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Chapter 8

The rare letters of the Phrygian alphabet revisited¹

Rostislav Oreshko

From all the non-Greek alphabets found in Anatolia in the first millennium BC, the Old Phrygian (OPhr.) is arguably the closest to the Greek. Although stylistically distinct – often featuring more slender letter shapes with shorter side strokes than was usual for Greek letters – the majority of the Old Phrygian inscriptions can be read by those familiar with Greek inscriptions of the Archaic period without any difficulty. Indeed, from the 24 letters recognised in the standard edition of the OPhr. inscriptions, *Corpus des inscriptions paléo-phrygiennes* (Brixhe and Lejeune 1984, 280) and adopted in the recent comprehensive overview of the Phrygian language (Obrador-Cursach 2020a, 31), 17 practically exactly correspond to their familiar counterparts in the Archaic Greek alphabets. Together with a special letter for the non-syllabic *i* (y, no. 18), which is the only important feature distinguishing the Phrygian alphabet from the Greek alphabet, these letters constitute the bulk of the standard Phrygian letter set used in an ordinary Phrygian inscription.

The remaining six letters listed in the table are found practically only in a handful of the OPhr. inscriptions constituting less than 10% of the Phrygian corpus. Moreover, the relative significance of these rare letters is by no means equal. In fact, only two of them (nos. 19 and 20, see Fig. 8.1) are relatively well represented in the corpus and can be properly classified as independent letters that make up part of an ‘average’ Phrygian letter repertoire.

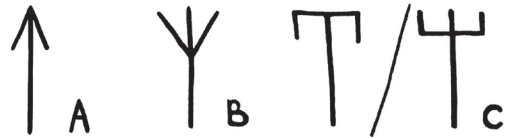


Fig. 8.1. Rare letters of the Old Phrygian alphabet: nos. 19 (A), 20 (B) and 23 (C).

¹ Abbreviations:
OPhr. = Old Phrygian
NPhr. = New Phrygian
Skr = Sanskrit

No. 23 is found very rarely (only in four graffiti on pottery sherds), and its status – a separate letter or a special local variant of another letter – remains not quite evident (see below). No. 22 is claimed to be found (Brixhe and Lejeune 1984, 282) only in two graffiti from Gordion (G-106 and G-244, both being meaningless three-sign sequences) and there is every reason to suspect that in both cases we are dealing with a corrupt text. Similarly, no. 21, found in only one inscription (W-08) on a natural rock, probably is a variant of a usual letter (in all likelihood, *r*). Lastly, no. 24 is very probably simply a graphic variant of *b* (cf. discussion in Obrador-Cursach 2020a, 50–51), more typical, as it seems, for the easternmost part of the Phrygian epigraphic zone, given that it is found in 2 out of 12 known inscriptions coming from this region (P-101 and P-106).

On the other hand, the standard table does not list all letters attested in the Phrygian alphabet. One additional rare Phrygian letter appears to have hitherto escaped identification. It is found in only two very early (c. 740 BC) inscriptions and, as will be argued below, probably represents a further variant of no. 19.

The topic of the present contribution is thus the three rare letters of the Phrygian alphabet (nos. 19, 20 and 23). The discussion will focus primarily on the definition of the exact phonetic value of the letters that hitherto remained controversial (albeit not quite to the same degree), using linguistic, philological and epigraphical evidence. In the final part of the paper, there will be discussed the question of possible ‘relatives’ of these letters within Anatolia – a question on which the establishment of the exact phonetic values sheds some new light.

Letter Ψ (no. 20)

One may count about 10 possible attestations of the crow’s-foot-shaped letter corresponding in essence to the most common variant of Ψ in the Archaic Greek ‘Blue alphabets’ and X in the ‘Red alphabets’.² Four of these possible attestations are found, however, as graffiti on pottery sherds consisting of only one letter (G-278, G-294, G-298, G-306) and may represent a sort of ‘mark’. The claim of Obrador-Cursach (2020a, 38) that the V-shaped character found on 10 other sherds³ is a variant of Ψ is unfounded. In none of the cases the ‘letter’ appears in what can be properly classified as a sensible letter sequence, and there is a strong suspicion that it represents a sort of ‘owner’s mark’; for G-249, which is a special case, see in detail below. There are thus only six real cases in which Ψ appears in a more or less sensible epigraphical context, W-01b, B-07, G-115, G-145, G-224c and G-339, although even from these the last two are much less informative, as both represent three-letter sequences. These are the following:

² It is not clear to me on what count is based Obrador-Cursach’s statement (2020a, 38) that the letter no. 20 ‘occurs twenty-three times in twenty-one different inscriptions’. Somewhat further in the text he mentions only 17 inscriptions (erroneously citing NW-121 twice), including those featuring V.

³ G-225, G-249, G-322, G-324, NW-101, NW-105, NW-112, NW-119, NW-121, NW-126. In fact, it is even dubious that in all these cases we are dealing with the same character: in a number of cases (NW-112, NW-119 or NW-121) the strokes may be a part of bigger and more intricate drawing.



Fig. 8.2. Graffito G-145, Penn Museum Gordion Archive: image G-4620.

1. Graffito G-145 on a jar handle from Gordion: a *scriptio continua* sequence *voineioYuriienoisku* [Brixhe and Lejeune 1984, 131–132; Obrador-Cursach 2020a, 458]. Although the word boundaries are by no means obvious and the sequence is broken at the end, the attestation is important from an epigraphical point of view. The part of the graffiti with the letter Ψ bears clear traces of correction from one letter to another, although it is not quite clear whether Ψ is the former or the final variant of the letter. Due to the importance of the technical side, it seems appropriate to reproduce the graffiti here (Fig. 8.2).
2. Graffito G-115 on the bottom of a small vessel from Gordion, which can be read as *YuvaYaros* (Brixhe and Lejeune 1984, 107; Obrador-Cursach 2020a, 450). The parallels of other graffiti from Gordion suggest that the sequence probably represents a personal name.
3. Graffito G-224c (one of three) on a large cooking pot from Gordion, which can be read as *Yuv* (Brixhe and Lejeune 1984, 181; Obrador-Cursach 2020a, 475). Given that the other two graffiti on the pot represent personal names (*Ata* and *Gartes*), and the only other personal name beginning with *Yuv* is found in G-115, it is quite possible that *Yuv* is an abbreviation for *YuvaYaros* (as already thought by Lejeune 1978, 784).
4. Inscription associated with the so-called ‘*Areystis Monument*’ (W-01b). The letter is found in the word *daYet* in the second clause of the inscription which reads as follows (Brixhe and Lejeune 1984, 39–41; Obrador-Cursach 2020a, 433):

*yos esai-t materey: evetekseti'y: ove vin: onoman: daYet:
lakedo-key: venavtun: avtay: materey*

5. A Middle-Phrygian funerary epigram B-07 (Brixhe 2004, 73–85; Obrador-Cursach 2020a, 441; 2021). The letter is found in the word *aniva*Υ*eti* in the final clause of the inscription:

*Tiv[.]n-ke devuṇ-ke umnotan ordoineten me kos aniva*Υ*eti smanin*

6. A graffito G-339 found on the bottom of a bowl from Gordion consisting of only three letters Υ*ir* (Brixhe 2002, 93). The sequence may be interpreted as an abbreviated personal name, comparable with Υ*uv* in G-224c.

The earliest interpretations of the letter proceeded from its similarity with the Greek letter of the same general shape, which had two different values in its two main alphabetic varieties: /k^h/ in the ‘Red alphabets’ and /ps/ in the ‘Blue alphabets’. Young (1969, 254 with n. 12 and 291) hesitated between the two values, but thought that the correction of Υ to *s* in the graffito G-145 supports its interpretation rather as /ps/ containing a sibilant. Haas (1976, 79–82), on the other hand, tried to defend the value /k^h/ by etymological speculations around the idea of the ‘Phrygian Lautverschiebung’ (now obsolete).⁴ Both interpretations were, however, made obsolete by the special discussion Lejeune (1978) in which he proposed to define its value as /ks/. This suggestion was commonly adopted in the more recent literature (e.g. Ligorio and Lubotsky 2018, 1817). Lejeune proceeded in his interpretation of the letter from G-145 (no. 1 above), arguing that the scribe initially wrote *s* and subsequently corrected it to Υ, which should imply that ‘Υ doit noter une articulation consonantique complexe à composante sifflante (ss? ts? ks? ps? vel sim.)’⁵ (1978, 786). Lejeune preferred /ks/, assuming that the case may be typologically comparable with the variation seen in Greek σύν/ξύν. In the interpretation of the name Υ*uva*Υ*aros* in G-115, Lejeune followed Haas, who suggested that it should be a Phrygian form of the royal Median name known from Greek sources as Κυαξάρης and from the Old Persian Behistun inscription as ^h*Uvaxštra-*, and argued that the value /ks/ fits even better. Lejeune interpreted the form *da*Υ*et* in the Areyastis monument as a suffixal form based on the root *dak-*, adducing as a parallel Latin *faxō* vs. *faciō/fēcī*. As B-07 was discovered only in 1997, Lejeune was not able to use its evidence. It is noteworthy that Lejeune himself was fully aware that the letter value suggested by him is no more than a *possibility* (1978, 788).

Lastly, a new interpretation of the letter was recently proposed by Obrador-Cursach (2020a, 38–49). Obrador-Cursach rejected the evidence of G-145, following a suggestion by Adiego that the scribe had in fact written not Υ but *ou*, and subsequently

⁴ For the recent views on the development of the Phrygian consonants see in general Ligorio and Lubotsky (2018, 1823–1824). One may note, however, that given the size of the Phrygian linguistic area and the likely existence of several dialects already in the early period, it is not excluded that the reflection of the IE consonants was not quite the same in different parts of Phrygia.

⁵ ‘Υ ought to denote a complex consonantal articulation with a sibilant component (ss? ts? ks? ps? or similar).’

inserted *s* between the two letters. He also doubted Lejeune's interpretation of the form *daY Ψ et* as /dakset/ on linguistic grounds (consonantal stems seem to insert *-e-* before the suffix *-s(e)-*), suggesting instead that the form may be a 'spelling variant' of *daket*. Obrador-Cursach found the key piece of evidence confirming this interpretation in G-249, which he read, following Brixhe and Lejeune (1984, 196), as *seY Ψ elt|ias* (omitting, however, three question marks present in the original edition). He further claimed that *seY Ψ el* represents a Semitic borrowing in Phrygian corresponding to *šql* 'shekel, weight' (which gave also Greek σίκλος/σίγλος). Next, using the comparative evidence of an Aramaic inscriptions form Daskyleion, Obrador-Cursach analysed the last clause of B-07, *me kos anivaY Ψ eti smaniñ*, as imprecation with the general meaning 'let nobody harm Manes', and proposed to connect the root of the verb *anivaY Ψ eti* with PIE root **ueh₂g-/ *ueh₂ǵ-* 'break'. Lastly, he assumed that a tectal value (*k* or the like) would be equally suitable for the case *Y Ψ uvaY Ψ aros* as reflecting Median *^hUvaxštra-*. From three possible interpretations of Ψ , which the evidence may imply – a palatalised allophone of /k/, a fricative allophone of *k* (/x/) or simply a graphic variant of *k* – Obrador-Cursach gave preference to the latter.

Neither the 'classical' interpretation of Ψ as /ks/ nor its re-interpretation as a /k/ by Obrador-Cursach are quite satisfactory. Only the very first step of Lejeune's analysis – the assumption that the letter is somehow connected with sibilant *s* – appears to be correct. His further argumentation is contradicted by several pieces of evidence. As for the attempt of Obrador-Cursach (following Adiego) to cast the epigraphical evidence of G-145 into doubt, it fails to convince. All photos that I was able to study in the Gordion Archive (e.g. Fig. 8.2) have only confirmed the previous interpretation of the picture as a case of correction of Ψ to *s*. In fact, the story of the correction is even somewhat more complex, which puts even more value on this evidence (see in detail below).

However, the idea to interpret the letter as /ks/ contradicts the evidence present in one of the inscriptions featuring Ψ , W-01a. Here, the verb *evetekseti'y*, found in just a couple of words before *daY Ψ et*, contains a cluster *-ks-* spelled with two letters. The attempt by Lejeune (1978, 788–789) to explain the obvious contradiction by the general reference to the 'redundancy in the orthographic possibilities' and by an assumption that in *evetekseti'y* there was a morphological border between *evetek-* and *-seti'y* fails to convince. It is difficult to believe in the existence of such 'redundancy' in general as none of the other known alphabets of Anatolia or the Mediterranean shows any apparent signs of it, and all the more difficult to believe that two alleged 'orthographic variants' are found in the same inscription. As for the second point, Lejeune was right that there is a morphological boundary between *evetek-* and *-seti'y*, as the latter part contains the prospective/future suffix *-se-* and the ending *-ti(y)*. However, precisely the same applies to the form *daY Ψ et* which should have the same prospective/future semantics, as it makes a part of the same protasis of an imprecation formula, the two verbs being divided only by the disjunctive *ove* 'or'. If the root were *dak-* 'to do', its *se-*form would be probably spelled as **dakset*. This argument is now even further

strengthened by the recent appearance of a second instance of the spelling *ks* for the phonetic cluster /*ks*/. It is found in the name *Muksos* discovered together with several other names on the beam of the Tumulus MM in 2007 (see Liebhardt and Brixhe 2009, 147–148). There is also a further contextual argument against the interpretation of the form *daYē* as **dak-set*: the verb *dak-* ‘do, make’ is in fact inappropriate in the context of the clause; this point will be addressed in more detail below.

The personal name *YuvaYaros* does not lend any firm support to the reading /*ks*/ either, as its time-honoured comparison with Median name ^h*Uvaxštra-* represents, if taken unbiasedly, a sheer absurdity both from historical and linguistic points of view. To avoid any misunderstandings: the name *YuvaYaros* is found as a graffito (G-115) on the bottom of a grey-ware black-polished drinking bowl excavated on the City Mound of Gordion, the capital of the Phrygians. Similar pottery is in general very well represented in the Middle Phrygian Gordion (c. 800–540 BC). The dating of the object is unclear: like the majority of the pottery material on the City Mound, it was found in rubble fill, and the objects associated with it essentially lack any precise dating. Even if the dating of the fill by Young (1969, 271) to the late sixth century is correct, it gives only a *terminus ante quem* for the object and the graffito, which is useless, since this dating is anyway obvious from the letter shapes. In fact, the shape of the slim six-bar⁶ *s* clearly points in the direction of a relatively early date, possibly first half of the seventh century BC. In any case, nothing in the graffito suggests that the name *YuvaYaros* is anything other than an ordinary Phrygian name, as is the case with dozens of other names incised in the pottery sherds from Gordion. It is noteworthy that, besides *YuvaYaros*, only one further Iranian name, *Asakas*, was tentatively assumed to be attested in Gordion (G-150, Avram 2019, 328–329); however, even in this case, the Iranian character is highly dubious.⁷ The attestation of *Yuv* in G-224c, probably representing an abbreviation of *YuvaYaros*, even further confirms that we are dealing with a local Phrygian name.

On the other hand, the name ^h*Uvaxštra-* is not even a Persian name, which one might theoretically expect to find in Gordion after the Achaemenid conquest of Anatolia c. 540 BC. It is a Median name. Moreover, as far as one can see it is a name associated exclusively with Median nobility. Besides the Old Persian form ^h*Uvaxštra-* (*u-v-x-š-t-r*), the name is attested in Assyrian sources as ^m*Ú-ak-sa-tar* or ^m*Uk-sa-tar*

⁶ The sixth bar of the letter is found close to the ring and is incised only slightly.

⁷ Schmitt 1982, 34. The Iranian origin of *Asaka* is claimed on the basis of its possible Iranian etymology (a diminutive of *asa-* ‘horse’) and the attestations of *Áš-šá-ka*₄ in two Elamite tablets (Tavernier 2007, 118). Neither of the arguments is compelling, as the chance correspondence is not excluded in such a short name. In fact, a very similar name is possibly attested also in another Phrygian graffiti from Seyitömer (W-101, see Bilgen *et al.* 2011) in which one read *asakas* after the broken edge of the sherd. The traces before the word would be compatible with *p* or *m*, but there is no guarantee that this is the first letter of the name and not a part of the preceding word. Even if it is not the same name, it has a very similar morphological structure, and, in the absence of clear indications otherwise, both names can be defined as Phrygian. Lastly, one may point out the name Αἴσακος belonging, according to Apollodorus (3.12.5) and Ovid (*Met.* 11.749–759), to the son of Priam and Arisbe. It is not impossible that the two names are related.

for a Median prince of the eighth century BC, and as Babylonian ^mÚ-*ma-ku-iš-tar* or ^mÚ-*ma-kiš-tar* and Elamite *Ma-ki-iš-tur-ri* or *Ma-ak-iš-tar-ra* for the sixth century king known from Herodotus (1.73, 1.103–107) as Κυαξάρης (for an overview of the evidence see Diakonoff 1993). In addition, the latter name was recently identified also in a late Assyrian document in the form ^mÚ-*ba-ki-is-te-ri* (Roaf 2021). It is obviously a fantastic idea that a Median king of the sixth century BC or a Median prince of the eighth century BC would show up in Gordion, grab a drinking bowl and write his name on it, without any attempt to identify himself as a Median.

No more credible is the linguistic side of the equation, which presupposes that the initial *h-* of the Iranian form would be reflected in the Phrygian alphabet as /ks/ (Lejeune) or /k/ (Haas and Obrador-Cursach). All the cuneiform forms, including the Old Persian, clearly show that already in the eighth century the initial *h-* was a very weak sound, which could be simply ignored in writing. The initial *k-* of the Herodotean form represents an oddity, the source of which is quite unclear; it may well result from a Greek folk-etymological reinterpretation of the name. At any rate, there is absolutely no reason to think that the strange Greek form was known in Gordion. The expected Phrygian spelling would simply ignore the initial weak *h-*, which is supported, *inter alia*, by a piece of onomastic evidence: while the name of the central Anatolian river *Halys* appears with a rough breathing in Greek (Ἁλυς), the personal name *Alus*, well attested both in Phrygia and Lydia, which is likely based on it, appears with the initial *a* (Oreshko 2020, 88, n. 18). In sum, the name Ὑυαῖνος cannot be connected with ^h*Uvaxštra*-Κυαξάρης and should be interpreted in Phrygian terms.

These observations already undermine in part Obrador-Cursach's argument for the re-interpretation of the letter as *k*. From the remaining two pieces of evidence, the heuristic value of the graffito G-249, regarded by Obrador-Cursach as the key piece of evidence, is in fact close to zero. There is every reason to think that the graffito does not encode any verbal message at all, but only *imitates* writing. Indeed, the 'letters' of the graffito (for a drawing and the photo see Brixhe and Lejeune 1984, 195 and pl. CVI) not only have 'un dispositif bizarre' (Brixhe and Lejeune 1984, 195) unimaginable for a normal text – in fact *not a single one* of the characters corresponds to a normal Phrygian letter. The reading *se[?]Y[?]e[?]lt|ias* proposed by Brixhe and Lejeune (1984, 196) is as arbitrary as, for instance, 'κύριε βοήθησε' would be. No better-founded is the definition of the object as an 'alabaster weight' given by Brixhe and Lejeune (1984, 195), which they probably took from the title of the object card preserved in the Gordion archive. However, the text of the card makes it clear that the compiler had in mind not a 'weight for scales', but a 'loom-weight' (which has obviously quite a different function), since the general form of the object to a degree resembles one and there is an unfinished hole in it. More probably, however, the object was conceived to become a sort of magic amulet to be worn around the neck: comparable things with the characters imitating writing and thus making it more powerful for the practitioner are well known both in Antiquity and in the medieval period

(see Boyes, this volume). Obrador-Cursach's analysis of the last piece of evidence – the verb *aniva*Ψ*eti* in B-07 – again fails to convince, as both the identification of the root as *vaΨ- and its connection with PIE root **ueh₂g-*/**ueh₂ǵ-* are quite speculative (for an alternative analysis see below).

As already in part adumbrated above, G-145 and W-01c remain two crucial pieces of evidence for establishing the value of Ψ. Both texts in fact contain more clues than was assumed earlier. As for the former, a close observation of the corrected letter reveals that we are probably dealing with two stages of correction: first Ψ to *s* and then back to Ψ. Indeed, the distance of the letter from the preceding *o* clearly implies that Ψ was the letter that was intended initially. However, *s* is seen well only in the lower part, and its long tail and the irregular shape – as contrasted with the neat multi-bar shape of the second *s* of the graffito – seems to suggest that the scribe 'freaked out' because of his own mistake. On the other hand, Ψ is incised very deeply, obviously with several additional scratches for every element, a process that caused the loss of black varnish around the incised lines. This indicates that the scribe has returned to the initial variant of the letter, making significant efforts to obliterate *s*. This painful hesitation of the scribe implies that the writing of Ψ instead of *s* was not just a mistake caused by negligence – apparently, it was indeed not that easy to choose between the two letters. This means that the phonetic values of Ψ and *s* were indeed connected closely.⁸

As for the form *da*Ψ*et*, its analysis both by Brixhe and by Obrador-Cursach was quite imprecise, being arrived at by an inveterate misconception concerning roots, *da-* and *dak-*. These roots, although etymologically related, have *different* meanings in Phrygian and the latter is in fact irrelevant for W-01c. The root *dak-* is abundantly attested in the Phrygian corpus, first of all in the NPhr. inscriptions (cf. Obrador-Cursach 2020a, 157–158). Although not all attestations are equally clear, the semantics of the verb αδ-δακ-ετ (which features the prefix *ad-* ~ Latin *ad-*) used in the standard protasis of an imprecation formula ιος νι ... κακον αδδακετ 'whoever does/inflicts evil to...' leaves little doubt that the precise meaning of the root *dak-* was 'do, make, inflict'. The verb thus corresponds to the Latin root seen in *faciō*, which can be traced back to PIE **d^heh₁-k-*, an old extension of PIE root **d^heh₁-* with the suffix *-k-*. In contrast, the Phrygian verb *da-* in all probability preserves the original semantics of the PIE

⁸ As for the meaning of the text, one may tentatively analyse the sequence as *Voineio* Ψ*uriieno(i) sku*l. The first word apparently represents an adjective (poss. nom. neutr.) based on the personal name *Voines* attested elsewhere in Gordion (G-129, G-228 and G-286). Given the observations put forward below, it would be tempting to recognise in Ψ*uriieno(i)* an ethnic adjective derived with the suffix *-en-* (= Greek *-ην-*, as in Σιπυλήνη etc.) from a toponym **Suri-*. The word finds a nearly exact correspondence in the epithet of Zeus Συρρανος found in an inscription from Söğütyaylası in the Phrygian Highlands (some 30 km to the east of Kütaħya, see Haspels 1971, 340 no. 109). The epithet of Zeus likely continues the name of the Mount *Šuvara* (> *Συρα) attested in the Hittite sources (cf. Forlanini 1996, 8). This is not excluded for Ψ*uriieno(i)*, but this is not the only possibility. Another option would be to connect it with the people called Σύροι or Λευκοσύροι in the Greek sources and *Sura* in hieroglyphic Luwian, who inhabited the northern parts of Anatolia (for which cf. Simon 2012). A third, less likely possibility, would be to connect it with Syria.

root **d^heh₁-* ‘put, place, set’ and thus corresponds to Greek τί-θη-μι. This is especially clearly seen in the use of the aorist form *e-da-es* regularly used in the dedicatory context (cf. M-01a, M-01b, M-02, B-01 or W-08 and discussions in Gorbachov 2005 or Ligorio and Lubotsky 2018, 1827). There is no evidence suggesting that the verbs *da-* and *dak-* belong, on the synchronic level, to the same paradigm, and their treatment by Obrador-Cursach (2020a, 157–159) under one lemma is confusing and erroneous.

The clause *yos esai-t materey: evetekseti'y: ove vin: onoman: daYet*: very probably represents a protasis of a *negative* imprecation formula, although the meaning of the verb *evetekseti'y* and the verb *lakedo* in the apodosis are not quite clear.⁹ At any rate, the fact that the second part of the clause uses the noun *onoman* ‘name’ suggests that we are dealing with a usual topos of replacing the name – *i.e.* appropriating a monument by obliterating the original name and writing instead his own – frequently found in Luwian inscriptions. The formulations in Phrygian and in Luwian were different: in the Luwian inscriptions one usually used in the respective imprecation formulas the verb ‘delete, obliterate’.¹⁰ However, the collocation ‘name’ + ‘put’ is often found in other cases, cf., *e.g.*, *wa/i-tu-ta* (LITUUS) *Á-za-ti-wa/i-tà-ia-na* (URBS) *lá-la/i-ma-za PONERE-ḫa* ‘And to it (scil. the ‘fortress’) I gave (lit. ‘put’) the name « Azatiwadaya »’ (KARATEPE §39) or *wa/i-ta* (DEUS) *Pa-ḫa-la-ti-i-sà á-ma-za-ḫa-’ á-lá/i-ma-za PONERE-ḫa* (HAMA 4, §7) ‘I put the name of the goddess *Ba’alat* and my (own) name (on it)’. These parallels and general logic requires for *daYet* a meaning ‘would/will put’ and not ‘would/will make’ (thus contra Ligorio and Lubotsky 2018, 1823). In other words, the expected root is not *dak-*, but *da-*.

⁹ The context suggests for the verb *evetekseti'y* a general meaning ‘harm, make wrong’ directed against the deity (*esai-t materey* ‘this Mother’) [I find quite unconvincing the analysis of the clause and the form as an adjective by Obrador-Cursach 2020a, 223]. The part of the word preceding the suffix *-se-* looks too complex to represent a simple root, and there are good reasons to analyse it as *eve-tek-*, with **tek-* being to the root, as was assumed already by Lubotsky (1988, 20) and now also by Obrador-Cursach (2020a, 223). However, the probable negative semantics of the verb excludes its connection with PIE **h₁su-* (in any case problematic, as the ‘prefix’ features additional *-e-*). An alternative interpretation would be to compare the prefix with Skr. suffix *ava* ‘away, off’. Given its separative/privative semantics, it would not look inappropriate. As for the root **tek-*, one may compare it with the Phrygian root **tik-* seen in the NPhr. form *τε-τικ-μενος* usually interpreted as ‘accursed’ (see Obrador-Cursach 2020a, 363–363 with further refs.). The alternation *i/e* does not represent a problem, as it is found in Phrygian on the synchronic level (*e.g.*, *kubileya/kubeleya*, *δεως/διως*, for further examples see Obrador-Cursach 2020a, 62–63), and the use of the root in a negative context supports the equation. The root in question probably go back to PIE **deik-* ‘to point, indicate’ and corresponds to the root of Greek *δικάζω*. It would be very tempting to see in the verb *eve-tek-* a Phrygian correspondence of Greek *ἀ-δικέω* ‘injure, do wrong’, which is the most frequent term in Greek imprecations. Alternatively, *eve-tek-* may mean simply ‘neglect’ or the like. However, one may also indicate an alternative possibility: the element *eve* could be not a suffix, but the first part of a complex disjunctive *eve ... ove*, which can be typologically compared with English *whether ... or*, or German *weder ... oder*; etymologically, the disjunctive can be compared with Skr. *vā*, on the one hand, and with Tocharian B *epe ... epe*, on the other. This interpretation would be, however, difficult to agree with the possible semantics of the root **tek-*.

¹⁰ Usually *ARḪA* ‘MALLEUS’-*la/i/u-* (as, *e.g.*, in *KARKAMIŠ* A11a, §25), but cf. also *ARḪA* *69’(-)*i-ti-* in *KARATEPE* §§63.

It is not difficult to see that the evidence of W-01c points in exactly the same direction as that of G-145: the expected *se*-form of the verb *da-* should be something like **daSet*. These observations suggest a very simple solution, which was in fact mentioned as a theoretical possibility already by Lejeune (see above), but for some reason finally disregarded: the letter Ψ should render a sort of sibilant.

This interpretation can be supported by several strands of evidence, which concern both the early Mediterranean alphabets and the language in general. To begin with the Phrygian evidence, one may point out that several words in the NPhr. inscriptions feature geminate σσ. The form in which this spelling appears to be employed consequently is just the *se*-forms of two verbs, ττοσσειτι and δεδασσιννι, based on **to-* ‘give’ (< PIE **deh₃-*) and on the already discussed *da-* respectively (Obrador-Cursach 2020a, 367 and 158).¹¹ The correspondence with the use of Ψ in *daΨet* is striking, and strongly suggests that Ψ, at least in this form, conceals precisely the geminate *ss* (for further discussion see below).

Next comes the evidence of the Phrygian alphabet found in the north-western part of the Phrygian cultural zone, which is slightly different from the central Phrygian variety. This variety appears to have two letters for sibilants, although due to the low number of inscriptions found there, the picture is not as clear as one would wish. A letter for a second sibilant was for the first time identified by Cox and Cameron (1932) who published the Phrygian inscription from Üyücek (B-04). They transliterated two letters, which (at least in their drawing) almost exactly correspond to Lydian Ϝ and ϝ as *ś* and *s* respectively (cf. Table 8.1), picking up the then-usual transliteration of the two Lydian letters for sibilants (now *s* and *š* respectively).¹² However, the photo in the original publication is of a rather mediocre quality, and the inscription has since been missing, so that it is impossible to verify the correctness of identification of the letter ϝ in the inscription; the context does not give any reliable clues either (for different readings of the inscription see Brixhe 2004, 39 and Obrador-Cursach 2020a, 439). The second inscription from the region in which a second letter for sibilant could be suspected is the inscription from Vezirhan (B-05). The first publisher of the inscription, Neumann (1997, 18) transliterated with *ś* a letter resembling (especially in his drawing) an *s* with a diacritic mark (cf. Table 8.1), which he identified in the words *eśtat* (l. 4), *enpśatuś* (l. 5), *śiray* (l. 11), *yosikeśos* and *śemeney* (l. 13). In the new edition of the text, Brixhe (2004, 47–48, 50) corrected Neumann’s transliteration *ś* to *s* in three words (*eśtat*, *enpraśtuś* and *yosikeśos*), which was accepted in subsequent discussions (Obrador-Cursach 2020a, 439–440 with further refs). Again, due to the poor quality of the published photos, a purely epigraphical verification of the picture is impossible, and one can rely only on circumstantial considerations (see below). Lastly, Gusmani-Polat (1999) published a short but clear graffito on a pottery sherd (B-108), which

¹¹ One may note, however, the form *dedq̄sitiy* found in B-05 (l. 8), which is clearly based on the root *da-* as well. If the fifth letter is indeed *s* (and not *ś*, cf. below), we are dealing apparently with a simplified spelling.

¹² A third sign that the publishers transliterated as *š* in fact renders the glide *y*.

Table 8.1. Sibilants/affricates in the north-west Phrygian alphabet (after Brixhe 2004, 28).

		s	ts(?)
B-04	5th – 4th C	𐌱	𐌱
B-05	End 5th C	𐌱	𐌱
B-06	6th C	𐌱 𐌱	𐌱
B-07	1st quarter 5th C	𐌱	
B-108	6th – 5th C	𐌱 𐌱	

features a personal name *Saragiś*, in which the first *s* corresponds to usual central Phrygian *s* and the final *s*, which they rendered with *ś*, to the northwest Phrygian *s* (cf. Table 8.1).

In his new edition of the inscriptions from the northwestern zone, Brixhe (2004, 26–29) dedicated a special section to the problem of the double representation of the sibilants, which, however, introduced even more confusion in the already rather incoherent picture with ‘western sibilants’. Observing that yet another inscription from the region, B-06, features the arrow-like letter ↑ (in the word ↑*egmatin*), while B-04 and B-05 lack it, Brixhe suggested that the letters earlier transliterated as *ś* represent in fact a variant of ↑, which he takes for an affricate resulting from the palatalisation of *k* before *i/e*. As for B-108, Brixhe simply identified both letters as different graphic variants of *s* (cf. Table 8.1).

This resulted, *inter alia*, in that the words *śiray* and *śemeney* found in Vezirhan are confusingly rendered in Obrador-Cursach’s edition (2020a, 247 and 440) as ↑*iray* and ↑*emeney*. The problem is that Brixhe’s suggestion, while not entirely impossible, has a very weak basis. The alleged letters for *ś* identified by Cox and Cameron, Neumann and Gusmani and Polat, are found not in the same words where ↑ is found in B-06, and the latter inscription is in general too short and fragmentary to give a reliable picture of the alphabet used in it. In fact, the absence of ↑ in B-04 and B-05, and the absence of a letter for *ś* in B-06 could be based simply on chance, as both letters, and especially ↑, are rare.¹³ On the other hand, it is difficult to agree that two letters in B-108, having clearly distinctive shapes, represent the same sound, all the more that their distribution corresponds to that seen in Lydian: while *s* apparently renders a

¹³ The only other argument that can be advanced to support Brixhe’s hypothesis is the alleged identity of *śira-* and NPhr. ζείρα suggested already by Neumann (1997, 25) and later picked up by Hämmig (2013, 150–151) and Obrador-Cursach (2020a, 35–36) who saw in the latter word the Phrygian correspondence of Greek χείρ ‘hand’ (< PIE *ǵ^hes-r-). If the meaning ‘hand’ is possible – although by no means certain – for NPhr. ζείρα, the meaning of *śira-* is entirely obscure, due to the problematic context. However, in view of the relative dating of the forms, the identity is unlikely. The Vezirhan inscription is dated probably to the late fifth century BC, and thus the form *śira-* is at least 500 years older than NPhr. ζείρα. Despite its late date, the digraph ει probably renders a true diphthong *eī*, as *i* is rendered by simple ι. In view of the Greek χείρ and the possible IE etymology of ζείρα, a later diphthongisation of *i* > *eī* looks very unlikely.

usual sibilant /s/, *ś* may render its palatal variant found after *i*. In sum, there is a good probability that the northwest Phrygian alphabet had two letters for sibilants and that central Phrygian Ψ might correspond to the second one.

Even more abundant evidence supporting the possibility of identification of a second sibilant in the central Phrygian alphabet is found beyond Phrygia. The evidence of the Lydian alphabet has been already mentioned above. Carian alphabet appears to have even three different letters for sibilants (*s*, *ś* and *š*, see Adiego 2007, 250). At least two letters for sibilants were present in the Sidetic alphabet (cf. Brixhe 2018, 146). In the Pamphylian alphabet, one finds a special letter Ψ , which appears in the words where later inscriptions have the geminate *ss* (cf. Brixhe 1974, 7); it is noteworthy that graphically, the letter is not that far away from Ψ (see below). Moving away from Anatolia, one finds two letters for sibilants at least in three Italic alphabets: Etruscan, Umbrian and South-Picene. Greek alphabets, each of which have only one letter for one basic sibilant of Greek, represent rather an exception; it is noteworthy that technically even the Greek alphabetic zone knew two letters for sibilants, *sigma* and *san*.

The common presence of several letters for sibilants in different alphabets has its roots, of course, in the simple fact of the linguistic reality: the majority of the world's languages have at least two, but often three sibilants. Usually, the contrastive pair is the alveolar sibilant /s/ vs. postalveolar sibilant /ʃ/ (as in English, Italian, Hungarian, Turkish etc.), but the contrast between alveolar vs. palatal /ç/, as in Lydian, is also frequent. In addition, a contrast in strength that can be expressed as fortis vs. lenis or geminate vs. non-geminate is another linguistic universal. In sum, the presence of the second letter for a sibilant in the central Phrygian alphabet looks entirely natural, whatever the exact linguistic nature of the sound concealed behind it could be. Before addressing this question, one has to discuss three other available attestations of the letter to verify how they agree with the re-interpretation of the letter.

The general interpretation of the last clause of B-07 (*me kos anivaΨeti smanin*) as 'let nobody harm Manes' proposed by Obrador-Cursach (2020b, 42–45; cf. further 2021) appears quite convincing. One can readily agree with the interpretation of *me kos* as a combination of a prohibitive particle (found also elsewhere in imprecation formulae) reflecting PIE **meh₁* (= Greek μή) and an indefinite pronoun. However, his morphological analysis of the verb *ani-vaΨeti* and the connection of the root with PIE **ueh₂g-*/**ueh₂ǵ-* 'break' look quite arbitrary. There is no other evidence for a prefix **ani-*, and even the existence of a prefix ***an-* (assumed by Brixhe 2004, 84) is highly dubious.¹⁴ Also, there is probably no necessity to analyse the sequence *smanin* and *smanes* in line 1 as a combination of the 'proclitic particle' *s-*, possibly a form of the demonstrative root *s-*, and the name *Manes* (cf. Obrador-Cursach 2020a, 343–344). The

¹⁴ In view of several attestations of the word $\delta\epsilon\tau\omicron\nu\nu$ or $\delta\epsilon\tau\omicron\nu$ (Obrador-Cursach 2020a, 212) the correct division of the text in W-11, l. 7 is doubtlessly $\kappa\omicron\rho\omicron\alpha\nu\ \delta\epsilon\tau\omicron\nu\nu$. NPhr. 40.3 (31), l. 2–3 feature in all probability $\epsilon\sigma\alpha\nu\ \mu\alpha\nu\kappa\alpha\nu$ 'this monument' (acc. sg.).

appearance of a deictic element in combination with a name would look quite odd. Rather, we are dealing with a name *Smanes*, a variant of the name *Manes* ‘embellished’ by an *s*-mobile, which is comparable with Σμῖκρος/Μῖκρος, Σμικυθίων/Μικυθίων and the like. As for the verb, it can now be read as *anivaSeti*. Read in this way, it can be immediately identified as a future/prospective *se*-form directly comparable with *daSet*, τοτοσσειτι and δεδασσιννι. As for *aniva-*, one may suggest connecting it with the root of Greek ἀνιάζω or ἀνιάω ‘grieve, distress, vex’, which excellently fits formally (with Phrygian preserving the intervocalic *-v-*) and semantically. The Greek verb is based on the noun ἀνία ‘distress, grief’, which do not have a good IE etymology and thus may well be of a substrate Balkan origin.¹⁵

The name ΨυναΨaros can be read now as *SuvaSaros*. Comparable forms are not attested in the later Greek epigraphical record of Phrygia or Anatolian in general. One may adduce, however, a piece of toponymic evidence: Stephen of Byzantium (301 Συνασός) mentions a settlement called Συνασός, which he defines as κώμη Φρυγίας ‘Phrygian village’ (for further details see below). The root may be tentatively identified also in the name Σουησις attested in the northern Pisidia (in an inscription from the Burdur museum, cf. Balzat *et al.* 2018, s.v.). This correspondence suggests that **suwas(s)aros* may be a secondary derivative based on the root **suwas(s)-*, most probably an adjective, structurally comparable with Greek adjectives with the suffix *-ρ-* (ἰσχυρός, λιπαρός etc.). On the other hand, one may compare **suwas(s)aros* with the word σαυσαρόν attested in the Lexikon of Hesychius: 285 σαυσαρόν ψίθυρον ‘whispering, twittering’. In other words, **suwas(s)aros* may be an onomatopoeic reduplicated formation imitating whispering or soft melodious sounds. These two explanations do not necessarily exclude each other.

Turning back now to the question of the exact phonetic value of Ψ, one may say that the evidence of B-07 and, to a degree, that of G-145 support the idea that Ψ corresponds first of all to the geminate *-σσ-*, *i.e.* indicates a sharper articulation of the alveolar spirant. Moreover, even if the evidence is not very numerous, it is still possible to identify the source of this sharper articulation. As the usual form of the future/prospective suffix was *-se-* and, normally, it is found spelled both in OPhr. and NPhr. inscriptions with a single *s*, cf. *evetekseti’y* (W-01b), *egeseti* (P- 04a), *dedasitiy* (B-05), *umnişet* (B-05), *ομνισιτ* (W-11) and *εγσειτ* (56.2 = 58).¹⁶ The forms *daSet*, *anivaSeti*,

¹⁵ The Phrygian evidence clearly disproves the speculative connection with Skr. *iṣ-* ‘to desire’. To some degree, it supports the old connection with Skr. *ámivā* ‘disease, pain’ (Beekes 2010, s.v. ἀνία), but the alternation *n/m* is difficult to explain.

¹⁶ For further discussion see Obrador-Cursach (2020a, 100–102). The hypothesis of Hämmig mentioned there that the suffix *-se-* goes back to a ‘suffix **-skí-*’ (possibly **-isk-*) does not find much support in the Phrygian material, and in any case a direct comparison with Armenian marker *-ic-* is hardly possible. There is in fact no necessity in this explanation, as there is a much more obvious option: the suffix is probably cognate with the Greek future suffix *-σ-*, as assumed earlier (Sowa 2007, 84–85). More precisely, the suffix can be directly compared with the suffix *-σε-*, which builds the so-called Doric future (cf. Delph. ταγευσέω, κλεψέω, Rhod. ἀποδωσεῦντι, σπευσίω, πραψίόμεν, βοαθησιοντι in Cretan, with *-σε-* > *-σι-*), as I argued earlier (the talk ‘Phrygian and the Early History of Greek Dialects’ given at the conference

τοτοσσειτι and δεδασσιννι represent thus special cases. The sharper articulation of the sibilant in these forms most probably lies in the prehistory of the roots. The forms *daSet* can be reconstructed as **d^heh₁-se-t* (3.sg.); reduplicated formation δεδασσιννι presupposes **d^hh₁-*d^heh₁-se-nti* (3.pl.) and τοτοσσειτι presupposes **dh₃-*deh₃-se-ti*. The exact stem form of *anivaSeti* is not immediately clear: in theory it may correspond to either ἀνιάω (stem **aniua-ī-ō*) or ἀνιάζω (stem **aniuad-ī-ō*). The latter possibility appears more probable, as the sharper articulation of the sibilant can be in this case naturally explained as resulting from the assimilation *-ds- > -ss-*, i.e. *anivaSeti* can be traced back to **aniuad-se-ti*. As for the former three forms, the gemination is apparently connected with the presence of the laryngeal in the root. What is amazing, however, is that the distinction between the two variants of the future/prospective suffix (*-se-* and *-sse-*) was synchronic, which might imply that the traces of the laryngeal was somehow retained in Phrygian. This appears, however, unlikely, especially given the very late date of the attestation of τοτοσσειτι and δεδασσιννι (beginning the common era). Rather, we are dealing with some secondary effect of the laryngeal. One may tentatively assume that the process went in two stages. First, the disappearance of the laryngeal caused the lengthening of the preceding vowel, just as it was the case in Greek, i.e. actual form of the Phrygian roots were **dā-* and **tō-*, which was not expressed in writing. The effect of gemination of the sibilant of the suffix *-se-* might then manifest itself in the second stage, resulting from the transformation of the syllable weight **dāCV- > *daCCV-* and **tōCV- > *toCCV-*. Very probably, the accent played a role in the process too.¹⁷

However, the rendering of the geminate (long/fortis) alveolar sibilant was not the sole function of the letter Ψ. In four cases (G-115, G-224c, G-339 and very probably G-145, cf. above, n. 7) it is attested at the beginning of the word, where the presence of the geminate *s* is unlikely. However scarce the available material is, it suggests that in these cases we may be dealing with a different sort of ‘unusual *s*’. At the beginning of the words, Ψ is found either before *u* or before *i*. Under the assumption that the Phrygian *u* has a front close articulation, as *v* in Greek, one may explain Ψ as rendering the palatal sibilant /ç/. This is reminiscent of the situation in Lydian and in northwest Phrygian alphabet. Thus, although the evidence is too slim to be sure, the Ψ had a complex function of rendering of ‘unusual *s*’, usually geminate in the

‘Contacts linguistiques en Grèce ancienne: diachronie et synchronie’, 7–9 April 2021). Most probably, Phrygian *se*-forms has simply future/prospective meaning, but some sort of semantic development or semantic specialisation of the suffix in Phrygian cannot be ruled out. Also the question of the semantic difference between the forms using primary endings (as *-ti*) and those using secondary endings (as *-t*) remains open.

¹⁷ It is noteworthy that the phenomenon is in a way reminiscent of the Aeolic compensatory lengthening of the resonants (ρ, λ, μ, ν) resulting from the disappearance of old *s > h*, as contrasted with the lengthening of the preceding vowel in other Greek dialects, cf., e.g. Aeol. ἔμμι vs. Att.-Ion. εἶμι and Dor. ἦμι (< **h₁es-mi*) or Aeol. σελάχνα vs. Att.-Ion. σελήνη and Dor. σελᾶνᾶ (< **selas-nā*). Given that from the geographic point of view Aeolic dialects (esp. Lesbian) and Phrygian were contiguous, it may be considered as a local feature. Both can be connected with a special type of accent.

intervocalic position and palatal at the beginning of the words. Given this phonetic value, one may propose to transliterate the letter Ψ as *ś*.

The ‘Lunate letter’ c

The lunate-shaped character was discovered for the first time in the Phrygian inscription from Kerkenes discovered in 2003–2005 (Brixhe and Summers 2006). The character is found twice in the sequence]xpaCuvaCx[preserved on a fragment no. V possibly belonging to the upper ‘beam’ of the inscribed monument (see Brixhe and Summers 2006, 121, fig. 23 and 106, fig. 9 for a reconstruction of the frontal part). Brixhe (Brixhe and Summers 2006, 123) identified it as a sort of interpunction sign, which serves to emphasise the text standing between the characters, *i.e. uva*. He proposed to identify in *uva* a personal name, comparing it with *Uwa* attested in Hittite texts and ’Oα(ζ) attested in the later epigraphic record from Anatolia. The second attestation of the same character appeared several years later in one of the graffiti discovered on the beams of the Tumulus MM dated to around 740 BC, which reads *Curunis* (cf. Liebhardt and Brixhe 2009, 156, fig. 7). Brixhe made a connection between this sign and that found in Kerkenes and hypothesised that the sign was also here used in a function comparable with cuneiform LÚ in the Hittite texts.¹⁸

The interpretation proposed by Brixhe fails to convince. The idea of seeing in a character of the alphabetic writing a sign comparable in the function of cuneiform LÚ is simply fantastical. Why then it is not used in the three other graffiti from the Tumulus MM, and is never found in the longer Phrygian texts, where it would be especially appropriate? In the Kerkenes inscription, such an interpretation looks no more convincing. First and foremost, the usual Phrygian interpunction sign is found in the inscription on another fragment (no. III) of the same inscription (Brixhe and Summers 2006, 117, fig. 18), which shows that the idea of interpunction was known to the scribes of the Kerkenes inscription, even if applied not very consequentially. Second, although *uva* may in theory indeed correspond to ’Oα(ζ) or Oυα, the appearance of such a short and inconspicuous name, attested in no other Old Phrygian inscription, looks rather odd. The interpretation of the character as some auxiliary sign should be dismissed. The character should render a *letter*. Its extremely rare attestation in the Phrygian corpus can be associated with the early dating. The graffiti from the Tumulus MM dated to around 740 BC belong

¹⁸ The character was also allegedly identified in the newly discovered inscription from Sarhöyük (Dorylaion) published by Baştürk and Avram (2019). The attestation is, however, highly dubious. The photo of the inscription (234, fig. 2) does not show any clear traces of the sign, which is drawn, moreover, in an inverted position, which is more than odd. The identification is further contradicted by the context: the text can be read *iman umniş*[, with *iman* being either a personal name or, more probably, the name of the monument and *umniş* is very probably the initial part of *umniset* attested in B-05, l. 7 and corresponding to ομνιστ in W-11, l. 8 (for possible meaning of the word see now Obrador-Cursach 2020b, 46–48).

to the earliest inscriptions written in Phrygian. The same can be said about the Kerkenes inscription. As I have argued previously (Oreshko 2021, 292–294 and 299–302) both the possibility to identify in *Masa Urgitos* mentioned in the Kerkenes inscription with *Masa-Urḥissas* of the HLuw. inscription PORSUK probably dated to the late eighth century BC and a number of unique graphic features of the Phrygian inscription strongly imply that it belongs to this time, and not to the sixth century BC, as thought earlier. One can assume, consequently, that C represents an early variant of another letter of the Phrygian alphabet.

Although the evidence is extremely scarce, both attestations of C strongly suggest that it is an early variant of Ψ. On the one hand, the sequence Cuvac- finds a striking structural correspondence in the sequence ΨuvaΨ- at the beginning of the name ΨuvaΨaros.¹⁹ On the other hand, in the name *Curunis*, the letter appears at the beginning of the word before u-, which corresponds to three attestations of Ψ (ΨuvaΨaros, Ψuv and Ψurieno(i)). Due to the fact that in both cases we are dealing with names, it is difficult to prove the reading beyond all doubt. However, in both cases the readings are not entirely senseless. As for the name **Śurunis*, it is not attested in the later epigraphical record. However, it is quite possible that it is in a way connected with the word *śurieno(i)* (G-145), which, as noted above (n. 7), is possibly based on a toponym/ethnonym *Sura*. *Śurunis* may be an alternative suffixal derivative based on the same root.²⁰

The reading *Śuvaś-* in the Kerkenes inscription presents an even more intriguing connection. The peculiar details that Stephen of Byzantium provides about the ‘village’ Συασσός (see above) prove to be quite relevant for the situation at Kerkenes. Stephen reports that ‘they say that in this very village the Cimmerians have found large quantities of wheat, stored in the corn-pits, on which they fed for a long time’ (ἐν ταύτῃ τῇ κώμῃ φασὶ Κιμμερίουσ εὐρεῖν ἐν σιροῖσ τεθησαυρισμένασ μυριάδασ πυρῶν, ἀφ’ ὧν αὐτοὺσ ἐπὶ πολὺν χρόνον διατρηφῆναι). It is obvious that this description suggests quite a specific type of ‘village’ quite different from an ordinary unprotected agricultural settlement. The commanding and well-protected position of Kerkenes at a high altitude in the centre of a fertile corn-producing region excellently fits with this description. No less relevant is the connection with the Cimmerians. As noted above, the palaeography of the Phrygian inscription from Kerkenes suggests a dating for the palatial complex – and probably the city itself – to the second half of the eighth century BC. Given the short life span of the city, its possible destruction date can be situated around or slightly after 700 BC. The connection of the destruction with the Cimmerian invasion of Anatolia would be one of the most straightforward possibilities. There are thus good chances that *Śuvaś-* at the beginning of the Phrygian inscription

¹⁹ One may note that a structurally comparable sequence is found also in another name, *Ṭuvatis* attested in G-133. However, identification of C as a variant of t is clearly out of the question.

²⁰ Structurally, one may compare *Kukkunniš*, a name of an early king of *Wiluša* (Troy) attested in KUB 21.5 I 18.

is a part of the name of the city. Needless to say, more epigraphical evidence is needed to confirm this interpretation.

It is noteworthy that the existence of two different chronological varieties of the same letter, strongly suggests that the ‘invention’ of the letter was a local Phrygian development, and not an import from abroad. The source of the early variant of \mathfrak{s} might have been simply the drastic ‘truncation’ of the form of \mathfrak{s} . However, this shape was probably too inconspicuous and in a way disagreed with the general Phrygian preference for the high and slim letters, and was at some point replaced by a new letter that matched it better. Given that \mathfrak{Y} is found already in the graffito G-145, which hardly dates later than c. 700 BC, the process of replacement had already taken place in the eighth century BC.

Letter no. 23

As already mentioned above, letter no. 23 is found extremely rarely in the Phrygian corpus. The letter represents a sort of T with two additional vertical strokes, which are suspended from the horizontal hasta; a similar letter in which the horizontal hasta is set somewhat lower, so that it has the shape of a ‘trident’ (Fig. 8.3), is probably a graphic variant of no. 23, although it is impossible to prove. The letter is found in only four graffiti on pottery sherds: G-112 in a sequence $e\mathfrak{T}\mathfrak{t}\mathfrak{a}$]; P-106 in a sequence $:makiota\mathfrak{T}bi$:²¹; in NW-120 in a sequence $\mathfrak{J}\mathfrak{T}is$ and in G-275 is an isolated two-letter combination Ti . The isolated character found on yet another pottery sherd (NW-128) has a different shape (a ‘trident’) and its connection with either no. 23 or no. 20 is impossible to demonstrate (see above on \mathfrak{V}). Similarly, the reading of the graffito NW-135 is too uncertain to suggest anything about the identity of the fifth letter (Brixhe and Sivas 2009, 135–136). Although obviously too scarce to suggest anything certain about the phonetic value of the letter, the available evidence is still not quite useless.

Given the scarcity of the attestations, there are good reasons to see in the letter a rare variant of a different, more usual letter, be it a purely graphic variant or



Fig. 8.3. Graffito G-112, Penn Museum Gordion Archive: image GR-675-6 [edit].

²¹ Contra Brixhe and Lejeune 1984, 250 (adopted in Obrador-Cursach 2020a, 504–504), it is highly unlikely that the vertical hasta before 8-shaped letter represents an i (and the reading is thus: $makiota\mathfrak{T}bi$). In all appearances, we are dealing with a somewhat idiosyncratic mode of writing of b .

an attempt to render a specific phonetic phenomenon. The attestation of the letter immediately before *t* in G-112 excludes with high probability the identification of the letter as a graphic variant of no. 19, which likely represents an affricate /dz/ or /ts/ (see in detail below), since the phonetic sequence /tʰt/ is strange (if not entirely impossible). On the other hand, the identification of the letter as yet another graphic variant of Ψ would be thinkable. Indeed, in the position before *t*, the alveolar sibilant *s* frequently assumes a post-alveolar articulation (/ʃ/), as is the case, for instance in German (cf. English *stone* vs. German *Stein*) or some Italian dialects (for further examples see Kümmel 2007, 236). Read as *eštq* (G-112), the sequence may be interpreted as a part of the verbal form *estae* ‘put’ (3rd. aor. sg.) or the like found in later inscriptions (cf. Obrador-Cursach 2020a, 232). It is noteworthy that the northwest Phrygian *ś* is possibly found in the form *estat* in B-05: 4 (see above), although this reading should be verified on stone. This explanation well agrees with the evidence of P-106 in which the letter is found again before a consonant. The position before a labial consonant is also conducive to the development *s* > ʃ (cf. English *swine* against German *Schwein* or *spare* against *sparen*). Thus, it is quite possible that the letter is connected with Ψ. It remains, however, not quite clear whether it is merely its purely graphic variant (for instance, a local variation), or an attempt to render /ʃ/ as contrasted both with /s/ and with /ss/.

The ‘Arrow letter’ (no. 19)

In contrast to no. 20, the clues for the phonetic reading of the arrow-shaped letter are more straightforward, and its identification as a sort of affricate (/ts/ or the like) was suggested long ago (Brixhe 1982, 229–238). However, in part etymological speculations on the prehistory of the sound rendered by this letter and in part its confusion with no. 20 and the northwest Phrygian *ś* (see above) have muddled the picture. The recent discussion by Obrador-Cursach (2020a, 33–37), which even more heavily relies on the etymological method, have even further confused the situation, the result being that the letter is rendered throughout the book by a special arrow sign (↑) – although the words beginning with this letter are given in the dictionary section intermixed with those beginning with ζ. As the problem has been already in part disentangled by the above discussion of no. 20, one can here only briefly revisit the key pieces of evidence concerning the reading of no. 19.

The clearest piece of evidence is supplied by the graffito A↑ses (HP-109) found on a bronze bowl from Tumulus D in Bayındır (Varinlioğlu 1992, fig.1, no. 7; cf. Brixhe 2004, 114). The word clearly represents a variant of the personal name *Ates* found on the other bowls from the same tumulus. The odd spelling apparently represents an attempt to render the real pronunciation of the name as /At^ses/ resulting from the assibilation of the *t* before *e*. In all probability, the scribe was not quite sure about the real phonetic value of the letter ↑ and thought it better to add *s* for clarity, which resulted in the redundant spelling ↑s. The spelling A↑ios and A↑ion found in

T-02 represent probably more correct spellings of a derivative of the same name.²² This evidence clearly implies that the value of ↑ (or at least one of the values) in the early Phrygian inscriptions was the affricate /t^s/.

The interpretation of the letter as an affricate is supported by a further piece of onomastic evidence. The Phrygian name *Si↑idos* (G-105, G-346, HP-110) or **Si↑etos* (W-08, W-09 and patronymic *Si↑etodas* in W-10) is very probably connected with the name **Sidis* attested in the Pamphylian bilingual S6 as *śdits* (gen.) and Σιδιδος (gen.).²³ The Phrygian *Si↑idos* represents either a direct counterpart of gen. Σιδιδος or, if a nominative, is a quasi-patronymic derivative of **Sidis* with the suffix *-t/-d-*.²⁴ The appearance of ↑i where Pamphylian and Greek still have *-di-* implies that ↑ renders the voiced affricate /d^z/.

This interoperation is further confirmed by later evidence. A number of words attested in the NPhr. inscriptions, which are written in the Greek alphabet, feature the letter ζ, cf. ζεμελως, ζειρα or PN Ζωτικῶ. The exact reading of the Greek ζ in different periods (and different words) is a problem in itself (Allen 1987, 56–59), but in the late period (second to third centuries AD) the common reading of the letter was probably either /dz/ or /z/ (and not /zd/ as earlier). Whatever the case, there is every reason to think that ζ has the same function in the NPhr. inscriptions as ↑ had in the Old Phrygian alphabet, while the letter Ψ rendering sibilants is quite irrelevant here. One has to emphasise that the question of the *origin* of the Phrygian sound rendered by ↑/ζ has as little relevance for its synchronic phonetic realisation, as the etymology of the Greek ζ (which can go back to PIE **ǵ, *dǵ, *gǵ, *zd < *sd*) has for its synchronic phonetic realisation.

²² A non-assibilated form of the same name is probably found in the first line of the Germanos inscription (B-01). Although the end of the first line is somewhat weathered, one can still quite clearly discern after *adi-* an *o*, after which there may be an *s* (cf. photos in Brixhe and Lejeune 1984, pl. XXXVIII, 3 and 4, and the drawings on p. 63). Both the position of the word *Adios* immediately after the object of dedication (*si bevdos*), as the absence of any other clearly identifiable names in the second line, suggests that *Adios* is the name of the dedicator. The name is probably related to *Ates*/ΑΤΤΙς, as there are further examples for the alternation of the Phrygian dentals (Oreshko 2020, 88, n. 18 and 108).

²³ Contra Nikolaev (2017, 223), it is hardly possible to see in the Carian name *śdats* (E. Me. 13) a counterpart of the Pamphylian and Phrygian names, as its phonetic reading is probably /śandə-t^satəs/. Most probably, it is a composite theophoric name based on the name of the War-and-Pestilence god *śandas*. It would be seducing to see in the second part the Carian counterpart of the Luwian *zida/i-* ‘man’, but the *a*-vocalism is odd.

²⁴ As argued in Oreshko (2020, 88, n. 18), the form *Si↑idos* is a nom. sg. rather than gen. sg. The Pamphylian evidence would, however, better agree with an assumption that *Si↑idos* is gen. = Σιδιδος. Such a reinterpretation would be possible if one takes the form *Si↑idos* on the wooden beam in Tumulus MM in Gordion (G-346) not as an isolated name, but as a patronymic of *Muksos* found immediately above it. In G-105 (*Si↑idos akor*) and in HP-110 (*Si↑idos*) interpretation of the form as gen. sg. is equally possible. This reinterpretation does not significantly affect the interpretation of *Alus* in W-08-10: the form *Sizeto* can be interpreted as an asigmatic genitive (< **Si↑etos*) and *Si↑etodas* would be, now as before, as patronymic based on the stem-form **Si↑et-* (poss. < **Si↑etadas*).

Last but not least, the interpretation of the ‘arrow letter’ as an affricate agrees well with the presence of letters of (nearly) identical shape and comparable phonetic values in three other Anatolian alphabets: Lydian, Carian and Sidetic. In Lydian, the letter very probably renders an alveolar affricate /tʰ/, as etymologically the sound appears to go back to the palatalised t/d (cf. Gérard 2005, 59–60). In Carian, the corresponding letter also stood for a sort of affricate, either /tʃ/ or /ts/, which appears more probable in the local perspective (Adiego 2007, 251; 2019, 25; Oreshko 2013 [2015], 81–82). As for the Sidetic alphabet, the appearance of the arrow-shaped letter in *śdītś* = Σιδιδος (S6) and in *ubāt-* (poss. < **ubati-*) suggests a sound comparable with that rendered by the Lydian ↑.²⁵ In sum, the available evidence rather strongly suggests that ↑ rendered an affricate in the Old Phrygian alphabet, very probably both tʰ and dʰ. It is not impossible that in late Phrygian the sound was simplified to voiced sibilant /z/, as was the case in Greek, but this is irrelevant for the Old Phrygian alphabet. The transliteration of the letter as z would thus be a fair option.

The unravelling of the phonetic values of letters nos. 19 and 20 has some interesting implications for two Greek alphabets of Anatolia, which one may briefly explore here. First, the Pamphylian Greek alphabet had a special trident-shaped letter (Ψ), which is found in the words usually spelled with the geminate σ elsewhere in Greek or in the later inscriptions from Pamphylia. For instance, it is found in the word for ‘queen, lady’, (F)ἄνασσα, attested in the coin legend **ΨΑΝΑΨΑΣ ΠΕΡΕΨΙΑΣ**, which would correspond to *Fάνασσας Περγαΐας* ‘of the Lady of Perge’. In the discussion of different hypothesis about the origin of the letter, Brixhe (1976, 7–9) expressed doubts about the possible connections of the letter with the Cypriot syllabic sign *se*, with Ionian *sampi* and a Carian letter of the same shape suggested earlier, and instead gave preference to the derivation of the letter from the Phoenician *šade*. The connection of the letter with the Cypriot sign and the Carian letter (now transliterated as y)²⁶ is indeed quite out of the question. However, a connection with the Ionian *sampi*, which has a similar shape, appears to have exactly the same phonetic value and found in the same general region is entirely thinkable (see below). As for the derivation directly from the Phoenician *šade*, it is not impossible per se, but is not especially convincing either. Graphically, such a derivation is possible, but the problem is that in the Greek alphabets of the Aegean, the Phoenician letter produced quite a different shape, ς (*san*). It would be rather strange if the Pamphylian Greeks had re-borrowed the Phoenician letter

²⁵ Cf. Pérez Orozco 2007, 128 and 134. In view of the very probable correspondence of the name to Phrygian *Si↑idos*, one wonders if *śdītś* is not a result of metathesis (or simply an error) for **śtidś*. The proposal by Nikolaev (2017) to interpret *tue[* (S4) as ‘all’ and interpret the phonetic value of the first letter as /ʃ/ does not seem convincing to me. Now as before, the *tue[* is most probably a verb corresponding to Luw. *Tuva-* with assibilation t > tʰ before u, which probably conceals a front close /y/.

²⁶ The letter is found in the alphabets of Mylasa, Sinuri and Kildara (Adiego 2007, 209–210 and 212–213).

in a shape closer to its Phoenician original, disregarding the possibility of adopting Greek *san* as the second sign for a sibilant.

On the other hand, the shapes of Ψ and the Phrygian Υ are close indeed, and their core phonetic values correspond, as far as one can see, quite exactly. Given this similarity, one may suggest that the Pamphylian letter has an Anatolian origin. As chronologically the central Phrygian Υ is very probably much earlier (possibly eighth century BC, see above) than the Pamphylian letter, the direction of borrowing should have been from Phrygia to Pamphylia. In fact, the Phrygians were present very early as far south as *Milyas* (the tumuli of Bayındır), and this circumstance makes it probable that the letter came to Pamphylia via Termessos. The slight difference of the shapes of the Pamphylian letter and the standard central Phrygian crow-foot variety of Υ can be naturally explained by the wish to differentiate the new letter for the sharp sibilant from the letter for /ps/, which was also present in Pamphylian alphabet.

The second implication concerns the Ionian *sampi*. The letter is usually shaped as a T with additional short strokes suspended from the horizontal hasta, but sometimes also having the shape of an arrow. It is found in the inscriptions of Ephesos, Erythrai, Teos, Halikarnassos, Kyzokos and Pontic Messambria, and thus is essentially confined to the Ionian alphabet, being exported to Messambria possibly via Kalchedon (see Jeffery 1990, 38–39; Willi 2008, 419–422; Hawkins 2013, 7–27). The letter appears in the words that are spelled in Ionian literary texts with the geminate $\sigma\sigma$ and with geminate $\tau\tau$ in Attic, which etymologically go back to the clusters $*t_{\bar{s}}$, $*k_{\bar{s}}$ and $*t_{\bar{s}}$. This picture suggested the idea that the letter renders a sound ancestral to $\sigma\sigma$ and $\tau\tau$, a sort of affricate /ts/ or /tʃ/ (cf. Allen 1987, 60–61 or Hawkins 2013, 17). Given that the use of the letter was essentially confined to Ionia, one frequently saw its source in Anatolia, or more specifically in Caria. In the recent discussion of the possible Anatolian sources of the letter, Hawkins (2013, 18–24) tried to specify its origin, analysing all available graphic comparanda from the Anatolian alphabets, but remained inconclusive about its exact source.

The separation of the two Phrygian letters changes the perspective and brings in clarity. On the one hand, one can postulate in the Phrygian alphabet a letter that graphically very closely – or even exactly, if one interprets no. 23 as a graphic variant of no. 20 – corresponds to the Ionian *sampi* and has exactly the same phonetic value. On the other hand, it becomes clear that the Carian and Lydian arrow-shaped letters are connected not with this letter, but with the Phrygian arrow-shaped letter. Neither Lydian nor Carian alphabet has a letter closely matching both graphically and phonetically the Ionian *sampi*. This implies that the source of the Ionian letter, like that of the Pamphylian Ψ , can only be the Phrygian letter no. 20. Moreover, as the letters for affricates become now irrelevant, there is no necessity to assume that the phonetic value of *sampi* was something other than the sharp ss, like in Phrygian. The putative affricate transitional between $*t_{\bar{s}}$, $*k_{\bar{s}}$ and $*t_{\bar{s}}$ and ss should be sought on a much earlier stage of the linguistic development of Greek.

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Bibliography

- Abusch, T. (2002a) *Mesopotamian Witchcraft*, Leiden.
- Abusch, T. (2002b) 'The socio-religious framework of the Babylonian witchcraft ceremony Maqlû: Some observations on the introductory section of the text, Part I' in Abusch, T. (ed.) *Riches Hidden in Secret Places*, Winona Lake, 1–34.
- Abusch, T. (2020) *Further Studies on Mesopotamian Witchcraft Beliefs and Literature*, Leiden.
- Adams, J. N. (1996) 'Interpuncts as evidence for the enclitic character of personal pronouns in Latin', *Zeitschrift für Papyrologie und Epigraphik* 111, 208–210.
- Adiego, I.-J. (2007) *The Carian Language*, Leiden.
- Adiego, I.-X. (2019) 'A kingdom for a Carian letter' in Adiego, I.-X., García Trabazo, J. V., Vernet, M., Obrador-Cursach, B. and Martínez Rodríguez, E. (eds) *Luwic dialects and Anatolian. Inheritance and diffusion*, Barcelona, 11–50.
- Akdoğan, R. and Hawkins, J. D. (2010) 'The Kırşehir letter: A new hieroglyphic Luwian text on a lead strip' in Süel, A. (ed.) *Acts of the VIIIth international congress of Hittitology, Çorum, August 25–31, 2008*, Ankara, 1–16.
- Al-Jadir, A. (2006 [2009]) 'Numbers and dating formulae in the Old Syriac inscriptions', *Journal of the Canadian Society for Syriac Studies* 6, 3–17.
- Allen, W. S. (1987) *Vox Graeca. A guide to the pronunciation of Classical Greek*, Cambridge.
- Amadasi M. G. (2015) 'Le matériel inscrit, Les inscriptions phéniciennes', in Caubet, A, Fourrier, S. and Yon, M. (eds) *Kition-Bamboula VI, Le sanctuaire sous la colline*, Lyon, 335–345.
- Amadasi M. G. and Karageorghis, V. (1977) *Fouilles de Kition III, Les inscriptions phéniciennes*, Nicosia.
- Amadasi M. G. and Zamora López J. A. (2020) 'Pratiques administratives phéniciennes à Idalion', *Cahiers du Centre d'Études Chypriotes* 50, 137–155.
- Amadasi M. G. and Zamora López J. A. (2018) 'The Phoenician marzeah. New evidence from Cyprus in the 4th Century BC', *Studia Eblaitica* 4, 187–214.
- Amadasi Guzzo, M. G. (2012) 'Phoenician and Punic in Sicily' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 115–131.
- Amandry, M. (1984) 'Le monnayage d'Amathonte' in Aupert, P. and Hellmann M.-C. (eds), *Amathonte I, Testimonia* 1, Paris, 57–76.
- Anderson, R. D., Parsons, P. J. and Nisbet, R. G. M. (1979) 'Elegiacs by Gallus from Qaşr Ibrîm', *Journal of Roman Studies* 69, 125–155.
- Anderson, S. E. and Levoy, M. (2002) 'Unwrapping and visualizing cuneiform tablets', *IEEE Computer Graphics and Applications* 22 (6), 82–88.
- Assael, Y., Sommerschild, T. and Prag, J. (2019) 'Restoring ancient text using deep learning: a case study on Greek epigraphy', *Empirical Methods in Natural Language Processing (EMNLP) 2019*, 6369–6376.
- Assis, E. (2007) 'The alphabetic acrostic in the Book of Lamentations', *The Catholic Biblical Quarterly* 69, 710–724.
- Austin, A. and Gobeil, C. (2017) 'Embodying the divine: A tattooed female mummy from Deir el-Medina', *Bulletin de l'Institut français d'archéologie orientale* 116, 23–46.
- Avram, A. (2019) 'Phrygian personal names in Phrygian inscriptions' in Tsetschladze, G. R. (ed.) *Phrygia in Antiquity: From the Bronze Age to the Byzantine period. Proceedings of an international*

- conference 'The Phrygian Lands over Time: From prehistory to the middle of the 1st Millennium AD', held at Anadolu University, Eskişehir, Turkey, 2nd-8th November, 2015, Leuven, 305-349.
- Bahrani, Z. (2003) *The Graven Image: Representation in Babylonia and Assyria*, Philadelphia.
- Baines, J. (1983) 'Literacy and Ancient Egyptian Society', *Man* 18 (3), 572-599.
- Baines, J. (2008) 'Writing and its multiple disappearances' in Baines, J., Bennet, J. and Houston, S. (eds) *The Disappearance of Writing Systems: Perspectives on literacy and communication*, London, 347-362.
- Baines, J., Bennet, J. and Houston, S. (eds) (2008) *The Disappearance of Writing Systems: Perspectives on literacy and communication*, London.
- Balzat, J.-S., Catling, R. W. V., Chiricat, É. and Corsten, T. (eds) (2018) *Lexicon of Greek Personal Names, Vol. V.C: Inland Asia Minor*, Oxford.
- Barkay, G., Lundberg, M. J., Vaughn, A. G. and Zuckerman, B. (2004) 'The amulets from Ketef Hinnom: A new edition and evaluation', *Bulletin of the American Schools of Oriental Research* 334, 41-71.
- Barkay, G. and Ussishkin, D. (2004) 'Area S: The late bronze age strata' in Ussishkin, D. (ed.) *The renewed archaeological excavations at Lachish (1973-1994)*, Tel Aviv, 316-407.
- Baştürk, M. B. and Avram, A. (2019) 'A newly discovered Old Phrygian inscription from Sarhöyük (Dorylaion)', *Ancient West & East* 18, 231-237.
- Beekes, R. (2010) *Etymological Dictionary of Greek* (with the assistance of Lucien van Beek), Leiden.
- Ben Ami, D. and Tchekhanovets, Y. (2008) 'A Greek abecedary fragment from the City of David', *Palestine Exploration Quarterly* 140 (3), 195-202.
- Bietak, M. (2022) 'Did the temple of Serabit el-Khadem originate from an earlier Canaanite shrine?' in Tristant, Y. and Buchez, N. (eds) *Égypte Antérieure*, Leuven, 59-80.
- Bilgen, A. N., Brixhe, C. and Coşkun, G. (2011) 'Un nouveau site épigraphique paléo-phrygien: Seyitömer Höyük', *Kadmos* 50, 141-150.
- Bird, S., Klein, E. and Loper, E. (2009) *Natural language processing with Python: analyzing text with the natural language toolkit*, Sebastopol, California.
- Bittel, K. (1957) 'Vorläufiger Bericht über die Ausgrabungen in Boğazköy im Jahre 1956. Untersuchungen in der Altstadt', *Mitteilungen der Deutschen Orient-Gesellschaft* 89, 6-25.
- Bitto, I. (2001) *Le iscrizioni greche e latine di Messina*, Vol. 1 (Pelorias 7), Messina.
- Bivona, L. (1994) *Iscrizioni latine lapidarie del museo civico di Termini Imerese: 1-188* (Σικελικά. Serie Storica 8), Palermo and Rome.
- Blümel, W. (1991) *Die Inschriften der rhodischen Peraia*, Inschriften griechischer Städte aus Kleinasien 38, Bonn.
- Boardman, J. (1982) 'An inscribed sherd from Al Mina', *Oxford Journal of Archaeology* 1 (3), 365-367.
- Boeckh, A. and Franz, J. (eds) (1853) *Corpus Inscriptionum Graecarum*, Vol. 3, Berlin.
- Bohak, G. (2008) *Ancient Jewish Magic: a history*, Cambridge.
- Bohleke, B. (1997) 'An oracular amuletic decree of Khonsu in the Cleveland Museum of Art', *Journal of Egyptian Archaeology* 83, 155-167.
- Bombardieri, L. and Panero, E. (2021) *Cipro, creoevia delle civiltà*, Torino.
- Bordreuil, P. and Pardee, D. (1995) 'Un abécédaire du type sud-sémitique découvert en 1988 dans les fouilles archéologiques françaises de Ras Shamra-Ougarit', *Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres*, 1995, 855-860.
- Bordreuil, P. and Pardee, D. (1998) 'La plus ancienne attestation épigraphique de la lettre proto-sémitique { D }', in Amphoux, Ch.-B., Frey, A. and Schattner-Rieser, U. (eds) *Études sémitiques et samaritaines offertes à Jean Margain*, Lausanne, 37-40.
- Bordreuil, P. and Pardee, D. (2001) 'Abécédaire (n° 32)', in Yon, M. and Arnaud, D. (eds) *Études ougaritiques I, Travaux 1985-1995, Ras Shamra-Ougarit XIV*, Paris, 341-348.
- Bossert, H. T. (1958) 'Sie schrieben auf Holz' in Grumach, E. (ed.) *Minoica. Festschrift zum 80. Geburtstag von Johannes Sundwall*, Berlin, 67-79.
- Bottéro, J. (1992) *Mesopotamia. Writing, reasoning and the gods* (trans. Z. Bahrani & M. Van de Mieroop), Chicago.

- Bourke, S. J. (2014) 'The southern Levant (Transjordan) during the Middle Bronze Age' in Killebrew, A. E. and Steiner, M. L. (eds) *The Oxford Handbook of the Archaeology of the Levant. c. 8000-332 BCE*, Oxford, 465-481.
- Bourke, S., Sparks, R. and Schroder, M. (2006) 'Pella in the Middle Bronze Age' in Fischer, P. M. (ed.) *The Chronology of the Jordan Valley during the Middle and Late Bronze Ages: Pella, Tell Abu al-Kharaz and Tell Deir 'Alla*, Vienna, 9-58.
- Bourogiannis, G. (2018a) 'The Phoenician presence in the Aegean during the Early Iron Age: trade, settlement and cultural interaction', *Rivista di Studi Fenici* 46, 43-88.
- Bourogiannis, G. (2018b) 'The transmission of the alphabet to the Aegean' in Niesiolowski-Spanò, Ł and Węcowski, M. (eds) *Change, Continuity and Connectivity. North-Eastern Mediterranean at the turn of the Bronze Age and in the early Iron Age*, Wiesbaden, 235-257.
- Bourogiannis, G. (2019) 'Between scripts and languages: Inscribed intricacies from Geometric and Archaic Greek contexts' in Boyes, P. J. and Steele P. M. (eds) *Understanding Relations between Scripts II: Early Alphabets*, Oxford, 151-180.
- Bourogiannis, G. (2022) *Beyond Cyprus: Investigating Cypriot connectivity in the Mediterranean from the Late Bronze Age to the end of the Classical Period*, Athens.
- Bowman, A. K. (1998) *Life and letters on the Roman frontier: Vindolanda and its people*, New York.
- Boyes, P. J. (2013) *Social Change in 'Phoenicia' in the Late Bronze/Early Iron Age Transition*. Unpublished doctoral thesis, University of Cambridge.
- Boyes, P. J. (2019a) 'Negotiating imperialism and resistance in Late Bronze Age Ugarit: The rise of alphabetic cuneiform', *Cambridge Archaeological Journal* 29 (2), 185-199.
- Boyes, P. J. (2019b) 'Variation in alphabetic cuneiform: Rethinking the 'Phoenician' inscription from Sarepta' in Boyes, P. J. and Steele, P. M. (eds) *Understanding Relations Between Scripts II: Early Alphabets*, Oxford, 29-51.
- Boyes, P. J. (2021a) *Script and Society: The social context of writing practices in Late Bronze Age Ugarit*, Oxford.
- Boyes, P. J. (2021b) 'Towards a social archaeology of writing practices' in Boyes, P. J., Steele, P. M. and Elvira Astoreca, N. (eds) *The Social and Cultural Contexts of Historic Writing Practices*, Oxford, 19-36.
- Boyes, P. J. and Steele, P. M. (eds) (2019a) *Understanding Relations Between Scripts II: Early alphabets*, Oxford.
- Boyes, P. J. and Steele, P. M. (2019b) 'Introduction: Issues in studying early alphabets' in Boyes, P. J. and Steele, P. M. (eds) *Understanding Relations Between Scripts II: Early alphabets*, Oxford, 1-14.
- Boyes, P. J., Steele, P. M., and Elvira Astoreca, N. (eds) (2021a) *The Social and Cultural Contexts of Historic Writing Practices*, Oxford.
- Boyes, P. J., Steele, P. M. and Elvira Astoreca, N. (2021b) 'Introduction: writing practices in socio-cultural context' in Boyes, P. J., Steele P. M., and Elvira Astoreca, N. (eds) *The Social and Cultural Contexts of Historic Writing Practices*, Oxford, 1-18.
- Bradley, R. (2015) *Ritual and Domestic Life in Prehistoric Europe*, London and New York.
- Brashear, W. M. (1995) 'The Greek magical papyri: an introduction and survey; annotated bibliography (1928-1994)' in Haase, W. (ed.) *Aufstieg und Niedergang der Römischen Welt* (Vol. II), Berlin, 3380-3684.
- Braudel, F. (1972) *The Mediterranean and the Mediterranean world in the age of Philip II*, New York.
- Bresciani, E. (1963) *Testi demotici nella Collezione Michaelidis*, Rome.
- Brixhe, C. (1976) *Le dialect grec de Pamphylie: documents et grammaire*, Paris.
- Brixhe, C. (1982) 'Palatalisations en grec et en phrygien: problèmes phonétiques et graphiques', *Bulletin de la Société de linguistique de Paris* 77, 209-249.
- Brixhe, C. (2002) 'Corpus des inscriptions paléo-phrygiennes: Supplément I', *Kadmos* 41, 1-102.
- Brixhe, C. (2004) 'Corpus des inscriptions paléo-phrygiennes: Supplément II', *Kadmos* 43, 1-130.
- Brixhe, C. and Lejeune, M. (1984) *Corpus des inscriptions paléo-phrygiennes I: Texte. II: Planches*, Paris.
- Brixhe, C. and Sivas, T. T. (2009) 'Nouveaux graffites paléo-phrygiens de Şarhöyük-Dorylaion', *Kadmos* 48, 125-140.

- Brixhe, C. and Summers G. D. (2006) 'Les inscriptions phrygiennes de Kerkenes Dağ (Anatolie Centrale)', *Kadmos* 45, 93–135.
- Broodbank, C. (2013) *The Making of the Middle Sea: A history of the Mediterranean*, Oxford.
- Brück, J. (1999) 'Ritual and rationality some problems of interpretation in European archaeology', *European Journal of Archaeology* 2, 313–344.
- Brunner-Traut, E. (1989) 'Ein Golem in der ägyptischen Literatur', *Studien zur Altägyptischen Kultur* 16, 21–26.
- Bryce, T. (2012) *The World of the Neo-Hittite Kingdoms: a political and military history*, Oxford.
- Brysbaert, A. (2008) *The Power of Technology in the Bronze Age Eastern Mediterranean: The case of painted plaster*, London.
- Burke, A. A., Lords, K. V., Peilstöcker, M., Keimer, K. H. and Pierce, G. A. (2010) 'Egyptians in Jaffa: A portrait of Egyptian presence in Jaffa during the Late Bronze Age', *Near Eastern Archaeology* 73 (1), 2–30.
- Burke, A. A., Peilstöcker, M., Karoll, A., Pierce, G. A., Kowalski, K., Ben-Marzouk, N., Damm, J. C., Danielson, A. J., Fessler, H. D., Kaufman, B., Pierce, K. V. L., Höflmayer, F., Damiata, B. N. and Dee, M. (2017) 'Excavations of the New Kingdom fortress in Jaffa, 2011–2014: Traces of resistance to Egyptian rule in Canaan', *American Journal of Archaeology* 121 (1), 85–133.
- Byrne, R. (2007) 'The refuge of scribalism in Iron I Palestine', *Bulletin of the American Schools of Oriental Research* 345, 1–31.
- Cammarosano, M. (2015) '3D-Joins Und Schriftmetrologie. A Quantitative Approach to Cuneiform Palaeography', *Current Research in Cuneiform Palaeography: Proceedings of the workshop organised at the 60th Rencontre Assyriologique Internationale, Warsaw 2014*, Gladbeck, 145–186.
- Cammarosano, M., Weirauch, K., Maruhn, F., Jendritzki, G. and Kohl, P. L. (2019) 'They wrote in Wax. Wax boards in the ancient Near East', *Mesopotamia* 54, 121–180.
- Cannavò, A. (2018) 'In the middle of the sea of the setting sun. The Neo-Assyrian Empire and Cyprus: economic and political perspectives', in Tyson, C. W. and Herrmann V. R. (eds) *Imperial Peripheries in the Neo-Assyrian Period*, Louisville, 240–264.
- Cannavò, A. (2015) 'Cyprus and the Near East in the Neo-Assyrian Period', *Kyprios Character* <http://kyprioscharacter.eie.gr/en/scientific-texts/details/cyprus-and-others/cyprus-and-near-east-in-neo-assyrian-period>.
- Cannavò, A. (2007) 'The role of Cyprus in the Neo-Assyrian economic system: Analysis of the textual evidence', *Rivista di Studi Fenici* 35, 179–190.
- Cardona, G. R. (2009) *Antropologia della scrittura*, Milano.
- Carmi, I. and Ussishkin, D. (2004) '14C dates' in Ussishkin, D. (ed.) *The Renewed Archaeological Excavations at Lachish (1973–1994)*, Tel Aviv, 2508–2513.
- Caquot, A. and du Mesnil du Buisson, R. (1971) 'La seconde tablette ou "petite amulette" d'Arslan-Tash', *Syria* 48 (3/4), 391–406.
- Černý, J. and Desroches-Noblecourt, C. K. M. (1969–1970) *Graffiti de la Montagne Thébaine. Volume I,1*, Cairo.
- Charpin, D. (2010) *Reading and Writing in Babylon*, Cambridge, MA.
- Clackson, J. (2012) 'Oscan in Sicily' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 132–148.
- Cline, E. H. (2014) *1177 B.C.: The year civilization collapsed*, Princeton.
- Cohen, S. L. (2014) 'The southern Levant (Cisjordan) during the Middle Bronze Age' in Killebrew, A. E., Steiner, M. L. (eds) *The Oxford Handbook of the Archaeology of the Levant. c. 8000–332 BCE.*, Oxford, 451–464.
- Coldstream, J. N. (1979) 'Geometric skyphoi in Cyprus', *Report of the Department of Antiquities of Cyprus*, 255–269.
- Collitz, H. (ed.) (1884–1915) *Sammlung der griechischen Dialekt-Inschriften*, Vols I–IV, Göttingen.

- Connor, A. (2018) 'An early second century BCE account of payments: The earliest known use of alphabetization in Greek documentary papyri', *The Bulletin of the American Society of Papyrologists* 55, 21–37.
- Consani, C. (1988) 'Bilinguismo, diglossia e digrafia nella Grecia antica. I. Considerazioni sulle iscrizioni bilingui di Cipro' in Campanile E., Cardona, G. R. and Lazzeroni, R. (eds), *Bilinguismo e biculturalismo nel mondo antico. Atti del colloquio interdisciplinare (Pisa, 28–29 settembre 1987)*, Pisa, 35–60.
- Consani, C. (1990) 'Bilinguismo, diglossia e digrafia nella Grecia antica. III. Le iscrizioni digrafe Ciptote' in Bolelli, T. (ed.) *Studi in memoria di Ernesto Gianmarco*, Pisa, 63–79.
- Cook, B. F. (1990) 'Greek inscriptions' in Hooker, J. T. (ed.) *Reading the Past: Ancient writing from cuneiform to the alphabet*, Berkeley, LA, 259–319.
- Cooley, A. (2012) *The Cambridge Manual of Latin Epigraphy*, Cambridge.
- Cox, C. M. W. and Cameron A. (1932) 'A native inscription from the Myso-Phrygian borderland', *Klio* 25, 34–49.
- Crellin, R. S. D. (2020) 'Vowel quantity and quality in Neo-Punic and Latin inscriptions from Africa and Sardinia' in Hornkohl, A. and Khan, G. (eds) *Studies in Semitic Vocalisation and Reading Traditions*, Cambridge, 1–53.
- Crellin, R. S. D. (2022) *The Semantics of word division in Northwest Semitic writing systems*, Oxford.
- Cross, F. M. and Stager, L. E. (2006) 'Cypro-Minoan inscriptions found in Ashkelon', *Israel Exploration Journal* 56 (2), 129–159.
- Crowther, C. (2004) 'The dating of Koan Hellenistic inscriptions' in Höghammar, K. (ed.) *The Hellenistic Polis of Kos; State, economy and culture; Proceedings of an international seminar organized by the Department of Archaeology and Ancient History, Uppsala University, 11–13 May 2000*, Uppsala Studies in Ancient Mediterranean and Near Eastern Civilizations 28, Uppsala, 21–60.
- Cryer, F. H. (2001) 'Magic in ancient Syria-Palestine and in the Old Testament' in Cryer, F. H. and Thomsen, M.-L. (eds) *Witchcraft and Magic in Europe, Vol 1: Biblical and Pagan Societies*, Philadelphia.
- Daly, L. W. (1967) *Contributions to a History of Alphabetization in Antiquity and the Middle Ages, Collection Latomus, Vol. XC*, Brussels.
- Daniel, J. F. (1941) 'Prolegomena to the Cypro-Minoan script', *American Journal of Archaeology* 45 (2), 249–282.
- Darnell, J. C. (2013) 'Wadi el-Hol', *UCLA Encyclopedia of Egyptology* 1.1, <https://escholarship.org/uc/item/1sd2j49d>.
- Darnell, J. C., Dobbs-Allsopp, F. W., Lundberg, M. J., McCarter, P. K., Zuckerman, B. and Manassa, C. (2005) 'Two early alphabetic inscriptions from the Wadi el-Hôl. New evidence for the origin of the alphabet from the Western Desert of Egypt', *Annual of the American Schools of Oriental Research* 59, 67–115.
- Davis, B. (2011) 'Cypro-Minoan in Philistia?' in Valério, M. (ed.) *Kubaba 2: Journal of Ancient Southwest Asia and Eastern Mediterranean Studies*, 49–100.
- Davis, B., Maran, J. and Wirghová, S. (2014) 'A new Cypro-Minoan inscription from Tiryns: TIRY Avas 002', *Kadmos* 53 (1–2), 91–109.
- De Angelis, A. (2013) 'Greek in Sicily in Late Antiquity' in Giannakis, G. K. (ed.) *Encyclopedia of Ancient Greek language and linguistics*, Leiden.
- De Moor, J. C. (1981–2) 'Demons in Canaan', *Jaarbericht Ex Oriente Lux* 27, 106–119.
- del Freo, M. (2010) 'Review of: Olivier, J.-P., Édition holistique des textes chypro-minoens', *Studi micenei ed egeo-anatolici* 52, 305–313.
- del Olmo Lete, G. (2014) *Incantations and Anti-Witchcraft Texts from Ugarit*, Berlin.
- Demetriou, D. (2012) *Negotiating Identity in the Ancient Mediterranean*, Cambridge.
- Devine, A. M. and Stephens, L. D. (1994) *The prosody of Greek speech*, Oxford.

- de Vreeze, M. (2019) 'The Late Bronze Age Deir 'Alla Tablets. A renewed attempt towards their translation and interpretation', *Maarav* 23 (2), 443–542.
- de Vreeze, M. and Badreshany, K. (forthcoming) 'Identity and monumentality: The construction of an Early Bronze Age landscape on the Lebanese coast', *Journal of Ancient Egyptian Interconnections*.
- Diakonoff, I. M. (1993) 'Cyaxares', *Encyclopaedia Iranica* VI, 478–479.
- Diamond, J. (1994) 'Writing Right', *Discover Magazine*, <https://www.discovermagazine.com/mind/writing-right>. Accessed November 2021.
- Dickey, E. (2017) 'Word division in bilingual texts' in Macedo, G. and Scappaticcio, M. C. (eds) *Signes dans les textes, textes sur les signes* (Papyrologica Leodiensia 6), Liège, 159–175.
- Diego Espinel, A. (2002) 'The role of the temple of Ba'alat Gebal as intermediary between Egypt and Byblos during the Old Kingdom', *Studien zur Altägyptischen Kultur* 30, 103–119.
- Dieleman, J. (2015) 'The materiality of textual amulets in ancient Egypt' in Boschung, D. and Bremmer, J. N. (eds) *The Materiality of Magic*, Paderborn, 23–58.
- Dietrich, M. and Loretz, O. (1969) 'Beschriftete Lungen- und Lebermodelle aus Ugarit' in Schaeffer, C. F.-A. (ed.) *Ugaritica VI*, Paris, 165–179.
- Dillo, M. (2017) 'A diplomatic approach to the Hieroglyphic Luwian Assur letters: their close relationship and consecution', *Bibliotheca Orientalis* 74 (5/6), 527–551.
- Dillo, M. (2021) 'Do the Uluburun signs represent Mycenaean numerals?' in Bianconi, M. (ed.) *Linguistic and Cultural Interactions between Greece and the Ancient Near East: In search of the golden fleece*, Leiden/Boston, 221–232.
- Dincol, A. M. and Dincol, B. (2002) 'Die "Anzeigen" der Öffentlichen Schreiber in Hattuscha' in de Martino, S. and Pecchioli Daddi, F. (eds) *Anatolia antica: studi in memoria di Fiorella Imparati*, Florence, 207–215.
- Donahou, M. S. (2010) *A Comparison of the Egyptian Execration Ritual to Exodus 32:19 and Jeremiah 19*, Piscataway.
- Donnelly, C. (2020) 'Signs, marks, and Olivier Masson in the development of the Cypro-Minoan corpus', *Cahiers du Centre d'études chypriotes*, 91–108.
- Dörfler, W. (2019) 'The Bronze Age in the East – The Hittites and their environment' in Haug, A., Käppel, L. and Müller, J. (eds) *Past Landscapes. The dynamics of interaction between society, landscape and culture*, Leiden, 291–310.
- Dornseiff, F. (1925) *Das Alphabet in Mystik und Magie*, Leipzig.
- Dow, S. (1952) 'Greek numerals', *American Journal of Archaeology* 56, 21–23.
- Duhoux, Y. (1989) *Problems in Decipherment*, Louvain.
- Dunne, A. and Raby, F. (2013) *Speculative Everything: Design, fiction, and social dreaming*, Cambridge, MA.
- Egetmeyer, M. (2006), 'Cipriota e-xe | o-ru-xe', in Bombi, R., Cifoletti, G., Fusco, F., Innocente, L. and Orioles, V. (eds) *Studi linguistici in onore di Roberto Gusmani*, Alessandria, 707–712.
- Egetmeyer, M. (2010) *Le dialecte grec ancien de Chypre, Voll. I-II*, Berlin.
- Egetmeyer, M. (2012) "'Sprechen Sie Golgisch?'" Anmerkungen zu einer übersehenen Sprache' in Carlier, P. (ed.) *Etudes mycéniennes 2010. Actes du XIII colloque international sur les textes égéens*, Pisa, 427–434.
- Egetmeyer, M. (2013) 'From the Cypro-Minoan to the Cypro-Greek syllabaries: Linguistic remarks on the script reform' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 107–132.
- Egetmeyer, M. (2016) 'Appendix V. A bronze bowl from Palaepaphos-Skales with a new Cypro-Minoan inscription from the Cypro-Geometric period' in Karageorghis, V. and Raptou, E. (ed.) *Palaepaphos-Skales. Tombs of the Late Cypriote IIIB and Cypro-Geometric Periods (Excavations of 2008 and 2011)*, Nicosia, 131–136.

- Egetmeyer, M. (2017) 'Script and language on Cyprus during the Geometric Period: An overview on the occasion of two new inscriptions' in Steele, P. M. (ed.) *Understanding Relations Between Scripts*, Oxford, 180–201.
- Elvira Astoreca, N. (2018) 'Escritura e Identidad: el caso de Pafos' in Balda Baranda, A. and Redondo-Moyano, E. (eds) *Opera Selecta. Estudios sobre el mundo clásico*, Vitoria-Gasteiz, 35–43.
- Elvira Astoreca, N. (2020) ΕΛΛΗΝΙΚΑ ΓΡΑΜΜΑΤΑ. A linguistic analysis of the early Greek alphabets. Doctoral thesis, University of Cambridge.
- Elvira Astoreca, N. (2021) *Early Greek alphabetic writing. A linguistic approach*, Oxford.
- Evans, A. (1921) *The Palace of Minos: A comparative account of the successive stages of the early Cretan Civilization as illustrated by the discoveries at Knossos*. Volume 1, London.
- Faigenbaum-Golovin, S., Shaus, A., Sober, B., Levin, D., Na'aman, N., Sass, B., Turkel, E., Piasetzky, E. and Finkelstein, I. (2016) 'Algorithmic handwriting analysis of Judah's military correspondence sheds light on composition of biblical texts', *Proceedings of the National Academy of Sciences of the United States of America*, 113 (17), 4664–4669.
- Faulkner, R. O. (1937) 'The Bremner-Rhind Papyrus 3: The Book of Overthrowing Apep', *Journal of Egyptian Archaeology* 23, 166–185.
- Feldman, M. H. (2002) 'Luxurious forms: Redefining a Mediterranean "International Style" 1400–1200 B.C.E.', *The Art Bulletin* 84, 6–29.
- Feldman, M. H. (2006) *Diplomacy by Design: Luxury arts and an 'International Style' in the Ancient Near East 1400–1200 BCE*, Chicago.
- Ferrara, F. (1829) *Storia di Catania: Sino alla fine del secolo XVIII con la descrizione degli antichi monumenti ancora esistenti e dello stato stato presente nella citta*, Catania.
- Ferrara, S. (2012) *Cypro-Minoan Inscriptions. Volume I: Analysis*, Oxford.
- Ferrara, S. (2013) *Cypro-Minoan Inscriptions. Volume II: The Corpus*, Oxford.
- Ferrara, S. (2017) 'Another beginning's end: Secondary script formation in the Aegean and the Eastern Mediterranean' in Steele, P. M. (ed.) *Understanding Relations Between Scripts*, Oxford, 7–32.
- Ferrara, S. and Bell, C. (2016) 'Tracing copper in the Cypro-Minoan script', *Antiquity* 90 (352), 1009–1021.
- Ferrara, S. and Valério, M. (2017) 'Contexts and repetitions of Cypro-Minoan inscriptions: Function and subject matter of clay balls', *Bulletin of ASOR* 378, 71–94.
- Fetaya, E., Lifshitz, Y., Aaron, E. and Gordin, S. (2020) 'Restoration of fragmentary Babylonian texts using recurrent neural networks', *Proceedings of the National Academy of Sciences* 117 (37), 22743–22751.
- Finkelstein, I. (2006) 'The last labayu: King Saul and the expansion of the first north Israelite territorial entity' in Amit, Y., Ben Zvi, E., Finkelstein, I., and Lipschits, O. (eds) *Essays on Ancient Israel in its Near Eastern Context. A tribute to Nadav Na'aman*, Winona Lake, 171–177.
- Finkelstein, I. and Sass, B. (2013) 'The West Semitic alphabetic inscriptions, Late Bronze II to Iron IIA: archeological context, distribution and chronology', *Hebrew Bible and Ancient Israel* 2 (2), 149–220.
- Finkelstein, I. and Na'aman, N. (2005) 'Shechem of the Amarna period and the rise of the Northern Kingdom of Israel', *Israel Exploration Journal* 55, 172–93.
- Fischer, P. M. (2014) 'The southern Levant (Transjordan) during the Late Bronze Age' in Killebrew, A. E. and Steiner, M. L. (eds) *The Oxford Handbook of the Archaeology of the Levant. c. 8000–332 BCE*, Oxford, 561–576.
- Folkerts, M. (2002) 'Zahlzeichen und Zahlensysteme; 1. Griechenland' in Cancik, H. and Schneider, H. (eds) *Der Neue Pauly; Enzyklopädie der Antike; Altertum*, Band 12/2, Stuttgart, Weimar, 670–676.
- Folkerts, M. (2006) 'Number signs and number systems; 1. Greece' in Cancik, H. and Schneider, H. (eds) *Brill's New Pauly; Encyclopaedia of the Ancient World; Antiquity*, Salazar, Ch. F. (editor-in-chief, English edition), Vol. 9, Leiden, 887–889.

- Forlanini, M. (1996) 'Un coin de Phrygie à l'époque hittite: continuité toponymique et religieuse', *Hethitica* 13, 5–12.
- Forshaw, R. (2014) *The Role of the Lector in Ancient Egyptian Society*, Oxford.
- Fortson, B. W. (2010) *Indo-European Language and Culture: An Introduction*, 2nd ed., Chichester.
- Fourrier, S. (2008) 'East Greek and Cypriote ceramics of the Archaic period. Cyprus and the East Aegean', *Pythagoreion*, 131–138.
- Fourrier, S. (2009) 'The Archaic deposit of the North Rampart at Amathus, VII. Other Cypriote wares and Levantine imports', *Bulletin de Correspondance Hellénique* 133 (1), 1–98.
- Fourrier, S. and Hermary, A. (2006) *Amathonte VI. Le Sanctuaire d'Aphrodite des origines au début de l'époque impériale*, Paris.
- Franken, H. J. (1964) 'The stratigraphical context of the clay tablets found at Deir 'Alla', *Palestine Exploration Quarterly* 96 (2), 73–8.
- Franken, H. J. (1992) *Excavations at Tell Deir 'Alla, Vol. 2: The Late Bronze Age sanctuary*, Leuven.
- Frankfurter, D. (2005) 'Curses, blessings, and ritual authority: Egyptian magic in comparative perspective', *Journal of Ancient Near Eastern Religions* 5 (1), 157–185.
- Frankfurter, D. (2019) *The Magic of Writing in Ancient Mediterranean Antiquity, Guide to the Study of Ancient Magic*, Boston/Leiden.
- Franz, J. (1853) *Corpus Inscriptionum Graecarum*, Vol. 3, Berlin.
- Freedman, D. N. and Geoghegan, J. C. (1999) 'Alphabetic acrostic psalms', in Freedman, D. N., *Psalms 119: The Exaltation of Torah*, Biblical and Judaic Studies from the University of California, San Diego, Vol. 6, Winona Lake, 1–23.
- Freedman, D. N. and Miano, D. (2005) 'Non-acrostic alphabetic psalms', in Flint, P. W. and Miller, P. D. (eds), *The Book of Psalms; Composition and reception*, Supplements to Vetus Testamentum, Vol. XCIX, Leiden and Boston, 87–96.
- Friedrich, J. and Kammenhuber, A. (1975–) *Hethitisches Wörterbuch, 2. völlig neu bearbeitete Auflage*, Heidelberg.
- Gachet, J. (1995) 'Les ivoires inscrits du palais royale' in Yon, M., Sznycer, M. and Bordreuil, P. (eds) *Le Pays d'Ougarit autour de 1200 av. J.-C.*, (Ras Shamra-Ougarit XI), Paris, 245–254.
- Gachet, J. and Pardee, D. (2001) 'Les ivoires inscrits du palais royal (fouille 1955)' in Yon, M. and Arnaud, D. (eds) *Études ougaritiques 1: Travaux 1985–1955*, (Ras Shamra-Ougarit XIV), Paris, 191–230.
- Galili, E., Gale, N. and Rosen, B. (2012) 'A Late Bronze Age shipwreck with a metal cargo from Hishuley Carmel, Israel', *The International Journal of Nautical Archaeology* 42, 2–23.
- Gardiner, A. H. (1916) 'The Egyptian origin of the Semitic Alphabet', *The Journal of Egyptian Archaeology* 3 (1), 1–16.
- Gaudard, F. (2012) 'Birds in the ancient Egyptian and Coptic alphabets' in Bailleul-LeSuer, R. (ed.) *Between Heaven and Earth; Birds in Ancient Egypt*, Oriental Institute Museum Publications 35, Chicago, 65–70.
- Gaze, T. and Jacobson, M. (2013) *An Anthology of Asemic Handwriting*, New York.
- Gelb, I. J. (1963) *A Study of Writing*, 2nd ed., Chicago.
- Georgiadou, A. (2010) 'La tablette d'Idalion réexaminée', *Cahiers Du Centre d'Etudes Chypristes* 40, 141–203.
- Georgiadou, A. (2011) 'À propos de la production céramique chyro-géométrique d'Amathonte: essai de caractérisation', *Cahiers du centre d'études chypristes* 41, 167–182.
- Georgiadou, A. (2015) 'Pottery of Geometric, Archaic and Classical periods in Cyprus', *Kyprios Character* <http://kyprioscharacter.eie.gr/en/scientific-texts/details/archaeology/pottery-of-geometric-archaic-and-classical-periods-in-cyprus>.
- Georgiadou, A. (2017) 'Aspects of pottery production and circulation in the Early Iron Age Cypriot polities: Considering the evidence of the Salamis workshops' in Vlachou, V. and Gadolou, A. (eds) *ΤΕΡΨΙΣ: Studies in Mediterranean Archaeology in honour of Nota Kourou*, Brussels, 99–112.

- Georgiadou, A. (2019) 'Aspects of pottery production of the workshops of Lapithos in the Early Iron Age' in Papanikola-Bakirtz, D., *Ceramic Art from the Soil of Lapithos*, Nicosia, 77–167.
- Gérard, R. (2005) *Phonétique et morphologie de la langue lydienne*, Louvain.
- Giusfredi, F. (2020) *A study in the syntax of the Luwian Language*, Heidelberg.
- Gjerstad, E., Calvet, Y., Yon, M., Karageorghis, V. and Thalmann, J. P. (1977) *Greek Geometric and Archaic Pottery found in Cyprus*, Stockholm.
- Gobeil, C. (2015) 'The IFAO excavations at Deir el-Medina', *Oxford Handbooks Online*, DOI: 10.1093/oxfordhb/9780199935413.013.32.
- Goldstein, D. M. (2016) *Classical Greek Syntax: Wackernagel's law in Herodotus*, Leiden.
- Goldwasser, O. (1982) 'The Lachish hieratic bowl once again', *Tel Aviv* 9, 137–138.
- Goldwasser, O. (1984) 'Hieratic inscriptions from Tel Sera' in southern Canaan', *Tel Aviv* 11, 77–93.
- Goldwasser, O. (2006) 'Canaanites reading hieroglyphs: Horus is Hathor? – The invention of the alphabet in Sinai', *Ägypten und Levante* 16, 121–160.
- Goldwasser, O. (2011) 'The advantage of the cultural periphery: the invention of the alphabet in Sinai (circa 1840 BCE)' in Sela-Sheffy, R. and Toury, G. (eds) *Culture Contact and the Making of Cultures: papers in homage to Itamar Even-Zohar*, Tel Aviv, 255–321.
- Goldwasser, O. (2012). 'The minders who invented the alphabet', *Journal of Ancient Egyptian Interconnections* 4 (3), 9–22.
- Goldwasser, O. (2016) 'From the iconic to the linear: the Egyptian scribes of Lachish and the modification of the early alphabet in the Late Bronze Age' in Finkelstein, I., Robin, C. and Römer, T. (eds) *Alphabets, texts and artifacts in the ancient Near East: studies presented to Benjamin Sass*, Paris, 118–160.
- Goody, J. (1968) 'Restricted literacy in northern Ghana' in Goody, J. (ed.) *Literacy in Traditional Societies*, Cambridge, 199–264.
- Gordon, A. E. (1983) *Illustrated introduction to Latin Epigraphy*, Berkeley.
- Gorbachov, Y. (2005) 'The origin of the Phrygian aorist of the type edaes' in Jones-Bley, K., Huld, M. E., della Volpe, A. and Dexter, M. R. (eds) *Proceedings of the Sixteenth Annual UCLA Indo-European Conference, Los Angeles, November 5–6, 2004*, Journal of Indo-European Studies Monograph Series No. 50. Washington, DC, 191–217.
- Goren, Y., Finkelstein, I. and Na'aman, N. (2004) *Inscribed in clay. Provenance study of the Amarna Letters and other Ancient Near Eastern Texts*, Tel Aviv.
- Graf, F. (2015) 'Magie et écriture: Quelques réflexions' in de Haro Sanchez, M. (ed.) *Écrire la magie dans l'antiquité*, Liège, 227–238.
- Graham, A. S. (2021) 'Reading visual cues on the so-called Archive Wall at Aphrodisias: A Cognitive approach to monumental documents', *American Journal of Archaeology* 125 (4), 571–601.
- Greenberg, R. (2020) *The Archaeology of the Bronze Age Levant: From urban origins to the demise of city-states, 3700–1000 BCE*, Cambridge.
- Greene, N. E. (2017) 'The Qubur al-Walaydah Bowl: New images and old readings', *Bulletin of the American Schools of Oriental Research* 377, 39–47.
- Grenfell, B. P., Hunt, A. S. and Smyly, J. G. (eds) (1902) *The Tebtunis Papyri*, Vol. I, London.
- Groot, N. (2011) All the Work of Artisans. Reconstructing society at Tell Deir 'Allā through the study of ceramic traditions: Studies of Late Bronze Age faience vessels and Iron IIC-III ceramics from Tell Deir 'Allā, Jordan. Doctoral dissertation, University of Delft.
- Guarducci, M. (1967) *Epigrafia greca*, Rome.
- Guillaume-Pey, C. (2021) 'A script "good to drink". Invention of an alphabet and emergence of a religious movement among the Sora (central India)' in Boyes, P. J., Steele, P. M. and Elvira Astoreca, N. (eds) *The Social and Cultural Contexts of Historic Writing Practices*, Oxford.
- Guillaumont, A. (1991) 'Hieracas of Leontopolis' in Atiya, A. S. (ed.) *The Coptic Encyclopedia*, Vol. 4, New York, 1228–1229.

- Gummere, R. M. (1917) *Seneca. Epistles*, Vol. 1 (Seneca Volume IV; Loeb Classical Library 75), Cambridge, MA.
- Gusmani, R. and Polat, Y. (1999) 'Ein neues phrygisches Graffito aus Daskyleion', *Kadmos* 38, 61–64.
- Güterbock, H. G. (1939) 'Das Siegel bei den Hethitern', in Friedrich, J., Lautner, J. G., Miles, G. and Folkers, T. (eds) *Symbolae ad jura Orientis antiqui pertinentes Paulo Koschaker dedicatae*, Leiden, 26–36.
- Güterbock, H. G. (1967) 'The Hittite conquest of Cyprus reconsidered', *Journal of Near Eastern Studies* 26, 73–81.
- Gzella, H. (2013) 'Abecedaries', in Khan, G. (ed.) *Encyclopedia of Hebrew Language and Linguistics*, Vol. I, Leiden and Boston, 4–7.
- Haas, O. (1976) 'Die Sprache der spätphrygischen Inschriften I', *Balkansko Ezikoznanie/Linguistique balkanique* 19/3, 49–82.
- Habicht, C. (2000a) 'Beiträge zu koischen Inschriften', *Chiron* 30, 291–301.
- Habicht, C. (2000b) 'Zur Chronologie der hellenistischen Eponyme von Kos', *Chiron* 30, 303–332.
- Habicht, C. (2004) 'The dating of the Koan Monarchoi', in Höghammar, K. (ed.) *The Hellenistic Polis of Kos; State, economy and culture; Proceedings of an international seminar organized by the Department of Archaeology and Ancient History, Uppsala University, 11–13 May 2000*, *Acta Universitatis Upsaliensis, Boreas*, Uppsala Studies in Ancient Mediterranean and Near Eastern Civilizations 28, Uppsala, 61–67.
- Hadjisavvas, S. (2010) *Cyprus: crossroads of civilizations*, Nicosia.
- Hadjisavvas S., Dupont-Sommer, A. and Lozachmeur, H. (1984) 'Cinq stèles funéraires découvertes sur le site d'Ayios Georghios, à Larnaca-Kition en 1979', *Report of the Department of Antiquities of Cyprus*, 101–116.
- Hall, J. M. (1997) *Ethnic Identity in Greek Antiquity*, Cambridge.
- Hamilton, G. J. (2006) *The origins of the West Semitic Alphabet in Egyptian Script*, Washington.
- Hämmig, A. E. (2013) 'Nevotan niptiyan, die Fluchformel der Stele von Vezirhan', *Indoger-manische Forschungen* 118, 125–154.
- Haring, B. (2015a) 'Halaḥam on an ostrakon of the early New Kingdom?', *Journal of Near Eastern Studies* 74, 189–196.
- Haring, B. (2015b) 'The Sinai alphabet: Current state of research' in De Jong, R. E., Van Gool, T. C. and Moors, C. (eds) *Proceedings of the Multidisciplinary Conference on the Sinai Desert, Cairo 2015*, Cairo, 18–32.
- Haring, B. (2019) 'Ancient Egypt and the earliest known stages of alphabetic writing' in Boyes, P. J. and Steele, P. M. (eds) *Understanding Relations Between Scripts II: Early Alphabets*, Oxford, 53–67.
- Haring, B. (2020) 'The survival of pharaonic ostraca: Coincidence or meaningful patterns?' in Caputo, C. L. (ed.) *Using Ostraca in the Ancient World*, Berlin, 89–108.
- Hasitzka, M. R. M. (1990) *Neue Texte und Dokumentation zum Koptisch-Unterricht*, Mitteilungen aus der Papyrussammlung der Österreichischen Nationalbibliothek (Papyrus Erzherzog Rainer), Neue Serie XVIII, Vienna.
- Haspelmath, M. (2011) 'The indeterminacy of word segmentation and the nature of morphology and syntax', *Folia Linguistica* 45 (1), 31–80.
- Haspels, C. H. E. (1971) *The Highlands of Phrygia. Sites and Monuments*, 2 vols, Princeton.
- Hawkins, J. D. (1986) 'Writing in Anatolia: imported and indigenous systems', *World Archaeology* 17, 363–376.
- Hawkins, J. D. (2000) *Corpus of Hieroglyphic Luwian Inscriptions*, 3 vols, Berlin.
- Hawkins, J. D. (2008) 'The disappearance of writing systems: Hieroglyphic Luwian' in Baines, J., Bennet, J. and Houston, S. (eds) *The Disappearance of Writing Systems. Perspectives on Literacy and Communication*, London, 31–43.
- Hawkins, S. (2013) *Studies in the Language of Hipponax*, Munich Studies in Historical Linguistics, Vol. 14, Bremen.

- Healey, J. F. (1990) *The Early Alphabet*, London.
- Heeßel, N. P. (2012) 'The hermeneutics of Mesopotamian extispicy: theory vs. practice' in Crouch, C. L., Stökl, J. and Zernecke, A. E. (eds) *Mediating Between Heaven and Earth: Communication with the divine in the Ancient Near East*, London.
- Henkelman, W. F. M. (2009) *The Other Gods Who Are. Studies in Elamite-Iranian acculturation based on the Persepolis Fortification Texts*, Leiden.
- Herbordt, S. (2005) *Die Prinzen- und Beamtensiegel der hethitischen Grossreichszeit auf Tonbulln aus dem Nişantepe-Archiv in Hattuša - mit Kommentaren zu den Siegelinschriften und Hieroglyphen von J. David Hawkins*, Mainz am Rhein.
- Hermay, A. (1997) 'Amathonte de Chypre et les Phéniciens' in Lipiński E. (ed.) *Studia Phoenicia V*, Leuven, 375–388.
- Hermay, A. and Mertens, J. R. (2014) *The Cesnola Collection of Cypriot Art. Stone sculpture*, New York.
- Higginbotham, C. R. (2000) *Egyptianization and Elite Emulation in Ramesside Palestine. Governance and accommodation on the Imperial Periphery. Culture and history of the ancient Near East*, Leiden.
- Hirschfeld, N. E. (1999) Potmarks of the Late Bronze Age Eastern Mediterranean, Unpublished doctoral thesis, University of Texas at Austin.
- Hirschfeld, N. E. (2008) 'How and why potmarks matter', *Near Eastern Archaeology* 71, 120–129.
- Hirschfeld, N. E. (2014) 'Signs of writing? Red Lustrous Wheelmade vases and Ashkelon amphorae' in Nakassis, D., Gulizio, J. and James, S. A. (eds) *KE-RA-ME-JA: Studies Presented to Cynthia W. Shelmerdine*, Philadelphia, 261–269.
- Hirschfeld, N. E. (2019) 'Marked pottery found by the British Museum expedition to Egkomi, 1896' in Pilides, D. (ed.) *The Tombs of Egkomi: British Museum Excavations*, Nicosia, 135–153.
- Hirschfeld, N. E. and Smith, J. (2012) 'The Cypro-Minoan inscription from Erimi-Kafkalla T.2/2' in Karageorghis, V. and Violaris, Y. (eds) *Tombs of the Late Bronze Age in the Limassol Area, Cyprus (17th–13th Centuries BC)*, Nicosia, 293–296.
- Hodos, T. (2020) *The Archaeology of the Mediterranean Iron Age: A globalising world c.1100–600 BCE*, Cambridge.
- Höflmayer, F., Haggai, M., Webster, L. and Streit, K. (2020) 'Early alphabetic writing in the ancient Near East: the "missing link" from Tel Lachish', *Antiquity* 95 (381), 1–15.
- Horden, P. and Purcell, N. (2000) *The corrupting sea, a study of Mediterranean history*, Oxford.
- Horowitz, W., Takayoshi, O. and Sanders, S. (2002). 'A bibliographical list of cuneiform inscriptions from Canaan, Palestine/Philistia, and the land of Israel', *Journal of the American Oriental Society* 122, 753–766.
- Horrocks, G. (1997) *Greek: A history of the language and its speakers*, 1st ed., London.
- Horrocks, G. (2010) *Greek: A history of the language and its speakers*, 2nd ed., Chichester.
- Houston, S. (2008) 'The small deaths of Maya writing' in Baines, J., Bennet, J. and Houston, S. (eds) *The Disappearance of Writing Systems: Perspectives on literacy and communication*, London, 231–252.
- Houston, S. (2018) 'Writing that isn't, pseudo-scripts in comparative view', *L'Homme* 3–4, 21–48.
- Houston, S., Baines, J. and Cooper, J. (2003) *Last Writing: script obsolescence in Egypt, Mesopotamia, and Mesoamerica*, Cambridge.
- Hunger, H. (2009) 'Schreiber C. Im 2. und 1. Jahrtausend', *Reallexikon der Assyriologie* 12 (3/4), 269–273.
- Huys, M. and Schmidt, T. (2001) 'The syllabic name-lists on O. Crum 525 (UC inv. 32222); Re-edition and Commentary', *Zeitschrift für Papyrologie und Epigraphik* 134, 145–162.
- Iacovou, M. (2008) 'Cultural and political configurations in Iron Age Cyprus: The sequel to a protohistoric episode', *American Journal of Archaeology* 112 (4), 625–657.
- Iacovou, M. (2013) 'The Cypriot Syllabary as a royal signature: The political context of the syllabic script in the Iron Age' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 133–152.

- Iacovou, M. (2014) 'Cyprus during the Iron Age I period (Late Cypriote IIC - IIIA)' in Steiner, M. L. and Killebrew, A. E. (eds) *Oxford Handbook of the Archaeology of the Levant (ca. 8000-332 BCE)*, Oxford, 660-674.
- Iacovou, M. (2019) 'Palaepaphos: Unlocking the landscape context of the sanctuary of the Cypriot Goddess', *Open Archaeology*, 204-234.
- Iwry, S. (1961) 'New evidence for belomancy in ancient Palestine and Phoenicia', *Journal of the American Oriental Society*, 81 (1), 27-34.
- Janes, S. (2013) 'Death and burial in the age of the Cypriot city-kingdoms: Social complexity based on the mortuary evidence', *Bulletin of the American Schools of Oriental Research* 370, 145-168.
- Jeffers, A. (1996) *Magic and divination in ancient Palestine and Syria*, Leiden.
- Jeffery, L. H. (1961) *The local scripts of Archaic Greece. A study of the origin of the Greek alphabet and its development from the eighth to the fifth centuries BC*, 1st ed., Oxford.
- Jeffery, L. H. (1990) *The local scripts of Archaic Greece. A study of the origin of the Greek alphabet and its development from the eighth to the fifth centuries BC*, 2nd ed., Oxford.
- Jenkins, I. (2001) 'Archaic kouroi in Naucratis: The case for Cypriot origin', *American Journal of Archaeology* Vol. 105 (2), 163-179.
- Jon, D. M. (2016) *James Castle: The Experience of everyday*, Minneapolis.
- Kafafi, Z. (2009) 'The archaeological context of the Tell Deir 'Allā Tablets' in Kaptijn, E. and Petit, L.P. (eds) *A Timeless Vale. Archaeological and related essays on the Jordan Valley in honour of Gerrit van der Kooij on the occasion of his sixty-fifth birthday*, Leiden, 119-128.
- Kaibel, G. and Lebègue, A. (1890) *Inscriptiones Graecae*, Vol. 14, Berlin.
- Kammerzell, F. (2001) 'Die Entstehung der Alphabetreihe; Zum ägyptischen Ursprung der semitischen und westlichen Schriften' in Borchers, D., Kammerzell, F. and Weninger, S. (eds) *Hieroglyphen, Alphabet, Schriftreformen; Studien zu Multiliteralismus, Schriftwechsel und Orthographieneuregelungen*, *Lingua Aegyptia, Studia monographica* 3, Göttingen, 117-158.
- Kaniewski, D., Paulissen, E., Van Campo, E., Weiss, H., Otto, T., Bretschneider, J. and Van Lerberghe, K. (2010) 'Late second-early first millennium BC abrupt climate changes in coastal Syria and their possible significance for the history of the Eastern Mediterranean' *Quaternary Research* 74, 207-215.
- Kanta, A. (2014) 'Pyla-Kokkinokremos 2012' in Kanta, A. and Karageorghis, V. (eds) *Pyla-Kokkinokremos: A Late 13th Century BC Fortified Settlement in Cyprus. Excavations 2010-2011*, Uppsala, 103-112.
- Kaplony-Heckel, U. (1974) 'Schüler und Schulwesen in der ägyptischen Spätzeit', *Studien zur Altägyptischen Kultur* 1, 227-246.
- Karageorghis, V. (1970) *Excavation in the Necropolis of Salamis II*, Nicosia.
- Karageorghis, V. (1983) *Palaepaphos-Skales: An Iron Age Cemetery in Cyprus*, Konstanz.
- Karageorghis, V. and Masson, É. (1971) 'Un bronze votif inscrit (modèle de foie ou de rein?) trouvé à Kition en 1970' in *Studi ciprioti e rapporti di scavo*, 1, Rome, 237-246.
- Karnava, A. and Markou, M. (2020) 'Cypriot kings and their coins: new epigraphic and numismatic evidence from Amathous and Marion', *Cahiers du centre d'études chypriotes* 50, 109-136.
- Karnava, A., Perna, M. and Egetmeyer, M. (2020) *Inscriptiones Graecae XV 1, Inscriptiones cypri syllabicae, Fasc. 1, Inscriptiones Amathontis, Curii, Marii*, Berlin.
- Kassianidou, V. (2013) 'The exploitation of the landscape: metal resources and the copper trade during the age of the Cypriot city-kingdoms', *Bulletin of the American School of the Oriental Research* 370, 49-82.
- Kassianidou, V. (2017) 'The production and trade of Cypriot copper during the Bronze Age: New data' in Papadimitriou, N. and Toli, M. (eds) *Ancient Cyprus. Recent developments in the archaeology of the Eastern Mediterranean*, Athens, 111-134.
- Keil, J. (1940) 'Ein rätselhafter Amulett', *Wiener Jahreshefte* 32, 79-84.
- Kirchhoff, A. (1863) *Studien zur Geschichte des griechischen Alphabets*, 1st ed., Berlin.

- Klinger, J. (1998) 'Wer Lehrte Die Hethitern Das Schreiben?' in Alp, S. and Süel, A. (eds) *III. Uluslararası Hititoloji Kongresi Bildirileri. Acts of the IIIrd International Congress of Hittitology*, Ankara, 365–375.
- Kloekhorst, A. (2008) *Etymological Dictionary of the Hittite Inherited Lexicon*, Leiden.
- Knapp, B. (2008) *Prehistoric and Protohistoric Cyprus: Identity, insularity, and connectivity*, Oxford.
- Knapp, A. B. and Manning, S. (2016) 'Crisis in context: The end of the Late Bronze Age in the Eastern Mediterranean', *American Journal of Archaeology* 120, 99–149.
- Koch, I. (2016) 'Settlement and interactions in the Shephelah during the late second through early first millennia BCE' in Lipschits, O. and Maier, A. (eds) *The Shephelah during the Iron Age: Recent archaeological studies*, Winona Lake, 181–207.
- Koch, I. (2017) 'Revisiting the Fosse Temple at Tel Lachish', *Journal of Ancient Near Eastern Religions* 17, 64–75.
- Koch, I. (2021) 'Chapter 3. Goddess in translation: The Fosse Temple at Lachish' in Koch, I., *Colonial Encounters in Southwest Canaan during the late Bronze Age and Early Iron Age*, Leiden and Boston, 45–53.
- Korhonen, K. (2011) 'Language and identity in the Roman colonies of Sicily' in Sweetman, R. J. (ed.) *Roman colonies in the first century of their foundation*, Oxford, 7–31.
- Korhonen, K. (2012) 'Sicily in the Roman Imperial period' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 326–369.
- Körner, C. (2017) *Die zyprischen Königtümer im Schatten der Grossreiche des vorderen Orients: Studien zu den zyprischen Monarchien vom 8. bis zum 4. Jh. v. Chr.*, Leuven.
- Körner, C. (2019) 'Silbenschrift und Alphabetschriften im archaischen und klassischen Zypern— Ausdruck verschiedener Identitäten?' in Amann, P., Corsten, T., Mitthof, F. and Taeuber, H. (eds) *Sprachen - Schriftkulturen - Identitäten der Antike Beiträge des XV. Internationalen Kongresses für Griechische und Lateinische Epigraphik*, Vienna, 59–76.
- Kourou, N. (2004) 'Inscribed imports, visitors and pilgrims at the archaic sanctuaries of Camiros' in Giannikouris, A. (ed.) *Χάρης Χαίρε. Μελέτες στη μνήμη της Χάρης Κάτζια*, vol. 2, 11–30.
- Kourou, N. (2012) 'Phoenicia, Cyprus and the Aegean in the Early Iron Age: J. N. Coldstream's contribution and the current state of research' in Iacovou, M. (ed.) *Cyprus and the Aegean in the Early Iron Age, the legacy of Nicolas Coldstream*, Nicosia, 33–51.
- Kourou, N. (2015) 'Literacy, networks and social dynamics in archaic Rhodes', in Nawracala, S. and Nawracala, R. (eds) *ΠΟΛΥΜΑΘΕΙΑ. Festschrift für Hartmut Matthäus anlässlich 65. Geburtages*, Aachen, 245–263.
- Kreimerman, I. (2017) 'A typology for destruction layers: The Late Bronze Age southern Levant as a case study' in Cunningham, T. and Driessen, J. (eds) *Crisis to Collapse: The archaeology of social breakdown*, Leuven, 173–203.
- Kümmel, M. (2007) *Konsonantenwandel: Bausteine zu einer Typologie des Lautwandels und ihre Konsequenzen für die vergleichende Rekonstruktion*, Wiesbaden.
- La'da, C. A. (2011) 'A new tax list from Hellenistic Egypt: A preliminary report', *Acta Antiqua Academiae Scientiarum Hungaricae* 51, 23–29.
- Langgut, D., Finkelstein, I. and Litt, T. (2013) 'Climate and the Late Bronze Age collapse: New evidence from the Southern Levant', *Tel Aviv* 40, 149–175.
- Larfeld, W. (1914) *Griechische Epigraphik*, Handbuch der klassischen Altertumswissenschaft, Erster Band, 5. Abteilung, 3rd ed., Munich.
- Lejeune, M. (1978) 'Sur l'alphabet paleophrygien', *Annali della Scuola Normale Superiore di Pisa, Classe di lettere e filosofia Serie III* 8.3, 783–790.
- Leopold, E. and Kindermann, J. (2002) 'Text categorization with support vector machines. How to represent texts in input space?', *Machine Learning* 46, 423–444.
- Lesko, L. H. (ed.) (1994) *Pharaoh's Workers: The villagers of Deir El Medina*, Ithaca, New York.
- Libertini, G. (1936–37) 'Rodogune: A proposito di un'antica iscrizione catanese', *Bollettino Storico Catanese* 1–2, 27–34.

- Liebhardt, R. F. and Brixhe, C. (2009) 'The recently discovered inscriptions from Tumulus MM at Gordion: a preliminary report', *Kadmos* 48, 141–156.
- Ligorio, O. and Lubotsky, A. (2018) 'Phrygian' in Klein, J., Joseph, B. and Fritz, M. (eds) *Handbook of Comparative and Historical Indo-European Linguistics*, Vol. 3, Berlin, 1826–1831.
- Lipiński, E. (1992) *Dictionnaire de la civilisation phénicienne et punique*, Turnhout.
- Liverani, M. (2006) *Uruk: The First City*, London.
- Liverani, M. (2014) *The Ancient Near East: History, society and economy*, London and New York.
- Loundine, A. G. (1987) 'L'abécédaire de Beth Shemesh', *Le Muséon* 100, 243–250.
- Lubotsky, A. (1988) 'The Old Phrygian Areyastis-inscription', *Kadmos* 27 (1), 9–26.
- Luo, J., Cao, Y. and Barzilay, R. (2019) 'Neural decipherment via minimum-cost flow: From Ugaritic to Linear B' in Korhonen, A., Traum, D. and Márquez, L. (eds) *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics*, 3146–3155.
- Luo, J., Hartmann, F., Santus, E., Barzilay, R. and Cao, Y. (2021) 'Deciphering undersegmented ancient scripts using phonetic prior', *Transactions of the Association for Computational Linguistics* 9, 69–81.
- MacGinnis, J. (2002) 'The use of writing boards in the Neo-Babylonian temple administration at Sippar', *Iraq* 64, 217–237.
- Malafouris, L. (2004) 'The cognitive basis of material engagement: where brain, body and culture conflate' in DeMarrais, E., Gosden, C. and Renfrew, C. (eds) *Rethinking materiality: the engagement of mind with the material world*, Cambridge, 53–62.
- Malafouris, L. (2011) 'The aesthetics of material engagement' in Manzotti, R. (ed.) *Situated Aesthetics: Art beyond the skin*, Exeter, 123–141.
- Malafouris, L. (2013a) 'Mindful Art', *Behavioral and Brain Sciences* 36 (2), 151–152.
- Malafouris, L. (2013b) *How things shape the mind: a theory of material management*, Cambridge.
- Manganaro, G. (2016[1988]) 'La Sicilia da Sesto Pompeo a Diocleziano', *Aufstieg und Niedergang der Römischen Welt* 2.11 (1), 3–89.
- Maran, J. (2008) 'Forschungen in Der Unterburg von Tiryns 2000–2003', *Archäologischer Anzeiger*, 35–111.
- Marazzi, M. (1994) 'Ma gli Hittiti scrivevano veramente su "legno"?' in Cipriano, P., Di Giovine, P. and Mancini, M. (eds) *Miscellanea di studi linguistici in onore di Walter Belardi*, Rome, 131–160.
- Marazzi, M. (2010) 'Scrittura, percezione e cultura: qualche riflessione sull'Anatolia in età hittita', *Kaskal* 7, 219–255.
- Marchesini, S. (2012) 'The Elymian language' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 95–114.
- Markides, M. (1916a) 'Annual report of the Curator of Antiquities 1914', *Annual Report of the Department of Antiquities, Cyprus* 1914, 5–6.
- Markides, M. (1916b) 'Annual report of the Curator of Antiquities 1915', *Annual Report of the Department of Antiquities, Cyprus* 1915, 1–7.
- Markoe, G. (1985) *Phoenician Bronze and Silver Bowls from Cyprus and the Mediterranean*, Berkeley.
- Markou, E. (2014) 'Symbols on the Archaic and Classical Cypriot coinage: Influences, duration and diffusion' in Dörtlük, K., Tekin, O. and Boyraz Seyhan, R. (eds) *Birinci Uluslararası Anadolu Para Tarihi ve Numismatik Kongresi - Bildiriler / First International Congress of the Anatolian Monetary History and Numismatics - Proceedings. Antalya 25–28 February 2013*, Antalya, 397–408.
- Markou, E. (2018) 'Quelques réflexions sur le monnayage d'Amathonte de l'époque classique' in Cannavò, A. and Thély, L. *Les royaumes de Chypre à l'épreuve de l'histoire*, Athènes, 213–220.
- Masson, É. (1974) *Cyprominoica. Répertoires, Documents de Ras Shamra, Essais d'Interpretation*, Studies in Mediterranean Archaeology 31.2, Gothenburg.
- Masson, O. (1957) 'Répertoire des inscriptions chypro-minoennes', *Minos* 5, 9–27.
- Masson, O. (1961) *Les inscriptions chypriotes syllabiques: recueil critique et commenté*, 1st ed., Paris.
- Masson, O. (1983) *Les inscriptions chypriotes syllabiques: recueil critique et commenté*, 2nd ed., Paris.
- Matthews, P. H. (1991) *Morphology*, 2nd ed., Cambridge.

- McLean, B. H. (2002) *An Introduction to Greek Epigraphy of the Hellenistic and Roman Periods from Alexander the Great down to the Reign of Constantine (323 B.C.-A.D. 337)*, Ann Arbor.
- Melchert, H. G. (2010) 'Spelling of Initial /A-/ in Hieroglyphic Luwian' in Singer, I. (ed.) *Ipamati kistamati pari tumatimis. Luwian and Hittite Studies Presented to J. David Hawkins on the occasion of his 70th Birthday*, Tel Aviv, 147–158.
- Meletis, D. (2020) *The Nature of Writing. A theory of grapholinguistics*, Brest.
- Meneghetti, F. (forthcoming) *Miniature oxhide ingots from Late Bronze Age Cyprus. An update on the material*, *Frankfurter Archäologischen Schriften*, Bonn.
- Meskel, L. (2002) *Private life in New Kingdom Egypt*, New York.
- Michel, A. (2021) *Chypre à l'épreuve de la domination lagide: recherches épigraphiques sur la société et les institutions chypriotes à l'époque hellénistique*, Athens.
- Millard, A. R. (1986) 'The infancy of the alphabet', *World Archaeology* 17 (3), 390–397.
- Millard, A. R. (1991) 'The use of early alphabets' in Baurain, C., Bonnet, C. and Krings, V. (eds) *Phoinikeia Grammatica. Lire et écrire en Méditerranée*, Namur, 101–114.
- Millard, A. R. (2001) 'Writing and texts' in Macdonald, B., Adams, R. and Bienkowski, P. (eds) *The Archaeology of Jordan*, Sheffield, 659–662.
- Millard, A. R. (2007) 'Alphabetic writing, cuneiform and linear, reconsidered', *Maarav* 14 (2), 83–93.
- Mimbrera, S. (2012a) 'Sicilian Greek: The dialects before the fourth century BC' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 191–222.
- Mimbrera, S. (2012b) 'The Sicilian Doric Koina' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 223–250.
- Mimbrera Olarte, S. (2013) 'Sicily, Dialects in' in Giannakis, G. K. (ed.) *Encyclopedia of Ancient Greek language and linguistics*, Leiden. http://dx.doi.org/10.1163/2214-448X_eagl_COM_00000318
- Mommsen, T. (1883) *Corpus Inscriptionum Latinarum*, Vol. X. Pars II. Inscriptiones Siciliae et Sardiniae, Berlin.
- Moran, W. L. (1992) *The Amarna Letters*, Baltimore.
- Morris, E. F. (2005) *The Architecture of Imperialism. Military bases and the evolution of foreign policy in Egypt's New Kingdom*, Leiden.
- Morpurgo Davies, A. (1987) 'Folk-linguistics and the Greek word' in Cardona, G. and Zide, N. H. (eds) *Festschrift for Henry Hoenigswald on the occasion of his seventieth birthday*, Tübingen, 263–280.
- Müller-Karpe, A. (2003) 'Remarks on Central Anatolian chronology of the Middle Hittite period' in Bietak, M. (ed.) *The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. II. Proceedings of the SCIEEM 2000 - Euroconference, Haindorf 2nd of May-7th of May, 2001*, Vienna, 383–394.
- Müller-Karpe, A., Müller-Karpe, V. and Rieken, E. (2017) 'Untersuchungen in Kayalıpınar 2015', *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* 149, 57–84.
- Mullins, R. A. (2012) 'The Late Bronze and Iron Age temples at Beth-Shean' in Kamlah, J. (ed.) *Temple Building and Temple Cult Architecture and Cultic Paraphernalia of Temples in the Levant (2.- 1. Mill. B.C.E.)*. *Proceedings of a conference on the occasion of the 50th anniversary of the Institute of Biblical Archaeology at the University of Tübingen (28 - 30 May 2010)*, Wiesbaden, 127–158.
- Na'aman, N. (2020) 'Egyptian centres and the distribution of the alphabet in the Levant' *Tel Aviv* 47, 29–54.
- Najock, D. (1975) 'Zahlensysteme, Zahlwörter' in Ziegler, K., Sontheimer, W. and Gärtner, H. (eds) *Der Kleine Pauly, Lexikon der Antike*, Vol. 5, Munich, 1449–1452.
- Neef, M. (2012) 'Graphematics as part of a modular theory of phonographic writing systems', *Writing Systems Research* 4 (2), 214–228.
- Neef, M. (2015) 'Writing systems as modular objects: proposals for theory design in grapholinguistics', *Open Linguistics* 1, 708–721.

- Neu, E. (1980) *Althethitische Ritualtexte in Umschrift*. Studien Zu Den Boğazköy-Texten 25. Wiesbaden.
- Neumann, G. (1992) *System und Ausbau der hethitischen Hieroglyphenschrift*, Göttingen.
- Neumann, G. (1997) 'Die zwei Inschriften auf der Stele von Vezirhan' in Gusmani, R., Salvini, M. and Vinnicelli, P. (eds) *Frigi e frigio 1997: Atti del 1° Simposio Internazionale, Roma 16-17 ott. 1995*, Rome, 13-32.
- Nijboer, A. J. (2008) 'A Phoenician family tomb, Lefkandi, Huelva and the tenth century BC in the Mediterranean' in Sagona, C. (ed.) *Beyond the Homeland: Markers in Phoenician Chronology*, Leuven, 365-378.
- Nikolaev, A. (2017) 'Sidetic masara ↑ue[', *Indogermanische Forschungen* 122 (1), 220-226.
- Norwich, J. J. (2015) *Sicily: A short history from the ancient Greeks to Cosa Nostra*, London.
- Nyord, R. (2019) 'Introduction: Egyptian and Egyptological concepts' in Nyord, R. (ed.) *Concepts in Middle Kingdom Funerary Culture: Proceedings of the Lady Wallis Budge anniversary symposium held at Christ's College, Cambridge, 22 January 2016*, Leiden, 1-23.
- Nyord, R. (2020) 'Seeing perfection: Ancient Egyptian images beyond representation' (Elements in Ancient Egypt in Context). Online resource: <https://doi.org/10.1017/9781108881494>.
- Obrador-Cursach, B. (2020a) *The Phrygian Language*, Leiden.
- Obrador-Cursach, B. (2020b) 'The last verse of the Middle Phrygian epigram from Dokimeion', *Indogermanische Forschungen* 125 (1), 41-49.
- Obrador-Cursach, B. (2021) 'The closing formula of the Old Phrygian epitaph B-07 in the light of the Aramaic KAI 318: a case of textual convergence in Daskyleion', *Anatolian Studies* 71, 47-58.
- Oliver, R. P. (1951) 'The first Medicean MS of Tacitus and the titulature of ancient books', *Transactions and Proceedings of the American Philological Association* 82, 232-261.
- Olivier, J.-P. (1988) 'Tiryinthian Graffiti: Ausgrabungen in Tiryns 1982/83', *Archäologischer Anzeiger*, 253-268.
- Olivier, J.-P. (2013) 'The development of Cypriot syllabaries, from Enkomi to Kafizin' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 7-26.
- Olivier, J.-P. and Vandenabeele, F. (2007) *Édition holistique des textes chypro-minoens*, Pisa.
- Oreshko, R. (2011) 'Hieroglyphic inscriptions of Western Anatolia. Long arm of the empire or vernacular tradition(s)?' in Mouton, A., Rutherford, I. and Yakubovich, I. (eds) *Luwian Identities. Culture, language and religion between Anatolia and the Aegean*, Leiden, 345-420.
- Oreshko, R. (2013 [2015]) 'Hipponax and the linguistic, ethnic and religious milieu of Western Anatolia. Some further notes on Hawkins, Sh. *The language of Hipponax*', *Hephaistos* 30, 87-112.
- Oreshko, R. (2019) 'Phonetic value of Lydian letter <d> revisited and the development of PIE *d in Lydian', *Wekwos* 4, 191-262.
- Oreshko, R. (2020) 'The onager kings of Anatolia: Hartapus, Gordis, Muška and the steppe strand in early Phrygian culture', *Kadmos* 59 (1/2), 77-128.
- Oreshko, R. (2021) 'Phrygians in disguise: onomastic evidence for Phrygian-Anatolian ethnocultural contact in Hieroglyphic-Luwian inscription PORSUK and elsewhere', *Res Antiquae* 18, 283-316.
- Otten, H. (1967) 'Zur Datierung und Bedeutung des Felsheiligtums von Yazilikaya. Eine Entgegnung', *Zeitschrift für Assyriologie und vorderasiatische Archäologie* 58, 222-240.
- Overmann, K. A. and Wynn, T. (2019) 'Materiality and human cognition', *Journal of Archaeological Method and Theory* 26 (2), 457-478.
- Packard, J. L. (2000) *The morphology of Chinese: A linguistic and cognitive approach*, Cambridge.
- Palaima, T. G. (1989) 'Ideograms and supplementals and regional interaction among Aegean and Cypriot scripts', *Minos* 24, 29-54.
- Palaima, T. G. (2010) 'Linear B' in Cline, E. (ed.) *The Oxford Handbook of the Bronze Age Aegean (ca. 3000-1000 BC)*, Oxford, 356-372.
- Papadopoulos, J. (2017) 'To write and to paint. More Iron Age potters' marks in the Aegean', in Strauss Clay, J., Malkin, I. and Tzifopoulos, T. Z., *Panhellenes at Methone*, Berlin, 36-104.

- Papantoniou, G. (2013a) 'Cypriot autonomous polities at the crossroads of empire: The imprint of a transformed islandscape in the Classical and Hellenistic periods', *Bulletin of the American School of Oriental Research* 370, 169–205.
- Papantoniou, G. (2013b) *Religion and Social Transformations in Cyprus: From the Cypriot basileis to the Hellenistic strategos*, Leiden.
- Papantoniou, G. and Bourogiannis G. (2018) 'The Cypriot extra-urban sanctuary as a central place: the case of Agia Irini', *Land* 7 (4), 139.
- Papantoniou, G., Morris, C. E. and Vionis, A. (2019) *Unlocking sacred landscapes: spatial analysis of ritual and cult in the Mediterranean*, Nicosia.
- Pappas, A. (2012), 'More than meets the eye: The aesthetics of (non)sense in the ancient Greek symposium', in Sluiter, I. and Rossen, R. (eds) *Aesthetic Value in Classical Antiquity*, Leiden, 71–111.
- Pardee, D. (2001) 'Ugaritic science' in Daviau, P. M. M., Wevers, J. W., Weigl, M. and Dion, P.-E. D. (eds) *The World of the Aramaeans: Studies in Language and Literature in Honour of Paul-Eugène Dion* (Vol. III), Sheffield, 223–254.
- Pardee, D. (2007) 'The Ugaritic alphabetic cuneiform writing system in the context of other alphabetic systems' in Miller, C. L. (ed) *Studies in Semitic and Afroasiatic Linguistics Presented to Gene B. Gragg*, Chicago, 181–200.
- Paton, W. R. and Hicks, E. L. (1891) *The Inscriptions of Cos*, Oxford.
- Payne, A. (2008) 'Writing systems and identity' in Collins, B. J., Bachvarova, M. R. and Rutherford, I. C. (eds) *Anatolian Interfaces. Hittites, Greeks and their neighbours: Proceedings of an international conference on cross-cultural interaction, September 17–19, 2004*, Oxford, 117–122.
- Payne, A. (2014) *Hieroglyphic Luwian*, 3rd ed., Wiesbaden.
- Paz, Y. and Weiss, T. (2015) 'From encoding to decoding: The ΑΤΒΗ of R. Hiyya in light of a Syriac, Greek and Coptic cipher', *Journal of Near Eastern Studies* 74, 45–65.
- Pérez Orozco, S. (2007) 'La lengua sidética. Ensayo de síntesis', *Kadmos* 46, 125–142.
- Perna, M. (2018) 'La grande inscription d'Amathonte (ICS 194 + 195): une nouvelle étude épigraphique. Rapport préliminaire', in Cannavò, A. and Thély, L. (eds) *Les royaumes de Chypre à l'épreuve de l'histoire*, Athens, 213–220.
- Persson, A. W. (1937) 'More Cypro-Minoan inscriptions' in Gjerstad, E., Lindros, J., Sjoqvist, E. and Westholm, A. (eds) *The Swedish Cyprus Expedition: Finds and results of the excavations in Cyprus, 1927–1931*, Vol. 3, Stockholm, 601–618.
- Pestarinò, B. (2022) *Kyprion Politeia, the political and administrative systems of the Classical Cypriot city-kingsdoms*, Leiden.
- Pestman, P. W. (1994) *The New Papyrological Primer*, 2nd revised ed., Leiden.
- Petit, T. (2015) 'La ville et le royaume d'Amathonte n'ont pas été fondés au XI^e siècle' in Lefevre-Novaro, D., Martzolf, L. and Ghilardi, M. (eds) *Géosciences, archéologie et histoire en Crète de l'âge du Bronze récent à l'époque archaïque*, Padua, 353–375.
- Pettersson, J. S. (1996) 'Numerical notation' in Daniels, P. T. and Bright, W. (eds) *The World's Writing Systems*, Oxford, 795–806.
- Pinch, G. (1994) *Magic in Ancient Egypt*, London.
- Piquette, K. E. and Whitehouse, R. D. (eds) (2013) *Writing as Material Practice: Substance, surface and medium*, London.
- Piraino, M. T. M. (1973) *Iscrizioni greche lapidarie del Museo di Palermo* (Σικελικά. Serie Storica 6), Palermo.
- Pissourios, A. (2019) *Μαθηαίννω Κυπριακά*, Nicosia.
- Pocchetti, P. (2012) 'Language relations in Sicily: Evidence for the speech of the Σικανοί, the Σικελοί and others' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 49–94.
- Poetto, M. (2018) 'A Hieroglyphic graffito on a pitcher from Kültepe', *News from the Land of the Hittites. Scientific Journal for Anatolian Research* 2, 17–25.

- Pöhlmann, E. and West, M. L. (2001) *Documents of Ancient Greek Music; The extant melodies and fragments edited and transcribed with commentary*, Oxford.
- Poilloux, J., Roesch, P. and Marcillet-Jaubert, J. (1987) *Salamine de Chypre XIII. Testimonia Salamina* 2, Paris.
- Polig, M. (2022) 3D approaches to Cypro-Minoan writing- advanced 3D methods of documentation, visualization and analysis. Unpublished PhD thesis, the Cyprus Institute / Ghent University.
- Polig, M., Hermon, S. and Bretschneider, J. (2021) 'Resolution and quality issues in 3D analysis of inscribed signs: An example from Cypro-Minoan inscriptions', *Journal on Computing and Cultural Heritage* 15 (1), 14:1–14:12.
- Prag, J. R. W. (2002) 'Epigraphy by numbers: Latin and the epigraphic culture in Sicily' in Cooley, A. and Burnett, A. (eds) *Becoming Roman, writing Latin?* Portsmouth, R. I., 15–31.
- Prag, J. R. W. (2018) 'The birth of epigraphic culture in the western Mediterranean: Sicilian epigraphic culture in the later Hellenistic period' in Lloris, F. B. and Ariño, B. D. (eds) *El nacimiento de las culturas epigráficas en el occidente mediterráneo*, Madrid, 131–144.
- Prag, J. R. W. (ed.) (2022) *I.Sicily*. <http://sicily.classics.ox.ac.uk>; doi: 10.5281/zenodo.4021517.
- Prag, J. R. W., Chartrand, J. and Cummings, J. (2017) 'I.Sicily: An EpiDoc corpus for ancient Sicily' in Orlandi, S., Santucci, R., Mambrini, F. and Liuzzo, P. M. (eds) *Digital and traditional epigraphy in context: The proceedings of the EAGLE 2016 international conference*, Rome, 83–96.
- Probert, P. (2019) *Latin grammarians on the Latin accent: The transformation of Greek grammatical thought*, Oxford.
- Puech, É. (2000) 'Les pointes de flèches inscrites de la fin du II^e millénaire en Phénicie et Canaan' in Aubet, M. E. and Barthélemy, M. (eds) *Actas del IV congreso internacional de estudios fenicios y púnicos*, Cádiz, 251–269.
- Pugliese Carratelli, G. (1963–1964) 'Il damos coo di Isthmos', in *Annuario della Scuola Archeologica di Atene e delle Missioni Italiane in Oriente*, 41–42 (N. S. 25–26) 147–202.
- Puhvel, J. (1984–) *Hittite Etymological Dictionary*, Berlin.
- Kaiser, S. and Ali, R. (2018) 'Text mining: Use of TF-IDF to examine the relevance of words to documents', *International Journal of Computer Applications (0975 - 8887)* 181 (1), 25–29.
- Quack, J. F. (1993) 'Ägyptisches und südarabisches Alphabet', *Revue d'Égyptologie* 44, 141–151.
- Quack, J. F. (1994) 'Notwendige Korrekturen', *Revue d'Égyptologie* 45, 197.
- Quack, J. F. (2003) 'Die spätägyptische Alphabetreihenfolge und das „südsemiteische“ Alphabet', *Lingua Aegyptia* 11, 163–184.
- Quack, J. F. (2020) 'Ein alphabetisch sortiertes Handbuch der Hieroglyphenzeichen' in Ryholt, K. (ed.) *Hieratic Texts from Tebtunis Including a Survey of Illustrated Papyri*, The Carlsberg Papyri 15, CNI Publications 45, Copenhagen, 77–106, no. 10.
- Quack, J. F. (2021) 'Les traités systématiques des égyptiens sur les sens de leurs signes écrits' in Fournet, J.-L. (ed.) *Les Hieroglyphica d'Horapollon de l'Égypte antique à l'Europe moderne; histoire, fiction et réappropriation*, *Studia Papyrologica et Aegyptiaca Parisina* 2, Paris, 31–43.
- Radner, K. (2010) 'The stele of Sargon II of Assyria at Kition: A focus for an emerging Cypriot identity?' in Rollinger, R., Gufler, B., Lang, M. and Madreiter, I. (eds) *Interkulturalität in der Alten Welt: Vorderasien, Hellas, Ägypten und die vielfältigen Ebenen des Kontakts*, Wiesbaden, 429–449.
- Rainey, A. F. (2015) *The El-Amarna Correspondence (2 vol. set). A new edition of the cuneiform letters from the site of El-Amarna based on collations of all extant tablets*, Leiden.
- Raptou, E. (2015) 'The relations between Athens and Cyprus during the classical period' in the website *Kyprios Character* in the <http://kyprioscharacter.eie.gr/en/scientific-texts/details/cyprus-and-others/relations-between-athens-and-cyprus-during-classical-period>.
- Rast-Eicher, A., Karg, S. and Bender Jørgensen, L. (2021) 'The use of local fibres for textiles at Neolithic Çatalhöyük', *Antiquity* 95, 1129–1144.

- Ray, J. (2011) 'The alphabet that never was: A possible Egyptian influence on the Near East', in Grabbe, L. L. and Lipschits, O. (eds) *Judah between East and West; The Transition from Persian to Greek Rule (ca. 400–200 BCE)*, Library of Second Temple Studies 75, London, 199–209.
- Ray, J. D. (2013) *Demotic Ostraca and Other Inscriptions from the Sacred Animal Necropolis, North Saqqara*, London.
- Regulski, I. (2016) 'The origins and early development of writing in Egypt', *Oxford Handbooks Online*, DOI: 10.1093/oxfordhb/9780199935413.013.61.
- Reynolds, L. D., Griffin, M. T. and Fantham, E. (1996) 'Annaeus Seneca (2), Lucius' in Hornblower, S. and Spawforth, A. (eds) *The Oxford Classical Dictionary*, 3rd ed., Oxford, 96–98.
- Renan, E. et al. (1867–1962) *Corpus Inscriptionum Semiticarum*, Paris.
- Richelle, M. (2016) 'Elusive scrolls: Could any Hebrew literature have been written prior to the eighth century BCE', *Vetus Testamentum* 66, 1–39.
- Rieken, E. (2014) 'Bemerkungen zum Ursprung einiger Merkmale der anatolischen Hieroglyphenschrift', *Welt des Orients* 45, 216–231.
- Ritner, R. K. (1993) *The Mechanics of Ancient Egyptian Magical Practices*, Chicago.
- Ritner, R. K. (1996a) 'Egyptian writing', in Daniels, P. T. and Bright, W. (eds) *The World's Writing Systems*, Oxford, 73–84.
- Ritner, R. K. (1996b) 'The Coptic alphabet', in Daniels, P. T. and Bright, W. (eds), *The World's Writing Systems*, Oxford, 287–290.
- Rizk, R., Rizk, D., Rizk, F. and Kumar, A. (2021) 'A hybrid capsule network-based deep learning framework for deciphering ancient scripts with scarce annotations: A case study on Phoenician epigraphy', *2021 IEEE International Midwest Symposium on Circuits and Systems (MWSCAS)*, 617–620.
- Roaf, M. (2021) 'Cyaxares in Assyria', *NABU* 2021/4, 277–279.
- Robb, J. (2017), "'Art" in archaeology and anthropology: An overview of the concept', *Cambridge Archaeological Journal* 27 (4), 587–597.
- Robinson, A. (2009) *Lost languages: The enigma of the world's undeciphered scripts*, London.
- Roul, R. K., Devanand, O. R. and Sahay, S. K. (2014) 'Web document clustering and ranking using Tf-Idf based apriori approach', *IJCA Proceedings on ICACEA (2)*, 74–78.
- Roux, V. (2008) 'Evolutionary trajectories of technological traits and cultural transmission. A qualitative approach to the emergence and dispersal of the ceramic wheel-fashioning technique in the Southern Levant' in Stark, M. T., Bowser, B. J. and Horne, L. (eds) *Cultural Transmission and Material Culture. Breaking down boundaries*, Tucson, 82–104.
- Rupprecht, H.-A. (ed.) (2003), *Sammelbuch Griechischer Urkunden aus Ägypten*, Vol. XXIV (Nr. 15875–16340), Wiesbaden.
- Ryholt, K. (2019) 'Four Demotic onomastica: occupations and plants' in Quack, J. F. and Ryholt, K. (eds), *Demotic Literary Texts from Tebtunis and Beyond*, The Carlsberg Papyri 11, CNI Publications 36, Copenhagen, 395–415.
- Saenger, P. (1982) 'Silent reading: Its impact on late medieval script and society', *Viator* 13, 367–414.
- Saenger, P. (1997) *Space between words*, Stanford.
- Salgarella, E. (2019) 'Drawing lines: The palaeography of Linear A and Linear B', *Kadmos* 58 (1/2), 61–92.
- Sanders, S. L. (2004) 'What was the alphabet for? The rise of written vernaculars and the rise of Israelite national literature', *Maarev* 11, 25–56.
- Sanders, S. L. (2009) *The Invention of Hebrew*, Urbana.
- Saporetti, C. (1976) 'Cipro nei testi neoassiri', *Studi ciprioti e rapporti di scavo* 2, 83–88.
- Sass, B. (2010) 'Arrowheads with Phoenician inscriptions: If not instruments of belomancy, what?' in Durand, J.-M. and Jacquet, A. (eds) *Magie et divination dans les cultures de l'Orient. Actes du colloque organisé par l'Institut du Proche-Orient Ancien du Collège de France, la Société Asiatique et le CNRS (UMR 7192), les 19 et 20 juin 2008*, Paris, 61–72.

- Sass, B. (1988) *The Genesis of the Alphabet and its Development in the Second Millennium B.C.*, Wiesbaden.
- Sass, B. and Finkelstein, I. (2016) 'The swan-song of Proto-Canaanite in the ninth century BCE in light of an alphabetic inscription from Megiddo', *Semitica et Classica* 9, 19–42.
- Satraki, A. (2013) 'The iconography of basileis in Archaic and Classical Cyprus: Manifestations of royal power in the visual record', *Bulletin of the American School of the Oriental Research* 370, 123–144.
- Schoep, I. (1995–1994) 'Some notes on Linear A "transaction signs"', *Minos* 29–30, 57–76.
- Schoep, I. (2002) *The Administration of Neopalatial Crete. A critical assessment of the Linear A tablets and their role in the administrative process*, Salamanca.
- Schwemer, D. (2011) 'Magic rituals: Conceptualization and performance' in Radner, K. and Robson, E. (eds) *The Oxford Handbook of Cuneiform Culture*, Oxford, 418–442.
- Schwemer, D. (2015) 'The Ancient Near East' in Collins, D. J. (ed.), *The Cambridge History of Magic and Witchcraft in the West. From antiquity to the present*, Cambridge, 17–51.
- Seed, P. (1991) "'Failing to marvel": Atahualpa's encounter with the word', *Latin American Research Review* 26, 7–33.
- Seeher, J. (2009) 'Der Landschaft sein Siegel aufdrücken. Hethitische Felsbilder und Hieroglypheninschriften als Ausdruck des herrscherlichen Macht- und Territorialanspruchs', *Altorientalische Forschungen* 36, 119–139.
- Segre, M. (1952) *Tituli Calymnii*, Annuario della Scuola Archeologica di Atene e delle Missioni Italiane in Oriente 22–23, N. S. 6–7 (1944–1945), Bergamo.
- Segre, M. (1993) *Iscrizioni di Cos*, Vol. 1, *Testo*, Monografie della Scuola Archeologica di Atene e delle Missioni Italiane in Oriente, «L'Erma» di Bretschneider, Rome.
- Seidl, U. (2020) 'The winged disc in Mesopotamia' in Otto, A., Herles, M. and Kaniuth K. (eds) *Proceedings of the 11th International Congress on the Archaeology of the Ancient Near East: Vol. 1*, Wiesbaden, 119–150.
- Selkirk, E. (1996) 'The prosodic structure of function words' in Morgan, J. and Demuth, K. (eds) *Signal to syntax: Bootstrapping from speech to grammar in early acquisition*, New York, 187–214.
- Serafini, L. (1981) *Codex Seraphinianus*, Milan.
- Sihler, A. L. (1995) *New Comparative Grammar of Greek and Latin*, Oxford.
- Silver, M. (1985) *Economic structures of the ancient Near East*, London.
- Simon, Z. (2012) 'Where is the land of Sura of the Hieroglyphic Luwian inscription KARKAMIŠ A4b and why were Cappadocians called Syrians by Greeks?', *Altorientalische Forschungen* 39, 167–180.
- Singer, I. (1983) *The Hittite KILAM Festival*, Wiesbaden.
- Singer, I. (1988) 'Merneptah's campaign to Canaan and the Egyptian occupation of the southern coastal plain of Palestine in the Ramesside period', *Bulletin of the American Schools of Oriental Research* 269, 1–10.
- Smith, H. S. and Tait, W. J. (1983) *Saqqâra Demotic Papyri I*, London.
- Smith, J. (1994) *Seals for Sealing in the Late Cypriot Period*. Unpublished doctoral thesis, Bryn Mawr College.
- Sowa, W. (2007) 'Anmerkungen zum Verbalsystem des Phrygischen', *Indogermanische Forschungen* 112, 69–95.
- Sparks, R. T. (2013) 'Re-writing the script: Decoding the textual experience in the Bronze Age Levant (c.2000–1150 BC)' in Piquette, K. E. and Whitehouse, R. D. (eds) *Writing as Material Practice: Substance, surface and medium*, London, 75–104.
- Sproat, R. (2002) *A Computational Theory of Writing Systems*, Cambridge.
- Starke, F. (1977) *Die Funktionen Der Dimensionalen Kasus Und Adverbien Im Althethitischen*. Studien Zu Den Boğazköy-Texten 23, Wiesbaden.
- Steele, P. M. (2013) *A Linguistic History of Ancient Cyprus*, Cambridge.
- Steele, P. M. (2014a) 'The mystery of ancient Cypriot clay balls', *British Academy Review* 24, 60–63.
- Steele, P. M. (2014b) 'Distinguishing between Cypriot scripts: Steps towards establishing a methodology', *Kadmos* 53 (1–2).

- Steele, P. M. (2017) 'Writing "systems": Literacy and the transmission of writing in non-administrative contexts' in Jasink, A. M., Weingarten, J. and Ferrara, S. (eds) *Non-scribal Communication Media in the Bronze Age Aegean and Surrounding Areas: The semantics of a-literate and proto-literate media (seals, potmarks, mason's marks, seal-impressed pottery, ideograms and logograms, and related systems)*, Florence, 153–174.
- Steele, P. M. (2018) *Writing and Society in Ancient Cyprus*, Cambridge.
- Steele, P. M. (2020) 'Material entanglements of writing practices in the Bronze Age Aegean and Cyprus' in Steel, L. (ed.) *Exploring Materiality in the Bronze Age*, special issue of *Sustainability* vol. 12, 1–17.
- Steele, P. M. (forthcoming) *Exploring Writing Systems and Practices in Bronze Age Aegean*, Oxford.
- Steinkeller, P. (2005) 'Of stars and men: The conceptual and mythological setup of Babylonian extispicy' in Gianto, A. (ed.) *Biblical and Oriental Essays in Memory of William L. Moran*, Rome, 11–47.
- Summa, D. and Kantiréa, M. (2020) *Inscriptiones Graecae XV 1: Inscriptiones Cypri alphabeticae*, Fasc. 1. *Inscriptiones Cypri orientalis: Citium, Golgi, Tremithus, Idalium, Tamassus, Kafizin, Ledra*, Berlin.
- Susnow, M. (2021) *The Practice of Canaanite Cult. The Middle and Late Bronze Ages*, Münster.
- Swiggers, P. (1996) 'Transmission of the Phoenician script to the west', in Daniels, P. T. and Bright, W. (eds) *The World's Writing Systems*, Oxford, 261–270.
- Symington, D. (1991) 'Late Bronze Age writing-boards and their uses: Textual evidence from Anatolia and Syria', *Anatolian Studies* 41, 111–123.
- Szzyrmer, M. (2004) 'Inscriptions phéniciennes inédites' in Yon, M. (ed.) *Kition Bamboula V, Kition dans les textes*, Paris, 217–228.
- Tavernier, J. (2007) *Iranica in the Achaemenid Period (ca. 550–330 B.C.): Lexicon of Old Iranian proper names and loanwords, Attested in non-Iranian texts (Orientalia Lovaniensia Analecta 158)*, Leuven.
- Thomas, R. (2015) 'Cypriot figures' in Villing, A., Bergeron, M., Bourgiannis, G., Johnston, A., Leclère, F., Masson, A. and Thomas, R. *Naukratis: Greeks in Egypt*, London, 2–31.
- Thomsen, M.-L. (2001) 'Witchcraft and magic in ancient Mesopotamia' in Cryer, F. H. and Thomsen, M.-L. (eds) *Witchcraft and Magic in Europe, Vol. 1: Biblical and pagan societies*, Philadelphia, 1–95.
- Threatte, L. (1980) *The Grammar of Attic Inscriptions, Vol. I, Phonology*, Berlin.
- Threatte, L. (1996) 'The Greek alphabet: numerals', in Daniels, P. T. and Bright, W. (eds) *The World's Writing Systems*, Oxford, 271–280.
- Tod, M. N. (1911–1912) 'The Greek numeral notation', *Annual of the British School at Athens* 18, 98–132.
- Tod, M. N. (1926–1927) 'Further notes on the Greek acrophonic numerals', *Annual of the British School at Athens* 28, 141–157.
- Tod, M. N. (1936–1937) 'The Greek acrophonic numerals', *Annual of the British School at Athens* 37, 236–258.
- Tod, M. N. (1950) 'The alphabetic numeral system in Attica', *Annual of the British School at Athens* 45, 126–139.
- Tribulato, O. (2012a) 'Introduction: "So many Sicilies"' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 1–45.
- Tribulato, O. (2012b) 'Siculi bilingues? Latin in the inscriptions of early Roman Sicily' in Tribulato, O. (ed.) *Language and linguistic contact in ancient Sicily*, Cambridge, 291–325.
- Truckenbrodt, H. (2007) 'The syntax-phonology interface' in de Lacy, P. (ed.) *The Cambridge Handbook of Phonology*, Cambridge, 435–456.
- Tufnell, O. (1958) *Lachish IV (Tell Ed-Duweir): the Bronze Age*, Oxford.
- Tufnell, O., Inge, C. H. and Harding, G. L. (1940) *Lachish II (Tell ed Duweir): the Fosse temple*, Oxford.
- Ussishkin, D. (1983) 'Excavations at Tel Lachish 1978–1983', *Tel Aviv* 10, 97–185.
- Ussishkin, D. (2004) 'A synopsis of the stratigraphical, chronological and historical issues' in Ussishkin, D. (ed.) *The renewed archaeological excavations at Lachish (1973–1994)*, Tel Aviv, 50–119.
- Valério, M. F. G. (2014) 'Seven uncollected Cypro-Minoan inscriptions', *Kadmos* 53 (1–2), 111–127.

- Valério, M. F. G. (2016) *Investigating the Signs and Sounds of Cypro-Minoan*. Unpublished doctoral thesis, University of Barcelona.
- van Binsbergen, W. and Wiggerman, F. (1999) 'Magic in history. A theoretical perspective, and its application to ancient Mesopotamia' in Abusch, T. and van der Toorn, K. (eds) *Mesopotamian Magic: Textual, historical, and interpretative approaches*, Groningen, 3–34.
- van den Hout, T. (2010) "𒌵DUB.SAR.GIŠ = "Clerk"?", *Orientalia* 79 (2), 255–267.
- van den Hout, T. (2012) 'The ductus of the Alalah VII texts and the origin of Hittite cuneiform' in Devecchi, E. (ed.) *Palaeography and Scribal Practices in Syro-Palestine and Anatolia in the Late Bronze Age. Papers read at a symposium in Leiden 17–18 December 2009*, Leiden, 147–170.
- van den Hout, T. (2020) *A History of Hittite Literacy. Writing and reading in Late Bronze-Age Anatolia*, Cambridge.
- van der Kooij, G. (2006) 'Tell Deir 'Alla: The Middle and Late Bronze Age chronology' in Fischer, P. M. (ed.) *The Chronology of the Jordan Valley during the Middle and Late Bronze Ages: Pella, Tell Abu al-Kharaz, and Tell Deir 'Alla*, Vienna, 199–226.
- van der Kooij, G. (2014) 'Archaeological and palaeographical aspects of the Deir 'Alla Late Bronze Age clay tablets' in Kafafi, Z. and Maraqtan, M. (eds) *A Pioneer of Arabia. Studies in the archaeology and epigraphy of the Levant and the Arabian peninsula in honor of Moawiyah Ibrahim*, Rome, 157–178.
- van Soldt, W. H. (1989) 'Labels from Ugarit', *Ugarit-Forschungen* 21, 375–388.
- van Wijngaarden, G.-J. M. (2002) *The Use and Appreciation of Mycenaean Pottery in the Levant, Cyprus and Italy (1600–1200 BC)*, Amsterdam.
- Varinlioglu E. (1992) 'The Phrygian Inscriptions from Bayındır', *Kadmos* 31, 10–20.
- Veenhof, K. R. (2020) [1995] 'Old Assyrian *iṣurtum*, Akkadian *eṣērum* and Hittite GIŠ.HUR' in Kouwenberg, N. J. C. (ed.) *Law and Trade in ancient Mesopotamia and Anatolia. Selected Papers by K.R. Veenhof*, Leiden, 225–243.
- Vernus, P. (2020) 'Form, layout and specific potentialities of the Ancient Egyptian hieroglyphic script' in Davies, V. and Laboury, D. (eds) *The Oxford Handbook of Egyptian Epigraphy and Palaeography*, Oxford, 13–30.
- Vertegaal, A. J. J. (2017) 'Filling in the facts. The practice of space-filling in Hieroglyphic Luwian inscriptions' *Altorientalische Forschungen* 44 (2), 235–260.
- Vetters, M. (2011) 'A clay ball with a Cypro-Minoan inscription from Tiryns', *Archäologischer Anzeiger*, 1–49.
- Vis, J. (2013) 'Prosodic word' in Giannakis, G. K. (ed.) *Encyclopedia of Ancient Greek language and linguistics*, Leiden.
- Vita, J.-P. (2021) 'Scribes and dialects in Late Bronze Age Canaan' in Kogan, L. E., Koslova, N., Loesov, S. and Tishchenko, S. (eds) *Proceedings of the 53e Rencontre Assyriologique Internationale: Vol. 1: Language in the Ancient Near East*, Winona Lake, 863–894.
- von Dassow, E. (2004) 'Canaanite in Cuneiform', *Journal of the American Oriental Society* 124 (4), 641–674.
- Voskos, I. and Knapp, B. (2008) 'Cyprus at the end of the Late Bronze Age: Crisis and colonization or continuity and hybridization?' *American Journal of Archaeology*, 112 (4), 659–684.
- Waal, W. (2011) 'They wrote on wood. The case for a hieroglyphic scribal tradition in Hittite Anatolia', *Anatolian Studies* 61, 21–35.
- Waal, W. (2012) 'Writing in Anatolia. The origins of Anatolian Hieroglyphs and the introductions of the cuneiform script', *Altorientalische Forschungen* 39 (2), 287–315.
- Waal, W. (2014) 'Changing fate. Hittite GUL-š-, C. Luwian GUL-zāi-, H. Luwian REL-za and the *Kuwanšeš*-deities' in Taracha, P. (ed.) *Proceedings of the 8th international conference of Hittitology, Warsaw, 5–9 September 2011*, Warsaw, 1016–1033.
- Waal, W. (2019) 'Fate strikes back. New evidence for the identification of the Hittite fate deities and its implications for hieroglyphic writing in Anatolia', *Journal of Cuneiform Studies* 71, 121–132.

- Waal, W. (forthcoming a) 'Sealed breads and tax-free canopies? Reflections on non-written administrative practices in Hittite Anatolia' in Bennison-Chapman, L. E. (ed.) *Bookkeeping Without Writing. Proceedings of the Netherlands Institute for the Near East postdoctoral research fellow first annual conference, 5th & 6th February 2021*, Leuven.
- Waal, W. (forthcoming b) 'Deconstructing the Phoenician myth. "Cadmus and the palm-leaf tablets" revisited', *Journal of Hellenic Studies*.
- Waal, W. (forthcoming c) 'With strings attached. Document sealing in Hittite Anatolia' Scott, S. J. and Topçuoğlu, O. (eds) *The Routledge Companion to Seals and Seal Studies in Antiquity: New approaches to Mediterranean and West Asian visual culture*, London.
- Wachter, R. (1999) 'Evidence for phrase structure analysis in some Archaic Greek inscriptions' in Cassio, A. C. (ed.) *Katà diálektion. Atti del III colloquio internazionale di dialettologia greca*, Naples, 365–382.
- Wachter, R. (2010) 'Inscriptions' in Bakker, E. J. (ed.) *A companion to the ancient Greek language*, Hoboken, 47–61.
- Weeden, M. (2018) 'Hieroglyphic writing on Old Hittite seals and sealings? Towards a material basis for further research' in Ferrara, S. and Valério, M. F. G. (eds) *Pathways into Script Formation in the Ancient Mediterranean*, Rome, 51–74.
- Weingarten, R. (2013) 'Comparative graphematics' in Borgwaldt, S. R. and Joyce, T. (eds) *Typology of Writing Systems*, Amsterdam, 13–40.
- Weissbein, I., Garfinkel, Y., Hasel, M. G., Klingbeil, M. G., Brandl, B. and Misgav, H. (2020) 'The Level VI North-East Temple at Tel Lachish', *Levant*, 76–104.
- Wengrow, D. (2013) 'Fleshpots of Egypt: rethinking temple economy in the ancient Near East'. in Frood, E and McDonald, A. (eds) *Decorum and experience: essays in ancient culture for John Baines*, Oxford, 291–298.
- West, M. L. (1992) *Ancient Greek Music*, Oxford.
- Willi, A. (2008) 'The Graeco-Semitic letter names as a chapter in the history of the alphabet', *Classical Quarterly* 58, 401–423.
- Wimmer, S. J. (1990) 'Egyptian temples in Canaan and Sinai' in Israelit-Groll, S. (ed.) *Studies in Egyptology (Festschrift Miriam Lichtheim)*, Jerusalem, 1065–1106.
- Wingo, E. O. (1972) *Latin punctuation in the Classical Age* (Janua Linguarum. Series Practica 133), The Hague and Paris.
- Woudhuizen, F. C. (2011) *Selected Luwian Hieroglyphic Texts - The Extended Version*, Innsbruck.
- Wright, N. J., Fairbairn, A. S., Faith, J. T. and Matsumura, K. (2015) 'Woodland modification in Bronze and Iron Age Central Anatolia: an anthracological signature for the Hittite state?', *Journal of Archaeological Science* 55, 219–230.
- Yakubovich, I. (2010) *Sociolinguistics of the Luvian Language*, Leiden.
- Yon, M. (1992) 'The end of the Kingdom of Ugarit' in Ward, W. A. and Joukowsky, M. S. (eds) *The Crisis Years. The 12th century B.C.: from beyond the Danube to the Tigris*, Dubuque, 111–122.
- Yon, M. (2004) *Kition Bamboula V, Kition dans les textes*, Paris.
- Yon, M. and Malbran-Labat, F. (1995) 'La stèle de Sargon II à Chypre' in Caubet, A. (ed.) *Khorsabad, le palais de Sargon II, roi d'Assyrie*, Paris, 159–179.
- Young, R. S. (1969) 'Old Phrygian inscriptions from Gordion: Toward a history of the Phrygian alphabet', *Hesperia* 38 (2), 252–296.
- Zaminer, F. (2000) 'Musik, IV. Griechenland, H. Notation, J. Musiknotierungen' in Cancik, H. and Schneider, H. (eds) *Der Neue Pauly; Enzyklopädie der Antike; Altertum*, Band 8, J. Stuttgart, 530–533.
- Zaminer, F. (2006) 'Music, IV. Greece, H. Notation, J. Written Music', in Cancik, H. and Schneider, H. (eds) Salazar, Ch. F. (editor-in-chief, English edition) *Brill's New Pauly; Encyclopaedia of the Ancient World; Antiquity*, Vol. 9, Leiden, 342–344.

- Zamora López, J.-Á. (2006) 'Les utilisations de l'alphabet lors du IIe millénaire av. J.C. et le développement de l'épigraphie alphabétique: une approche à travers la documentation en dehors des tablettes (II), in Albà, A.M. and Feliu, L. (eds) *Šapal tibnim mû illakû: studies presented to Joaquín Sanmartín on the occasion of his 65th birthday*, Sabedell, 491–528.
- Zamora López, J.-Á. (2007) 'Les utilisations de l'alphabet lors du IIe millénaire av. J.C. et le développement de l'épigraphie alphabétique: une approche à travers la documentation en dehors des tablettes (I)' in Michaud, J.-M. (ed.) *Le royaume d'Ougarit de la Crète à l'Euphrate. Nouveaux axes de recherche*, Sherbrooke, 9–47.
- Zauzich, K.-T. (2000) 'Ein antikes demotisches Namenbuch', in Frandsen, P. J. and Ryholt, K. (eds) *A Miscellany of Demotic Texts and Studies*, The Carlsberg Papyri 3, CNI Publications 22, Copenhagen, 27–52.
- Zournatzi, A. (2019) 'Smoke and mirrors: Persia's Aegean policy and the outbreak of the "Cypriot War"' in Rogge, S., Ioannou, C. and Mavrojannis, T. (eds) *Salamis of Cyprus: History and archaeology from the earliest times to Late Antiquity. Conference in Nicosia, 21–23 May 2015*, Münster, 313–326.