏿𐐀𐐁𐐂𐐃𐐄𐐅𐐆𐐇𐐈𐐉𐐊𐐋𐐌𐐍𐐎𐐏𐐐𐐑𐐒𐐓𐐔𐐕𐐖𐐗𐐘𐐙𐐚𐐛𐐜𐐝𐐞𐐟𐐠𐐡𐐢𐐣𐐤𐐥𐐦𐐧𐐨𐐩𐐪𐐫𐐬𐐭𐐮𐐯𐐰𐐱𐐲𐐳𐐴𐐵𐐶𐐷𐐸𐐹𐐺𐐻𐐼𐐽𐐾𐐿𐑀𐑁𐑂𐑃𐑄𐑅𐑆𐑇𐑈𐑉𐑊𐑋𐑌𐑍𐑎𐑏𐑐𐑑𐑒𐑓𐑔𐑕𐑖𐑗𐑘𐑙𐑚𐑛𐑜𐑝𐑞𐑟𐑠𐑡𐑢𐑣𐑤𐑥𐑦𐑧𐑨𐑩𐑪𐑫𐑬𐑭𐑮𐑯𐑰𐑱𐑲𐑳𐑴𐑵𐑶𐑷𐑸𐑹𐑺𐑻𐑼𐑽𐑾𐑿𐒀𐒁𐒂𐒃𐒄𐒅𐒆𐒇𐒈𐒉𐒊𐒋𐒌𐒍𐒎𐒏𐒐𐒑𐒒𐒓𐒔𐒕𐒖𐒗𐒘𐒙𐒚𐒛𐒜𐒝𐒞𐒟𐒠𐒡𐒢𐒣𐒤𐒥𐒦𐒧𐒨𐒩𐒪𐒫𐒬𐒭𐒮𐒯𐒰𐒱𐒲𐒳𐒴𐒵𐒶𐒷𐒸𐒹𐒺𐒻𐒼𐒽𐒾𐒿𐓀𐓁𐓂𐓃𐓄𐓅𐓆𐓇𐓈𐓉𐓊𐓋𐓌𐓍𐓎𐓏𐓐𐓑𐓒𐓓𐓔𐓕𐓖𐓗𐓘𐓙𐓚𐓛𐓜𐓝𐓞𐓟𐓠𐓡𐓢𐓣𐓤𐓥𐓦𐓧𐓨𐓩𐓪𐓫𐓬𐓭𐓮𐓯𐓰𐓱𐓲𐓳𐓴𐓵𐓶𐓷𐓸𐓹𐓺𐓻𐓼𐓽𐓾𐓿𐔀𐔁𐔂𐔃𐔄𐔅𐔆𐔇𐔈𐔉𐔊𐔋𐔌𐔍𐔎𐔏𐔐𐔑𐔒𐔓𐔔𐔕𐔖𐔗𐔘𐔙𐔚𐔛𐔜𐔝𐔞𐔟𐔠𐔡𐔢𐔣𐔤𐔥𐔦𐔧𐔨𐔩𐔪𐔫𐔬𐔭𐔮𐔯𐔰𐔱𐔲𐔳𐔴𐔵𐔶𐔷𐔸𐔹𐔺𐔻𐔼𐔽𐔾𐔿𐕀𐕁𐕂𐕃𐕄𐕅𐕆𐕇𐕈𐕉𐕊𐕋𐕌𐕍𐕎𐕏𐕐𐕑𐕒𐕓𐕔𐕕𐕖𐕗𐕘𐕙𐕚𐕛𐕜𐕝𐕞𐕟𐕠𐕡𐕢𐕣𐕤𐕥𐕦𐕧𐕨𐕩𐕪𐕫𐕬𐕭𐕮𐕯𐕰𐕱𐕲𐕳𐕴𐕵𐕶𐕷𐕸𐕹𐕺𐕻𐕼𐕽𐕾𐕿𐖀𐖁𐖂𐖃𐖄𐖅𐖆𐖇𐖈𐖉𐖊𐖋𐖌𐖍𐖎𐖏𐖐𐖑𐖒𐖓𐖔𐖕𐖖𐖗𐖘𐖙𐖚𐖛𐖜𐖝𐖞𐖟𐖠𐖡𐖢𐖣𐖤𐖥𐖦𐖧𐖨𐖩𐖪𐖫𐖬𐖭𐖮𐖯𐖰𐖱𐖲𐖳𐖴𐖵𐖶𐖷𐖸𐖹𐖺𐖻𐖼𐖽𐖾𐖿𐗀𐗁𐗂𐗃𐗄𐗅𐗆𐗇𐗈𐗉𐗊𐗋𐗌𐗍𐗎𐗏𐗐𐗑𐗒𐗓𐗔𐗕𐗖𐗗𐗘𐗙𐗚𐗛𐗜𐗝𐗞𐗟𐗠𐗡𐗢𐗣𐗤𐗥𐗦𐗧𐗨𐗩𐗪𐗫𐗬𐗭𐗮𐗯𐗰𐗱𐗲𐗳𐗴𐗵𐗶𐗷𐗸𐗹𐗺𐗻𐗼𐗽𐗾𐗿𐘀𐘁𐘂𐘃𐘄𐘅𐘆𐘇𐘈𐘉𐘊𐘋𐘌𐘍𐘎𐘏𐘐𐘑𐘒𐘓𐘔𐘕𐘖𐘗𐘘𐘙𐘚𐘛𐘜𐘝𐘞𐘟𐘠𐘡𐘢𐘣𐘤𐘥𐘦𐘧𐘨𐘩𐘪𐘫𐘬𐘭𐘮𐘯𐘰𐘱𐘲𐘳𐘴𐘵𐘶𐘷𐘸𐘹𐘺𐘻𐘼𐘽𐘾𐘿𐙀𐙁𐙂𐙃𐙄𐙅𐙆𐙇𐙈𐙉𐙊𐙋𐙌𐙍𐙎𐙏𐙐𐙑𐙒𐙓𐙔𐙕𐙖𐙗𐙘𐙙𐙚𐙛𐙜𐙝𐙞𐙟𐙠𐙡𐙢𐙣𐙤𐙥𐙦𐙧𐙨𐙩𐙪𐙫𐙬𐙭𐙮𐙯𐙰𐙱𐙲𐙳𐙴𐙵𐙶𐙷𐙸𐙹𐙺𐙻𐙼𐙽𐙾𐙿𐚀𐚁𐚂𐚃𐚄𐚅𐚆𐚇𐚈𐚉𐚊𐚋𐚌𐚍𐚎𐚏𐚐𐚑𐚒𐚓𐚔𐚕𐚖𐚗𐚘𐚙𐚚𐚛𐚜𐚝𐚞𐚟𐚠𐚡𐚢𐚣𐚤𐚥𐚦𐚧𐚨𐚩𐚪𐚫𐚬𐚭𐚮𐚯𐚰𐚱𐚲𐚳𐚴𐚵𐚶𐚷𐚸𐚹𐚺𐚻𐚼𐚽𐚾𐚿𐛀𐛁𐛂𐛃𐛄𐛅𐛆𐛇𐛈𐛉𐛊𐛋𐛌𐛍𐛎𐛏𐛐𐛑𐛒𐛓𐛔𐛕𐛖𐛗𐛘𐛙𐛚𐛛𐛜𐛝𐛞𐛟𐛠𐛡𐛢𐛣𐛤𐛥𐛦𐛧𐛨𐛩𐛪𐛫𐛬𐛭𐛮𐛯𐛰𐛱𐛲𐛳𐛴𐛵𐛶𐛷𐛸𐛹𐛺𐛻𐛼𐛽𐛾𐛿𐜀𐜁𐜂𐜃𐜄𐜅𐜆𐜇𐜈𐜉𐜊𐜋𐜌𐜍𐜎𐜏𐜐𐜑𐜒𐜓𐜔𐜕𐜖𐜗𐜘𐜙𐜚𐜛𐜜𐜝𐜞𐜟𐜠𐜡𐜢𐜣𐜤𐜥𐜦𐜧𐜨𐜩𐜪𐜫𐜬𐜭𐜮𐜯𐜰𐜱𐜲𐜳𐜴𐜵𐜶𐜷𐜸𐜹𐜺𐜻𐜼𐜽𐜾𐜿𐝀𐝁𐝂𐝃𐝄𐝅𐝆𐝇𐝈𐝉𐝊𐝋𐝌𐝍𐝎𐝏𐝐𐝑𐝒𐝓𐝔𐝕𐝖𐝗𐝘𐝙𐝚𐝛𐝜𐝝𐝞𐝟𐝠𐝡𐝢𐝣𐝤𐝥𐝦𐝧𐝨𐝩𐝪𐝫𐝬𐝭𐝮𐝯𐝰𐝱𐝲𐝳𐝴𐝵𐝶𐝷𐝸𐝹𐝺𐝻𐝼𐝽𐝾𐝿𐞀𐞁𐞂𐞃𐞄𐞅𐞆𐞇𐞈𐞉𐞊𐞋𐞌𐞍𐞎𐞏𐞐𐞑𐞒𐞓𐞔𐞕𐞖𐞗𐞘𐞙𐞚𐞛𐞜𐞝𐞞𐞟𐞠𐞡𐞢𐞣𐞤𐞥𐞦𐞧𐞨𐞩𐞪𐞫𐞬𐞭𐞮𐞯𐞰𐞱𐞲𐞳𐞴𐞵𐞶𐞷𐞸𐞹𐞺𐞻𐞼𐞽𐞾𐞿𐟀𐟁𐟂𐟃𐟄𐟅𐟆𐟇𐟈𐟉𐟊𐟋𐟌𐟍𐟎𐟏𐟐𐟑𐟒𐟓𐟔𐟕𐟖𐟗𐟘𐟙𐟚𐟛𐟜𐟝𐟞𐟟𐟠𐟡𐟢𐟣𐟤𐟥𐟦𐟧𐟨𐟩𐟪𐟫𐟬𐟭𐟮𐟯𐟰𐟱𐟲𐟳𐟴𐟵𐟶𐟷𐟸𐟹𐟺𐟻𐟼𐟽𐟾𐟿𐠀𐠁𐠂𐠃𐠄𐠅𐠆𐠇𐠈𐠉𐠊𐠋𐠌𐠍𐠎𐠏𐠐𐠑𐠒𐠓𐠔𐠕𐠖𐠗𐠘𐠙𐠚𐠛𐠜𐠝𐠞𐠟𐠠𐠡𐠢𐠣𐠤𐠥𐠦𐠧𐠨𐠩𐠪𐠫𐠬𐠭𐠮𐠯𐠰𐠱𐠲𐠳𐠴𐠵𐠶𐠷𐠸𐠹𐠺𐠻𐠼𐠽𐠾𐠿𐡀𐡁𐡂𐡃𐡄𐡅𐡆𐡇𐡈𐡉𐡊𐡋𐡌𐡍𐡎𐡏𐡐𐡑𐡒𐡓𐡔𐡕𐡖𐡗𐡘𐡙𐡚𐡛𐡜𐡝𐡞𐡟𐡠𐡡𐡢𐡣𐡤𐡥𐡦𐡧𐡨𐡩𐡪𐡫𐡬𐡭𐡮𐡯𐡰𐡱𐡲𐡳𐡴𐡵𐡶𐡷𐡸𐡹𐡺𐡻𐡼𐡽𐡾𐡿𐢀𐢁𐢂𐢃𐢄𐢅𐢆𐢇𐢈𐢉𐢊𐢋𐢌𐢍𐢎𐢏𐢐𐢑𐢒𐢓𐢔𐢕𐢖𐢗𐢘𐢙𐢚𐢛𐢜𐢝𐢞𐢟𐢠𐢡𐢢𐢣𐢤𐢥𐢦𐢧𐢨𐢩𐢪𐢫𐢬𐢭𐢮𐢯𐢰𐢱𐢲𐢳𐢴𐢵𐢶𐢷𐢸𐢹𐢺𐢻𐢼𐢽𐢾𐢿𐣀𐣁𐣂𐣃𐣄𐣅𐣆𐣇𐣈𐣉𐣊𐣋𐣌𐣍𐣎𐣏𐣐𐣑𐣒𐣓𐣔𐣕𐣖𐣗𐣘𐣙𐣚𐣛𐣜𐣝𐣞𐣟𐣠𐣡𐣢𐣣𐣤𐣥𐣦𐣧𐣨𐣩𐣪𐣫𐣬𐣭𐣮𐣯𐣰𐣱𐣲𐣳𐣴𐣵𐣶𐣷𐣸𐣹𐣺𐣻𐣼𐣽𐣾𐣿𐤀𐤁𐤂𐤃𐤄𐤅𐤆𐤇𐤈𐤉𐤊𐤋𐤌𐤍𐤎𐤏𐤐𐤑𐤒𐤓𐤔𐤕𐤖𐤗𐤘𐤙𐤚𐤛𐤜𐤝𐤞𐤟𐤠𐤡𐤢𐤣𐤤𐤥𐤦𐤧𐤨𐤩𐤪𐤫𐤬𐤭𐤮𐤯𐤰𐤱𐤲𐤳𐤴𐤵𐤶𐤷𐤸𐤹𐤺𐤻𐤼𐤽𐤾𐤿𐥀𐥁𐥂𐥃𐥄𐥅𐥆𐥇𐥈𐥉𐥊𐥋𐥌𐥍𐥎𐥏𐥐𐥑𐥒𐥓𐥔𐥕𐥖𐥗𐥘𐥙𐥚𐥛𐥜𐥝𐥞𐥟𐥠𐥡𐥢𐥣𐥤𐥥𐥦𐥧𐥨𐥩𐥪𐥫𐥬𐥭𐥮𐥯𐥰𐥱𐥲𐥳𐥴𐥵𐥶𐥷𐥸𐥹𐥺𐥻𐥼𐥽𐥾𐥿𐦀𐦁𐦂𐦃𐦄𐦅𐦆𐦇𐦈𐦉𐦊𐦋𐦌𐦍𐦎𐦏𐦐𐦑𐦒𐦓𐦔𐦕𐦖𐦗𐦘𐦙𐦚𐦛𐦜𐦝𐦞𐦟𐦠𐦡𐦢𐦣𐦤𐦥𐦦𐦧𐦨𐦩𐦪𐦫𐦬𐦭𐦮𐦯𐦰𐦱𐦲𐦳𐦴𐦵𐦶𐦷𐦸𐦹𐦺𐦻𐦼𐦽𐦾𐦿𐧀𐧁𐧂𐧃𐧄𐧅𐧆𐧇𐧈𐧉𐧊𐧋𐧌𐧍𐧎𐧏𐧐𐧑𐧒𐧓𐧔𐧕𐧖𐧗𐧘𐧙𐧚𐧛𐧜𐧝𐧞𐧟𐧠𐧡𐧢𐧣𐧤𐧥𐧦𐧧𐧨𐧩𐧪𐧫𐧬𐧭𐧮𐧯𐧰𐧱𐧲𐧳𐧴𐧵𐧶𐧷𐧸𐧹𐧺𐧻𐧼𐧽𐧾𐧿𐨀𐨁𐨂𐨃𐨄𐨅𐨆𐨇𐨈𐨉𐨊𐨋𐨌𐨍𐨎𐨏𐨐𐨑𐨒𐨓𐨔𐨕𐨖𐨗𐨘𐨙𐨚𐨛𐨜𐨝𐨞𐨟𐨠𐨡𐨢𐨣𐨤𐨥𐨦𐨧𐨨𐨩𐨪𐨫𐨬𐨭𐨮𐨯𐨰𐨱𐨲𐨳𐨴𐨵𐨶𐨷𐨹𐨺𐨸𐨻𐨼𐨽𐨾𐨿𐩀𐩁𐩂𐩃𐩄𐩅𐩆𐩇𐩈𐩉𐩊𐩋𐩌𐩍𐩎𐩏𐩐𐩑𐩒𐩓𐩔𐩕𐩖𐩗𐩘𐩙𐩚𐩛𐩜𐩝𐩞𐩟𐩠𐩡𐩢𐩣𐩤𐩥𐩦𐩧𐩨𐩩𐩪𐩫𐩬𐩭𐩮𐩯𐩰𐩱𐩲𐩳𐩴𐩵𐩶𐩷𐩸𐩹𐩺𐩻𐩼𐩽𐩾𐩿𐪀𐪁𐪂𐪃𐪄𐪅𐪆𐪇𐪈𐪉𐪊𐪋𐪌𐪍𐪎𐪏𐪐𐪑𐪒𐪓𐪔𐪕𐪖𐪗𐪘𐪙𐪚𐪛𐪜𐪝𐪞𐪟𐪠𐪡𐪢𐪣𐪤𐪥𐪦𐪧𐪨𐪩𐪪𐪫𐪬𐪭𐪮𐪯𐪰𐪱𐪲𐪳𐪴𐪵𐪶𐪷𐪸𐪹𐪺𐪻𐪼𐪽𐪾𐪿𐫀𐫁𐫂𐫃𐫄𐫅𐫆𐫇𐫈𐫉𐫊𐫋𐫌𐫍𐫎𐫏𐫐𐫑𐫒𐫓𐫔𐫕𐫖𐫗𐫘𐫙𐫚𐫛𐫜𐫝𐫞𐫟𐫠𐫡𐫢𐫣𐫤𐫦𐫥𐫧𐫨𐫩𐫪𐫫𐫬𐫭𐫮𐫯𐫰𐫱𐫲𐫳𐫴𐫵𐫶𐫷𐫸𐫹𐫺𐫻𐫼𐫽𐫾𐫿𐬀𐬁𐬂𐬃𐬄𐬅𐬆𐬇𐬈𐬉𐬊𐬋𐬌𐬍𐬎𐬏𐬐𐬑𐬒𐬓𐬔𐬕𐬖𐬗𐬘𐬙𐬚𐬛𐬜𐬝𐬞𐬟𐬠𐬡𐬢𐬣𐬤𐬥𐬦𐬧𐬨𐬩𐬪𐬫𐬬𐬭𐬮𐬯𐬰𐬱𐬲𐬳𐬴𐬵𐬶𐬷𐬸𐬹𐬺𐬻𐬼𐬽𐬾𐬿𐭀𐭁𐭂𐭃𐭄𐭅𐭆𐭇𐭈𐭉𐭊𐭋𐭌𐭍𐭎𐭏𐭐𐭑𐭒𐭓𐭔𐭕𐭖𐭗𐭘𐭙𐭚𐭛𐭜𐭝𐭞𐭟𐭠𐭡𐭢𐭣𐭤𐭥𐭦𐭧𐭨𐭩𐭪𐭫𐭬𐭭𐭮𐭯𐭰𐭱𐭲𐭳𐭴𐭵𐭶𐭷𐭸𐭹𐭺𐭻𐭼𐭽𐭾𐭿𐮀𐮁𐮂𐮃𐮄𐮅𐮆𐮇𐮈𐮉𐮊𐮋𐮌𐮍𐮎𐮏𐮐𐮑𐮒𐮓𐮔𐮕𐮖𐮗𐮘𐮙𐮚𐮛𐮜𐮝𐮞𐮟𐮠𐮡𐮢𐮣𐮤𐮥𐮦𐮧𐮨𐮩𐮪𐮫𐮬𐮭𐮮𐮯𐮰𐮱𐮲𐮳𐮴𐮵𐮶𐮷𐮸𐮹𐮺𐮻𐮼𐮽𐮾𐮿𐯀𐯁𐯂𐯃𐯄𐯅𐯆𐯇𐯈𐯉𐯊𐯋𐯌𐯍𐯎𐯏𐯐𐯑𐯒𐯓𐯔𐯕𐯖𐯗𐯘𐯙𐯚𐯛𐯜𐯝𐯞𐯟𐯠𐯡𐯢𐯣𐯤𐯥𐯦𐯧𐯨𐯩𐯪𐯫𐯬𐯭𐯮𐯯𐯰𐯱𐯲𐯳𐯴𐯵𐯶𐯷𐯸𐯹𐯺𐯻𐯼𐯽𐯾𐯿𐰀𐰁𐰂𐰃𐰄𐰅𐰆𐰇𐰈𐰉𐰊𐰋𐰌𐰍𐰎𐰏𐰐𐰑𐰒𐰓𐰔𐰕𐰖𐰗𐰘𐰙𐰚𐰛𐰜𐰝𐰞𐰟𐰠𐰡𐰢𐰣𐰤𐰥𐰦𐰧𐰨𐰩𐰪𐰫𐰬𐰭𐰮𐰯𐰰𐰱𐰲𐰳𐰴𐰵𐰶𐰷𐰸𐰹𐰺𐰻𐰼𐰽𐰾𐰿𐱀𐱁𐱂𐱃𐱄𐱅𐱆𐱇𐱈𐱉𐱊𐱋𐱌𐱍𐱎𐱏𐱐𐱑𐱒𐱓𐱔𐱕𐱖𐱗𐱘𐱙𐱚𐱛𐱜𐱝𐱞𐱟𐱠𐱡𐱢𐱣𐱤𐱥𐱦𐱧𐱨𐱩𐱪𐱫𐱬𐱭𐱮𐱯𐱰𐱱𐱲𐱳𐱴𐱵𐱶𐱷𐱸𐱹𐱺𐱻𐱼𐱽𐱾𐱿𐲀𐲁𐲂𐲃𐲄𐲅𐲆𐲇𐲈𐲉𐲊𐲋𐲌𐲍𐲎𐲏𐲐𐲑𐲒𐲓𐲔𐲕𐲖𐲗𐲘𐲙𐲚𐲛𐲜𐲝𐲞𐲟𐲠𐲡𐲢𐲣𐲤𐲥𐲦𐲧𐲨𐲩𐲪𐲫𐲬𐲭𐲮𐲯𐲰𐲱𐲲𐲳𐲴𐲵𐲶𐲷𐲸𐲹𐲺𐲻𐲼𐲽𐲾𐲿𐳀𐳁𐳂𐳃𐳄𐳅𐳆𐳇𐳈𐳉𐳊𐳋𐳌𐳍𐳎𐳏𐳐𐳑𐳒𐳓𐳔𐳕𐳖𐳗𐳘𐳙𐳚𐳛𐳜𐳝𐳞𐳟𐳠𐳡𐳢𐳣𐳤𐳥𐳦𐳧𐳨𐳩𐳪𐳫𐳬𐳭𐳮𐳯𐳰𐳱𐳲𐳳𐳴𐳵𐳶𐳷𐳸𐳹𐳺𐳻𐳼𐳽𐳾𐳿𐴀𐴁𐴂𐴃𐴄𐴅𐴆𐴇𐴈𐴉𐴊𐴋𐴌𐴍𐴎𐴏𐴐𐴑𐴒𐴓𐴔𐴕𐴖𐴗𐴘𐴙𐴚𐴛𐴜𐴝𐴞𐴟𐴠𐴡𐴢𐴣𐴤𐴥𐴦𐴧𐴨𐴩𐴪𐴫𐴬𐴭𐴮𐴯𐴰𐴱𐴲𐴳𐴴𐴵𐴶𐴷𐴸𐴹𐴺𐴻𐴼𐴽𐴾𐴿𐵀𐵁𐵂𐵃𐵄𐵅𐵆𐵇𐵈𐵉𐵊𐵋𐵌𐵍𐵎𐵏𐵐𐵑𐵒𐵓𐵔𐵕𐵖𐵗𐵘𐵙𐵚𐵛𐵜𐵝𐵞𐵟𐵠𐵡𐵢𐵣𐵤𐵥𐵦𐵧𐵨𐵩𐵪𐵫𐵬𐵭𐵮𐵯𐵰𐵱𐵲𐵳𐵴𐵵𐵶𐵷𐵸𐵹𐵺𐵻𐵼𐵽𐵾𐵿𐶀𐶁𐶂𐶃𐶄𐶅𐶆𐶇𐶈𐶉𐶊𐶋𐶌𐶍𐶎𐶏𐶐𐶑𐶒𐶓𐶔𐶕𐶖𐶗𐶘𐶙𐶚𐶛𐶜𐶝𐶞𐶟𐶠𐶡𐶢𐶣𐶤𐶥𐶦𐶧𐶨𐶩𐶪𐶫𐶬𐶭𐶮𐶯𐶰𐶱𐶲𐶳𐶴𐶵𐶶𐶷𐶸𐶹𐶺𐶻𐶼𐶽𐶾𐶿𐷀𐷁𐷂𐷃𐷄𐷅𐷆𐷇𐷈𐷉𐷊𐷋𐷌𐷍𐷎𐷏𐷐𐷑𐷒𐷓𐷔𐷕𐷖𐷗𐷘𐷙𐷚𐷛𐷜𐷝𐷞𐷟𐷠𐷡𐷢𐷣𐷤𐷥𐷦𐷧𐷨𐷩𐷪𐷫𐷬𐷭𐷮𐷯𐷰𐷱𐷲𐷳𐷴𐷵𐷶𐷷𐷸𐷹𐷺𐷻𐷼𐷽𐷾𐷿𐸀𐸁𐸂𐸃𐸄𐸅𐸆𐸇𐸈𐸉𐸊𐸋𐸌𐸍𐸎𐸏𐸐𐸑𐸒𐸓𐸔𐸕𐸖𐸗𐸘𐸙𐸚𐸛𐸜𐸝𐸞𐸟𐸠𐸡𐸢𐸣𐸤𐸥𐸦𐸧𐸨𐸩𐸪𐸫𐸬𐸭𐸮𐸯𐸰𐸱𐸲𐸳𐸴𐸵𐸶𐸷𐸸𐸹𐸺𐸻𐸼𐸽𐸾𐸿𐹀𐹁𐹂𐹃𐹄𐹅𐹆𐹇𐹈𐹉𐹊𐹋𐹌𐹍𐹎𐹏𐹐𐹑𐹒𐹓𐹔𐹕𐹖𐹗𐹘𐹙𐹚𐹛𐹜𐹝𐹞𐹟𐹠𐹡𐹢𐹣𐹤𐹥𐹦𐹧𐹨𐹩𐹪𐹫𐹬𐹭𐹮𐹯𐹰𐹱𐹲𐹳𐹴𐹵𐹶𐹷𐹸𐹹𐹺𐹻𐹼𐹽𐹾𐹿𐺀𐺁𐺂𐺃𐺄𐺅𐺆𐺇𐺈𐺉𐺊𐺋𐺌𐺍𐺎𐺏𐺐𐺑𐺒𐺓𐺔𐺕𐺖𐺗𐺘𐺙𐺚𐺛𐺜𐺝𐺞𐺟𐺠𐺡𐺢𐺣𐺤𐺥𐺦𐺧𐺨𐺩𐺪𐺫𐺬𐺭𐺮𐺯𐺰𐺱𐺲𐺳𐺴𐺵𐺶𐺷𐺸𐺹𐺺𐺻𐺼𐺽𐺾𐺿𐻀𐻁𐻂𐻃𐻄𐻅𐻆𐻇𐻈𐻉𐻊𐻋𐻌𐻍𐻎𐻏𐻐𐻑𐻒𐻓𐻔𐻕𐻖𐻗𐻘𐻙𐻚𐻛𐻜𐻝𐻞𐻟𐻠𐻡𐻢𐻣𐻤𐻥𐻦𐻧𐻨𐻩𐻪𐻫𐻬𐻭𐻮𐻯𐻰𐻱𐻲𐻳𐻴𐻵𐻶𐻷𐻸𐻹𐻺𐻻𐻼𐻽𐻾𐻿𐼀𐼁𐼂𐼃𐼄𐼅𐼆𐼇𐼈𐼉𐼊𐼋𐼌𐼍𐼎𐼏𐼐𐼑𐼒𐼓𐼔𐼕𐼖𐼗𐼘𐼙𐼚𐼛𐼜𐼝𐼞𐼟𐼠𐼡𐼢𐼣𐼤𐼥𐼦𐼧𐼨𐼩𐼪𐼫𐼬𐼭𐼮𐼯𐼰𐼱𐼲𐼳𐼴𐼵𐼶𐼷𐼸𐼹𐼺𐼻𐼼𐼽𐼾𐼿𐽀𐽁𐽂𐽃𐽄𐽅𐽆𐽇𐽋𐽍𐽎𐽏𐽐𐽈𐽉𐽊𐽌𐽑𐽒𐽓𐽔𐽕𐽖𐽗𐽘𐽙𐽚𐽛𐽜𐽝𐽞𐽟𐽠𐽡𐽢𐽣𐽤𐽥𐽦𐽧𐽨𐽩𐽪𐽫𐽬𐽭𐽮𐽯𐽰𐽱𐽲𐽳𐽴𐽵𐽶𐽷𐽸𐽹𐽺𐽻𐽼𐽽𐽾𐽿𐾀𐾁𐾃𐾂𐾄

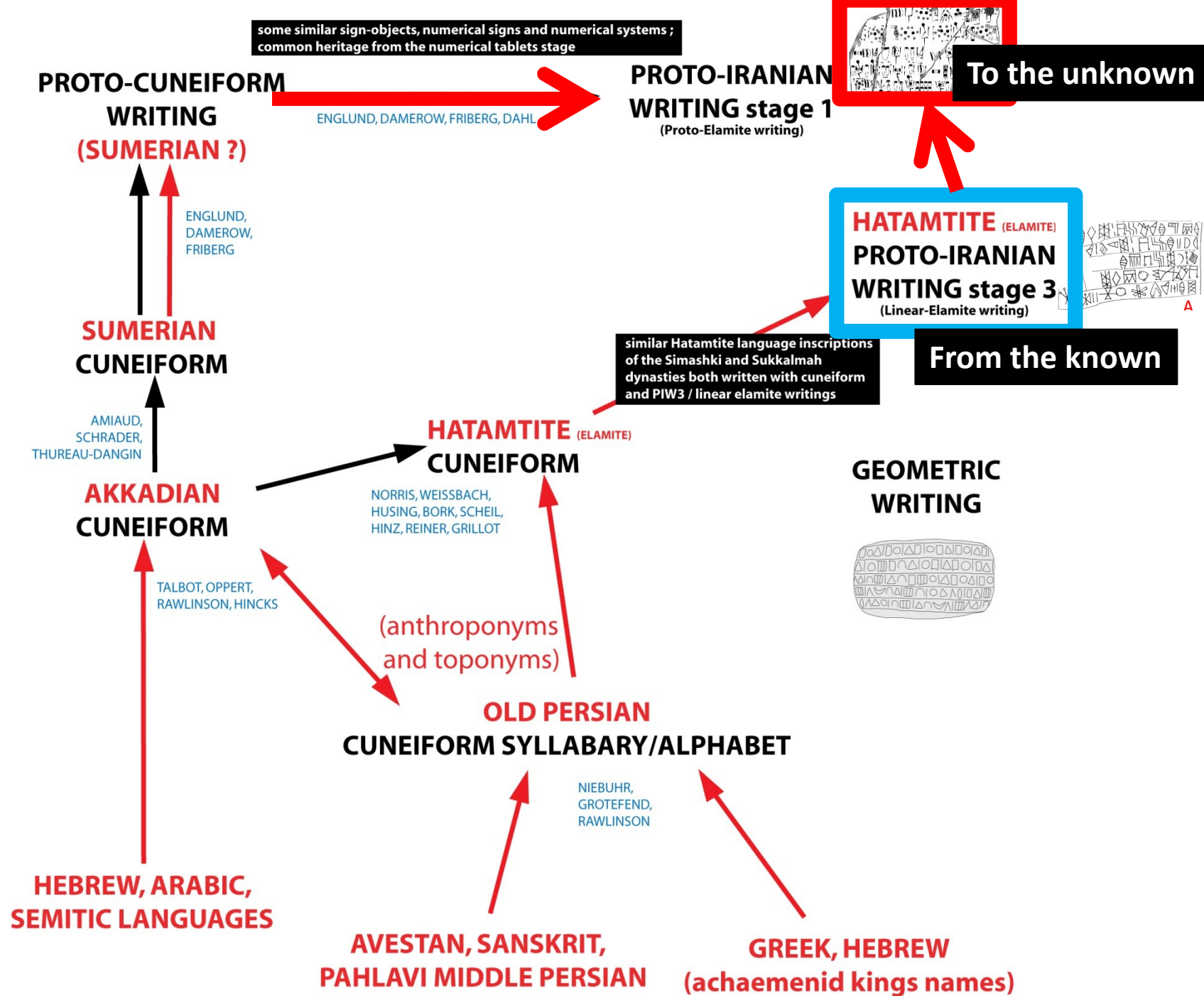
IV

Next project :

**Probably the last target :
the Early Proto-Iranian (Proto-Elamite) writing.**

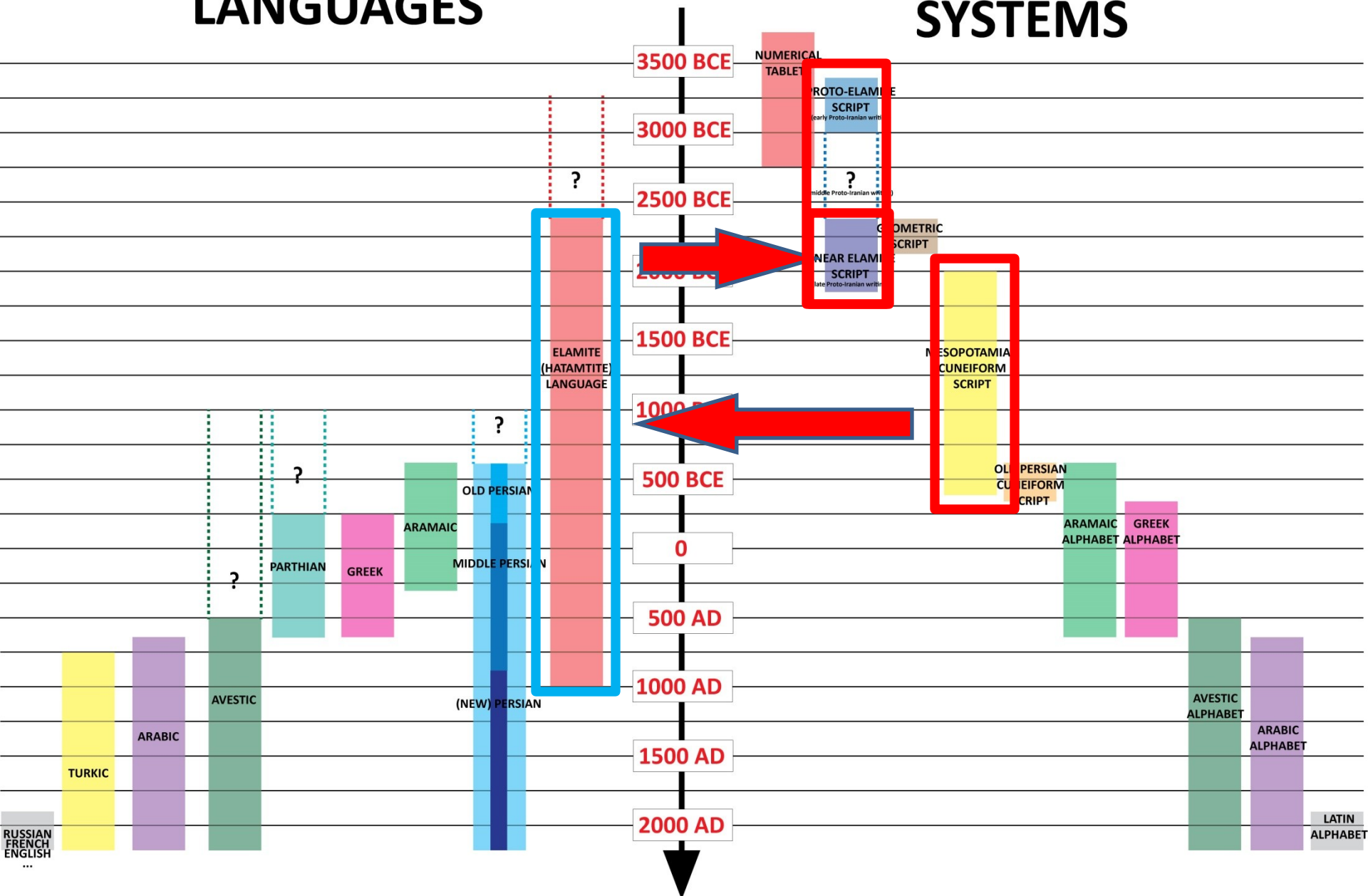
Back to the origin of writing in the world !

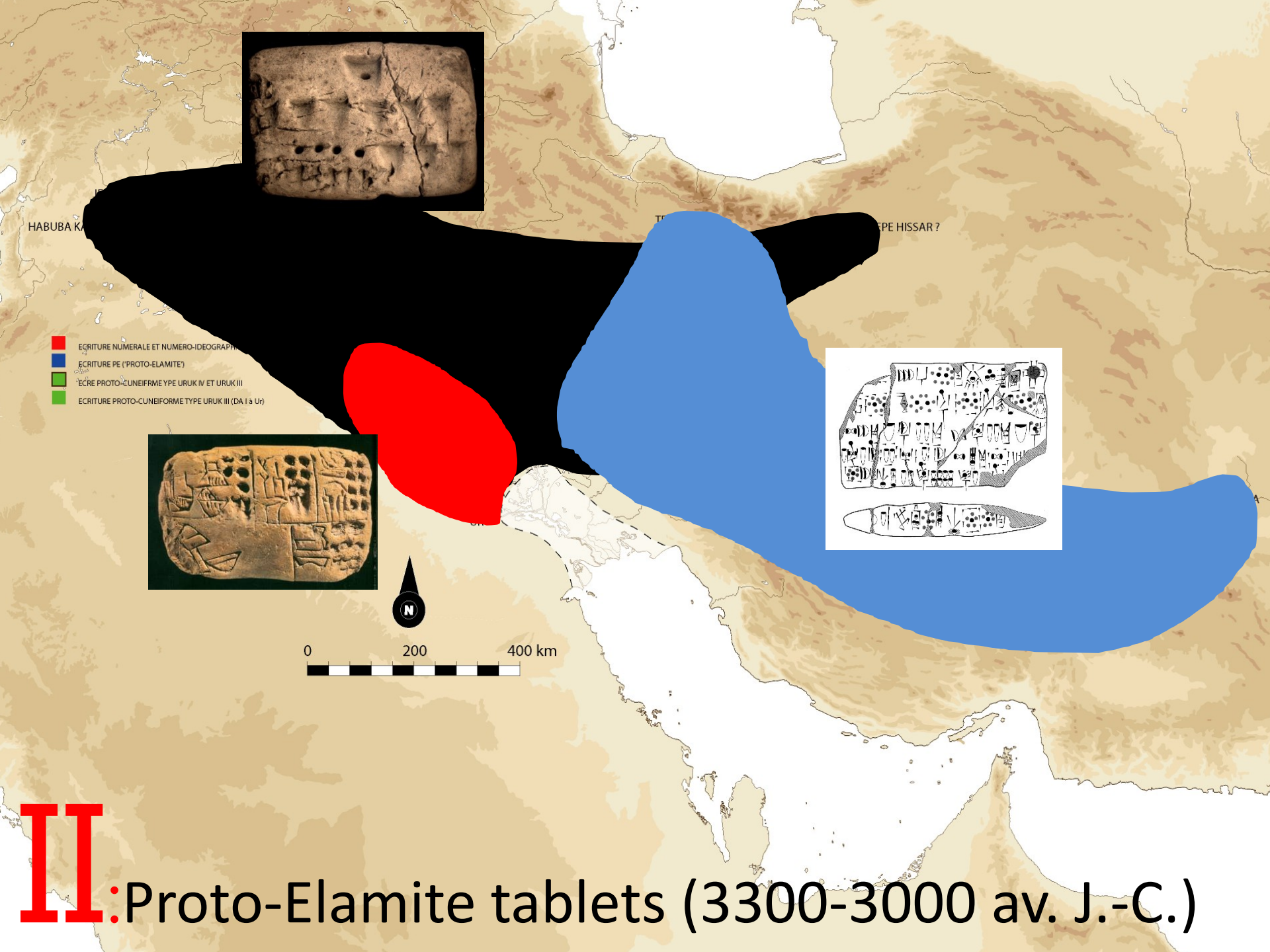




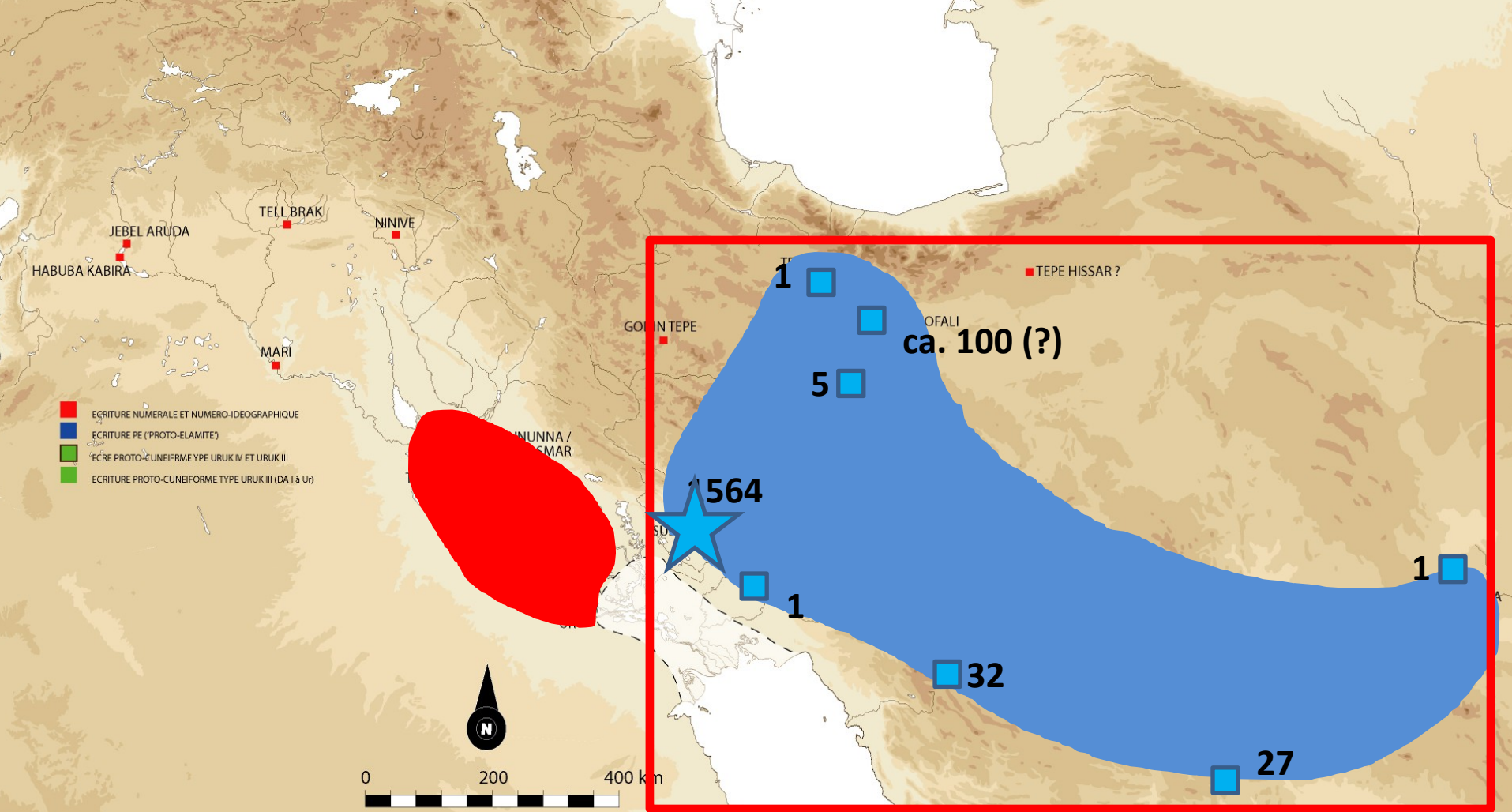
LANGUAGES

WRITING SYSTEMS





II: Proto-Elamite tablets (3300-3000 av. J.-C.)

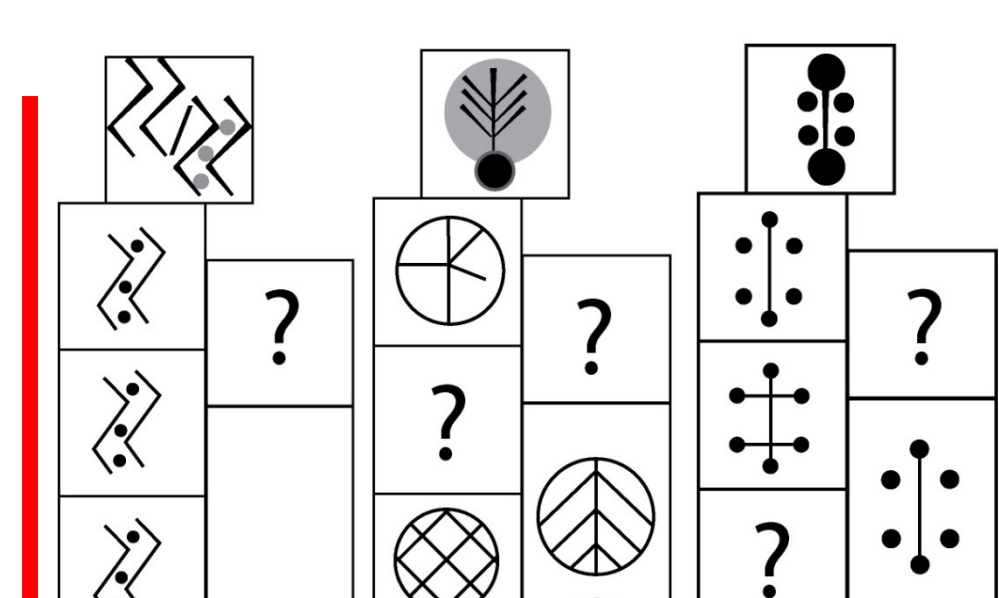


The proto-elamite tablets from Susa represent 90% of the corpus. This situation is due to the 'large scale' excavations led here by the French missions between the end of the 19th and the middle of the 20th century. As most of the tablets come from the ancient excavations in Susa, they are consequently not properly documented (no precise archaeological context).



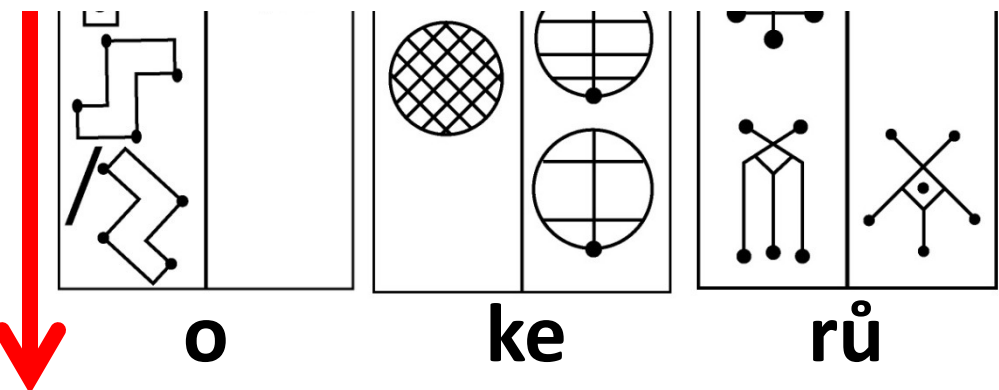


ca. 3300 BC : Proto-Elamite stage (Early Proto-Iranian writing)



Word	3000 BC	2500 BC	2000 BC	1000 BC	100 BC
sky / deity					
day					
water					
woman					

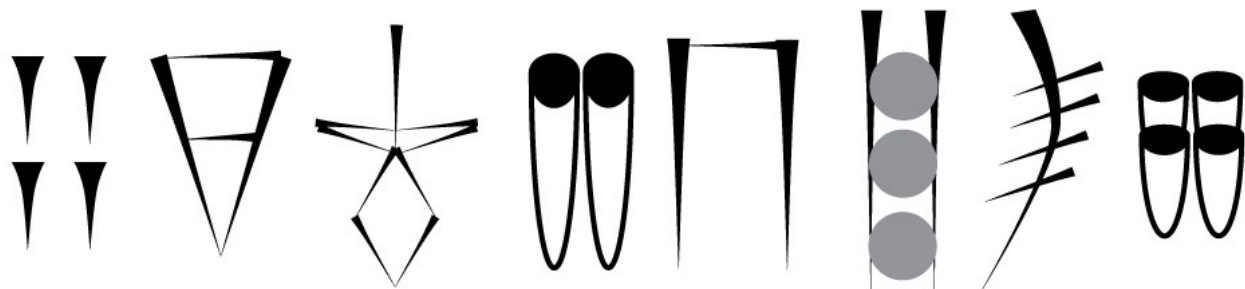
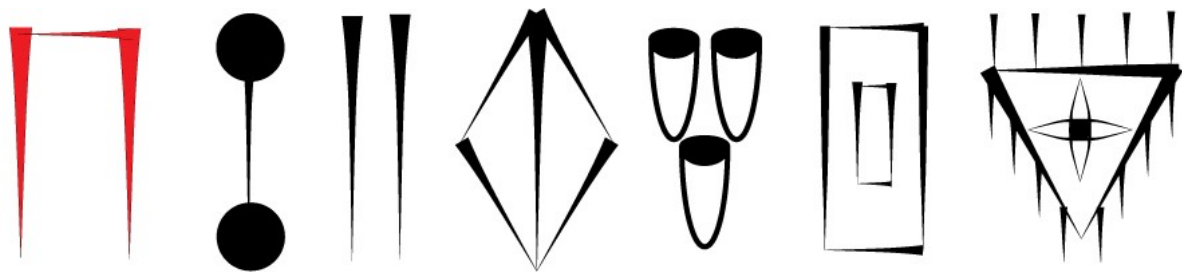
Proto-Iranian writing much more conservative. Almost no graphic evolution in time, contrary to Mesopotamian cuneiform



sheep					
fish					
bird					

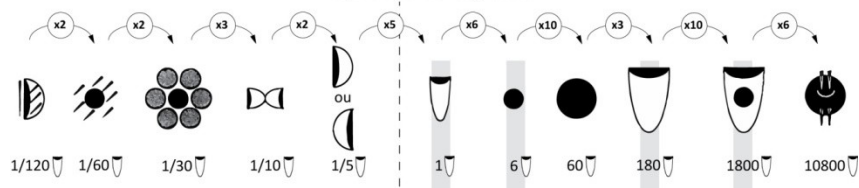
ca. 1880 BC : Linear Elamite stage (Late Proto-Iranian writing)



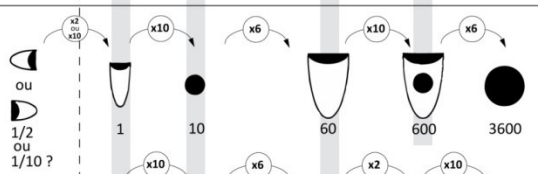




système de capacité



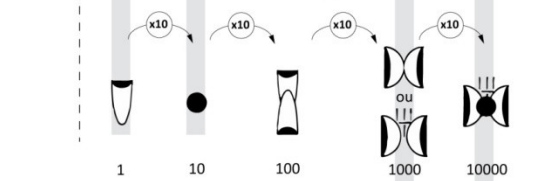
système sexagésimal
de décompte d'objets discrets

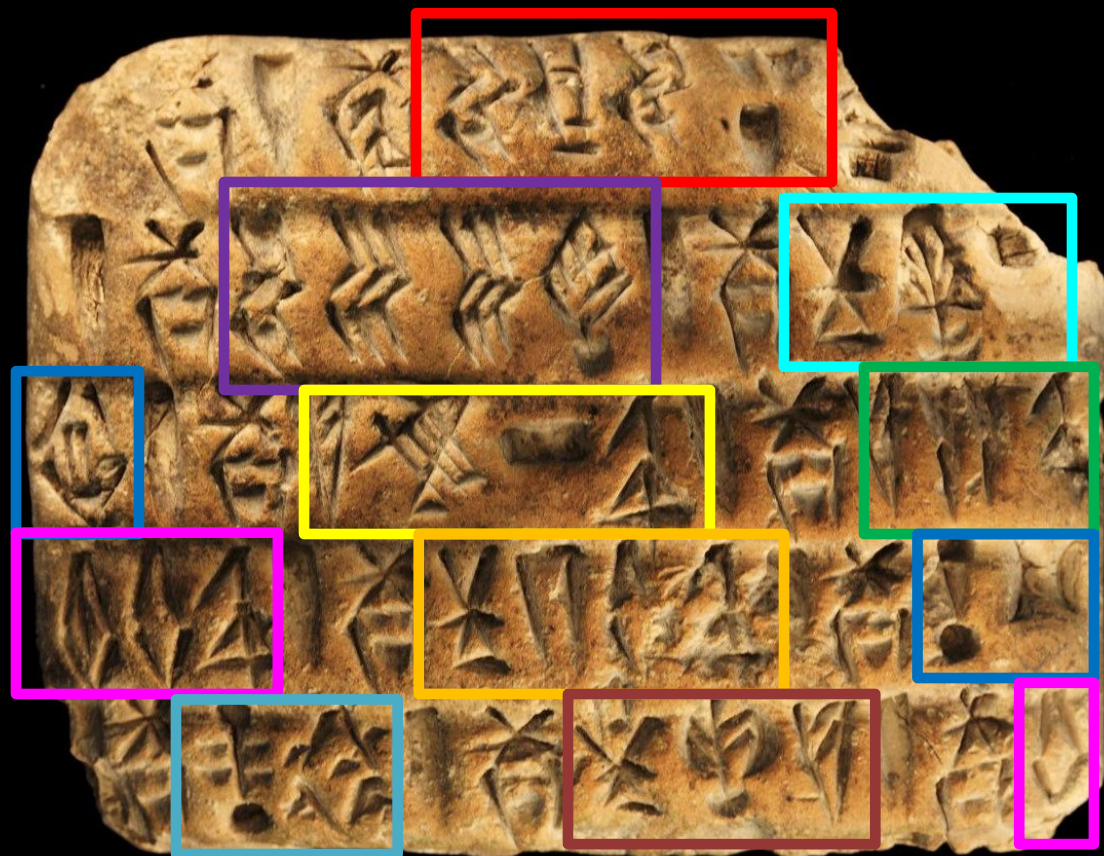


système bisexagésimal
de décompte d'objets discrets

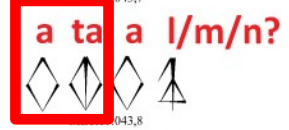
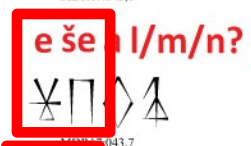
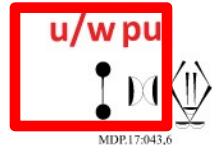
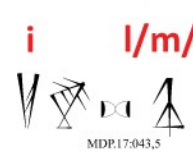
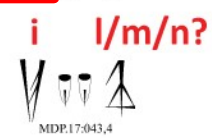
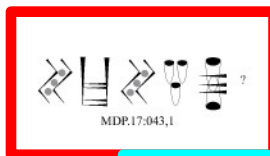


système décimal
de décompte d'objets discrets





MDP 17.043



o ku o

e

o su su ki

i l/m/n?

i l/m/n?

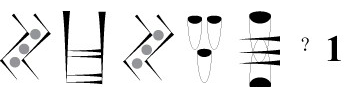
u/w pu

e še l/m/n?

a ta a l/m/n?

ke i

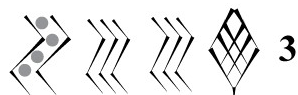
rû



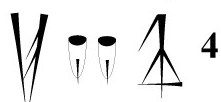
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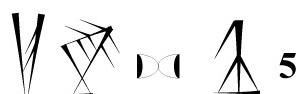
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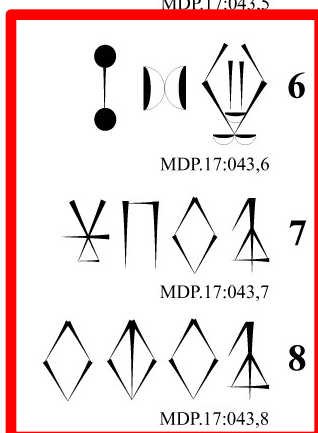
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MDP.17:043,4



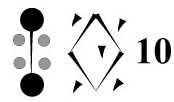
MDP.17:043,5



MDP.17:043,8

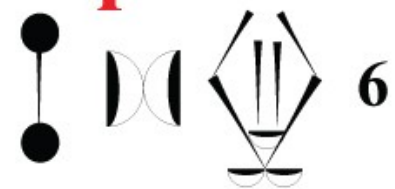


MDP.17:043,9



MDP.17:043,10

/u//pu/ ?



MDP.17:043,6

?-/pu-u/ = ?-/pū/

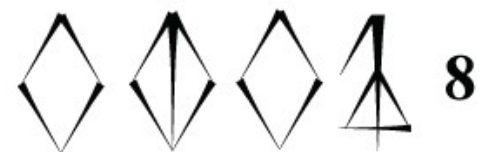
/e//še//a/ ?



MDP.17:043,7

?-/a-še-e/ = ?-/ašē/

/a//ta//a/ ?



MDP.17:043,8

?-/a-ta-a/ = ?-/atā/

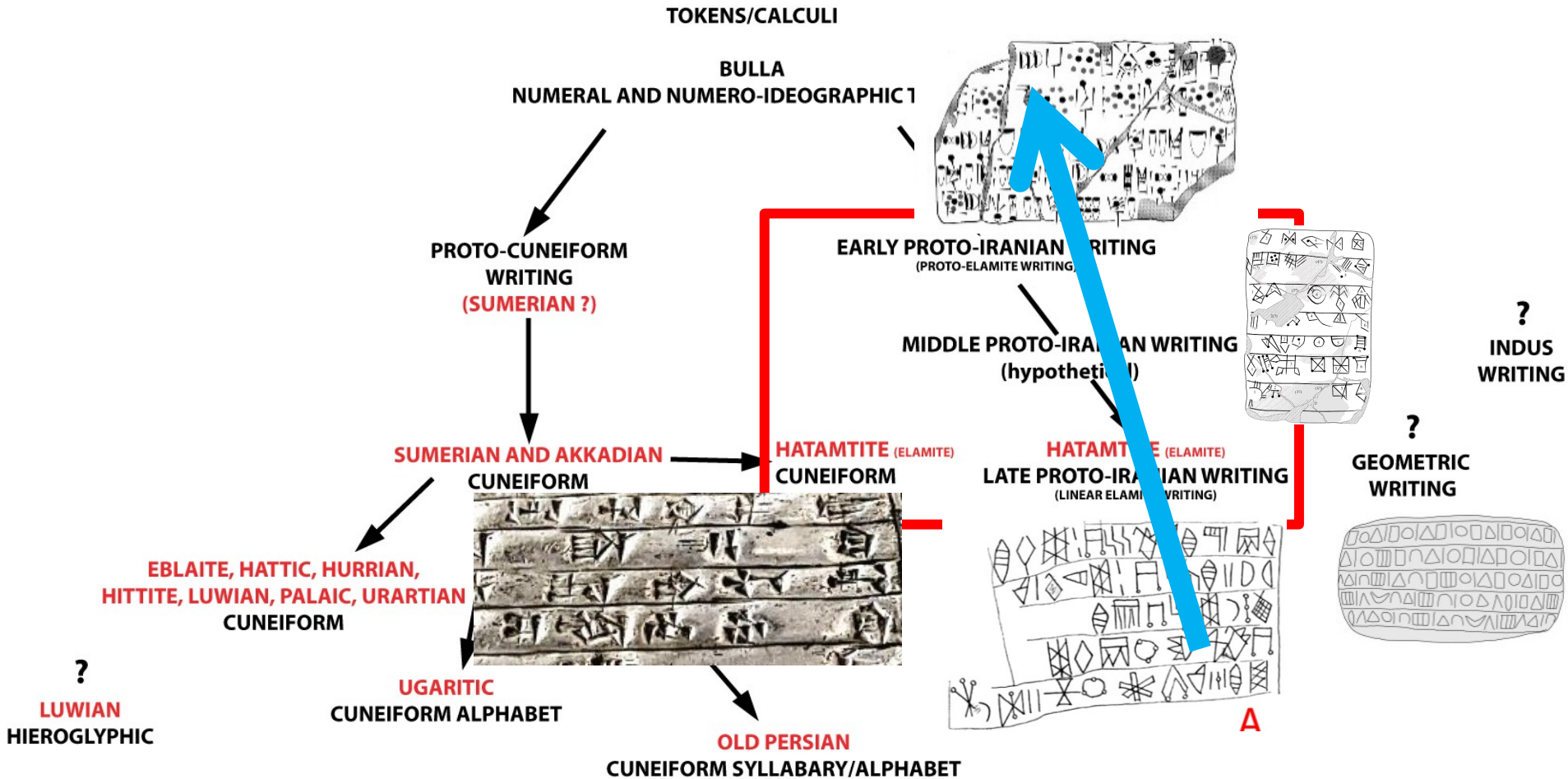
...-CV1-V1

... -pu-u

...-a -še-e

...-a -ta-a

Propositions:





Francois Desset

Université Lyon, Maison de l'Orient et de la Méditerranée - UMR 5133
Archéorient, Research fellow
University of Tehran, Facul...see more

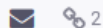
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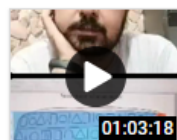
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François Desset

ARCHÉOLOGUE, LABORATOIRE ARCHÉORIENT (CNRS) ET UNIVERSITÉ DE TÉHÉRAN (IRAN) Spécialiste du Proche-Orient du IV^e au I^{er} millénaire av. J.-C., il se concentre plus particulièrement sur l'Iran et son processus d'urbanisation. Par ses travaux dans le sud iranien, il tente d'y déterminer les modalités d'apparition des premières agglomérations.

L'Iran dévoilé : le déchiffrement de l'élamite linéaire

Fin 2020 est annoncé le déchiffrement d'un système d'écriture utilisé dans le sud de l'Iran entre la fin du III^e et le début du II^e millénaire avant J.-C. : l'élamite linéaire. Cette découverte fait écho à celle de Jean-François Champollion avec les hiéroglyphes égyptiens il y a tout juste 200 ans. Fruit d'un travail minutieux, elle bouleverse ce que l'on pensait sur l'histoire du développement de l'écriture dans le monde.

« Ce vase en argent, un kunanki, datant de 1980 av. J.-C., découvert dans la région de Kam-Firouz (Iran actuel) dans les années 1920, présente une inscription royale en élamite linéaire qui a joué un rôle déterminant dans le déchiffrement de cette écriture.

FRANÇOIS DESSET AVEC LA REPRÉSENTATION DE LA COLLECTION MARBOUBIAN - DR

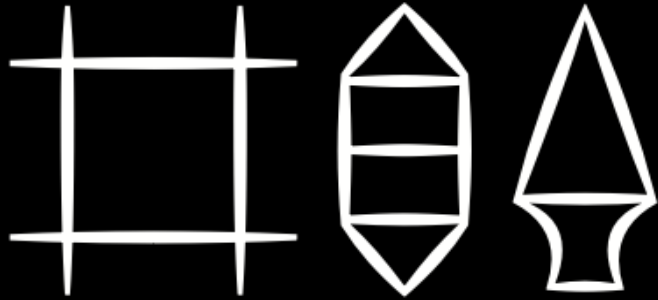
L'année 2022 marque le bicentenaire du déchiffrement des hiéroglyphes égyptiens par Jean-François Champollion (lire *La Recherche* n°570, p. 122).

Le fait que cette découverte soit encore célébrée, si longtemps après, illustre toute son importance. Sa rareté aussi. En effet, les occasions de découvertes définitives en sciences humaines sont relativement rares. Les derniers déchiffrements en date incluent celui du linéaire B mycénien – une écriture notant une version archaïque du grec ancien et utilisée en Grèce et en Crète entre 1500 et 1200 avant J.-C. environ – au tout début des années

1950, celui des glyphes mayas (à partir du début des années 1950) et celui des hiéroglyphes louvites/anatoliens (utilisés entre le milieu du II^e et le début du I^{er} millénaire av. J.-C. en Anatolie et Syrie du nord) (1). Dorénavant, un nouveau système d'écriture peut être ajouté à cette liste : l'élamite linéaire, utilisé dans le sud de l'Iran entre 2300 et 1850 av. J.-C. (2).

Ce système d'écriture a été découvert en 1903 par une mission française fouillant à Suse, important site archéologique dans le sud-ouest de l'Iran actuel. Depuis, il a résisté à diverses tentatives de déchiffrement, probablement en raison du nombre très restreint d'inscriptions

L'Iran dévoilé : le déchiffrement de l'élamite linéaire,
La recherche no. 572, Janvier/Mars 2023, p. 108-119.



me - r - si

**Merci pour votre
attention !**

fdesset@uliege.be



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