

# CHAPTER 1

## THE WRITING SYSTEM AND ITS TRANSLITERATION

### 1.1. HIEROGLYPHIC

The hieroglyphic writing system is based on pictorial representations of humans, animals, plants, and inanimate objects of the daily life in ancient Egypt, often accomplished in great detail. In contrast to an originally assumed ideographic writing system, however, it represents a combination of semantic and phonetic principles, i.e., a hieroglyphic sign may serve to represent an entire word, but it may also represent a phonetic value.

#### Note

Just like Arabic today, the Ancient Egyptian writing system denotes only the consonantal value of a word, while the vowels have to be filled in by the reader. In order to 'read' Ancient Egyptian, Egyptologists therefore insert an artificial 'e' between the consonants.

Although the semantic system would have allowed for a productive increase of signs, the hieroglyphic writing system was confined to about one thousand pictographs during the Old Kingdom, and about 750 signs during the time covered in this grammar book. Only in Ptolemaic and Roman times, an abundance of new signs was invented, resulting in an almost enigmatic script, the knowledge of which was limited to priestly circles.

### 1.2. HIERATIC

Along with the monumental variety of hieroglyphic signs, which were typically carved into stone or wood, or painted on plastered walls as a replacement for reliefs, Egyptian scribes employed cursive and more abstract forms to write with a reed brush on papyrus, leather, limestone fragments, or pottery. Almost each hieroglyphic sign thus has a cursive and more abstract counterpart known as the hieratic script.

Nevertheless, the system differs from the hieroglyphic script in some important respects:

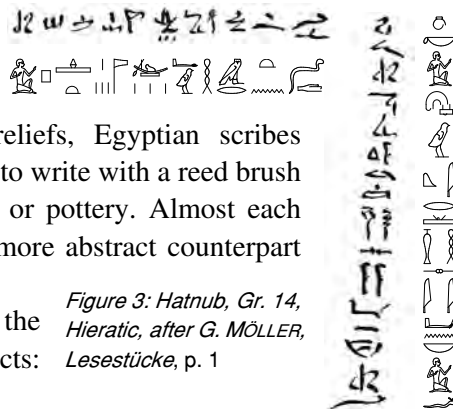


Figure 3: Hatnub, Gr. 14, Hieratic, after G. MÖLLER, Lesestücke, p. 1

1. Hieratic was typically written in one direction only, namely from right to left.

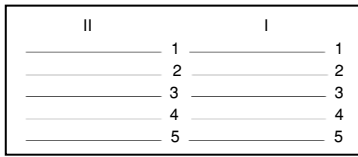


Fig. 4: Hieratic papyrus after 1800

In texts from earlier times, both lines [horizontal] and columns [vertical] are found; from about BC 1800, however, only lines were commonly used. As the papyrus unrolls, these are arranged in columns.

2. The pictorial hieroglyphic signs can often not be clearly recognised in their abstract hieratic equivalents. As the shape of the latter, however, changes over time, it bears important information regarding the date of the handwriting.

hierogl.	5 <sup>th</sup>	6 <sup>th</sup>	10 <sup>th</sup> / 11 <sup>th</sup>	11 <sup>th</sup> / 12 <sup>th</sup>	12 <sup>th</sup>	12 <sup>th</sup> / 13 <sup>th</sup>	13 <sup>th</sup>	Hyksos to early 18 <sup>th</sup>		
	Seth. I	Mernpt. / Seth. II		R. IV	R. IX	22 <sup>nd</sup>	22 <sup>nd</sup>	BC 320	AD 60	

Fig. 5: Development of the hieratic script, after G. MÖLLER, *Paläographie*, vols. I – III.

3. Common combinations of usually two, only rarely more than two signs can be written in a single stroke of the brush [ligature].

𓆎 for 𓆏, 𓆑 for 𓆒, or 𓆓 for 𓆔, 𓆕 for 𓆖, 𓆗 for 𓆘, or 𓆙 for 𓆚.

As a result, hieratic texts do not exactly correspond with contemporary hieroglyphic texts, either in the placing of signs or in the spelling of words.



After BC 1800, columns were only used with a particular script known as cursive hieroglyphs, which are most commonly found on Middle Kingdom coffins [Coffin Texts] and on New Kingdom papyri [Book of the Dead]. Their shapes trace back to early hieratic and remained close to the pictorial original.

Hieratic script was used in all kinds of documents, distinguishing a book-hand and an administrative-hand. During the Third Intermediate Period, however, the latter grew into an extremely cursive and abbreviated variant that eventually developed into an early form of Demotic. By the end of the twenty-sixth dynasty, all administrative documents, and during the Ptolemaic Era even

Fig. 6: Cursive hieroglyphs, after E. NAVILLE, *Todtenbuch*, vol. II, *Varianten*, p. 22

pieces of literature, were written in Demotic. At the same time, hieratic became restricted to religious writings, which in this function remained in use until the third century BC.

### 1.3. PRINCIPLES OF THE HIEROGLYPHIC WRITING SYSTEM

The Ancient Egyptian writing system combines the principles of an ideographic system, which employs a sign to denote a semantic value that is closely related to the depicted object, with a phonetic system, which employs a sign merely to represent a phonetic value. Many signs can actually be used in either way, namely as semograms, which can be further differentiated into logograms and determinatives, or as phonograms.

#### 1.3.1. LOGOGRAMS

A logogram stands for an entire word that is closely related to the depicted object. The relation between this word and the hieroglyphic sign can be

- a) figurative, i.e., the pictographic sign represents the depicted object itself;

☉ [the sun] for *rʿw* ‘sun’

⌞ [a mountain] for *čw* ‘mountain’

- b) symbolic, i.e., the pictorial sign represents a typical semantic aspect of the word in question;

⊙ [a head of an ox] for *ih* ‘ox’

🦩 [a red flamingo] for *tšr* ‘red’

☞ [a giving arm] for *čī* ‘to give’





- c) rebus-based, i.e., the pictorial sign represents a specific word the pronunciation of which is similar to the depicted object.

🦎 [a lizard, Eg. *šš*] for *šš* ‘many’












Applied to the English language, the signs 🏠 and 🏷️ could thus stand for the nouns ‘house’ and ‘tag’, respectively [figurative], while ☞, the sign of a pointing finger, could represent the word ‘there’ [figurative]. In addition, the sign ☀️ could stand for ‘sun’ [figurative] as well as ‘son’ [rebus].

#### 1.3.2. PHONOGRAMS




If, by convention, only the consonantal stems of the English words in the example above are considered, the signs 🏠, 🏷️, and ☞ turn into the mere representation of a sequence of consonants [🏠 = ‘hs’, 🏷️ = ‘tg’, and ☞ = ‘thr’] that














can be freely combined to form the consonantal stem of other words, e.g.,  , ‘h<sup>o</sup>st<sup>a</sup>g<sup>e</sup>’, or  , ‘t<sup>o</sup>g<sup>e</sup>th<sup>e</sup>r’.

Ancient Egyptian applied the same principle to a limited number of signs in order to denote a sequence of one to three consonants.






 <i>r</i>	[from  <i>r</i> ’ (masc.) ‘mouth’]	in	  <i>r</i> ’	‘goose’
 <i>ir</i>	[from  <i>ir.t</i> (fem.) ‘eye’]	in	 <i>iri</i>	‘to do’
 <i>nh</i>	[from  <i>nh</i> (masc.) ‘sandal-strap’]	in	  <i>nh</i>	‘to live’

Note

The sign  in *r*’, ‘goose’, is used as a determinative,  /*n*/ and  /*h*/ in *nh*, ‘to live’, are used as phonetic complements.





Phonograms thus allow for a larger number of hypothetical spellings. In order to avoid confusion, however, Middle Egyptian largely employs more or less standardised spellings, and not all phonograms can be freely employed in the spelling of different words. Triliteral signs, in particular, are almost limited to words derived from the same semantic root. The phonogram  *nh*, for instance, is usually restricted to words that are related to the semantic aspect of ‘life’, such as    *nh*, ‘[living] person’,    *nh*, ‘captive’, i.e., an enemy who was brought back alive,    *nh.t*, ‘grain’, i.e., ‘what keeps one alive’,    *nh*, ‘to swear’ [by one’s life], etc.

















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


A group of signs can form a phonetic unit in its own right [monogram];   *mw* or   *nn*, for instance, cannot be traced back to a single sign .

### 1.3.2.1. UNILITERAL SIGNS AND THE PRONUNCIATION OF ANCIENT EGYPTIAN

Throughout the history of Egyptology, different systems were used for the transliteration of hieroglyphic script. The following table shows the system used in this book, along with older transliterations and the phonetic value of uniliteral signs.

MODERN	OLD	NAME	PHON. VALUE	PRONUNCIATION	SIGN
ʾ	a	aleph	[1] > [ʔ] / [i]	ă	
ỉ / j	â	yod	[i] > [ʔ]	ĩ or j	
y / ï	â, j		[i] as in Engl. ‘yes’	ī	 / 

ʿ	ā	ayin	[ʕ] as the Arabic ayin in ‘ka’ba’	ā	
w	u	waw	initial [w] as in Engl. ‘wet;’ non-initial [u], as in Engl. ‘hue’	w / ũ, ū	
b	b		[b] as in Engl. ‘bitter’; sometimes softer, as in Spanish ‘Pablo’	b	
p	p		[p] as in Engl. ‘pet’; sometimes probably [pʰ], as in Germ. ‘Pferd’	p	
f	f		[f] as in Engl. ‘father’	f	
m	m		[m] as in Engl. ‘mother’	m	
n	n		[n] as in Engl. ‘never’	n	
r	r		[r] with a single tap of the tongue as in Spanish, ‘Pero’; sometimes [l] [dialectic]	r	
h	h		[h] as in Engl. ‘he’	h	
ḥ	ḥ	‘dotted h’	[ħ] mute and deep in the throat, as in Arabic ‘Ahmad’	ḥ	
ḫ	χ / kh	‘third h’	voiceless velar fricative [χ] as in Germ. ‘ach’ or Engl. ‘loch’	kh	
ḥ	χ / kh	‘fourth h’	a voiceless palatal fricative [ç], as in Germ. ‘ich’	kh	
s / z	s	z / ‘first s’	[z] as in Engl. ‘zoo’; perhaps [θ] as in Engl. ‘think’	z	
ś / s	s	s / ‘second s’	sharp [s], as in Engl. ‘set’	s	
š	ś / sh	shin	[ʃ] as in Engl. ‘shot’	sh	
ķ / q	ķ		ejective [qʰ] from deep in the throat, as in Arabic qur’ān	ķ	

<i>k</i>	<i>k</i>		aspirated [k <sup>h</sup> ] as in Engl. ‘kick’; in some word palatalised [kʲ], as in English ‘cue’	k	
<i>g</i>	<i>g</i>		ejective [kʼ] as in Engl. ‘good’; sometimes palatalised [kʲ], as in Engl. ‘argue’	g	
<i>t</i>	<i>t</i>		aspirated [t <sup>h</sup> ], as in Engl. ‘ten’	t	
<i>č / č̣</i>	<i>θ, th</i>	‘second t’	palatalised [tʲ] or [tʃ], as in Engl. ‘chew’	ch	
<i>ḏ / ḏ̣</i>	<i>ḏ</i>		ejective [tʼ], as in Am. Engl. ‘matter’ or in Brit. Engl. ‘shudder’	d	
<i>č̣ / ḏ̣</i>	<i>tʼ, tch</i>	‘second d’	ejective [dʼ], as in Brit. Engl. ‘due’	j / dj	
<i>ī</i>			fictive vowels that are characteristic for certain verb classes		
<i>ū</i>					

## Note



As the Coptic alphabet employs the twenty-four Greek letters [vowels as well as consonants] along with six additional letters taken from the Demotic script, and as part of the Coptic word-stock traces back to Ancient Egyptian words, Coptic words help deduce the pronunciation of the hieroglyphic script.









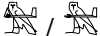










































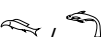

































In addition to the above non-syllabic forms, most of these letters also have syllabic forms with an insignificant resonant sound <sup>e</sup>, <sup>i</sup>, or the like, usually written with a superlinear stroke. These syllabic forms are found with initial letters, e.g., **ⲚⲦⲟⲩ** – ‘ntof, as well as with non-initial letters, e.g., **ⲚⲚ̅** – h<sup>e</sup>n.

MODERN	PRONUN- CIATION	NAME	PHON. VALUE
<b>ⲁ</b>	a, ʔ	alpha	
<b>ⲃ / Ⲅ̅</b>	b / <sup>e</sup> b	beta	/b/
<b>Ⲅ / Ⲅ̅</b>	g / <sup>e</sup> g	gamma	/g/; mostly in Greek words
<b>Ⲇ</b>	d	delta	/d/ only in Greek words
<b>Ⲉ</b>	ě	epsilon	
<b>Ⲑ</b>	z	zeta	
<b>Ⲓ</b>	ê	eta	
<b>Ⲕ</b>	th	theta	abbr. for t + à
<b>Ⲗ / Ⲗⲓ</b>	i / y	iota	
<b>Ⲙ / Ⲙ̅</b>	k / <sup>e</sup> k	kappa	













λ / λ̄	l / <sup>e</sup> l	lambda	
μ / μ̄	m / <sup>e</sup> m	mu	
ν / ν̄	n / <sup>e</sup> n	nu	
ξ	ks	ksi	
ο	o	omicron	
π / π̄	p / <sup>e</sup> p	pi	
ρ / ρ̄	r / <sup>e</sup> r	rho	
σ / σ̄	s / <sup>e</sup> s	sigma	
τ / τ̄	t / <sup>e</sup> t	tau	
υ / ῡ	u / w	upsilon	
φ	ph	phi	abbr. for π + 2
χ	kh	khi	
ψ / ψ̄	ps	psi	abbr. for π + c
ω	ō	omega	
ω̄ / ω̄̄	š / <sup>e</sup> š	shai	
φ / φ̄	f / <sup>e</sup> f	fai	
2 / 2̄	h / <sup>e</sup> h	hore(h)	
α / ᾱ	j / <sup>e</sup> j	djandja	
6 / 6̄	ǵ / <sup>e</sup> ǵ	kyima	
†	ti	ti	

1.3.2.2. BILITERAL SIGNS









































































	33		3w		[3b]
	3b / <i>mr</i>		3b		3h
	3h		[3s] / [ws]		iw
	ib		im		im
	in		in		in
	ir		is		is
	3		3		b
	b		b		h / [ih]
	k		ç / [çt]		ç
	w3		w <sup>e</sup>		ww
	wp / [ip]		wn		wn
	wr		wç / [wt]		[wç]
	b3		b3		bh

	<i>bs</i>		<i>pʒ</i>		<i>pr</i>
	<i>ph</i>		<i>pč / [pʦ]</i>		<i>mʒ</i>
	<i>mʒ</i>		<i>mʒ</i>		<i>mǐ / [mr]</i>
	<i>mǐ</i>		<i>mǐ</i>		<i>mw</i>
	<i>mm</i>		<i>mn</i>		<i>mn</i>
	<i>mr</i>		<i>mr</i>		<i>mḥ</i>
	<i>mś</i>		<i>mt</i>		<i>mt</i>
	<i>mṭ</i>		<i>mč</i>		<i>nǐ</i>
	<i>nw</i>		<i>nw</i>		<i>nb</i>
	<i>nm</i>		<i>nn</i>		<i>nḥ</i>
	<i>nś</i>		<i>nč</i>		<i>rw</i>
	<i>rś</i>		<i>hb</i>		<i>ḥʒ</i>
	<i>ḥw</i>		<i>ḥb</i>		<i>ḥp</i>
	<i>ḥm</i>		<i>ḥm</i>		<i>ḥn</i>
	<i>ḥn</i>		<i>ḥn</i>		<i>ḥr</i>
	<i>ḥḥ</i>		<i>ḥs</i>		<i>ḥč</i>
	<i>ḥč</i>		<i>ḥʒ</i>		<i>ḥʒ</i>
	<i>ḥʳ</i>		<i>ḥw</i>		<i>ḥm</i>
	<i>ḥt</i>		<i>ḥʒ</i>		<i>ḥn</i>
	<i>ḥn</i>		<i>ḥr</i>		<i>sʒ / [gb]</i>
	<i>sp / śp</i>		<i>sʒ / śʒ</i>		<i>sh</i>
	<i>śʒ / sʒ</i>		<i>śʒ</i>		<i>św</i>
	<i>śf</i>		<i>śm</i>		<i>śn</i>
	<i>śk</i>		<i>śt</i>		<i>śt / [šč]</i>
	<i>šč / [št]</i>		<i>šč</i>		<i>šč</i>
	<i>św</i>		<i>śm</i>		<i>śn</i>
	<i>śś</i>		<i>śṭ</i>		<i>ḥn</i>
	<i>kś</i>		<i>kṭ</i>		<i>kʒ</i>
	<i>kp</i>		<i>km</i>		<i>gm</i>
	<i>gś</i>		<i>tʒ</i>		<i>tʒ</i>















	<i>ti</i>		<i>tp</i>		<i>tp</i>
	<i>tm</i>		<i>č3</i>		<i>čs</i>
	<i>č3</i>		<i>čw</i>		<i>čb</i>
	<i>čr</i>		<i>čt</i>		<i>čč</i>

1.3.2.3. TRILITERAL SIGNS

	<i>i3m / [im3]</i>		<i>ičb</i>		<i>iwn</i>
	<i>imi</i>		<i>išw</i>		<i>i3r</i>
	<i>čwt</i>		<i>čb3</i>		<i>čpr</i>
	<i>čnh</i>		<i>črk</i>		<i>čh3</i>
	<i>čhč</i>		<i>čš3</i>		<i>w3h</i>
	<i>w3s</i>		<i>w3č</i>		<i>wbn</i>
	<i>wh3</i>		<i>whč</i>		<i>whm</i>
	<i>wšr</i>		<i>wšh</i>		<i>wčb</i>
	<i>b3s</i>		<i>bi3</i>		<i>bit</i>
	<i>phr</i>		<i>m3č</i>		<i>m3č</i>
	<i>m3w</i>		<i>m3č</i>		<i>m3n</i>
	<i>mčh</i>		<i>nfr</i>		<i>nhb</i>
	<i>nčm</i>		<i>rwč / [rwč]</i>		<i>hnt</i>
	<i>hk3</i>		<i>h3p</i>		<i>[h3m]</i>
	<i>hčč</i>		<i>h3p</i>		<i>hnt</i>
	<i>hnt</i>		<i>h3w</i>		<i>h3f</i>
	<i>h3f</i>		<i>h3m</i>		<i>š33</i>
	<i>šb3</i>		<i>š3p</i>		<i>šm3</i>
	<i>šm3</i>		<i>š3č</i>		<i>šhm</i>
	<i>ššm</i>		<i>ššr / ššr</i>		<i>š3p</i>
	<i>šč3</i>		<i>šmč</i>		<i>šm3</i>
	<i>šsp</i>		<i>ššr</i>		<i>kr3</i>
	<i>k3p</i>		<i>t3w</i>		<i>t3w</i>
	<i>tšr</i>		<i>t3n</i>		<i>čb3</i>












### 1.3.3. DETERMINATIVES [CLASSIFIERS]

As the omission of vowels results in countless homographs, i.e., lexemes that share the same spelling but differ in meaning, the Ancient Egyptian writing system often employs semograms to indicate the semantic class to which a lexical item belongs. The ‘walking legs’, , for instance, can indicate ‘movement’, while the sun-disk  signals words that somehow belong to the category ‘time’.

  *pri* ‘go forth’        *h3i* ‘to descend’  
  *hrw* ‘day’        *tr* ‘time’        *wršu* ‘to spend the day’

Signs used in this fashion would best be called [lexical] classifiers; in Egyptology, however, they are commonly known as ‘determinatives’. They have no phonetic value, and as in the examples above, they always appear last in the spelling of a word.



















Determinatives thus not only allow for the distinction of possible homographs





















































   ‘*nh*’ [‘living] person’ [DET.: A SITTING MAN]  
  ‘*nh*’ ‘captive’ [DET.: A MAN WITH HIS ARMS TIED UP IN THE BACK]  
   *nh.t* ‘grain’ [DET.: GRAIN]  
   ‘*nh*’ ‘swear’ [DET.: ACTIONS WITH THE MOUTH]












but also provide an important reading aid, as every determinative marks the end of a word. Not every word, however, is spelled with a determinative.

#### 1.3.3.1. GENERIC DETERMINATIVES

The following table shows a list of commonly used determinatives.


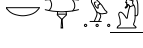


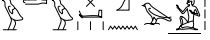
	male person		female person
	eat; drink; think; speak; feel		lift; carry
	group of people		young; child; sit
	official; man in authority		old; weak; lean upon
	exalted person; deceased		deceased
	enemy; deceased [as a dangerous being]		mummy; likeness; shape
	high; rejoice; support		praise
	force; labour; effort		weak; weary; sit
	lie down; dead; bury		hair; mourn

	eye; actions of the eye		actions and conditions of the eye
	nose; smell; joy; contempt		ear; actions and conditions of the ear
	tooth; action of the teeth		force; labour; effort
	offer; present		arm; cease
	envelop; embrace		flesh; limb
	walk; run; move		move backwards; return
	leg; foot; actions and conditions of the foot		phallus; beget; urinate
	cattle		savage
	animals; skin		fish
	birds; insects		small; bad; weak
	god; king		goddess; queen
	snake; worm		tree
	plants; flowers		wood; tree
	corn		grain
	wine; fruit; garden		sky; above
	sun; light; time		night; darkness
	star; hour		road; travel; position
	desert; foreign country		sand; mineral; pellet
	land		irrigated land
	sheet of water		water; liquid; actions connected to liquids
	foreign country or person		town; village; Egypt
	building		door; open
	stone		air; wind; sail
	boats; ships; navigation		sacred bark
	box; coffin		shrine; mat
	fire; heat; cook		knife; cut

	cultivate; hack up		rope
	cup		pots
	vessel; ointment, anoint		festival
	copper; bronze		textiles; cloths; linen; bind; document
	cake; offering		abstract things; book; writing
	break; divide; cross		





### 1.3.3.2. GROUP DETERMINATIVES

A determinative cannot only indicate the meaning of an individual word, but it may also follow an entire phrase, most commonly if an expression designates a person or a group of persons based on a particular quality.


Peas B1, 60		<i>nb šgr</i> ‘Lord of Silence’
BD 125 [Schluss], Nu 77		<i>nb č3w</i> ‘Lord of Breath’ [see sect. 3.2.2.1.]
BD 99, Nu 31		<i>nfr.w k3(.w)</i> ‘those with beautiful <i>kas</i> ’ [see sect. 5.4.]
IV : 28, 15		<i>nšwt.yw tp(.i)w<sup>c</sup></i> ‘former kings’ [see sect. 7.3.]
IV : 968, 15		<i>wṯi.w kn</i> ‘those who cause trouble’ [see sect. 33.2.1.1.]













### 1.3.4. SUMMARY

As both logograms and determinatives are employed on a semantic level, either representing a word that is closely related to the object represented by the hieroglyphic sign or indicating the semantic class of a lexical unit, they can commonly be classified as semograms. There is, in fact, no absolute distinction between the two subcategories, but a determinative can also be employed as an abbreviation for a noun or an action and thus serve as an ‘irregular’ logogram.

	<i>ščr</i> ‘to sleep’ [regular]	ABBR.: 
	<i>šwr</i> ‘to drink’ [regular]	ABBR.: 

Phonograms, on the other hand, disregard the semantic implication of the pictorial sign and merely represent a phonetic value of one to three consonants.

As many signs, however, can be employed in different ways, the semographic use of a hieroglyphic sign is often indicated by a stroke , especially if a sign serves as a logogram.

	as a logogram:		<i>tp</i>	'head'
	as a phonogram in		<i>tp</i>	'upon'
	as a determinative in:		<i>mḥʔ</i>	'back of the head'
	as a logogram:		<i>mw</i>	'water'
	as a phonogram in:		<i>mwy.t</i>	'urine'
	as a determinative in:		<i>nwy</i>	'flood'

This so-called semogram stroke has to be distinguished from a stroke that is merely used as a 'space-killer' and particularly found with small or long broad signs.

		<i>rʔ-pw</i>	'or'			<i>hʔi</i>	'to descend'
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#### 1.4. PECULIARITIES OF THE HIEROGLYPHIC WRITING SYSTEM

##### 1.4.1. PHONETIC COMPLEMENTS

The phonetic value of a multilateral sign can be specified by one or more unilaterals [only rarely also by biliteral] signs, i.e., these so-called phonetic complements have no bearing on the pronunciation. Such complementation, however, is not arbitrary, but as a rule, a possible specification of the first consonant precedes the multilateral sign, while a possible complement on the last consonant follows the multilateral sign. A possible middle consonant may be added to either side.





Biliteral signs are commonly complemented to the rear. Any unilateral sign following a biliteral sign is thus most likely to be considered a phonetic complement.

AB [+ B] [VERY COMMON]

	<i>hʔ</i> [+ ʔ] [DET.: FORCE]	=	<i>hʔ</i>	'to break'
	<i>nḥ</i> [+ ḥ] + ḥ [DET.: TIME]	=	<i>nḥḥ</i>	'eternity'
	<i>w</i> + <i>ḥʔ</i> [+ ʔ] [DET.: MOVEMENT]	=	<i>wḥʔ</i>	'to proceed'

This general rule bears particular importance for the various verb classes that have both a base stem and a geminated stem [see sect. 10.2.2.2.].

BASE STEM    GEMINATED STEM

	<i>mʔ</i> [+ ʔ] = <i>mʔ</i>	vs.		<i>mʔ</i> [+ ʔ] + ʔ = <i>mʔʔ</i>
	<i>wn</i> [+ n] = <i>wn</i>	vs.		<i>wn</i> [+ n] + n = <i>wnn</i>

In fewer cases, but still common, a biliteral sign is complemented to either side.

## [A +] AB [+ B] [COMMON]

	[ <i>h</i> +] <i>hn</i> [+ <i>n</i> ] + <i>s</i> [DET.: BAD]	= <i>hns</i> ‘[to be] narrow’
	[ <i>i</i> +] <i>im</i> [+ <i>m</i> ] [DET.: FEEL + PL. DET.]	= <i>im.w</i> ‘lamentation’
	[ <i>m3</i> +] <i>m3c</i> [+ <i>c</i> ] [PHON. DET.]	= <i>m3c</i> ‘real’

The complementation of a multiliteral sign only to the front, however, is obsolete and rare in Middle Egyptian. Most examples either trace back to earlier times or arise from a desire to fill an empty space, as in the following examples, which employ a uniliteral sign above a broad narrow sign.

## [A +] AB [OBSOLETE AND RARE]

	[ <i>h</i> +] <i>hw</i> + <i>s</i> [DET.: FORCE]	= <i>hwsj</i> ‘to stir’
	[ <i>t</i> +] <i>tm</i>	= <i>tm</i> ‘Atum’
	<i>h</i> [+ <i>n</i> +] <i>nm</i> + <i>s</i> [DET.: SIT]	= <i>hnm3</i> ‘to be friendly’

The same basic rules apply to trilateral signs, which are commonly complemented either to the rear

## ABC [+ C] [VERY COMMON]

	<i>whm</i> [+ <i>m</i> ] [DET.: ABSTRACT]	= <i>whm</i> ‘to repeat’
	<i>hnm</i> [+ <i>m</i> ] [DET.: ABSTRACT]	= <i>hnm</i> ‘to unite with’
	<i>k3p</i> [+ <i>p</i> ] [DET.: FORCE]	= <i>k3p</i> ‘to fumigate’

## ABC [+ B + C] [VERY COMMON]

	<i>nfr</i> [+ <i>f</i> + <i>r</i> ]	= <i>nfr</i> ‘[to be] good’
	<i>nh</i> [+ <i>n</i> + <i>h</i> ]	= <i>nh</i> ‘to live’
	<i>shym</i> [+ <i>h</i> + <i>m</i> ]	= <i>shym</i> ‘to be mighty’

or to either side.

## [A +] ABC [+ B + C] [COMMON]

	[ <i>s</i> +] <i>shym</i> [+ <i>h</i> + <i>m</i> ]	= <i>shym</i> ‘to be mighty’
	[ <i>t</i> +] <i>tmč</i> [+ <i>m</i> + <i>č</i> ] [DET.: ABSTRACT]	= <i>tmč</i> ‘to unite’
	[ <i>w</i> +] <i>w3r</i> [+ <i>s</i> + <i>r</i> ]	= <i>w3r</i> ‘to be strong’

## [A + B] ABC [+ C] [LESS COMMON]

	[ <i>h</i> + <i>s</i> +] <i>hšf</i> [+ <i>f</i> ] [DET.: FORCE] = <i>hšf</i> ‘to repel’
	[ <i>h</i> + <i>r</i> +] <i>hrw</i> [+ <i>rw</i> ] + <i>y</i> [DET.: FORCE] = <i>hrw.y</i> ‘opponent’

## [A +] ABC [+ C] [LESS COMMON]

	[ <i>c</i> +] <i>h<sup>c</sup></i> [+ <i>c</i> ] [DET.: MOVE] = <i>h<sup>c</sup></i> ‘to stand [up]’
	[ <i>p</i> +] <i>phr</i> [+ <i>r</i> ] [DET.: MOVE] = <i>phr</i> ‘to go around’

## [A + B +] ABC [OBSOLETE AND RARE]

	[ <i>h</i> + <i>p</i> +] <i>hpr</i> = <i>hpr</i> ‘to come into being’
	[ <i>h</i> + <i>b</i> +] <i>h3b</i> = <i>h3b</i> ‘festival’

## 1.4.1.1. DOUBLE COMPLEMENTATION

A biliteral sign serving as a phonetic complement can itself be complemented by a uniliteral sign.

	<i>wb3</i> [+ <i>b</i> + <i>b3</i> + <i>3</i> ] [DET.: ABSTRACT] = <i>wb3</i> ‘to open’
	<i>hpr</i> [+ <i>pr</i> + <i>r</i> ] = <i>hpr</i> ‘to come into being’
	[ <i>m3</i> +] <i>m3<sup>c</sup></i> [+ <i>c</i> ] [DET.: ABSTRACT] = <i>m3<sup>c</sup></i> ‘real’

Except for the root *m3<sup>c</sup>*, however, which is usually spelled as in the last example, biliteral signs are rarely found as complements specifying the consonantal stem of a word.

Double complementation is most commonly found at the end of a word and particular frequent with the biliteral sign *nw*. The spelling , for instance, often occurs as a phonetic unit for the stem *nw*.

	<i>nw</i> ‘these’		<i>nw</i> ‘time’		<i>nw</i> ‘to be weak’
	<i>nw</i> ‘to see’		<i>nw</i> ‘hunter’		<i>nw</i> ‘to care for’

Masculine nouns ending in /*n*/ or /*r*/ often employ the biliteral signs *nw* and *rw* to represent the contracted spelling of the last consonant of the stem and the masculine ending .*w* [see sect. 2.4.1.1.].

	<i>hn</i> [+ <i>n</i> + <i>nw</i> ] + <i>w</i> [DET.: BUILDING] = <i>hnw</i> ‘residence’
	<i>i</i> + <i>t</i> + <i>r</i> [+ <i>rw</i> ] + <i>w</i> [DET.: WATER] = <i>itr.w</i> ‘river’
	<i>h3</i> + <i>rw</i> [+ <i>w</i> ] [+ DETS.: FOREIGN COUNTRY] = <i>h3r.w</i> ‘Syria’

The spelling  $\circ nw$  further occurs with the plural number of nouns ending in the consonant /n/ [see sect. 2.4.2.],

	$r + n [+nw] + w$ [DET.: SPEAKING]	= $rn.w$ ‘names’
	$m + \check{c} + n [+nw] + w$ [DET.: ROAD]	= $m\check{c}n.w$ ‘roads’

and even verb stems ending in  $n$  occasionally employ the biliteral sign  $\circ nw$  if the particular form ends in  $n.w$ , e.g.,  $m \check{s}h\check{c}n.w$ , ‘do not irritate’ [NEGATIVAL COMPLEMENT, see sect. 11.2.2.],  $\acute{s}mn.w$ , ‘being recorded’ [STATIVE, see sect. 21.2.], or  $wn.w$ , ‘who [pl.] exist’ [perfective participle, see sect. 33.2.1.1.].

The biliteral sign  $tw$  can represent the combination of a final stem consonant /t/ and the masculine ending /w/.

	$ht [+h +t] + tw$ [DET.: STAIRS]	= $ht.w$ ‘terrace’
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#### Note

The hieratic script, as a rule, tends to employ more phonetic complements than the monumental hieroglyphic script. A semogram in combination with a semogram stroke, however, is usually not complemented at all.








The arrangement of phonetic complements may be influenced by calligraphic considerations [cf. below].






	$\text{ʿ3} [+ \text{ʿ}]$ for $[\text{ʿ}] + \text{ʿ3}$	= $\text{ʿ3}$ ‘great’
	$[p + t +]$ $pt$ for $[+ p] pt [+ t]$	= $p.t$ ‘sky’
	$n\check{c} [+ n + \check{c}]$ for $[n +] n\check{c} [+ \check{c}]$	= $n\check{c}$ ‘to consult’
	$mr [+ m + r]$ for $[m +] mr [+ r]$	= $mr$ ‘[to be] ill’
	$[s + t + p]$ for $[s + t +] stp [+ p]$	= $stp$ ‘to select’






### 1.4.2. PHONETIC DETERMINATIVES

A limited number of hieroglyphic signs represent a phonetic value that is derived from the depicted object in the same way as has been described for logograms, but neither can they freely engage in the spelling of words [like phonograms] nor do they commonly represent an entire word by themselves [like semograms]. Known as ‘phonetic determinatives’, such signs typically follow the full spelling of an entire word the consonantal stem of which is identical with the determinative, which may precede as well as follow a possible ending. In either case, however, a phonetic determinative precedes a generic determinative.



 : PHON. DET. *w<sup>c</sup>r* [through  *w<sup>c</sup>r.t* 'leg']  
  *w<sup>c</sup>r.t* 'district of the necropolis'      *w<sup>c</sup>r.t* 'administrative division'  
 *w<sup>c</sup>r* 'to flee'

 : PHON. DET. *s3h* [through  *s3h* 'toe']  
 *s3h* '[astron.] Orion'                       *s3h* 'neighbours'  
 *s3h* 'to enfeoff [with fields]'

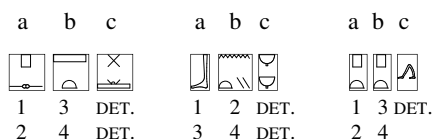
 : PHON. DET. *iw<sup>c</sup>* [through  *iw<sup>c</sup>*, 'meat on the bone', 'haunch']  
 *iw<sup>c</sup>.w* 'heir'     *iw<sup>c</sup>.t* 'inheritance'  
 *iw<sup>c</sup>.yt* 'troops'




Note

Most of these hieroglyphic signs are [or at least were] also attested as generic determinatives [in an earlier stage of Ancient Egyptian]. Serving as a representation of a phonetic unit rather than as a categoriser, they are thus called 'phonetic determinative'.

1.4.3. WRITING DIRECTION



Hieroglyphic texts can be written in columns [vertical] as well as in lines [horizontal], from right to left or from left to right. For a pleasant appearance, groups of hieroglyphic signs are further arranged in full or half squares, making use of the entire height of the line or the entire width of a column. The width and height of such a square thus depends on the width and height of the widest / highest sign.



 *i.nč* [+ č] *hrzč*  
 *imn.t* [DET.: DESERT]  
 *nfr* [+ f + r].t







In addition to the regular reading direction, which is usually indicated by animals and humans facing the beginning of the text, Egyptian writings are thus to be read from right to left / left to right [columns, cf. BH I, pl. 8, B 5 – 6 / A 1, left] or from top to bottom [lines, cf. VII : 14, 21 / 15, 7, below].




 [...] *n hpr nh.w m mš<sup>c</sup>zì* [...]  
 *tw3 n zì nčr s3 nšwt*


'No loss had occurred among my army, [...]  
and the son of the king thanked me.'

Some texts, however, disregard this general rule in order to ‘encrypt’ their content. The following example shows the heading of a religious book in plain writing [first line] besides the encrypted version in a parallel version [second line].


Amduat : 1, A II 1  *šhw n(.i) šft.w pn*  
 ‘summary of this book’

Two coordinated words are occasionally written in what is known as a ‘split column’, i.e., side by side in one column. In the following example [A], this is the case with the masculine and the feminine form of the Egyptian word for enemies [ *hft(.i)w*] / [ *hft(.w)t*], i.e., the qualifying suffix pronoun  *sk*, ‘your’ [see sect. 4.2.1.3.1.], is valid for both nouns.

The same is true for example [B], which employs a split column with barley [ *it*] and emmer [ *bt.t*], both of which are qualified by the adjective  *nb*, ‘all’,





CT I : 10 d, B1P A: *m<sup>3c</sup>-hrwsk r hft(.i)wsk hft(.w)t sk nb*  A B  
 ‘May you triumph over your male and female enemies.’  
 BH I, pl. 8, A 8 B: *nb.w it nb bt.t nb(.t) nb.w (i)h.t nb(.t)*  
 ‘the lords of all barley and all emmer, the lords of all things’

and a third example constructs a noun with two different possessive pronouns to form a balanced sentence of the structure

CT VII : 509 h, B4L *m<sup>c</sup>k.t z<sup>i</sup> m<sup>c</sup>k.t r<sup>c</sup>w*   
 ‘My [NOUN] is the [NOUN] of X’ [see sect. 14.4.2.]  
 ‘My protection is the protection of Ra.’



#### 1.4.4. CALLIGRAPHY

As the hieroglyphic script strives for a pleasant appearance and arranges individual words and expressions in graphic squares, the order of individual signs may differ from the actual pronunciation [graphic transposition]. Small signs, for instance, tend to be placed under the breast of a bird sign,

 *t + w* for  *wt*  *t + 3* for  *3t*

while thin vertical signs often precede a bird sign that they ought to follow.

 *wč [+ w]* for  *wč* ‘command’

 *h + 3 + t* for  *3h.t* ‘field’

In a group consisting of a low broad sign between two small signs, the small signs can further be placed side by side above the long sign,

	<i>h + t + f</i>	for		<i>hft</i>	‘in front of’
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while a small sign that is supposed to precede or to follow two thin vertical signs can be placed between them.

	<i>s + sb3 + 3</i>	for		<i>sb3</i>	‘star’
	<i>rt + hr + rt</i>	for		<i>hr rt(.wi)</i>	‘under the feet’
	<i>h + hr + b</i>	for		<i>hr(.i)-h(3)b</i>	‘lector priest’
	<i>i + t + i</i>	for		<i>yt</i>	[mostly in columns]

### 1.4.5. DEFECTIVE AND ABBREVIATED SPELLINGS

The hieroglyphic script does not necessarily reflect the full consonantal stem of a word, but some nouns regularly show defective spellings.

	<i>(3)s.t</i>	>	HCE	‘Isis’		<i>wn(m)</i>	>	ΟΥΜ	‘to eat’
	<i>r(m)č</i>	>	ΡΩΜΕ	‘people’		<i>h(n)k.t</i>	>	ΖΝΚΕ	‘beer’

More frequently, however, the weak consonants *y* and *w* are lost in the end of a word, while *3* tends to be omitted between two consonants.




	<i>snč.yt</i>	→		<i>snč(.y)t</i>		<i>hrw</i>	→		<i>hr(w)</i>
	<i>h3b</i>	→		<i>h(3)b</i>		<i>h3i</i>	→		<i>h(3)i</i>

Note






The specification of only the middle consonant in the spelling *h(3)*, which is frequently used instead of the regular *hk3*, indicates that also at the end of a word, *3* was no longer prominently pronounced.

Stereotyped phrases and established wordings further occur in abbreviated spellings. The most common of these are:



	<i>nh(.w) wč3(.w) snb(.w)</i>	[ABBR.: <i>˘.w.š.</i> ]
‘may he live, be prosperous and healthy’		[ABBR.: l.p.h.]
	<i>čt-mtw</i>	‘to be recited’
	<i>wč(.t)-mtw</i>	‘command’
	<i>pr.t-hrw</i>	‘funeral offering’
	<i>č3s-phr</i>	‘vice versa’
	<i>hr.t-nčr</i>	‘necropolis’
	<i>hr.t-hrw</i>	‘daily provision’
	<i>iti-nčr</i>	‘god’s father’ [a priestly title]
	<i>h3.ti-˘</i>	[a title, not translated]
	<i>m3˘-hrw</i>	‘true of voice’, ‘vindicated’






The noun  *iṯi*, ‘father’, is often found in abbreviated spellings such as  (*i*)*ṯi* or even  (*i*)*ṯi*.


#### 1.4.6. ORTHOGRAPHY

Although the hieroglyphic script has no strict ‘orthography’, Middle Egyptian largely employs ‘standard spellings’. Unorthodox spellings such as  *nḥr*, ‘god’,  *hpr* [e.g., CT I : 314 b, B<sub>2</sub>L] or  *hpr* [e.g., VII : 3, 9; CT I : 12 d, B<sub>4</sub>Bo] for  *hpr*, ‘to come into being’, or even  *wnm*, ‘to eat’, are thus rare and largely







limited to archaic and archaising texts. The use of phonetic complements and determinatives, however, has a wider range, and slightly different spellings of words may occur even within one textual witness.












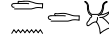
Due to its pictorial nature, the Egyptian writing system further employs rebuses, i.e., not only the phonetic value of the signs but also their arrangement is to be read. The compound preposition  *m-hnw*, ‘in[side of]’, for instance, can be spelled as , namely as a group showing ‘water [*mw*] is beneath [*hr*] a *nw*-pot’,

in Egyptian *mw-hr-nw* [acronym] [cf. the English rebus  = ‘I understand’]. In a similar fashion, the sign , i.e., ‘ [*n*] is inside [*m*]  [*iw*]’, is used as a cryptogram for  *imn*, the name of the god Amun [retrograde] [cf. the English rebus: neMANed = man in need’.]

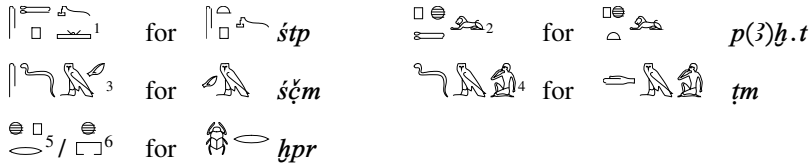
Such cryptic orthographies as well as the use of alternative phonetic values of hieroglyphic signs are attested as early as the Old Kingdom [E.DRIOTON in *Mélanges Maspero 1,2*, MIFAO 66.2, Cairo, 1935 – 1938, pp. 697 – 704; for a MK example, cf. BH II, pl. 14]. Except for the group  *m-hnw*, however, they are only found in enigmatic writings, which abound in religious texts of the New Kingdom and eventually culminate in the Ptolemaic writing system.

#### 1.4.7. PHONETIC CHANGES

Over time, the pronunciation of consonants and entire words were subject to minor changes, resulting in various spellings of respective verbs in Middle Egyptian. As the phonetic value of the graphemes , , and  were no longer distinguished from , , and , spellings with the latter consonants occur next to the older orthography.

	→		<i>sin</i>		→		<i>hsi</i>
	→		<i>šw</i>		→		<i>šš</i>
	→		<i>šbš</i>		→		<i>čnt</i>

While  $\overline{s}$  and  $\overline{\acute{s}}$  frequently interchange, the palatalised consonants  $\overline{\acute{c}}$  and  $\overline{\acute{\acute{c}}}$  almost exclusively occur with original spellings. Due to confusion, however, some archaising texts replace an original  $\overline{t}$  or  $\overline{\acute{t}}$  with a wrongly assumed conservative spelling with  $\overline{\acute{c}}$  or  $\overline{\acute{\acute{c}}}$ , respectively. At the same time, they often show an increased use of phonetic complements or even employ uniliteral signs in the place of a multi-literal sign.



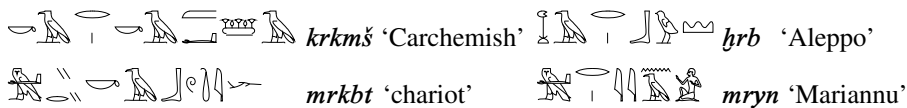
<sup>1</sup> IV : 247, 8   <sup>2</sup> IV : 287, 5   <sup>3</sup> IV : 1854, 18   <sup>4</sup> IV : 1854, 20   <sup>5</sup> VII : 3, 9; CT I : 12 d, B4Bo  
<sup>6</sup> CT I : 314 b, B2L.

Particularly at the end of a word, an older consonant  $\overline{r}$  often developed into  $\overline{\acute{i}}$  or went entirely missing, and along with the ‘standard’ orthography of respective words, Middle Egyptian spellings may either show both consonants or omit the last consonant. In any case, however the transliteration commonly agrees with the older spelling.











### 1.4.8. SYLLABIC ORTHOGRAPHY

As the Egyptian writing system denotes only the consonantal value of a word, the so-called ‘syllabic spelling’ was used to hint at the original pronunciation of foreign words or proper names, indicating which vowels were to be inserted between the consonants. As a rough guideline for the transliteration of syllabic orthography, only the first consonant of the biliteral signs is to be considered.








### 1.4.9. STRUCTURAL SIGNS AND TEXT-CRITICAL SYMBOLS

Transliteration not only reflects the phonetic value but also the structure of a word. Its most basic part attainable by analysis of its component parts is the root, the carrier of semantic information, which may be identical with the stem, the simplest form of a word. More often, however, the stem is formed from the root by various modifications. Nouns, for instance, may be built with a nominal prefix [see

sect. 2.2.], e.g.,  *mswr*, ‘drinking bowl’, from  *swr*, ‘to drink’, and especially verbs often derive different stems from one root: namely a base stem, e.g.,  *m3*, ‘to see’,  *3h*, ‘to be glorious’, or  *hti*, ‘to retreat’, and a geminated stem [duplication of the second or third consonant of the root], e.g.,  *m33*, a causative stem with a prefix /s/, e.g.,  *s3h*, ‘to make glorious’, or a duplicated stem, which often implies emphasis or repetition, e.g.,  *htbt*, ‘to nullify’ [for this and other derivations, see sect. 10.2.]. Other possible means of modification such as changing or lengthening vowels can only be deduced from later stages of the language.

In transliteration, a dot separates the stem from possible endings indicating a nominal feature, or other inflectional affixes,

	<i>mr</i> [adj., 2-RAD] ‘[to be] ill’
	<i>mr.Ø</i> [n., masc.] ‘illness’, ‘disease’
	<i>mr.t</i> [n., fem.] ‘illness’, ‘evil’
	<i>mr.t</i> ‘one [fem.] who is ill’ [see sect. 33.2.1.1.]
	<i>n mr.t ir.tsf</i> ‘when his eye had not yet been injured’ [see sect. 29.3.1.]






while the sign  $\neq$  separates a suffix pronoun [see sect. 4.2.1.] from the stem or a possible ending.

	<i>mr.tsf</i> ‘his illness’		<i>mr=sf</i> ‘when he is ill’
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Several text critical signs further reflect the state of preservation of the Egyptian source:

- [...] Destroyed in the original, but restored by the editor.
- ⋮ Destroyed in the original, but traces visible. / Partly destroyed.
- <...> Omitted in the original by mistake, and filled in by the editor.
- (...) Unwritten in the original, and added by the editor.

The same set of critical signs is sometimes found in hieroglyphic text editions; usually, however, the following set of hatchings is used:

-  Destroyed in the original.
-  Partly destroyed in the original.
-  Damaged parts of the text.
- <sup>tr</sup> Damaged in the original, but traces [tr. / sp.] visible.
- [] Destroyed in the original and restored by the editor.