



The Diffusion of the Cuneiform Writing System in Northern Mesopotamia: The Earliest Archaeological Evidence

Author(s): Philippe Quenet

Source: *Iraq*, Autumn, 2005, Vol. 67, No. 2 (Autumn, 2005), pp. 31-40

Published by: British Institute for the Study of Iraq

Stable URL: <https://www.jstor.org/stable/4200597>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



British Institute for the Study of Iraq is collaborating with JSTOR to digitize, preserve and extend access to *Iraq*

JSTOR

THE DIFFUSION OF THE CUNEIFORM WRITING SYSTEM IN NORTHERN MESOPOTAMIA: THE EARLIEST ARCHAEOLOGICAL EVIDENCE

By PHILIPPE QUENET¹

The invention of writing in southern Mesopotamia at the end of the fourth millennium BC had many and long-lasting consequences. As far as the Early Bronze Age is concerned, one of the most remarkable of these consequences is that the cuneiform writing system that gradually emerged in southern Iraq during the first part of the Early Dynastic period spread to northern Syria around the mid-third millennium BC. A flourishing scribal tradition was already firmly established throughout the Syrian Jezirah and inner Syria by the advent of the Akkadian period.

It is difficult to establish the reasons and mechanisms that led the elites of northern Syria to borrow the practice of writing from their counterparts in southern Iraq. The steps in this process are even more unclear. Hence the aim of this paper is to gather material evidence that may help us shed light on those questions. As an archaeologist, I will not discuss here the content of epigraphical finds, but only their context and chronological attribution according to the chronological divisions in northern and southern Mesopotamia respectively.

The earliest written records known in northern Mesopotamia date back to the second half of the fourth millennium BC, that is, to the end of the Uruk period in this region, usually, but still ambiguously, termed “Late Uruk”. A more precise dating is not required here, because I will not deal specifically with this phase. Suffice it to say that calibrated radiocarbon dates from Syrian and Anatolian sites give a time range of 3300–2900 BC (di Nocera 2000). At meetings held in 1998 in Istanbul and Santa Fe (New Mexico), many scholars agreed to date the end of the Uruk to around 3000 BC (Marro and Hauptmann 2000; Algaze *et al.* 1998, now published as Rothman 2001).

The earliest north-Mesopotamian written records were found at Tell Brak (Oates 1982, 191 and Pl. XV/c), Habuba Kabira South and Jabal Aruda (Talon and van Lerberghe 1993, Nos. 17–18, 61–2) in so-called “Late Uruk” contexts. They are numerical tablets of a kind previously known from contemporaneous contexts in Uruk and Susa (Algaze 1989 and 1993). Two unbaked clay labels were also found in an Akkadian or post-Akkadian secondary context in Tell Brak, associated with Late Uruk material (ceramics but also one *bulla*). They are incised with what are assumed to be zoomorphic pictographs and numeral signs. Their date was therefore pushed back tentatively to the Uruk period (Oates 1985, 164; Finkel 1985, 187–9, Fig. 1 and Pl. XXXII).

In the current state of knowledge it appears that only numerical tablets come from secure Late Uruk contexts in northern Mesopotamia, whereas southern sites of the same period have yielded many pictographic tablets that are much more elaborate than the Brak labels. We may infer from this that the practice of writing was not as well developed in the north as in the south at that time, nor does it seem to have been as deeply rooted because it completely disappeared at the onset of the Bronze Age when the Uruk culture itself came to an end.

Writing fell into disuse in the North for a few centuries. It reappeared first on cylinder seals and sealings in the shape of short pictographic inscriptions. Three cylinder seals come from Mari (Fig. 1). All of them were found in the Ishtar Temple and belong to the so-called “Crossed Style”, as defined by Martin (Martin 1988, 64 ff.). The first one comes from level a (Fig. 1/c). It depicts three pairs of crossed animals associated with three anthropomorphic figures. It is made of shell and is rather thick (2.5 cm in diameter), so that it was probably not cut from a columella of *Fasciolaria trapezium*, as it is most often the case for shell cylinder seals, but of *Turbinella pyrum*.

¹I.F.P.O. Damascus. An abridged version of this paper was first read at the International Conference of the Fifth Millennium for the Invention of Writing in Mesopotamia held in Baghdad in March 2001. This is the occasion for me to express my warm thanks to those who made the

conference possible, and my admiration for Iraqi archaeologists who have been courageously working for years under very difficult conditions. I am also grateful to A. McMahon and M. Makinson and the editorial board of *Iraq* for correcting my original English text.

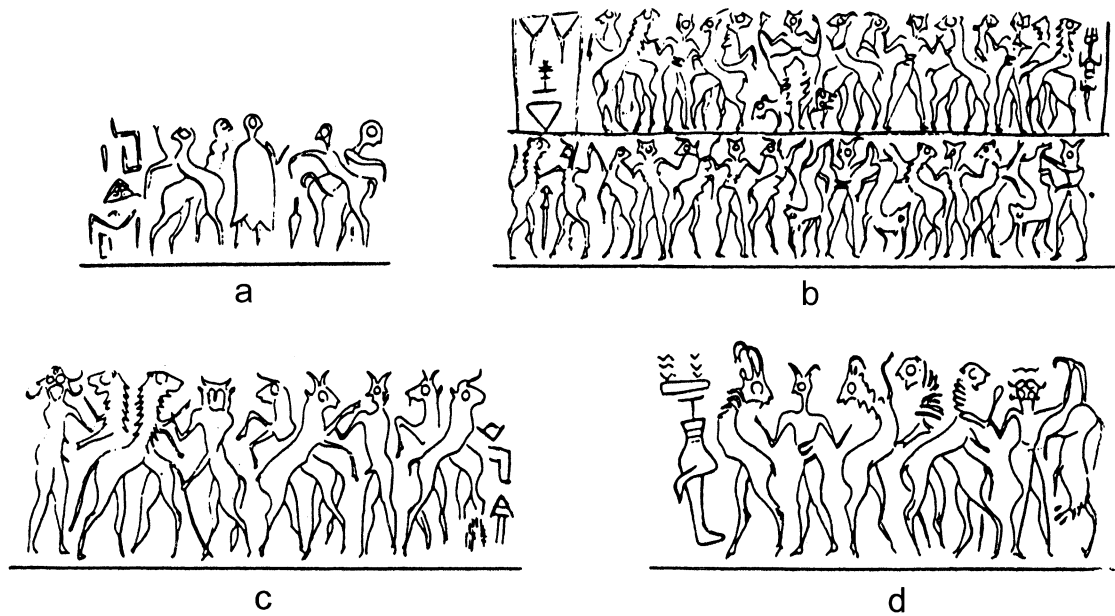


Fig. 1. Inscribed cylinder seals from (a) Tell Hammam Seghir and (b–d) Mari (after Amiet 1980).

This species lives nowadays along the coast of the Gulf of Kutch and further south (Gensheimer 1984). This would suggest that the raw material of this seal was imported from the Indus area. It is engraved with an inscription to be read Utu-ur-sag, “The sun god is the hero” (Parrot 1956, 189, Pl. LXV/183; Amiet 1980, Pl. 72^{bis}/A; Hammade 1994, 46, No. 328; Talon and van Lerberghe 1993, No. 307).

The second cylinder seal comes from level b (Fig. 1/b). It is divided into two registers. The motifs are nearly the same as in the previous example. A few details may be noted: some animals are represented in a *tête-bêche* position, a dagger or sword is present in the lower register, a kind of salamander in the upper one. It is even thicker than our first cylinder and was cut from white limestone (\varnothing 3.4 cm). Boulders of that stone, carried by the river and stranded on its banks, are found all along the Euphrates valley. However, primary limestone deposits are also known along this valley, from Iraq to Syria (Moorey 1994, 21, 38). According to Lambert, the inscription says “Incantation of a child-deity Dumu-nun” (*šita-dumu-nun*) (Parrot 1956, 190, Pl. LXV/1080; Amiet 1980, Pl. 72/960; Petit Palais 1983, No. 89; Kohlmeyer and Strommenger 1982, No. 51; Weiss 1985, No. 51; Matthiae *et al.* 1985, No. 45; Hammade 1994, 46, No. 327; Talon and van Lerberghe 1993, No. 308).

The third and last Mari cylinder seal comes from level c/d (Fig. 1/d). In one register, it also depicts crossed animals (one of which is *tête-bêche*) and anthropomorphic figures. Its material is not identified with any certainty. It might be chalcedony, a mineral related to carnelian, but greyish or bluish in colour. If so, it was imported from outside Mesopotamia, either Iran or Gujarat (Tosi 1976–80). The inscription is transcribed Sar-II by Dossin and translated “(The god) Il is the king” (Parrot 1956, 189–90 and Pl. LXV/1388; Amiet 1980, Pl. 72^{bis}B and 1985, 477 and Fig. 4).

On the basis of glyptic style, the dating of these cylinder seals is easy. All of them are pure examples of the “Crossed Style”, which is attributed to the second part of the ED II period as defined in the Diyala sequence. A few radiocarbon determinations from Mari itself, Abu Salabikh and Nippur suggest that ED IIIa begins *ca* 2600 BC (Wright 1980). The Mari cylinder seals should therefore belong to a period ranging approximately from 2700 to 2600 BC. The double-registered cylinder seal is perhaps the latest of the three, because this is a feature that is quite uncommon before ED IIIa.

Crossed Style cylinder seals are mainly found in central Mesopotamia, where the Crossed Style itself probably originated. The Mari examples display such similarity with the Fara corpus that

they almost certainly constitute imports.² For this reason, one may question whether the ED II inscribed cylinder seals from Mari really do provide some of the earliest evidence of writing in Early Bronze Age Syria, and whether they should be considered as written documents from a Mari point of view. In other words, could they be read by anyone in Mari? Moreover the chronological attribution is based on stylistic criteria alone so that the stratigraphic contexts in which the cylinder seals were found need to be examined.

Parrot published few pottery vessels from the Ishtar Temple.³ Three are assigned to the “Priests’ Room” (the name given to the building east of the cella in the four levels a–d) without any further details. Three of them consist of Metallic Ware (Parrot 1956, 208–9),⁴ namely one slightly corrugated goblet (Parrot 1956, 208, Fig. 100/M.378), one Spiral-Burnished pot (Parrot 1956, 209, Fig. 101/M.531) and one Syrian bottle (Parrot 1956, 209, Fig. 100/M.379). A useful Metallic Ware chrono-typology has not yet been established, but Syrian bottles are typical of the later part of EB III and EB IV in northern Mesopotamia (after *ca* 2500 BC) (Schachner and Schachner 1995; Lebeau 2000, Table V/Early Jezirah IIIb–V). A fourth piece, discovered in the Temple, is a tripod cup, the feet of which look like handles (Parrot 1956, 213, Fig. 104/M.866). This is a type known in the Diyala in the ED III period (Delougaz 1952, Pl. 168/C.011.201.a), but Kish, Nuzi (Parrot 1956, 212, note 1), Nineveh (Campbell Thompson 1933, Pl. LXXI/7) and Tepe Gawra (Speiser 1935, Pl. XXIX/b and LXXV/212) have also yielded similar cups. These pots do not allow us to give a precise dating to the levels in which our cylinder seals were discovered. Further evidence is needed.

To judge from the numerous statues of worshippers found in it, level a clearly does not predate ED IIIb. Indeed, many of them belong to “Stilstufe III” as defined in Braun-Holzinger 1977. If we exclude the cylinder seals from level b, both in the Fara style (Parrot 1937, 63–4; Parrot 1956, 189, Pl. LXV/138; Amiet 1980, Pl. 68/908; Amiet 1985, 477 and Fig. 4), few diagnostic finds come from the Temple floors of levels b–c. One cylinder seal from level c is to be noted. Though not illustrated, it is obviously ED III, because one of its figures is a lion whose head is represented from above (Parrot 1956, 191: M.1061).

The stone-built graves Nos. 241–2 date to a phase between levels c and d (Parrot 1938, 4, 6 and 7 and 1956, 10–11 and Pl. VII/Coupes sur les niveaux a, b, c, d; Jean-Marie 1990, 305–6). The pots are lost, but metal objects that were part of their furnishing were published. One spearhead (Jean-Marie 1990, Pl. IX/2, M.1319; Jean-Marie 1999, Pl. 41/upper left corner, M.1319) belongs to a type as early as ED IIIa in the Royal Cemetery of Ur (Woolley 1934, Pl. 227/U.9122, Type 2a). This type is mainly attested in the ED III graves (Nissen 1966, Taf. 17). It is also present at Fara (Heinrich and Andrae 1931, Taf. 39/e). Two bent toggle pins with a flattened perforated shaft and a rounded head are similar to Woolley’s type 7 (Woolley 1934, Pl. 231), which is at home in the ED IIIa graves in the Royal Cemetery (Nissen 1966, Taf. 17). Other south-Mesopotamian examples are nevertheless dated from ED II to the Akkadian period (Coessens 1989).

In level d there is an interesting group of pottery. Once again there is a tripod cup (Parrot 1956, 220, Fig. 107/M.1570). Two jars of Euphrates Banded Ware (Parrot 1956, 221, Fig. 107/M.1548–9) have counterparts in the Tawi and Halawa Cemeteries (Kampschulte and Orthmann 1984, Taf. 1/4 and 8, 17/14 and 33/10; Orthmann 1981, Taf. 71/6) and Tell Banat Tomb 1 (Porter 1995, 19–20 and Pls. 14–16). A radiocarbon date from the latter gives a time span of 2890–2490 BC (Porter 1995, 21–2). Euphrates Banded Ware is best dated to the first part of North-Mesopotamian EB III (*ca* 2600–2450 BC): Early Jezirah IIIa (Lebeau 2000, Table V) or horizon 2A (Jamieson 1993). Euphrates Banded Ware is attested for instance in the following stratified contexts:

1. At Tell Khuera Early ID in Kleiner Antentempel 2/3 (Kühne 1976, Abb. 88 = Taf. 8/2) dated to the twenty-fifth and twenty-fourth centuries BC (Pfälzner 1998; Khuera 1998b; Lebeau 2000, Table IV) and Khuera IC (Steinbau I, level 7; Orthmann 1995, Abb. 27/76).

²What is certain is that the shell and the chalcidony(?), from which two of them were cut, reached Mari through southern Mesopotamia.

³Ishtar Temple ceramics referred to in the text are

illustrated in Fig. 4.

⁴They are called “Fine Black-Burnished Wares” by Parrot. They can now be seen in the Aleppo Museum.

2. At Tell Bi'a in the shape of a Syrian Bottle in Grabbau 6, Raum 3 (Strommenger *et al.* 1993, Abb. 19/b = Strommenger and Kohlmeyer 1998, Taf. 99/7), in a tomb to be dated early in the North-Mesopotamian EB III, earlier anyway than the Palace B or Ancient Palace, itself dated to 2567–2039 bc by C¹⁴ (Görsdorf 1993).
3. At Tell Jokhah, where ED II–Early ED III levels were excavated (Rumayidh al-Jabbouri 1988, Pl. 18/a).
4. At Abu Salabikh in ED IIIa Graves G.100 and 102 (Postgate 1977, 295) and G.176 (Postgate and Moon 1982, 131 and 1983a, 70).
5. At Fara (Martin 1988, Fig. 85) in a possible post-ED II (ED IIIa?) context (Schachner and Schachner 1995, 85–6).

A chalice fragment (Parrot 1956, 223 and Fig. 107/upper row, third from the left) can also be compared to tripod chalices from Tell Banat Tomb 1, the feet of which are made of hollow tubes (Porter 1995, 17, Fig. 12/P113 and P61). Finally there is the neck of a Metallic Syrian bottle (Parrot 1956, 223 and Fig. 107/upper row, second from the left). We may conclude that level d is roughly contemporary with the middle and/or earlier part of ED III.

Below level d lay the stone-built tomb No. 300 (Jean-Marie 1990, 307 and Pl. XI). It was richly furnished. Among the metal objects were a high-necked, spouted vessel (Jean-Marie 1990, Pl. XVI/2, M.1480 = Jean-Marie 1999, Pl. 45/M.1480) and two forked pins or bidents (Jean-Marie 1990, Pl. XVI/2, M.1478 = Jean-Marie 1999, Pl. 45/M.1478) that find their closest *comparanda* in the “Y” Cemetery at Kish (Müller-Karpe 1993, Taf. 172), dated to ED II (Algaze 1983–4; Porada 1992, I, 104). One crescentic axe head is similar to axe heads found in an ED II context at Tell Agrab (Delougaz 1942, 257; Hillen 1955, Fig. 1; Tubb 1982, 9, Fig. 2/23) and in an EB II/III context (Steinbau 2, level 4) at Tell Khuera (Klein and Orthmann 1995, 79–81, Abb. 37/22 and 38/21).⁵ For these reasons, the traditional ED I date attributed to the Mari burial must be reconsidered. It was based on the fact that two upright-handled Scarlet Ware jars were found in it. I think that this statement, without any further comments, may be misleading.

Parrot was the first to have used this argument (Parrot 1938, 5 and Pl. II/4). Consequently, he dated Tomb 300 to ED I. This dating was challenged long ago by Delougaz, who was right in pointing out that no ED I parallel could be found for these jars (Delougaz 1952, 141). Moreover Scarlet Ware is not confined to ED I, either in the Diyala or in the Hamrin basin. This type survives until ED II at least (see Delougaz 1952, 69–72, 80, 141, Pls. 15 and 60–2 concerning Khafaje and Tell Agrab, and Gibson 1981, 141, Pls. 84 and 85/1–2 concerning Tell Razuk). Scarlet Ware is even attested in an ED III context at Sabra (Tunca 1987, 58, Pls. 19/2, 66/1) and in early Akkadian contexts at Razuk (Gibson 1981, 76, Pls. 92/2, 98/10) and at Gubbah (Odani and Ii 1981, 156, Fig. 21/2). The Mari jars are more akin to the pots of that period. As they lack the usual carinated shoulder of the Diyala or Hamrin examples, they are most probably local imitations of Late ED II/Early ED III date. As for the remaining pots, Lebeau gathered several *comparanda* (Lebeau 1990) that would also be dated now, even by him, to *ca* 2600 bc (Lebeau 2000).

The Ishtar Temple sequence should finally be reconstructed as follows. Tomb 300 is contemporaneous with ED II, level d, and Tombs 241–2 are ED IIIa at the earliest. Levels c to a are later, level a dating to the end of ED III or very beginning of the Akkadian period. As a consequence our inscribed cylinder seals, which all come from levels a–d, were found in post-ED II contexts (ED IIIa at the earliest). Either all these cylinder seals were already in use at Mari in the ED II period, or they constitute heirlooms kept for centuries, but this question cannot be answered. It can be noted, nonetheless, that the cylinder seal found in level c or d is probably earlier than any tablet discovered in Syria. Yet, especially if this object was imported from southern Mesopotamia, it does not prove in itself that cuneiform writing was used in Mari before late ED IIIb.

The same can be said of a cylinder seal from Tell Hammam Seghir on the Syrian bend of the Euphrates (Woolley 1914, 90–1 and Pl. XXVII/a; Hogarth 1920, 25, Pl. I/2; Amiet 1963, 69 and 1980, 65, Pl. 72/952) (Fig. 1/a). It was part of a group of objects allegedly belonging to one tomb (Tomb-group I) and purchased by Woolley. Unfortunately, its context cannot be ascertained. The pots from this tomb (if it ever contained any) were mixed with the ceramics from two other tombs.

⁵ See Pfälzner 1998 and Khuera 1998b for dating. Many other identical crescentic axe heads are known, but their contexts are ill-defined.

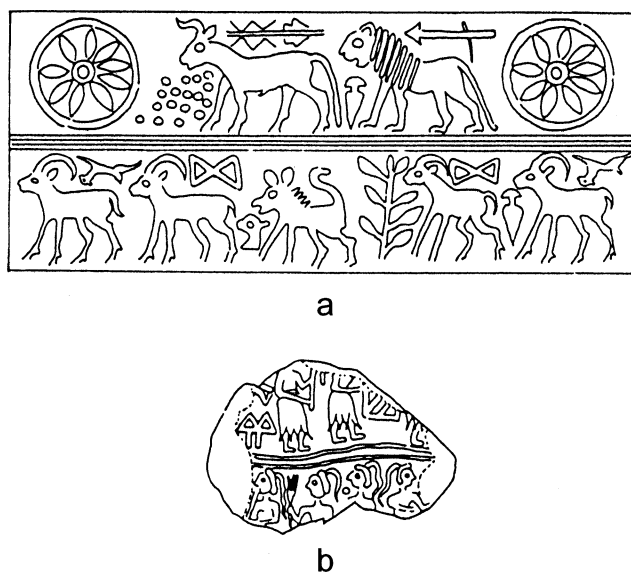


Fig. 2. Two inscribed cylinder seals from Tell Khuera (after Moortgat and Moortgat-Correns 1978).

This heterogeneous assemblage includes Euphrates Banded Ware and one corrugated goblet of the *Mardikh IIB1* type. It therefore covers the whole EB III period and not only the Late EB III/Early EB IV transition as has been asserted (Wäfler 1979, 791; Curvers 1991, 36; Jamieson 1993, 54). One flat axe head, two straight toggle pins and several beads were associated with our cylinder seal, but they do not permit a closer dating. As far as I know, the inscription has not been interpreted (Amiet 1963, 69, reads “ma-zu-é”).

There are two further early inscribed north-Syrian sealings that are much better stratified than the previous glyptic material. They come from Tell Khuera (Moortgat and Moortgat-Correns 1978, 30–1 and Abb. 12–13) (Fig. 2). They were found in level 5 of the West extension of the *Kleiner Antentempel*.⁶ Their motifs are arranged in two registers separated by a double median line. Their style is local and they are engraved with signs that look like rudimentary pictographs. I am not aware of anyone having tried to interpret or even comment on them. The level from which they were excavated is now fairly securely dated to the beginning of Khuera IC, that is ca 2600 BC (Pfälzner 1998; Khuera 1998b; Lebeau 2000, Table IV).

In contrast to the Mari cylinder seals, seals used to impress the Khuera sealings were certainly not imported. It means that the pictographs were locally engraved. However, until they are deciphered, they cannot be used to support a knowledge of writing in the north-Syrian Jezirah in early EB III, for they could have served some ornamental purpose. They do show that at least the existence of cuneiform signs was known by north-Syrian peoples well before the end of ED IIIb, probably through the Fara glyptics. Even if our Mari examples were found out of context, they would allow us to account for the presence at Khuera not only of pictographs, but also of Fara-style sealings that were found in Steinbau I, level 7a (Orthmann 1995, Abb. 14/9) and level 5 (*ibid.*, Abb. 14/4, 6 and 7) in the early stage of period IC,⁷ and also in an indeterminate context (Moortgat 1965, 7, 43–4, Abb. 1; Amiet 1980, 206, Pl. 130/1744).

A final inscription is probably also early (Fig. 3). It comes once again from Mari (*INANNA-ZAZA* Temple, Room 13). It is engraved on the statue of a worshipper whose name was first transcribed as *TAGGE* (Parrot 1953, 211–12 and Fig. 10 and 1956, 49–51, Figs. 53–6 and Pl. XXIV). The stylistic attribution of this sculpture is difficult as only the lower part of the body has survived, although a nude torso, much damaged, may have belonged to it. Considering that only the bottom of the skirt is fringed and that the whole statue is awkwardly cut, it is probably not later than the first part of ED III (Spycket 1981, 70–1 and Fig. 26). So the inscription should be of the same date.

⁶ This area is now known as K-West.

⁷ See Pfälzner 1998; Khuera 1998b; Lebeau 2000, Table IV for dating.

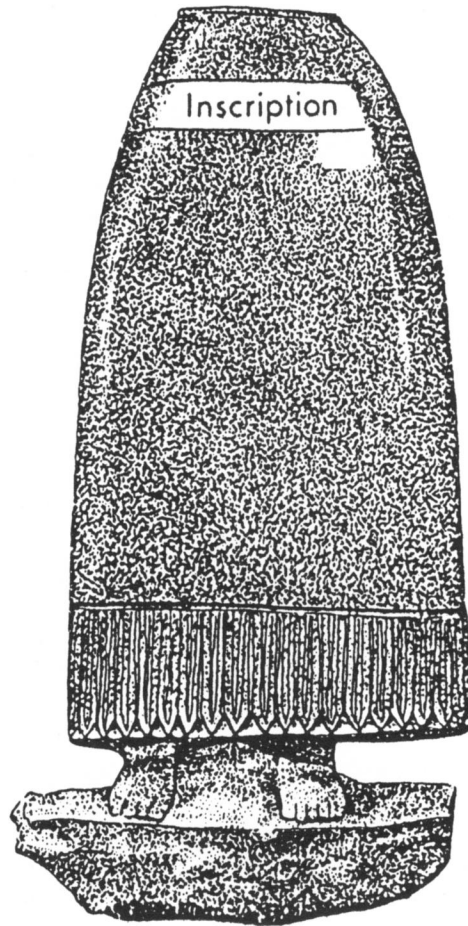


Fig. 3. Gypsum statue of TAGGE from Mari (after Spycket 1981).

Once we accept this dating, Edzard's comments about the inscription (Edzard 1985) become enlightening. The signs are recognizable, he says, but so oddly combined that their reading remains unclear. One may suppose that, before standard rules of orthography were finally adopted, there was a period of training, hesitation, adaptation and chaotic spelling, for we must not forget that the south-Mesopotamian cuneiform system was not originally conceived for the transcription of the language of Mari.

From the beginning to the end of EB III, the cuneiform script does not seem to have been used on smaller sites. Yet a handful of numerical tablets were found on Middle Khabur sites such as Tell Kashkashok (Talon and van Lerberghe 1993, 21, No. 130), Tell ar-Raqa'i (Curvers and Schwartz 1990, 7, Fig. 7; Schwartz and Curvers 1993-4, 253), Tell 'Atij (Fortin 1988, 114; 1989, 47-8, Fig. 16; Fortin 1990, 239, Fig. 20; Fortin 1993-4, Abb. 37; Fortin 1993, 285, Nos. 179, 444; Talon and van Lerberghe 1993, 214, No. 128) and Tell Bderi (Pfälzner 1990, 77; Maul 1992; Talon and van Lerberghe 1993, 214, No. 129). Whether those sites were in one way or another linked to the major surrounding urban centres is still a matter of debate. There is no doubt, however, that the use of tablets and of a numerical written system was inspired by models commonly found in urbanized areas: "Palais Présargonique 1" in Mari yielded such a numerical tablet (Parrot 1965, 12 and Fig. 10) and very similar numerical tablets, probably out of context, come from Middle Bronze Age levels at Tell Bi'a (Krebernik 1990, 86-7, Nos. 22-3). One may wonder moreover if bookkeeping would have been necessary in such small villages unless they had close economic relations with the main cities of north Syria.

By the end of ED III the cuneiform writing system had become normalized and was widely used in north Syria. Between them Mari, Beydar and Ebla have yielded thousands of tablets (for

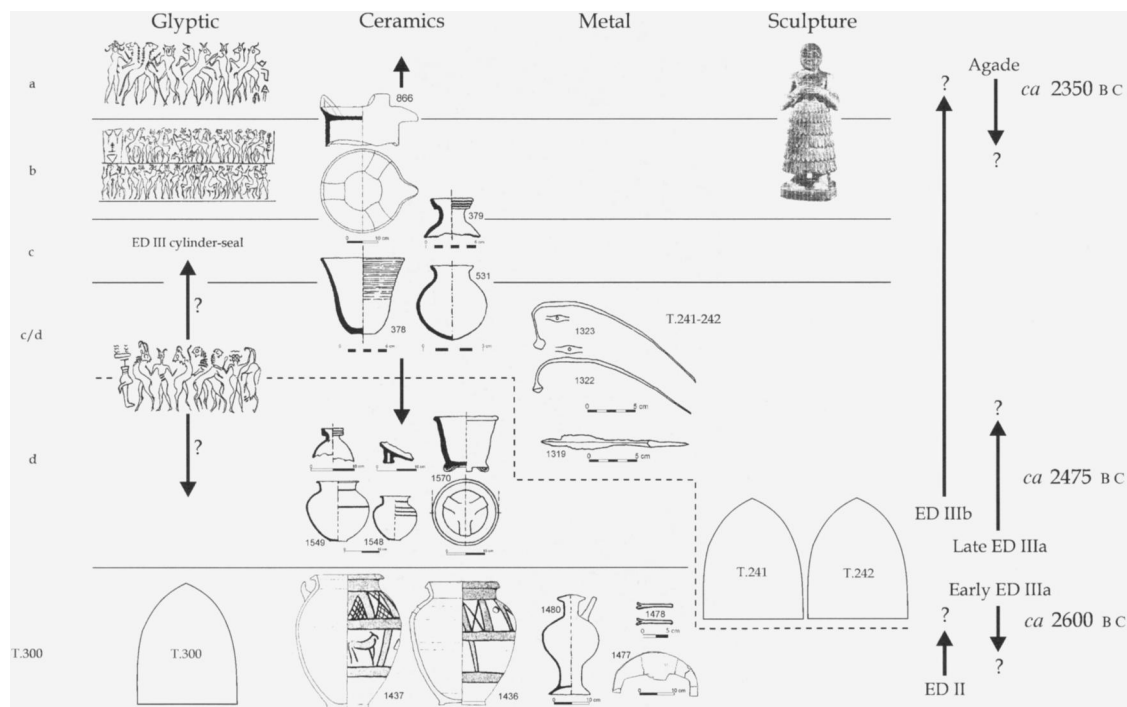


Fig. 4. Schematic stratigraphy of the Ishtar Temple at Mari.

a comprehensive overview, see Talon and van Lerberghe 1993). Isolated finds come from Tell Bi'a (Kohlmeyer and Strommenger 1995, 44–5, Abb. 1) and Tell Brak (Oates and Oates 1993, 159, Fig. 43; Talon and van Lerberghe 1993, 267, No. 335). They contain religious, literary, historical, lexical, administrative and accounting texts. The language is Semitic in every case, even if each region transcribes its own dialect. The documents of this period have been the subject of many studies, but it is especially important to note here that the scribal tradition from which they stem is that of central Mesopotamia.⁸

Indeed, before the Akkadian period writing appears to have been confined, in north Syria, to an area where Fara-style cylinder seals are also well attested. Both obviously spread along the Euphrates. From central Mesopotamia they reached Mari, then the western Jezirah and inner Syria. According to the data presented here, this phenomenon took place *ca* 2600 BC or slightly before, at the time when several other Early Dynastic cultural features were adopted in north Syria. The adoption of cuneiform writing is therefore but one aspect of a much wider phenomenon.

References

- Algaze, G., 1983–4: Private Houses and Graves at Ingharra, a Reconsideration, *Mesopotamia. Rivista di Archaeologia* 18–19, 135–93.
- Algaze, G., 1989: The Uruk Expansion: Cross-Cultural Exchange Early Mesopotamian Civilization, *Current Anthropology* 30/5, 570–608.
- Algaze, G., 1993: *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization*. Chicago.
- Algaze, G., D'Altroy, T., Frangipane, M., Nissen, H. J., Pittman, H., Pollock, S., Rothman, M. S., Schwartz, G. M., Stein, G. J., Wright, H. T., 1998: *School of American Research Advance Seminar: Mesopotamia in the Era of State Formation (March 1–5, 1998)*. www.science.widener.edu/ssci/mesopotamia. Web site.
- Amiet, P., 1963: La glyptique syrienne archaïque. Notes sur la diffusion de la civilisation mésopotamienne en Syrie du nord, *Syria. Revue d'Art Oriental et d'Archéologie* 40, 57–83.
- Amiet, P., 1980: *La glyptique mésopotamienne archaïque* (2nd edition), Paris.
- Amiet, P., 1985: La glyptique de Mari: État de la question, *Mari, Annales de Recherches Interdisciplinaires* 4, 475–85.

⁸ The fact that this scribal tradition is also Semitic probably helped the diffusion of writing into Northern Syria.

- Braun-Holzinger, E. A., 1977: *Frühdynastische Beterstatuetten* (Abhandlungen der Deutschen Orient-Gesellschaft 19). Berlin.
- Campbell Thompson, R., 1933: The British Museum Excavations at Nineveh 1931–32, *Liverpool Annals of Archaeology and Anthropology* 20, 71–127.
- Coessens, B., 1989: Bent Pins in the Near East in the Third Millennium B.C., in De Meyer and Haerink 1989, 85–98.
- Curvers, H. H., 1991: *Bronze Age Society in the Balikh Drainage (Syria)*. Unpublished Ph.D. Dissertation, University of Amsterdam.
- Curvers, H. H. and Schwartz, G. M., 1990: Excavations at Tell al-Raqa'i: A Small Rural Site of Early Urban Northern Mesopotamia, *The American Journal of Archaeology* 94, 3–23.
- Delougaz, P., 1952: *Pottery from the Diyala Region* (Oriental Institute Publications 63). Chicago.
- Delougaz, P. and Lloyd, S., 1942: *Pre-Sargonid Temples in the Diyala Region* (Oriental Institute Publications 53). Chicago.
- De Meyer, L. and Haerink, E. (eds.), 1989: *Archaeologia Iranica et Orientalis. Miscellanea in Honorem Louis vanden Berghe* (2 vols.), Gent.
- di Nocera, G.-M., 2000: Radiocarbon Datings from Arslantepe and Norşuntepe: The Fourth–Third Millennium Absolute Chronology in the Upper Euphrates and Transcaucasian Region, in Marro and Hauptmann 2000, 73–93.
- Edzard, D. O., 1985: Le soi-disant “TAGGE” et questions annexes, *Mari, Annales de Recherches Interdisciplinaires* 4, 59–62.
- Ehrich, R.-W. (ed.), 1992: *Chronologies in Old World Archaeology* (Third Edition — 2 vols.). Chicago and London.
- Finkel, I. L., 1985: Inscriptions from Tell Brak 1984, *Iraq* 47, 187–201.
- Fortin, M., 1988: Mission archéologique de l'Université de Laval en Syrie sur les sites de Tell 'Atij et de Gueda (IIIe mill. av. J.-C.), *Echos du Monde Classique/Classical Views* 32/7, 103–15.
- Fortin, M., 1989: Trois campagnes de fouilles à Tell 'Atij : Un comptoir commercial du IIIème millénaire en Syrie du Nord, *Bulletin of the Canadian Society for Mesopotamian Studies* 18, 35–55.
- Fortin, M., 1990: Rapport préliminaire sur la seconde campagne de fouilles à Tell 'Atij et la première à Tell Gueda (automne 1987), sur le Moyen Khabour, *Syria. Revue d'art oriental et d'archéologie* 67/2, 219–55.
- Fortin, M., 1993–4: Tell 'Atij 1987–1988, *Archiv für Orientforschung* 40–1, 225–8.
- Fortin, M., 1993: Tell 'Atij, in Rouault and Masseti-Rouault 1993, 153–6.
- Fujii, H. (ed.), 1981: Preliminary Report of Excavations at Gubba and Songor, *al-Rafidan* 2.
- Gensheimer, T. R., 1984: The Role of Shell in Mesopotamia. Evidence of Trade/Exchange with Oman and the Indus Valley, *Paléorient* 10/1, 65–73.
- Gibson, McG. (ed.), 1981: *Uch Tepe I. Tell Razuk, Tell Ahmad al-Mughir, Tell Ajamat* (Hamrin Report 10). Chicago and Copenhagen.
- Görsdorf, J., 1993: Vorbericht zu den Radiokohlenstoffdatierungen aus Tall Bi'a, *Mitteilungen der Deutschen Orient-Gesellschaft* 125, 61–8.
- Hammade, H., 1994: *Cylinder Seals from the Collections of the Aleppo Museum, Syrian Arab Republic. 2. Seals of Known Provenance* (British Archaeological Reports. International Series 597). London.
- Heinrich, E. and Andrae, W., 1931: *Fara, Ergebnisse der Ausgrabungen der D.O.G. in Fara und Abu Hatab, 1902–3*. Berlin.
- Hillen, C., 1955: *The Early Development of Metal-Working in the Ancient Near East*. Unpublished Ph.D. Dissertation, University of Chicago.
- Hogarth, D., 1920: *Hittite Seals, with Particular Reference to the Ashmolean Museum Collection*. Oxford.
- Jamieson, A. St., 1993: The Euphrates Valley and Early Bronze Age Ceramic Traditions, *Abr-Nahrain, an Annual Published by the Department of Middle Eastern Studies, University of Melbourne* 31, 36–92.
- Jean-Marie, M., 1990: Les tombeaux en pierre de Mari, *Mari, Annales de Recherches Interdisciplinaires* 6, 303–36.
- Jean-Marie, M., 1999: *Tombeaux et nécropoles de Mari*, Mission Archéologique de Mari 5 (Bibliothèque Archéologique et Historique 153). Beyrouth.
- Kampschulte, I. and Orthmann, W., 1984: *Gräber des 3. Jahrtausends vor Chr. im Syrischen Euphrattal. 1. Ausgrabungen bei Tawi 1975 und 1978* (Saarbrücken Beiträge zur Altertumskunde 38). Bonn.
- Kerner, S. (ed.), 1990: *The Near East in Antiquity I. German Contributions to the Archaeology of Jordan, Palestine, Syria, Lebanon and Egypt*. Amman.
- Khuera, 1998a: *Tell Chuera, Martin-Luther-Universität Halle-Wittenberg, Institut für Orientalische Archäologie und Kunst*. www.orientarch.uni-halle.de/chuera. Web site.
- Khuera, 1998b: Tell Chuera, Syrien — Fundort und Grabungsbereiche, in Khuera 1998a, 1998/chuinfo.html#info.
- Klein, H. and Orthmann, W., 1995: Grabungen im Bereich des Steinbau 2, in Orthmann et al. 1995, 73 ff.
- Kohlmeyer, K. and Strommenger, E. (eds.), 1982: *Land des Baal. Syrien – Forum der Völker und Kulturen*. Mainz.

- Kohlmeyer, K. and Strommenger, E., 1995: Die Ausgrabungen in Tall Bi'a 1994 und 1995, *Mitteilungen der Deutschen Orient-Gesellschaft* 127, 43–55.
- Krebernik, M., 1990: Die Textfunde aus Tall Bi'a, *Mitteilungen der Deutschen Orient-Gesellschaft* 122, 67–87.
- Kühne, H., 1976: *Die Keramik von Tell Chuera und ihre Beziehungen zu Funden aus Syrien-Palästina, der Türkei und dem Iraq*. Berlin.
- Lebeau, M., 1990: La céramique du tombeau 300 de Mari (Temple d'Ishtar), *Mari, Annales de Recherches Interdisciplinaires* 6, 349–74.
- Lebeau, M., 2000: Stratified Archaeological Evidence and Compared Periodizations in the Syrian Jezirah during the Third Millennium B.C., in Marro and Hauptmann 2000, 167–92.
- Marro, C. and Hauptmann, H. (eds.), 2000: *Chronologie des pays du Caucase et de l'Euphrate aux IV^e–III^e millénaires. Actes du colloque d'Istanbul, 16–19 décembre 1998* (Varia Anatolica 11). Istanbul/Paris.
- Martin, H. P., 1988: *Fara, a Reconstruction of the Ancient Mesopotamian City of Shuruppak*. Birmingham.
- Matthiae, P., Mazzoni, S. and Scandone-Matthiae, G., 1985: *Da Ebla a Damasco. Diecimile anni di archeologia in Siria*, Milano.
- Maul, S., 1992: *Die Inschriften von Tall Bderi* (Berliner Beiträge zum Vorderen Orient Texte 2). Berlin.
- Moorey, P. R. S., 1994: *Ancient Mesopotamian Materials and Industries. The Archaeological Evidence*. Oxford.
- Moortgat, A., 1965: *Tell Chuera in Nordost-Syrien. Vorläufiger Bericht über die 4. Grabungskampagne 1963* (Wissenschaftliche Abhandlungen der Arbeitsgemeinschaft für Forschung des Landes Nordrhein-Westfalen 31). Köln and Opladen.
- Moortgat, A. and Moortgat-Correns, U., 1978: *Tell Chuera in Nordost-Syrien. Vorläufiger Bericht über die 8. Grabungskampagne 1976* (Schriften der Max Freiherr von Oppenheim Stiftung 11). Wiesbaden.
- Müller-Karpe, M., 1993: *Metallgefäße im Iraq I (Von den Anfängen bis zur Akkad-Zeit)* (Prähistorische Bronzefunde 2/14). Stuttgart.
- Nissen, H. J., 1966: *Zur Datierung des Königsfriedhofes von Ur*. Bonn.
- Oates, D., 1982: Excavations at Tell Brak, 1978–81, *Iraq* 44, 187–204.
- Oates, D., 1985: Excavations at Tell Brak, 1983–84, *Iraq* 47, 159–74.
- Oates, D. and Oates, J., 1993: Excavations at Tell Brak, 1992–93, *Iraq* 55, 155–99.
- Odani, N. and Ii, H., 1981: Tell Gubba, in Fujii 1981, 141–63.
- Orthmann, W., 1981: *Halawa 1977 bis 1979. Vorläufiger Bericht über die 1. zu 3. Grabungskampagne* (Saarbrücken Beiträge zur Altertumskunde 31). Bonn.
- Orthmann, W., 1995: Die Grabungen am Steinbau I, in Orthmann *et al.* 1995, 17–72.
- Orthmann, W. and Pruß, A., 1995: Der Palast F, in Orthmann *et al.* 1995, 121–72.
- Orthmann, W., Hempelmann, R., Klein, H., Kühne, C., Novak, M., Pruß, A., Vila, E., Weicken, H. M. and Wener, A., 1995: *Ausgrabungen in Tell Chuera in Nordost-Syrien I. Vorbericht über die Grabungskampagnen 1986 bis 1992* (Vorderasiatische Forschungen der Max Freiherr von Oppenheim-Stiftung 2). Saarbrücken.
- Parrot, A., 1937: Les fouilles de Mari. Troisième campagne (Hiver 1935–6), *Syria. Revue d'art oriental et d'archéologie* 18, 54–84.
- Parrot, A., 1938: Les fouilles de Mari. Quatrième campagne (Hiver 1936–7), *Syria. Revue d'art oriental et d'archéologie* 19, 1–29.
- Parrot, A., 1953: Les fouilles de Mari. Huitième campagne (Automne 1952), *Syria. Revue d'art oriental et d'archéologie* 30, 197–221.
- Parrot, A., 1956: *Le Temple d'Ishtar* (Mission Archéologique de Mari 1), Paris.
- Parrot, A., 1965: Les fouilles de Mari. Quatorzième campagne (Printemps 1964), *Syria. Revue d'art oriental et d'archéologie* 42, 1–24.
- Petit Palais, 1983: *Au Pays de Baal et d'Astarté. 10 000 ans d'art en Syrie*. Paris.
- Pfälzner, P., 1990: Tell Bderi – The Development of a Bronze Age Town, in Kerner 1990, 63–79.
- Pfälzner, P., 1998: Eine Modifikation der Periodisierung Nordmesopotamiens im 3. Jtsd. v. Chr., *Mitteilungen der Deutschen Orient-Gesellschaft* 130, 69–71.
- Porada, E., Hansen, D. P., Dunham, S. and Babcock, S. H., 1992: The Chronology of Mesopotamia, ca. 7000–1600 B.C., in Ehrich 1992, I: 77–121 and II: 90–124.
- Porter, A., 1995: Tell Banat — Tomb 1, *Damaszener Mitteilungen* 8, 1–50.
- Postgate, J. N., 1977: Excavations at Abu Salabikh 1976, *Iraq* 39, 269–99.
- Postgate, J. N. and Moon, J. A., 1982: Excavations at Abu Salabikh 1981, *Iraq* 44, 103–36.
- Rothman, M. S. (ed.), 2001: *Uruk Mesopotamia and its Neighbors, Cross-Cultural Interactions in the Era of State Formation*. Santa Fe/Oxford.
- Rouault, O. and Masseti-Rouault, M. (ed.), 1993: *L'Euphrate e il tempo. Le civiltà del medio Euphrate e della Gezira siriana*. Milano.
- Rumayidh al-Jabbouri, S. S., 1988: *Results of the Tell Chokkeh Excavations* (in Arabic). Baghdad.
- Schachner, Ş. and Schachner, A., 1995: Eine "syrische" Flasche aus Fara, *Mitteilungen der Deutschen Orient-Gesellschaft* 127, 83–96.
- Schwartz, G. M. and Curvers, H. H., 1993–4: Tall ar-Raqa'i 1986–93, *Archiv für Orientforschung* 40–1, 1993–4, 246–57.
- Speiser, E. A., 1935: *Excavations at Tepe Gawra, I (Level I–VIII)*. Philadelphia.

- Spycket, A., 1981: *La statuaire du Proche-Orient ancien* (Handbuch der Orientalistik 7.I.2B2). Leiden/Köln.
- Strommenger, E., Böhme, S., Brandes, M. A., Hemker, Chr., Kohlmeyer, K., Ludwig, W., Schulze-Wischeler, H. and Selz, G., 1993: Ausgrabungen in Tall Bi'a 1992, *Mitteilungen der Deutschen Orient-Gesellschaft* 125, 5–31.
- Strommenger, E. and Kohlmeyer, K., 1998: *Tall Bi'a/Tuttul — I. Die altorientalischen Bestattungen* (Ausgrabungen in Tall Bi'a/Tuttul 1). Saarbrücken.
- Talon, Ph. and van Lerbergue, K. (eds.), 1993: *En Syrie aux origines de l'écriture*. Turnhout.
- Tosi, M., 1976–80: Karneol, *Reallexikon der Assyriologie* 5, 1976–80, 448–52.
- Tubb, J. N., 1982: A Crescentic Axehead from Amarna (Syria) and an Examination from Similar Axeheads in the Near East, *Iraq* 44, 1–12.
- Tunca, Ö., 1987: *Tell Sabra* (Hamrin Report 7). Leuven.
- Wäfler, M., 1979: Zur Datierung von Hama J, *Ugarit Forschungen* 11, 783–98.
- Weiss, H. (ed.), 1985: *Ebla to Damascus. Art and Archaeology of Ancient Syria. An Exhibition from the Directorate-General of Antiquities and Museums, Syrian Arab Republic*. Washington.
- Woolley, C. L., 1914: Hittite Burial Customs, *Liverpool Annals of Archaeology and Anthropology* 6/3, 87–98.
- Woolley, C. L., 1934: *The Royal Cemetery. A Report on the Predynastic and Sargonid Graves Excavated between 1926 and 1934* (Ur Excavations 2). London.
- Wright, H. T., 1980: Problems of Absolute Chronology in Protohistoric Mesopotamia, *Paléorient* 6, 93–8.