



The Most Ancient Scripts of Iran: The Current Situation

Francois Vallat

World Archaeology, Vol. 17, No. 3, Early Writing Systems. (Feb., 1986), pp. 335-347.

Stable URL:

<http://links.jstor.org/sici?sici=0043-8243%28198602%2917%3A3%3C335%3ATMASOI%3E2.0.CO%3B2-P>

World Archaeology is currently published by Taylor & Francis, Ltd..

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/about/terms.html>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/journals/taylorfrancis.html>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is an independent not-for-profit organization dedicated to and preserving a digital archive of scholarly journals. For more information regarding JSTOR, please contact support@jstor.org.

The most ancient scripts of Iran: the current situation

François Vallat

The first excavations at Susa, a site in the present-day Iranian province of Khuzistan, were conducted by J. de Morgan at the end of the last century. From these excavations emerged two clay tablets with unusual signs which V. Scheil (1900, 130–1) considered, not without reservation, to be cuneiform documents:

Il semble que nous ayons sous les yeux un autre système
d'écriture cunéiforme, ou du moins le résultat d'une
évolution très indépendante, très différente de celle
qui nous a donné les signes dits babyloniens.

The work undertaken on the Acropolis mound in 1901 produced more than 200 tablets of the same type, as well as three stone inscriptions with identical signs. One of these stone inscriptions was accompanied by an Akkadian text written in cuneiform characters attributing the monument in question to the king PUZUR-Inšušinak, the last king of the Awan dynasty, which dominated the Iranian plateau in the last part of the third millennium B.C. This was all that was needed for Scheil (1905) to view all these documents as contemporary, and to label them as *proto-Elamite*, assuming that the language which they recorded had to be Elamite because of their place of discovery, for Susa was at that time considered to be the capital city of Elam in the late fourth millennium.

In fact the term proto-Elamite nowadays tends to cover three separate categories which should be distinguished from one another:

- 1 *Bullae* and *numerical* tablets, which can be seen as the first writing system,
- 2 *proto-Elamite* tablets, usually economic texts,
- 3 *Linear Elamite*, of which the main texts are royal inscriptions.

These three systems succeeded each other in time, but more than a millenium separates the invention of the numerical system and the beginnings of the use of Linear Elamite.

I The bullae and the numerical tablets

The recent scientific excavations conducted by A. Le Brun on the Acropolis at Susa have

World Archaeology Volume 17 No. 3 *Early writing systems*

© R.K.P. 1986 0043–8243/86/1703/335 \$2/1

enabled us to establish the process which led to the invention of writing (Le Brun 1978, Le Brun and Vallat 1978). Levels 18 and 17 of Le Brun's excavations produced bullae and characteristic tablets which bore only numerals and cylinder seal impressions, without any other form of notation. Thanks to their well-stratified provenance it is now possible to trace the different stages of evolution of the writing system. The Susians of the second half of the fourth millennium recorded their transactions using a system involving clay calculi of different shapes (rod, sphere, disc, small cone), which they enclosed in envelopes, commonly referred to as *bullae*, made of clay. These envelopes, which bore seal impressions on the surface, were of varying dimensions up to about the size of a tennis ball. The small clay objects (calculi), which were of the order of 1 cm. in size, represented units, tens, hundreds, etc. (Fig. 1). In order to check the total in a transaction, or if there were any dispute, it was only necessary to break the bulla to be able to count the original calculi.

In the second stage of development, in order to simplify checking the contents of the bulla, the Susians developed a system using different sized circles or notches on the surface of the bulla to represent the calculi it contained. These circles or notches, made by pressing two styluses of different diameters perpendicularly or obliquely into the clay, were the first graphic signs to be invented by the inhabitants of Susa. From then on it was no longer necessary to break open the bullae in order to know what they contained. It was enough to *read* the markings on the surface. With this the calculi became superfluous, and in consequence, so did the bullae which contained them. It was now sufficient to use the symbols (the circles and notches) on simple pieces of clay. This marked the appearance of the first clay tablets, which thereafter remained the main writing medium used in the Near East for over three millennia.

These different stages in the development of the writing system must have taken place over a relatively short period of time, since examples of all three are found at Susa in the same archaeological level, in the same room, on the same floor, at a time when the archaeological material is stylistically identical with that of Mesopotamia. Identical documents have been discovered at several Mesopotamian sites, and in particular at Uruk. Two specific features of these documents require comment – the shape of the tablet, and the content. The earliest tablets from level 18 (Fig. 1) represent two types, the first oblong and the second markedly rounded, as if they had assumed the shapes of the two types of bullae previously used, the one ovoid and the other spherical. It is only in level 17 that the documents took on a squarer or more rectangular shape. All these tablets are fairly thick (often more than 1.5 cm) and are generally much bulkier and less regular in shape than later documents. Often the signs were impressed deeply after the cylinder seal had been rolled.

These documents, both bullae and tablets, indicate only the quantities involved, and not the nature of the transaction. It has been possible to determine the value of the numerals by using the calculations found on later tablets. However, the type of object exchanged or received had to be indicated implicitly by the seal impression(s): that of a shepherd would reveal that the tablet dealt with a transaction involving animals, whereas that of a baker might indicate an exchange of bread or flour. The exhaustive study which P. Amiet (1972) has made of this glyptic reveals a variety and richness of types which must have allowed a quick and easy identification of each seal owner, an identification

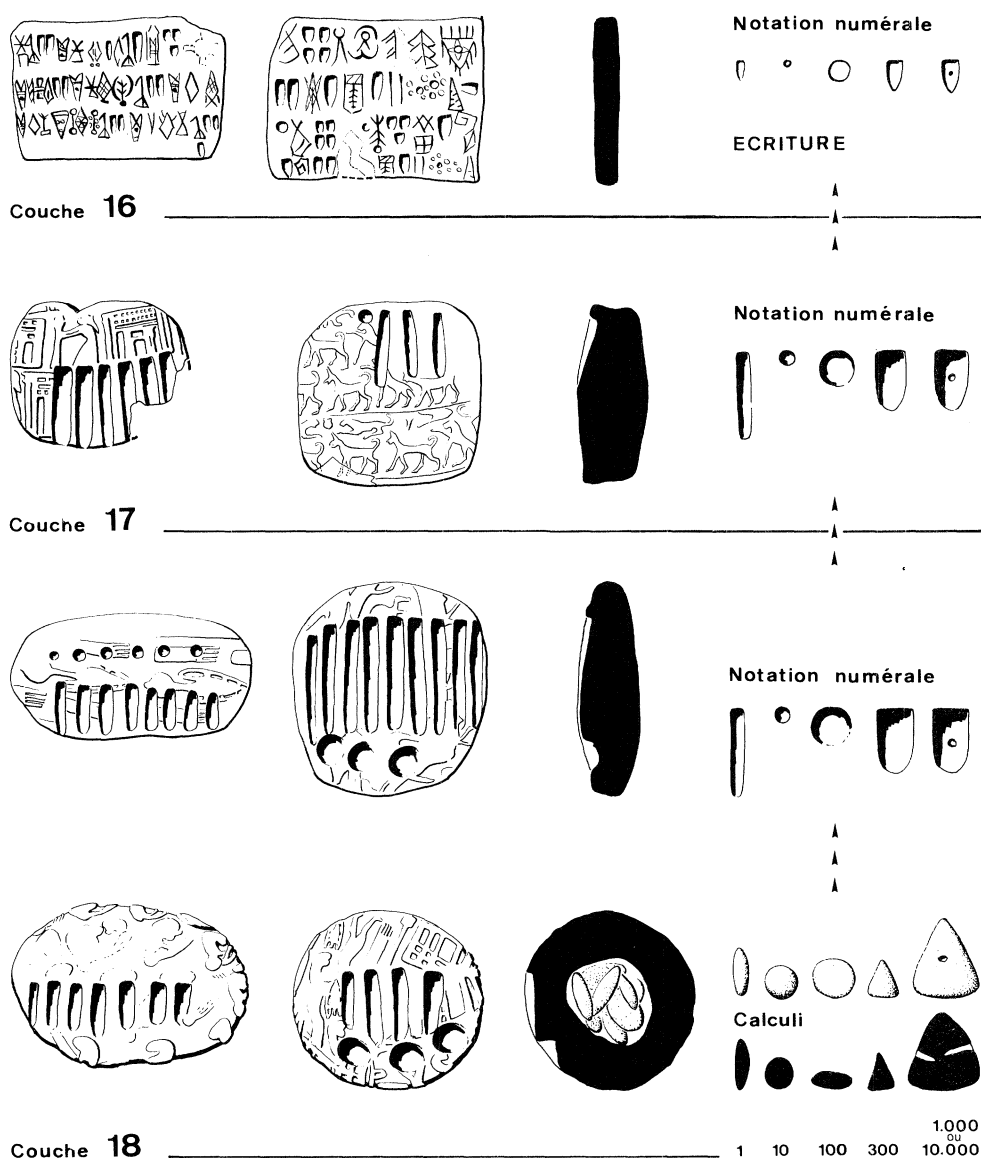


Figure 1 Numerical notation in proto-Elamite.

made all the simpler by the fact that the economy of this era was in the very early stages of its development. Certain scholars, however, consider that the shapes of the calculi themselves indicate the nature of the contract (Amiet 1972 and, following him, Schmandt-Besserat 1977). One or two tablets contemporary with those of level 17 bear a sign which does not appear to be a numeral (Amiet 1972: nos 471, 604), a point which may confirm this hypothesis.

Be that as it may, the vast majority of these documents are marked only with a

numeral and a seal impression. These fragile clay documents, ‘orders’ or ‘receipts’ from an administration in its infancy, imply that man at the end of the fourth millennium had already lost confidence in his fellow man! To append one’s signature and inscribe the total for a transaction (very often for a sum less than a dozen, and sometimes even for a single unit) derives more from legal developments than any purely economic preoccupation! This type of material, attested also at Tepe Sialk (Ghirshman 1938), at Chogha Mish (Porada 1969) and at Godin Tepe (Weiss and Young 1975), has been confused in the publications of V. Scheil, L. Legrain and R. de Mecquenem with the proto-Elamite tablets which were found in the subsequent level of the Acropolis at Susa.

II The proto-Elamite tablets

Level 16 of Le Brun’s excavations marks a complete change from the preceding levels (18–17). The orientation of the houses is different, building methods are new, and the archaeological material, chiefly pottery, bears no similarity to that of Mesopotamia but shows a close relationship to discoveries made on the upper Iranian plateau. Susa now belonged to the Elamite civilization, and the written documents reinforce the evidence offered by archaeology.

With regard to their appearance, the proto-Elamite tablets show the rectangular form that they were to keep for several centuries, indeed for millennia. They are more regular, better made and better proportioned than their predecessors. These tablets are of varying sizes, ranging from 1.2×2.5 cm to a maximum of 17.3×22.7 . The latter, which present the same format as the more everyday examples, may be considered as balance sheets. The principal difference, however, between the proto-Elamite and the numerical tablets lies in the fact that the later documents contain ideograms side by side with the numerals, while seal impressions are less commonly found. Information which previously was only implied is, from then on, explicitly conveyed by means of written signs, i.e. ideograms.

In the publication of the first important group of *Documents archaïques en écriture proto-élamite* (1906), Scheil enumerated 989 different signs (including variants) and concluded that he was dealing with a writing system that was ‘strictly ideographic’. Moreover, the presence on all the documents of numerals (whose value had by then been determined) led him to see these texts as exclusively economic transactions. Indeed, these tablets, written from right to left, present a series of sequences consisting of an ideogram followed by a numeral. Very soon, however (from level 15 onward), this sequence could include several written signs before the numeral. Now the information conveyed could include the purpose of the contract and its conditions, and involve, eventually, a writing system that was partly syllabic, using a syllabary which may at first have been reserved for expressing proper names. In his attempts at decipherment Scheil tried to compare the proto-Elamite with cuneiform signs, being convinced that the two were derived from one and the same ancestor. He was followed in this by Legrain who, in *Empreintes de cachets élamites* (1921), grouped together figured motifs from the seal impressions and the written sign forms by themes, which he related to the corpus of Mesopotamian signs.

In 1923 Scheil published another group of 490 *Tablettes de comptabilité proto-élamites* to which he added an analysis and commentary. Although he enumerated 1582 signs (including variants), he retracted his earlier pronouncement concerning the entirely ideographic nature of the writing:

Les signes d'aspect idéographique plus cursif et négligé
correspondent à des tablets dont la rédaction se charge d'éléments
nouveaux, complexes, objectifs ou phonétiques.

In addition, he admitted that the proto-Elamite tablets were not all from a single period. However, he maintained that the latest group dated to the period of PUZUR-Inšušinak.

This procedure, i.e. comparing the proto-Elamite signs with cuneiform, was still adhered to by Scheil when he published his third series of *Textes de comptabilité proto-élamite* in 1935. It was also used by his successor R. de Mecquenem in 1949 and 1956, in the publication of the last large group of tablets. Still confusing proto-Elamite tablets and those we now know to have been written in Linear Elamite, convinced of the ideographic character of all these documents in view of the 5529 signs and variants that he had established (1949), and positive that their understanding was to be derived from the cuneiform script, de Mecquenem denied even their direction of reading which had already been correctly proposed by F. Bork in 1905. Even if some common origin was shared by the proto-Elamite and Sumerian writing systems, the problem of decipherment would never have been solved by this procedure, since to all intents and purposes it would have been impossible to read these documents given that the signs which appear on the earliest Sumerian tablets have an unknown reading in Elamite. Indeed, even in the latest texts the Elamites often used Mesopotamian ideograms.

Finally, apart from the value of the numerals, little is established with certainty concerning the proto-Elamite script: the direction it should be read (right to left), the ideographic character of the earliest signs – a system rapidly tainted by syllabic usage, and the economic content of all the tablets, recognized by Scheil and confirmed by the studies of W. C. Price (especially 1962) and above all by the impressive work of P. Meriggi (1971–4). The discovery of documents of this type at Tepe Sialk (Ghirshman 1934, 1938), at Tell-i Ghazir (Caldwell 1968, Whitcomb 1971), and more recently at Tepe Yahya (Lamberg-Karlovsky 1971), Tell-i Malyan (Stolper 1976 and forthcoming) and Shahr-i Sokhta in distant Seistan (Amiet and Tosi 1978) has added nothing to decipherment. However the locations of these excavations confirm that Susa was situated in the Elamite sphere of influence and leads one to suppose that this writing originated on the Iranian Plateau (Figure 2).

III Linear Elamite

Documents in Linear Elamite were for a long time confused with proto-Elamite tablets. In 1905, when Scheil published the first group of *Documents archaïques en écriture proto-élamite*, which consisted both of clay tablets and stone inscriptions (texts A, B and C), he considered all these inscriptions to be contemporary and dated them to the reign of PUZUR-Inšušinak, last king of the Awan dynasty, whose name appears on the

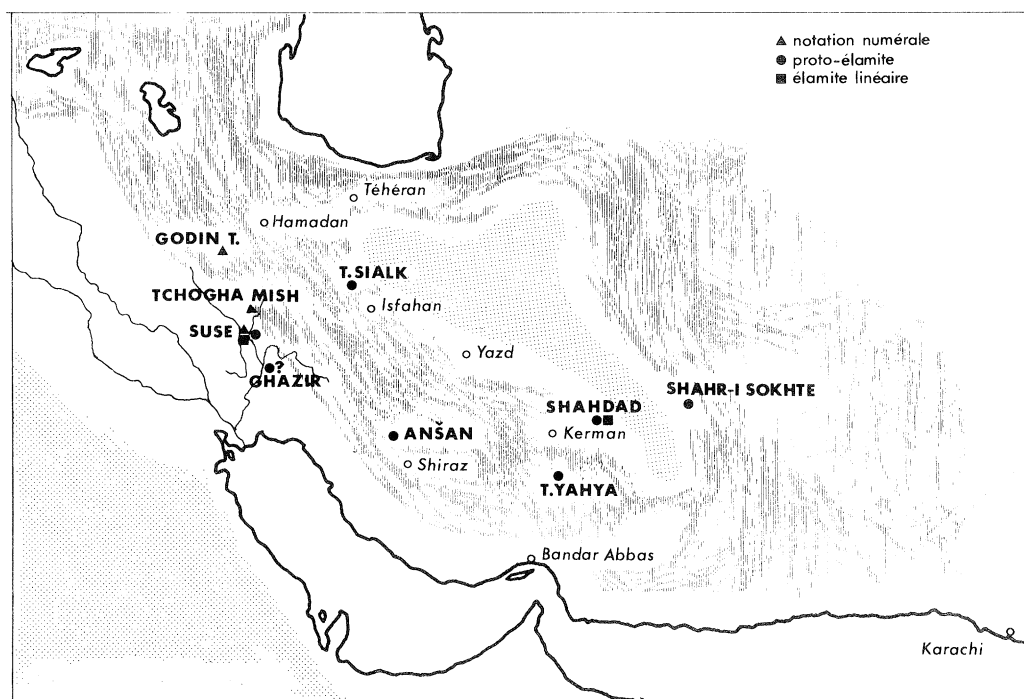


Figure 2 Sites from which epigraphic evidence has been recovered.

Akkadian (and therefore readable) text which accompanied inscription A. Shortly after the appearance of this first publication, Bork produced a commentary on it which was of interest from more than one point of view (1905). First of all, he drew a distinction between the clay tablets and the three linear inscriptions on stone. In studying text A (Figure 3), he observed that the lines, being each of the same height, were of unequal length, from which he deduced the direction of writing: the signs from top to bottom, and the columns from left to right. Then he produced a fundamental hypothesis, namely that inscription A was a translation of the Akkadian text which read:

To his lord Inšušinak, PUZUR-Inšušinak,
viceroy of the land of Elam, governor of Susa,
son of Šimpišhuk, dedicated this (foundation) cone
of copper and cedar.

By isolating in the Elamite text two identical sequences of signs which could represent the name of the god Inšušinak, which appears in the first line of the Akkadian text and in the second line in the name of the ruler, he accordingly attributed a value to various signs:

I 7 = II 5 = *šu*
I 8 = II 6 = *ši*
I 9 = II 7 = *na*
I 10 = II 8 = *ak*

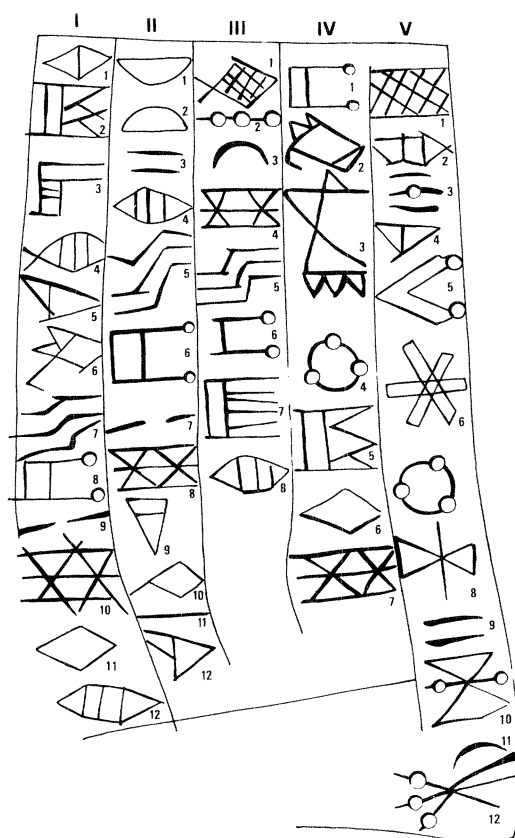


Figure 3 Linear Elamite Inscription A.

Further different values follow on naturally from this initial decipherment; thus the sign I 6 which precedes *šu-ši-na-ak* could only be *in*, and in line III the two signs which follow *šu* could be *še* and *en*, since the sequence should stand for Susa (or Susiana), which appears in the titulary of the Akkadian text. Thinking, furthermore, that the text was couched in the first person, Bork suggested that the often repeated sign I 4, I 12, II 4, III 8, and V 2, could be read *ik*, the locutive suffix which indicates the first person.

In this brief article Bork had established the basis for the decipherment of Linear Elamite. He was followed along this path by C. Frank (1912, 1923), who established the value of certain signs more precisely, in particular that of I 5 which he considered to be the divine determinative (*nap* in Elamite), but his work was completely ignored by Scheil, who wrote when publishing his 1923 book:

Sur l'hypothèse d'un phonétisme rigoureux et de l'emploi
de la langue anzanite [i.e. élamite], dans cette écriture,

– M. C. Frank, le seul qui ait tenté quelque chose dans ce domaine, a établi son travail: *Zur Entzifferung der altelamischen Inschriften* (1912) (. . .). L’auteur s’occupe des seuls textes lapidaires qui sont, selon nous, contemporains de nos moins anciennes tablettes et décèlent quelque phonétisme. De son effort ne nous retiendrons rien, sinon qu’un certain groupe de signes, souvent répété, pourrait se lire Šušinak.

In fact Scheil remained quite unpersuaded by the researches of his German colleagues. When in 1935 he published the third group of ‘Textes de comptabilité proto-élamites’, which included six linear inscriptions on clay (J, K, L, M, N, O), he reiterated his doubts as to the equivalence of inscription A and the Akkadian text. He was followed in this view by Legrain (1921) and de Mecquenem (1949, 1956).

The decipherment of Linear Elamite was taken up again, several years later, by W. Hinz (1962) who himself accepted the theories of Bork and Frank regarding the direction the texts were read, their syllabic character and the value of certain signs, in particular those used to inscribe the name Inšušinak. The discovery in the neighbourhood of Persepolis of a silver vase with an inscription in Linear Elamite gave Hinz, in 1969, the opportunity to publish that text and re-examine the whole of his previous work. Today this publication constitutes the basic tool of reference for the study of the linear script in the sense that it brings together all the elements, including photographs of the documents themselves, which are not to be found in the monumental work of Meriggi (1971–4). Accepting also that inscription A is a translation of the Akkadian text, Hinz devoted himself first to isolating the name of PUZUR-Inšušinak’s father, Šimpišhuk. Observing that line IV begins with *ši-in-* and ends with *-ik*, he concluded that the seven signs in this line represent the proper name which he read *ši-in-pi-hi-iš-hu-uk*. This reading led him to look for the word ‘son’ at the beginning of line V: V 1 = *ša*, V 2 = *ki*, V 3 = *ri*: *ša-ki-ri* (‘son’).

This interpretation, however, raises various problems. Since the Elamite text as a whole seems to be in the first person, the word ‘son’ ought to be written syllabically *ša-ki-ik* (not *ša-ki-ri*). Moreover, in the father’s name, the decipherer added the syllable *-hi-* which does not appear in the Akkadian version. Finally, inscription E which ends with the name Šimpišhuk should not contain the word ‘son’ which would make the end of the text incomprehensible. It seems therefore that line IV of text A, which begins *ši-in-* and ends *-ik* must contain not only the name of the father of the king but also the word ‘son’ with the locutive suffix, that is to say, ending in *-k*, indicating a first person context. However, ‘son of Šimpišhuk’ is written syllabically with nine signs (if one removes the *-hi-* which is not attested in the Akkadian version):

ši-in-pi-iš-hu-uk ša-ak-ik

But line IV contains only seven signs. In order to overcome this difficulty it is reasonable to suppose that a sign can represent a closed syllable, like the *šim-* in Akkadian which begins the name Šimpišhuk, and/or that Linear Elamite, like contemporary Akkadian, used certain ideographic signs side by side with writing that was essentially syllabic. One could then assume, as a hypothesis, that sign IV 3 is *piš* (as was already proposed by Bork

in 1924) and that IV 6 is the ideogram ŠAK, representing the word for 'son'. One would thus have:

ši-in-piš-hu-uk ŠAK-ik

This new interpretation, if proved to be correct, would imply the need for a great number of modifications in the general system proposed by Hinz, and partly accepted by Meriggi. First of all, line V would no longer commence with *ša-ki-ri* ('son of'). On the contrary, since the value *ki* is assured for sign V 2, one could suggest *li-ki*, the Elamite word for 'nail', which would fit neatly with the Akkadian version. Then, the value *uk* for sign IV 5 would have to be restored in I 2. In place of *te-im-tik-ki* 'to the lord' of Hinz, one would have *mu-uk-tuk-ki* 'to the master/sovereign', or 'to my master' (*muktu*, 'master', 'sovereign', is attested at this period in the Akkadian onomasticon). Finally, to return to inscription A, one would have to give the value *hu* to sign V 7, which would be the first syllable of the word *hu-sa*, which means 'wood' in Elamite and could correspond to the word 'cedar' of the Akkadian version. This hypothesis would lead to another important point: certain linear signs could have two values, one ideographic, the other syllabic, as in Akkadian. Thus, the value ŠAK for sign IV 6 would not make sense in I 11 where one would expect *ik*:

nap in-šu-ši-na-ak ik-ki: 'to Inšušinak'.

The example of line IV of inscription A illustrates well the difficulties of deciphering Linear Elamite, difficulties which are of several types. The first major obstacle arises from the paucity of material available. The corpus consists of only 19 inscriptions of unequal interest:

- 9 stone inscriptions (A to J)
- 7 texts inscribed on clay (K to P + R)
- 1 inscription on the silver vase from Fars (Q)
- 1 inscription on a potsherd from Shahdad (S).

One should not, however, be misled by this total of 19. It must be stressed that the 7 texts on clay (all fragmentary) are of very little use in decipherment. None of the sequences of signs attested in the stone inscriptions is to be found on these clay documents, with the exception of inscription P which consists only of the name of the king. Moreover, amongst the stone inscriptions a few, such as F, G, H or C and E, seem to be repetitions of the same single text. Thus we find ourselves dealing with a very limited corpus of material. As a result, it is often impossible to verify a hypothesis, particularly since, of the 103 signs recorded, more than 40 are *hapax legomena*, i.e. the signs are attested only once, or they are always attested in the same context.

Together with this two-fold difficulty, one is obliged to take account of the ineptitude of the craftsmen who carved the stone inscriptions. The same signs do not always have the same form, and in some instances one cannot be certain whether or not a supplementary graphic element should be given the value of a diacritic which would alter the reading of the sign. For some signs we know that a supplementary element does modify the value, thus sign III 6, probably to be read *še*, is to be distinguished from I 8 (*ši*). Conversely, the tail of the lozenge which certain modern copyists have added to the

sign I 11 has no diacritical value, since in the same word this sign appears with and without the appendage. However, for the many signs which are not found in identical sequences, doubt remains.

Another difficulty arises from our poor knowledge of the Elamite language in general, and of Old Elamite in particular. This first coherent corpus we have dates to the Middle Elamite era, to the dynasty of the Igiḫalkids and that of the Sutrukids (13th–12th centuries), or nearly a millennium after the time of the few Old Elamite texts. The first readable Elamite document, that is to say written in cuneiform characters, is the ‘Naram-Sin Treaty’ (2254–2218), a large but fragmentary tablet published by Scheil in 1911 but still today largely incomprehensible. An Elamite tablet found at Tello and published by C. Gros in 1910 is equally untranslatable. With the exception of a few words, it is only the verb forms which allow the recognition in this document of the language of the Plateau. Finally, two small tablets recently published by M. Lambert complete the meagre total of Old Elamite documents. Under such conditions it is rarely possible to verify a hypothesis concerning the linear script by means of contemporary inscriptions. Thus the titulary of PUZUR-Inšušinak, who in Akkadian is ‘viceroys (GÍR.NITÀ) of the country of Elam, governor (*ensi*) of Susa’, would be, according to Hinz:

zunkik hal-me-ka hal-me-ni-ik šu-si-im-ki

in linear script. This he translates as ‘König des Landes, Landerbe von Susa’. The hypothesis is attractive, but poses numerous epigraphic and historical problems. For example, the title *halmenik*, which F. Grillett has recently studied and now translates as ‘sovereign’, is only attested up to now in connection with Elam, and never with Susa or Susiana. At the same time, the expression rendered by Hinz as ‘king of the land’ (of the country of Elam as opposed to that of Susiana), is a title attributed to Inšušinak in inscription B. But it would be astonishing even at this time if Inšušinak, the chief deity of Susa and Susiana had been considered ‘King of Elam’. Finally, in the decipherment by Hinz the expression in the Akkadian text ‘dedicated a (foundation) cone of copper and cedar’ is only partially translated in the Elamite.

Certain hypotheses of Hinz are based, moreover, on dubious readings. The signs I 2 and IV 5, which are identical on the monument, are given the values *im* (I 2) and *iš* by Hinz, who at the same time denies the existence of any linear sign with more than one value. As for the beginning of the Elamite king’s name, which is read by Hinz *ku-ti-ki-šu-ši-na-ik*, even if this is plausible there is no way of verifying the reading of the first signs. Also, grammatical errors such as *ša-ki-ri*, a third person form in a first person context, permit us to entertain some reservations about the readings proposed by the German scholar. This is also the view of Meriggi (especially 1971) in commenting on these hypotheses of which, however, he accepts the basic principles. The main source of disagreement between the two scholars lies in the fact that Hinz considers all the stone inscriptions to have been written in the first person, whereas Meriggi reads all the texts in the third person. On this point it is difficult to follow Meriggi since he reads line III *halmenik susenri*, thereby mixing the first and the third person in the same expression, something which is grammatically unacceptable. These few examples taken solely from inscription A, which remains the basis for decipherment since it appears to be the translation of the Akkadian text, illustrate the variety of difficulties of the undertaking

and highlight the numerous questions posed by Hinz's decipherment. Nonetheless, his attempt remains the most significant contribution so far towards resolving the enigma of the linear writing.

Linear Elamite, the heir to proto-Elamite writing, at least as far as the visual appearance of the signs is concerned, appeared as an intermediate Elamite script in the history of Susiana, whose inhabitants had already adopted the cuneiform writing system of the Mesopotamians, with whom they were so closely linked. Used, it would seem, only during the reign of PUZUR-Inšušinak, i.e. at the beginning of the Old Elamite period (the expression proto-Elamite B, which is sometimes used to designate Linear Elamite, is thus inappropriate), Linear Elamite is still far from revealing all its secrets. The only aspects of which we can feel certain are the direction of reading (variable), the essentially syllabic character of the writing, established values for some dozen signs and the period during which it was used. At present it seems that only the discovery of new linear inscriptions will allow the verification of existing hypotheses and the development of new ones to overcome the obstacles to further research, since the decipherment of proto-Elamite can only proceed with a sound knowledge of Linear Elamite as a basis from which to work.

27.vii.85

Centre National de la Recherche Scientifique, Paris

Acknowledgements

I would like to express my warmest gratitude to Odile Daune-Le Brun for her skilful work on the illustrations.

References

- Amiet, P. 1972. *Glyptique susienne, des origines à l'époque des Perses Achéménides*. Mémoires de la Délégation Archéologique en Iran 43, 2 volumes. Paris: P. Geuthner.
- Amiet, P. and Tosi, M. 1978. Phase 10 at Shahr-i Sokhta: Excavations in Square XDV and the Late 4th Millennium B.C. Assemblage of Sistan. *East and West* 28: 9–31 (with an Epigraphic Note by P. Meriggi).
- Bork, F. 1905. Zur protoelamischen Schrift. *Orientalistische Literatur-Zeitung* 8: 323–30.
- Bork, F. 1924. *Die Strichinschriften von Susa*. Königsberg i. Pr.
- Brice, W. C. 1962. The writing system of the Proto-Elamite account tablets of Susa. *Bulletin of the John Rylands Library* 45: 15–39.
- Caldwell, J. R. 1968. Ghazir. Tell-i. *Reallexikon der Assyriologie* 3/5: 348–55.
- Frank, C. 1912. *Zur Entzifferung der altelamischen Inschriften*. Berlin: Verlag der Königl. Akademie der Wissenschaften.
- Frank, C. 1923. *Die altelamischen Steininschriften* (Drittes Jahrtausend v. Chr.) Ein neuer Beitrag zur Entzifferung. Berlin.
- Ghirshman, R. 1934. Une tablette proto-élamite du Plateau iranien. *Revue d'Assyriologie et d'Archéologie Orientale*, 31: 115–19.

- Ghirshman, R. 1938. *Fouilles de Tépé Sialk*, I. Paris.
- Hakemi, A. n.d. *Ecriture pictographique découverte dans les fouilles de Shahdad*. Permanent Bureau of the International Congress of Iranian Art and Archaeology. Tehran.
- Hinz, W. 1962. Zur Entzifferung der elamischen Strichschrift. *Iranica Antiqua* II: 1–21.
- Hinz, W. 1969. *Altiranische Funde und Forschungen*. Berlin: W. de Gruyter.
- Hinz, W. 1971. Eine altelamische Tonkrug-Anschrift vom Rande der Lut. *Archaeologische Mitteilungen aus Iran* N.F. 4: 21–4.
- Hinz, W. 1975. Problems of Linear Elamite. *Journal of the Royal Asiatic Society* 2: 106–15.
- Lamberg-Karlovsky, C. C. 1971. Proto-Elamite account tablets from Tepe Yahya, Iran. *Kadmos* 10: 97–9.
- Lamberg-Karlovsky, C. C. 1971. The Proto-Elamite settlement at Tepe Yahyâ. *Iran* 9: 87–96.
- Le Brun, A. and Vallat, F. 1978. L'origine de l'écriture à Suse. *Cahiers de la Délégation Archéologique Française en Iran* 8: 11–70.
- Le Brun, A. 1978. Chantier de l'Acropole I. *Paléorient* 4: 177–92.
- Legrain, L. 1921. *Empreintes de cachets élamites*. Mémoires de la Mission Archéologique de Perse, 16. Paris: E. Leroux.
- Mecquenem, R. de. 1949. *Epigraphie proto-élamite*. Mémoires de la Mission Archéologique en Iran, 31. Paris: E. Leroux.
- Mecquenem, R. de. 1956. Notes proto-élamites. *Revue d'Assyriologie et d'Archéologie orientale* 50: 200–4.
- Meriggi, P. 1969. Altsumerische und proto-elamische Bilderschrift. *Zeitschrift der Deutschen morgenländischen Gesellschaft*. Supplementband 1: 156–63.
- Meriggi, P. 1969. Zur Lesung und Deutung der proto-elamischen Königsinschriften. *Bibliotheca Orientalis* 26: 1976–7.
- Meriggi, P. 1971. Zu den neuen Inschriften in proto-elamischer Prunkschrift. *Bibliotheca Orientalis* 28: 171–3.
- Meriggi, P. 1971–4. *La scrittura proto-elamica*. 3 volumes. Roma: Accademia Nazionale Dei Lincei.
- Porada, E. 1969. Iranian art and archaeology: A report of the Fifth International Congress, 1968. *Archaeology* 22: 54–65.
- Scheil, V. 1900. *Textes élamites-sémitiques*. Mémoires de la Délégation en Perse 2. Paris: E. Leroux.
- Scheil, V. 1905. *Documents en écriture proto-élamite*. Mémoires de la Délégation en Perse 6. Paris: E. Leroux.
- Scheil, V. 1923. *Textes de comptabilité proto-élamites* (nouvelle série). Mémoires de la Mission Archéologique de Perse 17. Paris: E. Leroux.
- Scheil, V. 1935. *Textes de comptabilité proto-élamites* (troisième série). Mémoires de la Mission Archéologique de Perse 26. Paris: E. Leroux.
- Schmandt-Besserat, D. 1977. An archaic recording system and the origin of writing. *Syro-Mesopotamian Studies* 1/2: 31–70.
- Stolper, M. W. 1976. Preliminary report on texts from Tâl-e Malyân, 1971–1974. *Proceedings of the IVth Annual Symposium on Archaeological Research in Iran*. Tehran.
- Stolper, M. W. (forthcoming). Proto-elamite Texts from Tall-i Malyan.

- Vallat, F. 1971. Les documents épigraphiques de l'Acropole (1969–1971). *Cahiers de la Délégation Archéologique Française en Iran*, 1: 235–45.
- Vallat, F. 1973. Les tablettes proto-élamites de l'Acropole (campagne 1972). *Cahiers de la Délégation Archéologique Française en Iran* 3: 93–107.
- Vallat, F. 1978. Le matériel épigraphique des couches 18 à 14 de l'Acropole. *Paléorient* 4: 193–5.
- Weiss, H. T. and Young, T. C. Jr. 1975. The merchants of Susa: Plateau-lowland relations in the late fourth millennium B.C. *Iran* 13: 1–18.
- Whitcomb, D. S. 1971. *The Proto-Elamite Period at Tall-i Ghazir*, Iran. M.A. Thesis, University of Georgia.

Abstract

Vallat, François

The most ancient scripts of Iran: the current situation

Between the second half of the fourth millennium B.C. and the end of the third, three writing systems succeeded one another at Susa and on the Iranian Plateau. Around 3200 B.C. clay bullae and tablets attest the use of an exclusively numerical notation, at a time when relations between Susa and Mesopotamia were extremely close. From around 3100 until about 2700 B.C., proto-Elamite writing, probably invented on the Plateau, was employed for economic purposes. At first ideographic, this script, as yet undeciphered, became increasingly syllabic, like the Linear Elamite of more than half a millennium later. At the end of the third millennium, at a time when the scribes of Susa had already adopted the Mesopotamian cuneiform characters, an Elamite invader, PUZUR-Inšušinak, imposed the linear script, derived from proto-Elamite signs. Despite recent efforts, in particular those of W. Hinz and P. Meriggi, these linear inscriptions remain largely incomprehensible. Only the discovery of new inscriptions may enable further progress in their decipherment.