The Egyptian background of early alphabetic writing

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Abstract

Alphabetic writing systems worldwide trace their origins to mono-consonantal writing systems (*abjad*) of Semitic languages in the Near East in the second and first millennia BCE. The earliest evidence of the *exclusive* use of mono-consonantal signs is thought by many to date from the early second millennium. This evidence consists of (1) a modest corpus of inscriptions found at and around the site of Serabit el-Khadim, in the south of the Sinai Peninsula; (2) two very similar inscriptions in the Wadi el-Hol, in the south of Egypt; (3) the attestation of the *halaḥam* alphabetic sequence on a Theban ostracon of the mid-second millennium BCE. The broad consensus among specialists is that these sources represent an iconic writing system of at least twenty characters that represent single consonants of a West-Semitic language, and a canonic order of these characters.

Keywords: *abjad; alphabet; halaḥam; hieroglyphs; Proto-Sinaitic; Wadi el-Hol*

1. 'Alphabetic' Writing in the Ancient Near East

Alphabetic writing is currently the most widely spread type of writing in the world. Greek- and Latin-based alphabets were adopted and transformed by the speakers of different languages in the Mediterranean world and in eastern and western Europe, mainly from the beginning of the Common Era onward.[1] Due to European colonialism, alphabets derived from Latin spread worldwide, with the English alphabet in particular enjoying almost universal application and popularity – even in countries whose main writing systems are totally different from European-based alphabetic writing.

Obviously, the spread of European alphabets is very much bound up with the spread of European languages, such as Greek and Latin in antiquity, or English, French and Spanish in modern history. Being an instrument enabling the visual and material rendering of human language, a specific writing system is usually developed by the speakers of one specific language. The classical Latin alphabet as we know it was developed for the rendering of the classical Latin language, and adaptations were made to the alphabet for its later uses (Knight, 1996). The Latin alphabet was also adopted and adapted for the rendering of other European languages. Today, the English, French, Italian, Spanish, Swedish etc. alphabets are all clearly based on variants of the Latin alphabet, but have become alphabets in their own right, because the repertoires of characters, and the rules for their uses, vary among these writing systems. What is more, Latin-based alphabets have also been developed for the writing of non-European languages, such as the Turkish alphabet, which replaced the Arabic script for writing the Turkish language from 1928 onward, or the currently popular *pinyin* transcription of Mandarin Chinese.

The Greek alphabet is commonly regarded as the oldest alphabet in world history, and it is equally commonly supposed to have been derived from a Near Eastern writing system, that is, Phoenician (Swiggers, 1996). The actual process of derivation and development of Greek writing was probably more complex in the sense that slightly different alphabetic scripts were developed by Greek-speaking communities, perhaps on the basis of different Near Eastern types of writing (Waal, 2020).

What is important for the current discussion is that the Near Eastern examples, such as Phoenician, were not alphabets in the strict

1 Korean alphabetic signs demonstrate, however, that not all alphabetic scripts have Greek or Latin precursors (see e.g. King, 1996).

sense but *abjad*s: notations with sets of characters that were as limited as those of alphabets (typically ranging between 20 and 30 signs), but which basically rendered consonants only; not vowels, whereas an alphabet is usually understood to include both consonant and vowel signs. The true alphabet is hence considered to have been a Greek invention. This is correct in the sense that none of the Ancient Near Eastern *abjad*s known to us include the notation of vowels to the same extent as the Greek alphabet, although the presence and quality of vowels in certain positions is actually indicated in some *abjad* writing systems, for instance by the consonantal signs for *ʾ*, *h*, *w* and *y* in Aramaic and Hebrew (so-called *matres lectionis*; see e.g. Waal, 2020, p. 120) or by the signs for *ʾa*, *ʾi* and *ʾu* in Ugaritic ('vocalized *ʾaleph*'; Van Soldt, 2010, pp. 122–126).

The following sections are therefore not, strictly speaking, about alphabetic writing, but about the earliest history of the *abjad*: the type of writing whose characters reflect individual consonants. The term 'alphabetic' is often used for such scripts as a manner of speaking, since *abjad*s have important characteristics in common with alphabetic scripts, such as the approximate numbers of different characters, as has already been noted. The essential common feature, however, is the exclusive use of *phonemic* writing, that is, the writing of distinctive individual sounds (as different from larger units, such as syllables or words), whether that be consonants and vowels, or consonants only. In this, *abjad* writing differs from older dominant writing systems in the Near East: Mesopotamian cuneiform writing and Egyptian hieroglyphic writing. These older systems are combinations of phonetic and ideographic writing; ideography being capable of conveying meaning without rendering sound. Cuneiform phonetic writing used syllables, that is, clusters of consonants and vowels, or vowels only (Michalowski, 1996), whereas Egyptian phonetic writing rendered individual consonants or clusters of them. From the latter observation it becomes clear already that Egyptian writing shares an important feature with the *abjad* principle.

The earliest *abjad* that is well-understood today is Ugaritic, an 'alphabetic' type of cuneiform writing that was used in the 14th and 13th centuries BCE in the city-state of Ugarit at the eastern Mediterranean coast, in present-day Syria (Van Soldt, 2010, pp. 122–126). Its individual characters resemble those of Mesopotamian (i.e.syllabic) cuneiform, but amount to 30 different signs only, whereas Mesopotamian cuneiform (which was also used at Ugarit) had several hundred.

2. The Proto-Sinaitic Inscriptions

The oldest preserved *abjad* is thought to be represented by the inscriptions known as Proto-Sinaitic: a corpus of approximately 50 inscriptions attested at several sites in the southern Sinai Desert, with the main concentration at the site of Serabit el-Khadim (main collections of material: Sass, 1988; Hamilton, 2006; Dalix, 2012; recent discussions by Goldwasser, 2006; 2022). Here, a temple was built for the Egyptian goddess Hathor, 'Lady of Turquoise'; turquoise and copper being the products Egyptian expeditions had been mining here since prehistoric times. The leaders of such expeditions have left hieroglyphic stelae and rock inscriptions at the site and in its surroundings, in the temple area and near the turquoise mines (Valbelle & Bonnet, 1996).[fig. 1] The same places feature inscriptions of a different nature, written in characters that resemble hieroglyphs but seem to belong to a different

Fig. 1
Stela Sinai 112, west face
Gardiner & Peet (1917, pl. XXXVII)

script in view of their shapes and style, and especially in view of the very limited sign repertoire (estimations of which range between 21 and 31: Sass, 1988; Goldwasser, 2006, pp. 154–155; Hamilton, 2006; Morenz 2016, p. 36).

Most Proto-Sinaitic inscriptions are brief, and many are in a bad state of preservation. In addition, we lack sufficient knowledge of the people who made the inscriptions, of the language they spoke, and of their cultural background. Even so, most specialists agree that the individual signs stand for consonants, and that the language represented belongs to the West-Semitic branch of the Afro-Asiatic language family. That is, a language related to Hebrew, Phoenician and Aramaic.

Decipherment of Proto-Sinaitic started with the pioneering work by Alan Gardiner (1916), Kurt Sethe (1917) and Robert Eisler (1919). Their interpretations focused on a recurrent string of characters probably to be read as *b'lt* 'Lady' (*beth-'ayin-lamed-tav* in Hebrew letter names, and *ba'alat* in Biblical Hebrew vocalization). Slightly longer strings are *lb'lt* 'for the Lady' (Sethe) and *m'hb(b)'lt* 'beloved of the Lady' (Eisler)[fig. 2]; see also Morenz, 2019, pp. 196–204; Goldwasser, 2022, pp. 29–33). The latter expression is found, for instance, on the basis of a small stone sphinx found in the temple of Serabit el-Khadim, now in the British Museum. The same sphinx bears an Egyptian hieroglyphic inscription on its shoulder saying 'beloved of Hathor,

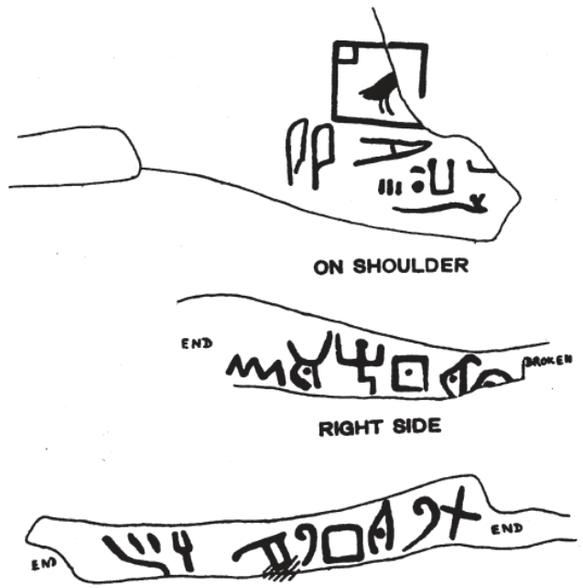


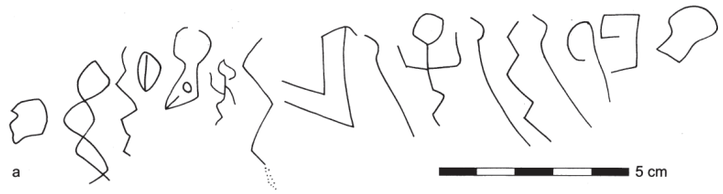
Fig. 2
Egyptian and Proto-Sinaitic inscriptions on sphinx Sinai 345
The middle inscription ('right side') is interpreted from left to right as *m'hb(b)'l*[f]*t*[1] 'beloved of the Lady'
Gardiner & Peet (1917, pl. LXXXII)

[Lady of] Turquoise'. This combination and the numerous references to 'Hathor, Lady of Turquoise' in local Egyptian texts, together with the word *b'lt* that is recurrent in Proto-Sinaitic inscriptions, strongly suggest that *b'lt* 'Lady' and Egyptian 'Hathor' refer to the same deity.

These interpretations imply the identification of Proto-Sinaitic characters as consonantal, and of the language expressed as West-Semitic. They proceed from the observation that some of the Proto-Sinaitic signs graphically resemble later Phoenician, Paleo-Hebrew and Aramaic *letters* (especially *kaph*, *lamed*, *shin*, *taw*), while others can be connected, as icons, with Hebrew letter *names* (an ox head for *'aleph* 'ox', a rectangular sign for *beth* 'house', a zigzag line for *mem* 'water', an eye for *'ayin* 'eye', a human head for *resh* 'head'; see Gardiner, 1916, p. 14). The theoretical reconstruction of the Proto-Sinaitic abjad is built on the assumptions that the Proto-Sinaitic signs stand for the same consonants as the corresponding signs in later West-Semitic *abjad*s, and that these consonantal values were derived from the initial sounds of West-Semitic words for the notions depicted (following the principle of acrophony), and that these words resembled the later Hebrew letter names. It is essentially the same observations and assumptions that guide the attempts to read Proto-Sinaitic inscriptions to this day (e.g. Albright, 1948; Sass, 1988; Wilson-Wright, 2013; 2020), but as opposed to the general consensus on *b'lt*, *lb'lt* and *m'hb(b)'lt*, there is little agreement on longer strings of characters.

Nor is there general agreement on the dating of the Proto-Sinaitic corpus, although a strong case has been made, and continues to be made, for the late Egyptian Twelfth Dynasty, with a pivotal role assigned to the expeditions to the Southern Sinai under King Amenemhat III (about 1800 BCE; see most recently Koller, 2018, p. 7; Goldwasser, 2022, p. 15). Expedition texts from his reign on hieroglyphic stelae at Serabit el-Khadim mention non-Egyptian participants, most likely of Levantine descent, and speaking a Semitic language, and even including a 'brother of the prince of Retjenu' (i.e., of the Levant or part of it).[fig. 1] The joint presence of Egyptians and Semitic-speaking people at this remote desert site would explain the co-occurrence of Egyptian and Proto-Sinaitic inscriptions, even on the same object as on the sphinx mentioned earlier. But no direct historical relation between the two groups of texts is apparent, hence it cannot be entirely excluded that the Proto-Sinaitic texts were made later, and cases have been made for a few or even five centuries after 1800 BCE (Briquel-Chatonnet, 1998; Sass, 2005).

Fig. 3
Wadi el-Hol inscription 1
Darnell et al. (2005, p. 75)



3. The Wadi el-Hol inscriptions

Two very small inscriptions consisting of characters identical or very similar to Proto-Sinaitic were discovered in Wadi el-Hol, in the Egyptian Western Desert, in the 1990s (Darnell et al., 2005).[fig. 3] One is a horizontal line of 16 characters; the other a vertical column of 12 characters. Together, they present fourteen different signs, all of which find graphic equivalents in the Proto-Sinaitic textual corpus (such as *'aleph, beth, mem,'ayin, resh, lamed, shin, taw* mentioned in the previous section). There can be little doubt that the writing system employed here is related to, if not precisely the same as Proto-Sinaitic, but as yet no convincing interpretation of the two strings of characters is forthcoming.[2] Obviously, here as in the case of Proto-Sinaitic, it is exceedingly difficult to interpret continuous strings of consonants without a precise knowledge of the language encoded.

Just like Serabit el-Khadim, Wadi el-Hol is a desert site visited by expeditions, which in this particular case included armies taking a short cut along the Farshut desert road, in the Qena bend of the Nile. Some Egyptian inscriptions left by such military expeditions in Wadi el-Hol in the reign of Amenemhat III testify to the presence of non-Egyptians, including a Levantine army general called Bebi. Here also, the appearance of Egyptian and Levantine (hence Semitic-speaking) groups at the same time might explain the co-occurrence of hieroglyphic and *abjad* inscriptions. But without a satisfactory decipherment of the Wadi el-Hol *abjad* texts it is impossible to say if they are really related to the expedition texts from the reign of Amenemhat III. In this case again, a (much) later date cannot be excluded.[3]

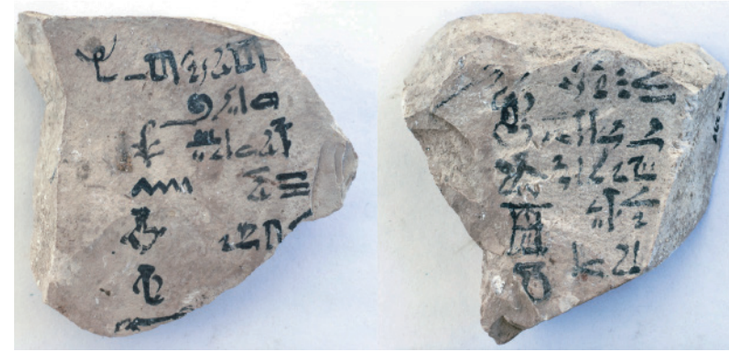
2 See the attempts by e.g. Darnell et al., 2005, pp. 85–86 (suggesting *rb* 'chief' for the first two characters at the right of the horizontal inscription and *'l* 'god' at the end of the vertical one); Wimmer & Wimmer-Dweikat, 2001, suggest a combination of Semitic and Egyptian expressions.

3 Darnell et al. (2005, pp. 86–90) argue that the inscriptions are in fact related to the texts from the reign of Amenemhat III, and that the script used was developed even earlier.

4. The *Halaḥam* Ostracon from Theban Tomb 99 and the *Abjad* Tradition(s) in Egypt

A limestone ostracon found in a shaft of Theban Tomb 99 provides further evidence of an early *abjad* tradition in an Egyptian context.[4] The tomb[5] belonged to the treasurer Senneferi, who lived in the reign of King Thutmose III (15th century BCE). It is not certain if the ostracon is to be connected with Senneferi himself or his tomb, since it was found among secondary deposits in a shaft that was dug in the tomb tomb after the New Kingdom, but in view of its hieratic palaeography, an Eighteenth Dynasty date seems most likely (Haring, 2015, pp. 189–191; Fischer-Elfert & Krebernik, 2016, p. 169; Schneider, 2018, p. 103). In its present state of preservation, the ostracon shows the remains of seven lines on its obverse and six on its reverse; there are probably lines missing beneath obverse 7 and above reverse 1.[fig. 4]

Fig. 4
Ostracon 99.95.0297 from TT 99 obverse and reverse
©Photo: N. Strudwick



Each line includes a word or name in hieratic, to be read from right to left. At the left of each line is a sign that looks (cursive) hieroglyphic rather than hieratic, has the same orientation as the hieratic signs, but is separated from the preceding word by a blank space. From the third line onwards, these signs form a column of their own at the left, while the hieratic words are adjusted at the right.

Obverse lines 1–4 are complete, and show the alphabetic sequence known as *halaḥam* (*h-l-ḥ-m*;[Tab. 1]).[6] Before the discovery of the ostracon,

4 Identified and discussed by Haring, 2015; further discussions Fischer-Elfert & Krebernik, 2016; Schneider, 2018; Morenz, 2019, pp. 110–114.

5 Fischer-Elfert & Krebernik, 2016, p. 169, note 2, suggest that Senneferi might have been acquainted with a Semitic (i.e. Canaanite) language, in view of his expedition to Byblos on the order of Thutmose III.

6 The consonant /l/ is represented by /r/; Egyptian hieroglyphic and hieratic having no specific sign for /l/.

1	*h*	*l*	*ḥ*	*m*	*?*	[…]		*r*	*b*	-	-	-	-	-	-	-	-	-	-	*g*	-	-	*t*	-	*ḏ*	-
2	*h*	*l*	*ḥ*	*m*	*q*	*w*	*ṯ*	*r*	*b*	*t*	*ḏ*	*š*	*k*	*n*	*ḫ*	*ṣ*	*ś*	*p*	*ʾ*	*ʿ*	*ḍ*	*g*	*d*	*ġ*	*ṭ*	*z*	-	*y*
3	*h*	*l*	*ḥ*	*m*	*q*	*w*	*š*	*r*	-	*t*	-	*s*	*k*	*n*	*ḫ*	*ṣ*	*ś*	*f*	*ʾ*	*ʿ*	*ḍ*	*g*	*d*	*ġ*	*ṭ*	*z*	*ḏ*	*y*

Tab. 1
Letter sequence of ostracon 99.95.0297 compared to those of the Ugarit and Beth Shemesh *halaḥam*. After Haring, 2015, p. 195; […] = lacuna; - (dash) = not represented in the original source (s).

the oldest attestation of this sequence was on a clay tablet from Ugarit inscribed with the local cuneiform *abjad* (see section 1), and on a similar tablet found at Beth Shemesh, near Jerusalem.[Tab. 1] Its survival in Ancient Arabian *abjad*s and in the Classical Ethiopic syllabary (Haile, 1996) testifies to its having been widely used in the Middle East for many centuries. It is also attested in Egyptian hieratic and demotic texts from the fourth century BCE and later, and is thought to have been inspired at that time by Ancient Arabian (Quack, 2003; see Haring, 2015, p. 194, note 41 for more references). A much older native Egyptian tradition had also been considered (Kammerzell, 2001). The ostracon from TT 99 shows that the *halaḥam* sequence was known in Egypt in the early New Kingdom, but given its apparent absence in preceding and immediately following centuries, it is difficult to say if the ostracon belongs to an Egyptian tradition, or if it is merely the result of incidental contact of an Egyptian scribe with a foreign *abjad* tradition. The ostracon is the earliest known piece of evidence for alphabetic ordering to this day – not just in Egypt, but anywhere.

Other cuneiform texts from Ugarit testify to the 'ABC' sequence (that is, *ʾ-b-g-d*, or '*abjad*') that became common in Canaanite *abjad*s as well as European alphabets and which, according to Schneider (2018, pp. 107–109) is also rendered on the reverse of the TT 99 ostracon. Haring (2015) read *r-b-g-t-ḏ* on the reverse which, if correct, would mean a deviation from the *halaḥam* sequence as known from other sources (see Table 1).[7] Although the sequence *ʾ-b-g-d* suggested by Schneider is attractive in itself, it remains uncertain because of (1) the missing line or lines at the top of the reverse (hence preceding the supposed *ʾaleph*)[8], and (2) *ḏ* representing Semitic *z*(*ayin*) in reverse 6. The latter entry would mean that the supposed *ʾ-b-g-d -ḏ* sequence omits the expected consonants *h*(*e*) and *w*(*aw*) between *d*(*aleth*) and *z*(*ayin*).

The identification of the *halaḥam* sequence on the obverse, however, is now generally accepted. This firmly connects the ostracon from Theban Tomb 99 with the Near Eastern *abjad* tradition as it is known from later sources. That connection is further strengthened by the observation that most, if not all of the words written on the ostracon in hieratic characters are non-Egyptian.[9] The combination of hieratic script (written by a competent hand) and (partly) Semitic vocabulary is suggestive of a Semitic tradition adapted for the Egyptian script: had the *halaḥam* as rendered on this ostracon been a native Egyptian tradition, we would rather expect the words to be Egyptian.

What is remarkable, then, is that the words do not correspond with the Semitic letter names known from Hebrew Biblical tradition, which are supposedly represented by the Proto-Sinaitic characters (see section 2).[10] This is all the more striking since several of the signs in the left column of the ostracon's obverse (the 'determinatives' that seem to go with the words at the right) are clearly the same as the characters for *h*, *l* and *m* in the Proto-Sinaitic corpus – and as such an explicit confirmation of the latter's phonetic identification by Gardiner, Sethe, Eisler and later scholars.[11] The ancient *halaḥam* canon may very well have had its own letter names that set it apart from the ABC canon. If Schneider's (2018) identification of the sequence *ʾ-b-g-d-z* on the *reverse* of the TT 99 ostracon is correct, the letter names of that particular sequence here also deviate from the Biblical and Proto-Sinaitic *ʾaleph-beth-gimel-daleth* etc.

The ostracon and the Proto-Sinaitic inscriptions (and maybe the Wadi el-Hol inscriptions) thus appear to represent related but different branches of Near Eastern *abjad* tradition. It is to be regretted – as ever so often – that the TT 99 ostracon is incomplete, and therefore does not give us a complete sequence of consonants, which would have enabled us to compare with other *halaḥam* versions; for instance with regard to the number of consonants distinguished. The Ugarit and Beth Shemesh sequences have twenty-seven and twenty-seven characters respectively[Tab. 1]; the Ancient South Arabian has twenty-six. The *halaḥam* represented in demotic Egyptian texts is thought to have included twenty-five consonants (Quack, 2003, pp. 169–173). The latter may have been an adaptation of a longer Semitic *abjad* to the

7 Haring (2015, p. 195) suggested that in its original, intact state the ostracon had the complete *halaḥam* sequence, which in that case deviated, at least in part, from similar sequences in other sources.

8 Quite apart from the uncertain identification of *ʾaleph* itself, which is based on the assumed presence of a vowel onset */e/* rendered graphically as *r* in Egyptian (Schneider, 2018, p. 107). There is bound to be text missing at the top of the reverse because that corresponds with the bottom right edge of the obverse, where some lines are clearly broken off.

9 Whereas Haring (2015), Schneider (2018) and Morenz (2019) consider a combination of Egyptian and Semitic words, Fischer-Elfert & Krebernik (2016) decidedly opt for an overall Semitic lexical identification. The orthography used on the ostracon is predominantly that of hieratic syllabic writing, which was more generally used in the New Kingdom for the writing of non-Egyptian words and names; see section 6 of the paper by Jean Winand in this volume.

10 They do not correspond with the Ethiopic letter names, either; cf. Haile, 1996, p. 573.

11 The remaining determinatives on the ostracon as preserved sadly do not seem to have equivalents in Proto-Sinaitic.

Egyptian consonantal repertoire. From the earliest periods of their use, the hieroglyphic and hieratic scripts expressed twenty-four distinctive consonants. A twenty-fifth (*l*) appeared later in Egyptian language history but lacked its own character before the appearance of the Demotic script, and was often rendered as *r*, as on the TT 99 ostracon.[12] Despite Demotic having a separate sign for *l*, both Semitic *l* (the second letter in the sequence) and Semitic *r* (the eighth letter) are rendered as *r* in extant Demotic *halaḥam* texts, just as in hieratic.

5. Egyptian Inspiration for Near Eastern *Abjad* traditions

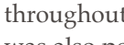
The early testimonies to Near Eastern *abjad*ic writing presented in the preceding sections are strongly suggestive of a non-Egyptian writing principle in an Egyptian 'disguise': texts in a Semitic language written with signs that resemble Egyptian hieroglyphs in case of the Proto-Sinaitic and Wadi el-Hol inscriptions; alphabetically ordered Semitic words written in hieratic and (seemingly) hieroglyphic scripts on the TT 99 ostracon.

Since the focus of this volume is on the relation between script and language, graphic aspects will be touched upon here only briefly. The iconic signs used to write Proto-Sinaitic and Wadi el-Hol texts are indeed similar to Egyptian hieroglyphs. Some seem to be particularly close parallels (such as the signs supposedly rendering *ḫ, h, k, m* and *p* and bearing close resemblance to Egyptian  , ,  ,  and  ; see fig. 5). Many others depict the same things as hieroglyphs (such as the ox head for *'aleph*, the house plan for *beth*, or the eye for *'ayin*), but one may wonder whether the models for these signs were Egyptian hieroglyphs, or the very objects depicted. Some Proto-Sinaitic signs even deviate from hieroglyphs (e.g. the upright hand for kaph with all fingers indicated versus  the horizontal 'hand' hieroglyph rendered in outline), or their possible Egyptian equivalents are so rare that hieroglyphic inspiration is unlikely, despite graphic similarity (e.g. the hieroglyph as supposed inspiration for the corner or builder's square for *pe*).[13] The Proto-Sinaitic and Wadi el-Hol characters (and perhaps the signs in the left columns of the TT 99 ostracon) may as well be 'concrete',[14] just like Egyptian hieroglyphs, without necessarily having the latter as examples. In that case, Egyptian hieroglyphic inscriptions (so numerous at Serabit el-Khadim) might still have been a source of inspiration for Proto-Sinaitic writing; not on the level of

12 See note 6.

Fig. 5
Proto-Sinaitic signs supposedly rendering *ḫ, h, k, m* and *p*.
samples from Hamilton (2006)

the individual characters, but as an example of a script using iconic (concrete) signs to express sounds.

This brings us to phonetic writing as an aspect of the Egyptian hieroglyphic writing system – a topic discussed at length by Jean Winand in this volume. Beside logograms,[15] which have semantic and phonetic value, and determinatives (or classifiers) with a purely semantic value, there are phonograms whose use, as the name indicates, is purely phonetic. These phonograms may represent individual consonants, but also clusters of two and three consonants. Very often phonograms serve as complements to logograms, for instance in  *sḏm* 'to hear/listen', written with (from right to left) a logogram, a phonogram and a determinative. But in early (Old Kingdom) Egyptian, phonograms, mono-consonantal ones in particular, were often considered sufficient for writing entire words, with or without determinatives (e.g.  for *sḏm*). For frequently used short words, such as prepositions and pronouns, and morphemes for flexion and derivation, mono-consonantal signs were even the rule throughout Egyptian language history. Mono-consonantal writing was also popular in specific applications of the hieroglyphic script; one important example being enigmatic writing, in which graphic play had an important role as explained by Winand, but where an equally important element was giving new phonetic values to traditional hieroglyphs, especially for the writing of single consonants (Werning, 2023, p. 203). Old and Middle Kingdom texts employ mo-

13 For discussions of these and other signs see Goldwasser, 2006, pp. 135–151; Hamilton, 2006; Haring, 2020, pp. 63–67. Palaeographical discussions of Proto-Sinaitic and Wadi el-Hol signs often serve the purpose of dating the script and texts (a hazardous undertaking given the very small corpora); some specialists even wish to see the precise selection and shapes of Proto-Sinaitic signs as evidence for the very invention of the script at Serabit el-Khadim and the surrounding turquoise mines (Goldwasser, 2012; Morenz, 2016). A case in point is the sign for *he*, supposedly inspired by the hieroglyph  , which is indeed remarkably frequent in Egyptian hieroglyphic inscriptions at Serabit el-Khadim as the writing of a specific functional or administrative title, the precise reading of which remains elusive (Goldwasser, 2006, pp. 137–138; Hamilton, 2006, pp. 76–86).

14 The term 'concrete referent' is used in this sense by Orly Goldwasser, 2006, 137 ff.

15 In many cases more appropriately called 'radicograms', that is, semantic and phonetic renderings of roots (*radices*), the Semitic and Egyptian equivalents of stems, which become words by means of flexion or derivation but retain the same root hieroglyphs. See, e.g., Polis & Rosmorduc, 2015.

no-consonantal signs when rendering foreign words and names,[16] in which phonetics were more important than semantic aspects, although the latter would be indicated by means of determinatives.

This means that the Egyptian hieroglyphic script frequently used characters that stood for single consonants, so much that a 'hieroglyphic alphabet' is often shown in popular works on Ancient Egypt and its hieroglyphs. Such a notion is misleading, since hieroglyphic texts rarely make exclusive use of mono-consonantal signs, but it is true that they usually employed a limited set of signs for single consonants in addition to bi- and triconsonantal ones, and that for specific purposes (as set out in the previous paragraph), recourse was mainly had to these signs. It is conceivable that this practice was an important source of inspiration for the earliest *abjad*s, which *did* make exclusive use of signs rendering single consonants. It may be surmised, therefore, that the *conceptual* contribution of Egyptian writing to the earliest precursors of the alphabet was considerable, in phonological as well as graphic terms, especially since these precursors (Proto-Sinaitic, Wadi el-Hol, the *halaḥam* ostracon) are all attested in Pharaonic Egyptian settings.

16 Late Egyptian employed syllabic writing for the same purposes (see note 9).

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II.
Cuneiform and The Behistun Inscription