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THE AFROASIATIC LANGUAGES

Edited by
ZYGMUNT FRAJZYNGIER
ERIN SHAY
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ACKNOWLEDGEMENTS

The work on this volume was supported by grants from the Committee on Research and Creative Work and the Graduate Committee on the Arts and Humanities, both at the University of Colorado at Boulder. The work of the editors was also supported by National Science Foundation Grant No. 0439940.

Maps for this volume were drawn by Monika Feinen of the University of Cologne. It has been a pleasure working with her. We are most grateful to Marian Safran for her editorial work on this volume. We have also benefited from the advice and comments of contributors to this volume and of a number of other colleagues with whom we have discussed various issues. In particular, thanks are due to Guy Deutscher, Geoffrey Khan, Amina Mettouchi, Jonathan Owens, and Mauro Tavco. We are also most grateful to anonymous readers of the volume for pointing out mistakes and oversights and for other insightful comments. All errors of fact or interpretation remain our own.

This volume was inspired by Bob Dixon, who first broached the possibility of preparing the volume for the Cambridge Language Surveys. Our sincere thanks go to Helen Barton of the Cambridge University Press, who has provided wise and very friendly guidance throughout our work on this project. We are also very grateful to Leigh Mueller for her insightful and meticulous copy-editing.

ABBREVIATIONS

The list below contains abbreviations used in various chapters of the volume. In some cases, the same symbol may refer to different categories, or the same category may be indicated by more than one symbol, in different chapters. Also, abbreviations may use either upper- or lower-case letters, depending on which chapter they appear in.

'' low tone
' high tone
∅ zero marked (unmarked)
# word boundary (in chapter 3)
= elitic boundary
$ syllable boundary (in chapter 3)
1 first person
2 second person
3 third person
3MSG third-person masculine singular
3FSG third-person feminine singular
A Akhnic (Coptic dialect)
A aorist
A class a of verbs (Ts'amakko, Dhaasanac)
ablative
'absolutive' = unmarked case
accusative
preverbal particle ad
'NON-REALIZED'
AD adjective
ADJP adjectival phrase
ADVST adverstive
AFF affected (Chadic)
AFF affirmative (Omotic)
AKK Akkadian
ALL allative
ANAPH anaphora
ANN annex
ANNEX annexed state
AOR aorist
APPL applicative
Ar. Arabic
ASSC associative
ASSOC associative
AT 'at'
ATR Advanced Tongue
ATT attributive
AUX auxiliary
AWAY motion away (verbal extension)
B Bohairic (Coptic dialect)
class b of verbs (Ts'amakko, Dhaasanac)
BCKG background
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<td>SS</td>
<td>same subject</td>
</tr>
<tr>
<td>STAT</td>
<td>stative</td>
</tr>
<tr>
<td>STR</td>
<td>strong</td>
</tr>
<tr>
<td>SUBJ</td>
<td>subject</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UH</td>
<td>unspecified human subject</td>
</tr>
<tr>
<td>UNM</td>
<td>unmarked tense (Ts’amakko)</td>
</tr>
<tr>
<td>UP</td>
<td>movement upward extension</td>
</tr>
<tr>
<td>V</td>
<td>verb</td>
</tr>
<tr>
<td>V1</td>
<td>first vowel</td>
</tr>
<tr>
<td>VEN</td>
<td>ventive</td>
</tr>
<tr>
<td>VN</td>
<td>verbal noun</td>
</tr>
<tr>
<td>VOC</td>
<td>vocative</td>
</tr>
</tbody>
</table>
Ancient Egyptian and Coptic

Antonio Loprieno and Matthias Müller

3

3.1 Historical and cultural context

3.1.1 Introduction

Ancient Egyptian and its latest historical stage, Coptic, represent a separate branch of the Afroasiatic language family (also called Hamito-Semitic, or Semito-Hamitic: Diakonoff 1965; Hodge 1971; Zaborski 1992: 36–7). Within Afroasiatic, Egyptian shows the closest relations to Semitic and Berber.

The productive history of Egyptian, which spans from 3000 BC to AD 1300, divides into two main stages, characterized by a major change from synthetic to analytic patterns in the nominal syntax and the verbal system (Junge 1985), and further into three different phases, which affect mainly the sphere of graphemics (Kammerzell 1995).

The use of Egyptian was confined to the Nile valley and delta, broadly within the borders of modern Egypt. At certain times, the Egyptian dominion exceeded these natural borders, and Egyptian was used as the language of the Egyptian-based ruling elite in the occupied territories such as Nubia or the southern Levant. However, the language never established itself there as a stable communication system, although it seems to have left language contact traces in some of the areas (Muchiki 1999).

3.1.2 Earlier Egyptian

Earlier Egyptian is the language of all written texts from 3000 to 1300 BC, surviving in formal religious texts until the third century AD. Its main phases are as follows:

(1) **Old Egyptian** (Edel 1955–64), the language of the Old Kingdom and of the First Intermediate Period (3000–2000 BC). The main documents of this stage of the language were royal rituals such as the 'Pyramid Texts', and funerary texts, especially 'autobiographies' which contained accounts of individual achievements inscribed in the rock tombs of the administrative elite. Additionally, a limited number of letters and business documents survive from this period.

(2) **Middle Egyptian** (Gardiner 1957), also termed 'Classical Egyptian', from the Middle Kingdom to the end of Dynasty XVIII (2000–1300 BC). Middle Egyptian was the language of classical Egyptian literature, which consisted of ritual texts, for example the 'Coffin Texts' inscribed on the sarcophagi of the administrative elite; wisdom texts that conveyed the educational and professional expectations of contemporary Egyptian society, for example the 'Instructions of the Vizier Ptahhotep'; narratives relating adventures of a specific hero and representing individual concerns, the most famous specimen of this genre being the 'Tale of Sinuhe'; hymns and poetical texts with religious contents, written in praise of a god or of the king. Besides literary texts, administrative documents, for example the Kahun papyri, and historical records comprise the Middle Egyptian corpus.

(3) **Traditional Egyptian**, the language of religious texts (rituals, mythology, hymns) from the New Kingdom to the end of Egyptian civilization. Late Middle Egyptian coexisted with Later Egyptian for more than a millennium in a situation of diglossia (Vernus 1996: 560–4). From a grammatical point of view, Late Middle Egyptian maintained the linguistic structures of the classical language, but on the graphemic side, especially in the Greco-Roman period, it showed an enormous expansion of the set of hieroglyphic signs.

Earlier Egyptian was characterized by a preference for synthetic grammatical structures: it displayed a full set of morphological suffixes indicating gender and number; it exhibited no definite article; it maintained the VSO order in verbal formations:

(1) \( \text{ṣm} \, \text{ḏw} \, \text{n} \, \text{ḏ3t-f} \)

listen(PROS) scribe to teaching.FEM-me

'May the scribe listen to my teaching.'

3.1.3 Later Egyptian

Later Egyptian is documented from Dynasty XIX down to the Middle Ages (1300 BC–AD 1300). Its main phases were as follows:

(1) **Late Egyptian** (1300–700 BC), the language of written records from the second part of the New Kingdom (Černý and Groll 1984; Junge 2008; Neveu 1996). It conveyed the rich entertainment literature of Dynasty XIX, consisting of wisdom texts and tales, as well as new literary genres, such as mythology or love poetry. Late Egyptian was also the vehicle of Ramesside bureaucracy, as documented by the archives of the Theban necropolis or
by school texts. Late Egyptian was not a wholly homogeneous linguistic reality; rather, the texts of this phase of the language show various degrees of interference from classical Middle Egyptian, with a tendency for older or more formal texts, such as historical records or literary tales, to display a higher number of borrowings from the classical language, as opposed to later or administrative texts, in which Middle Egyptian forms are much rarer (Winand 1992: 3–25).

(2) Demotic (seventh century BC to fifth century AD), the language of administration and literature from the pharaonic Late Period to Late Antiquity (Johnson 1991). While grammatically close to Late Egyptian, it radically differs from it in its graphic system. Important texts in Demotic are narrative cycles and moral instructions (Hoffmann 2000; Quack 2005).

(3) Coptic (fourth to fourteenth century AD), the language of Christian Egypt, written in a variety of the Greek alphabet with the addition of six Demotic signs to indicate Egyptian phonemes absent from Greek (Lambdin 1983; Layton 2004). As a spoken, and gradually also as a written language, Coptic was superseded by Arabic from the ninth century onward, but it survives to the present time as the liturgical language of the Christian church of Egypt and in a few linguistic traces it left in spoken Egyptian Arabic (Vittmann 1991).

Besides displaying a number of phonological evolutions, Later Egyptian develops analytic features: suffixal markers of morphological oppositions are dropped and functionally replaced by prefixal indicators; the demonstrative 'this' and the numeral 'one' evolve into the definite and the indefinite article; periphrastic patterns in the order SVO supersede older verbal formations (Hintze 1950):

(2) 

\[
\text{mare-p-sah sōm e-ta-šō}
\]

OPT-the-scribe listen to-the(FEM)my-teaching

'May the scribe listen to my teaching.'

3.1.4 Dialects

Owing to the centralized nature of the political and cultural models underlying the evolution of Ancient Egyptian society, there is hardly any evidence of dialect differences in pre-Coptic Egyptian (Osing 1975; Lüddeckens 1975). However, although the writing system probably originated in the south of the country, the origins of the linguistic type represented by Earlier Egyptian are to be seen in northern Egypt, around the city of Memphis, which was the capital of the country during the Old Kingdom. The linguistic origins of Later Egyptian lie in southern Egypt, in the region of Thebes, which was the cultural, religious, and political centre during the New Kingdom (Zeidler 1992: 208; Schenkel 1993: 148).

Coptic is known through a variety of dialects differing mostly in the graphic rendition of Egyptian phonemes, and to a lesser extent also in morphology and lexicon. The most important dialect was Sahidic (from Arabic al-sā'īd ‘Upper Egypt’), the written standard of the Theban area. Sahidic was the first dialect of Coptic literature. Bohairic (from Arabic al-buḥayra ‘Lower Egypt’), the dialect of Alexandria, eventually became the language of the liturgy of the Coptic church. Other important dialects of Coptic literature were Akhmimic from the city of Akhmim (Greek Panopolis) in Upper Egypt; Sahidic, also called Lycopolitan or Lycodiosopolitan, spoken in the area of Asyut (Greek Lycopolis) in Middle Egypt; and Fayyumic, the variety of Coptic from the oasis of Fayyum, in the upper western corner of the Nile valley (Kasser 1991b).

3.2 Writing systems

3.2.1 Principles

The basic graphic system of the Egyptian language from about 3000 BC to the first centuries of the common era is called ‘hieroglyphs’ (Fischer 1977). This term is the Greek counterpart to the Egyptian expression mdw-nfr ‘god’s words’. Hieroglyphs were used primarily for monumental purposes, their main material support being stone—less frequently, papyrus. For cursive uses, the hieroglyphic system developed two handwritten varieties: Hieratic, documented from the Old Kingdom to the third century AD, and Demotic, from the seventh century BC to the fifth century AD. Beginning in Hellenistic times, hieroglyphs and their manual varieties were gradually superseded by alphabetic transcriptions of words, and then of whole texts, inspired by the Greek alphabet with the addition of Demotic signs to render Egyptian phonemes unknown to Greek. The final result of this process was the emergence of Coptic. Unlike other writing systems of the Ancient Near East, for example Mesopotamian cuneiform, hieroglyphs were never used to write any language other than Egyptian, except for their later adoption in Nubia for the writing of Meroitic (third century BC to fourth century AD; Wenig 1982). However, the Proto-Sinaitic inscriptions of the second millennium BC (Giveon 1982) show that Hieratic signs may have inspired the shape of Northwest Semitic consonantal signs. As for Demotic, some of its sign groups were adopted and phonetically reinterpreted in Meroitic.

Because of the formal similarities with Egyptian hieroglyphs, the term ‘hieroglyph’ has also been applied to the writing system of Luwian, an Anatolian language related to cuneiform Hittite, spoken and written during the Late Bronze and Iron Ages (between
The Egyptian hieroglyphs constitute a variable set of graphemes, ranging from about 1,000 in the Old Kingdom (third millennium BC) down to approximately 750 in the classical language (second millennium BC), then increasing to many thousands during the Ptolemaic and Roman rule in Egypt, from the third century BC to the second century AD. They are pictographic signs representing entities and objects, such as gods or categories of people, animals, parts of the human or animal body, plants, astronomical entities, buildings, and furniture. But these pictograms are not organized within a purely ideographic system; rather, they represent a combination of phonological and semantic principles (Schenkel 1984). The graphic representation of an Egyptian word usually consists of two components:

1. A sequence of phonograms, each of which represents a sequence of one, two, or three consonantal phonemes; hence their label as 'monoconsonantal' (such as
- a /p/, /q/, or /r/ - the the phonogram for the sequence /p-q-r/), or 'triconsonantal' signs (such as
- a /m/, /n/, or /l/ - the phonogram for the sequence /m-n-l/). Phonograms convey a substantial portion of the phonological structure of the word: normally all the consonants, less regularly the (semiconsonantal) glides /j/ and /w/. The vowels remain unexpressed in the writing. Bi- and triconsonantal signs may be accompanied by other phonograms, mostly monoconsonantal, which spell out one or two of their phonemes, allowing in this way a more immediate interpretation of the phonological sequence; these signs are called phonetic complements.

2. The sequence of phonograms is usually followed by a semagram, called a determinative, which classifies a word according to its semantic sphere: for example, a

<table>
<thead>
<tr>
<th>Sign</th>
<th>Entity depicted</th>
<th>Conventional transliteration</th>
<th>Phono logical value (transliteration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>vulture</td>
<td>3 (adepb)</td>
<td>earlier /ʔa/ &gt; later /ʔa/</td>
<td></td>
</tr>
<tr>
<td>flowering reed</td>
<td>j (yod)</td>
<td>earlier /ʔa/ &gt; later /ʔa/</td>
<td></td>
</tr>
<tr>
<td>two reed flowers</td>
<td>y</td>
<td>/ʔ/</td>
<td></td>
</tr>
<tr>
<td>human forearm</td>
<td>ĉ̄ (ayin)</td>
<td>earlier /ʔa/ &gt; later /ʔa/</td>
<td></td>
</tr>
<tr>
<td>quail chick</td>
<td>w̃ (waw)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>lower leg with foot</td>
<td>b̃ (be)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>stool</td>
<td>p̃ (pe)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>horned viper</td>
<td>j̃ (je)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>owl</td>
<td>m̃ (me)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>ñ (ne)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>human mouth</td>
<td>r̃ (re)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>Reed shelter</td>
<td>h̃ (he)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>twisted wick</td>
<td>h̃ (he)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>Placenta</td>
<td>h̃ (he)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>animal's belly</td>
<td>h̃ (he)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>door bolt</td>
<td>z̃ (ze)</td>
<td>earlier /ʔa/ &gt; later /ʔa/</td>
<td></td>
</tr>
<tr>
<td>folded cloth</td>
<td>s̃ (se)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>pool or lake</td>
<td>s̃ (se)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>hill slope</td>
<td>q̃ (qe)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>basket with handle</td>
<td>k̃ (ke)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>stand for a jar</td>
<td>g̃ (ge)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>bread loaf</td>
<td>t̃ (te)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>tethering rope</td>
<td>t̃ (te)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>human hand</td>
<td>d̃ (de)</td>
<td>/ʔa/</td>
<td></td>
</tr>
<tr>
<td>snake</td>
<td>d̄ (de)</td>
<td>/ʔa/</td>
<td></td>
</tr>
</tbody>
</table>

Sitting man (♀) expresses the lexical realm of 'man, mankind'; a sitting man touching his mouth (♂), the domain of 'eating, speaking, thinking, sensing'; a scribe’s equipment (♂), the area of 'writing'; a stylized settlement (♂) identifies the word as a toponym.

Many items of the basic vocabulary of Egyptian are expressed by semagrams, which indicate their own semantic meaning. They do this (i) iconically, by reproducing the object itself; (ii) indexically, by portraying an entity whose name displays a similar phonological structure; or (iii) symbolically, by depicting an item metaphorically or metonymically associated with the object. These signs are called logograms or ideograms: for example, the hieroglyph which represents the enclosure of a house (♀) is used to indicate iconically the concept 'house' (prw); the sign representing a duck (♀) means 'son' (♂) by virtue of the phonetic similarity between the Egyptian words for
While the principles described herein basically apply to the entire history of Egyptian writing, their distribution varied somewhat in the course of time. In the archaic period around 3000 BC, the emergence of writing in Egypt was associated with a gradual development of a centralized system of government covering the entire country. In the inscriptions from this period on seals, palettes, and other monuments pertaining to the royal or administrative sphere, phonological and semantic principles were already interwoven, with a high number of signs functioning as logograms (Kahl 1994). In the Old Kingdom (Dynasty III–VI, 2750–2150 BC), the quantity and the complexity of written documents expanded dramatically. Phonetic complementation might precede or follow the main sign. In the classical system of the Middle Kingdom (2050–1750 BC), which remained in use until the end of Dynasty XVIII (c. 1300 BC), a developed school system for the education of the bureaucratic elite fixed Egyptian orthography by reducing the number of graphic renditions allowed for any given word. The conventional orthography of the word usually consisted of either a logogram, for the most basic nouns of the lexicon, or a sequence of phonograms, often complementized, followed by a determinative. The inventory of hieroglyphs at this period totalled about 750 signs (Gardiner 1957: 438–458). During Dynasty XIX (1310–1195 BC), major changes affected the writing conventions of hieroglyphs and especially of Hieratic. In monumental texts, the space units within which sequences of hieroglyphs were formally arranged underwent an aesthetic readjustment. Changes were even more significant in manual writing, with a constant interface between traditional historical writing and the evolved phonetic reality.

With the decay of a powerful centralized government in the first millennium BC, centrifugal tendencies affected writing conventions as well. During Dynasty XXVI (seventh century BC), the cursive variety called Demotic developed—first in the north of the country, where the royal residence was located—and was gradually extended to the southern regions. Unlike Hieratic, which had sign groups that mirrored the shape of the original hieroglyphs rather closely, Demotic signs broke away from this tradition and adopted a set of stylized, conventional forms, in which the connection to the hieroglyphic counterpart was hardly perceivable, and which proved therefore more likely to be used in purely phonetic function. Determinatives had to a large extent lost their function as lexical classifiers. The development of Demotic marked the beginning of a divorce between monumental and cursive writing, which would have a dramatic impact on the evolution of the hieroglyphic system as well. Demotic remained in literary and administrative use until the end of the Roman period.

In Ptolemaic and Roman times (fourth century BC to third century AD), an increasing consciousness of the symbolic potential inherent in the relation between hieroglyphic signs and semantic meanings led to the development of previously unknown phonetic values and also of so-called 'cryptographic solutions'. This evolution, which originated in priestly circles and remained until the end the monopoly of a very restricted intellectual community, threatened the accessibility of the system, favouring a dramatic increase in...
used for the administration and Coptic for everyday communication as well as religious
(Boas and Grafton 1993). However, Egypt remained a bilingual country, with Greek
a 'decipherment' of the hieroglyphs fully echoing the late antique symbolic speculations
the nature of hieroglyphs: the
Hieroglyphiká of Horapollo, a Hellenized Egyptian, offer
a 'decipherment' of the hieroglyphs fully echoing the late antique symbolic speculations
(Boas and Grafton 1993). However, Egypt remained a bilingual country, with Greek
used for the administration and Coptic for everyday communication as well as religious
the number of signs, which at the time reached many thousands (Daumas 1988–95),
and exploiting the full array of potential meanings of the hieroglyphic sign. And it was
exactly this radical change in the nature of the writing system in the Greco-Roman period
which was at the origin of the view, held in the western world from Late Antiquity to the
emergence of modern Egyptology, of the symbolic, rather than phonological, character
of the hieroglyphic writing (Fowden 1986: 13–74). With few exceptions, the Ptolemaic
system was applied only to monumental writing.

3.2.3 Coptic
The first two centuries AD saw the development of a corpus of mostly magical Egyptian
texts in Greek letters, with the addition of Demotic signs to supplement it when
phonologically required. This corpus is called in the scholarly literature 'Old Coptic'.
The adoption of an alphabetic system was standardized with the Christianization of the
country, when religious reasons contributed to the divorce between Egyptian culture and
its traditional writing systems. The last dated hieroglyphic inscription is from the year
AD 394. Demotic texts substantially decrease in number, Egyptian being replaced by
Greek as a written language (Bagnall 1993: 235ff.). The last Demotic graffito is dated
to AD 452. In the following century, the new convention, which we call Coptic, appears
completely established: the Egyptian language was written in a Greek-derived alphabet
(see table 3.2). By the fifth century, the Egyptian elite had already lost the knowledge of
the nature of hieroglyphs: the Hieroglyphiká of Horapollo, a Hellenized Egyptian, offer
a 'decipherment' of the hieroglyphs fully echoing the late antique symbolic speculations
(Boas and Grafton 1993). However, Egypt remained a bilingual country, with Greek
used for the administration and Coptic for everyday communication as well as religious
3.2.4 Decipherment
The interest in matters Egyptian remained active in the West for the centuries that followed (Iversen 1961: 57–123), but it was only in modern times that the understanding
of the writing system was recovered. In the seventeenth century Athanasius Kircher
recognized the linguistic derivation of Coptic from the language of the hieroglyphs
(which he still took to be a symbolic writing), and in the eighteenth century Jean
Barrhélyé suggested that the cartouches, which surround some hieroglyphic words,
contained divine and royal names. In 1799, during Napoleon's expedition to Egypt,
the discovery of the so-called 'Rosetta Stone', a trilingual (Hieroglyphic, Demotic, and
Greek) document from the Ptolemaic period, found in the Egyptian town of Rosetta
(from Arabic 'Al-Rashid'), provided the possibility of comparing the same text in
two unknown writing systems (Demotic and hieroglyphs) and in Greek; this event
opened the way to the actual decipherment. First results were achieved by the Swede
Johan David Åkerblad for the Demotic section and especially by the English physician
Thomas Young, who, however, did not progress beyond the royal names. The most
decisive contribution to the decipherment was made by the French scholar Jean-
François Champollion in his Lettre à M. Dacier (1822), and especially in the Précis du
système hiéroglyphique (1824). On the basis of the writing of Greek names in the hiero-
glyphic text, Champollion was able to establish the presence of a phonetic component
in the system, breaking away from the traditional symbolic approach (Iversen 1961: 124–45).

3.3 Phonology
3.3.1 Phonemes and graphemes
The exact phonological value of many Egyptian phonemes is obscured by difficulties
in establishing reliable Afroasiatic correspondences (Schenkel 1990: 24–57). Vocalism
and prosody can be partially reconstructed on the basis of: (i) Akkadian transcriptions of Egyptian words and phrases from the second millennium BC; (ii) Greek transcriptions from the Late Period (corresponding roughly to spoken Demotic); and (iii) the Coptic evidence of the first millennium AD. In the sketch of Egyptian phonology presented below, Egyptological transliterations of words and phrases are given in italics, whereas underlying phonological realities are rendered between slashes. The latter, since they are scholarly reconstructions, are always preceded by an asterisk (note that by convention a dot is used to separate the root from morphological affixes, e.g., sn.t ‘sister’ < root sn + feminine marker t). As for Coptic, in spite of a certain number of graphic idiosyncrasies, all dialects share a relatively uniform phonological system. For example, the graphic conventions of Sahidic – as opposed to those of Bohairic – do not distinguish between voiceless and ejective plosives (Sahidic ḥrai, Bohairic ḥrai = ḥrāi ‘‘hand’’; or between glottal and velar fricatives (Sahidic ḥrai, Bohairic xrai = /xrāi/ ‘‘below’’). Yet the presence of the corresponding oppositions in Sahidic can be established on the basis of comparative dialectology and of the different impact of these phonemes on their respective phonetic environment (Loprieno 1995: 40–50).

3.3.2 Consonants

3.3.2.1 Stops and affricates

The standard stops of Earlier Egyptian are presented in (3).

earlier Egyptian stops

<table>
<thead>
<tr>
<th>Voiced</th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Uvular</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b /b/</td>
<td>t /t/</td>
<td>k /k/</td>
<td>q /q/</td>
<td>ʔ /ʔ/</td>
<td></td>
</tr>
<tr>
<td>Voiceless</td>
<td>p /p/</td>
<td>t’/t’/</td>
<td>k’/k’/</td>
<td>q’/q’</td>
<td>ʔ’/ʔ’/</td>
<td></td>
</tr>
<tr>
<td>Ejective</td>
<td></td>
<td>d /d/</td>
<td>d’/d’/</td>
<td>g /g/</td>
<td>ʔ/ʔ/</td>
<td></td>
</tr>
</tbody>
</table>

In prehistoric times, a palatalization process led to the emergence of palatal stops. Only the environment rule for the change /k’/ > /k/’, however, can be established with certainty (4b).

(4a) Afroasiatic q > Eg. c^3
    *√wmq ‘green; yellow’ > w3q /h-w-r-c/’

(4b) Afroasiatic k > Eg. c^3’/’
    *-kt ‘you(SG.FEM)’ > -k/ʔ/’

In the Egyptian phonological system, the opposition between voiceless and voiced phonemes (Schenkel 1993: 138–46) appears limited to bilabial stops (5a), whereas in the other series the articulatory opposition – when present – was between voiceless and
ejective stop or affricate (5b–c). The voiceless varieties displayed aspiration in pretonic and high-sonority environments.

(5a) bilabial /b/ > /p/; Earlier Eg. b3q ‘bright’ > p3q ‘fine’

(5b) dental /t/ > /t’/; Earlier Eg. tm ‘to complete’ > dm ‘to sharpen’

(5c) palatal /l/ > /l’/; Earlier Eg. lkt ‘willow’ > lkt ‘hand’

Etymological considerations, however, point towards a general development of voiced stops into fricatives. The dental series was typologically complex: while it probably exhibited a tripartite opposition voiceless–voiced–ejective in the earliest periods, the voiced stop */d/ evolved into a pharyngeal fricative */ʔ/ before the emergence of Middle Egyptian (Zeidler 1992: 206–10), and then to a glottal stop, and eventually zero, in Coptic (6a). During the late third to the early second millennium BC, the voiceless alveolar /l/ showed the tendency to be dropped in final position (6b).

(6a) *jʔj > *ʔʔj > /ʔʔ/ or /ʔ/:
    Old Eg. *$+da:;/ > Late Eg. *ʔa;/ > Coptic δʔ /ʔʔ/ ‘to call’

(6b) t > [ʔ] #:
    Old Eg. sn.t*/snatu/ > Late Eg. *ʔsnatu/ > Coptic sone isonatal ‘sister’

During the late second millennium BC, the place of articulation of stop consonants tended to be moved to the frontal region (Osing 1980: 946): uvulars and velars were palatalized (7) (Peust 1999: 120–2), palatals became dentals, and dentals were dropped in final position (8) (Peust 1999: 123–5):

Uvular and velar palatalization

(7a) Late Eg. k3m */ʔk3ma/t/ > Coptic cóm /ko:mt/ ‘garden’

(7b) Old Eg. gr */ʔk3ma/ > Coptic có /ko:/ ‘to cease’

(7c) Old Eg. qd */ʔku:ʔ/ > Coptic cot /kot/ ‘form’

Palatal > dental; dental > [ʔ] #

(8a) Old Eg. lkt */k3ma/ > Late Eg. */ʔk3ma/ > Coptic tõre /ʔk3ma/ ‘hand’

(8b) Old Eg. run */ʔlamual/ > Late Eg. */ʔlamul/ > Coptic réme izoomal ‘man’

Earlier Egyptian had an alveolar affricate z /ʔ/ which by the end of the third millennium BC had lost its plosive co-articulation and thus conflated with the alveolar fricative s /ʔ/.

The opposition between uvulars and velars was neutralized during the first millennium BC: Coptic exhibited in the velar series a new tripartite opposition, ‘voiceless: ejective: palatalized’.
in (6), a pharyngeal

In Old Egyptian, all fricative consonants were voiceless; in Middle Egyptian, as we saw
nasal environments (11b).

borrowings or as a result of assimilation of the corresponding voiceless obstruent in
post-tonic position (11a), and that voiced dentals and velars are only found in Greek
borrowings or as a result of feature spreading in nasal environments:

The standard aspiration of the plain stops in Earlier Egyptian was subject to allo-
phonic distribution: as in some varieties of English, aspiration appeared only in stressed
syllables. The feature aspiration was marked in writing only in Bohairic Coptic (Hintze
1980: 28). Under certain conditions, the stop /c/ developed into an affricate, since
might also represent word-initial etymological

lt should be noted that the opposition between voiceless and ejectives was neutralized
in the third millennium BC. The original alveolar affricate z merged by the
end of the third millennium BC with the alveolar s (/*z/ > /s/). In the first millennium
BC, the tripartite opposition between the back coronal and the dorsal fricatives (/ʃ/ ~
/*xi/) was reduced to a bipartite one (/ʃ/ ~ /s/), with a partial redistribution of the
original articulation (Peust 1999: 115-18):

(13a) *fax > /ʃ/;
Old Eg. */fax/ > Late Eg. */fax/ > Coptic /fax/ 'falcon'

(13b) * * ~ /s/;
Old Eg. */sa/ ~ Late Eg. */sa/ > Coptic /sa/ 'scribe'

In the first millennium BC a similar neutralization affected the opposition between
pharyngeal /h/ and glottal /h/ (Oising 1976: 367-8; Peust 1999: 98-9):

(14a) Old Eg. /fax/ > Late Eg. */fax/ > Coptic /fax/ 'beginning'

(14b) Old Eg. /fax/ > Late Eg. */fax/ > Coptic /fax/ 'season'

The distribution of fricative phonemes in Sahidic Coptic was thus in (15).

Fricatives in Sahidic Coptic

(15) LABIO-DENTAL ALVEOLAR PALATO-ALVEOLAR VELAR GLOTTAL

<table>
<thead>
<tr>
<th>Voiced</th>
<th>/f/</th>
<th>/s/</th>
<th>/ʃ/</th>
<th>/h/</th>
<th>/h/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiceless</td>
<td>/f/</td>
<td>/s/</td>
<td>/ʃ/</td>
<td>/h/</td>
<td>/h/</td>
</tr>
</tbody>
</table>

It should be noted that the voiced alveolar fricative z is only found in Greek borrowings
or as a result of feature spreading in nasal environments:

(16) Coptic /anza/ < */anza/ < */anza/ 'school'

3.3.2.3 Sonorants

Historical evolutions affecting nasals, liquids, and glides during the second millennium
BC (Loprieno 1995: 38) involved: (i) the loss of the uvular trill /r/ and its lenition to
glottal stop /Ɂ/ and eventually to s (17); and (ii) the loss of final approximants (18) in
the same environments in which a final voiceless dental t was dropped, as in (8):

The post-alveolar fricative resulted from a conditioned sound change /ʃ/ > /ʃ/ which
took place in the third millennium BC. The original alveolar affricate z merged by the
end of the third millennium BC with the alveolar s (/*z/ > /s/). In the first millennium
BC, the tripartite opposition between the back coronal and the dorsal fricatives (/ʃ/ ~
/*xi/) was reduced to a bipartite one (/ʃ/ ~ /s/), with a partial redistribution of the
original articulation (Peust 1999: 115-18):

(13a) *fax > /ʃ/;
Old Eg. */fax/ > Late Eg. */fax/ > Coptic /fax/ 'falcon'

(13b) * * ~ /s/;
Old Eg. */sa/ ~ Late Eg. */sa/ > Coptic /sa/ 'scribe'

In the first millennium BC a similar neutralization affected the opposition between
pharyngeal /h/ and glottal /h/ (Oising 1976: 367-8; Peust 1999: 98-9):

(14a) Old Eg. /fax/ > Late Eg. */fax/ > Coptic /fax/ 'beginning'

(14b) Old Eg. /fax/ > Late Eg. */fax/ > Coptic /fax/ 'season'

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Fricatives in Sahidic Coptic

(15) LABIO-DENTAL ALVEOLAR PALATO-ALVEOLAR VELAR GLOTTAL

<table>
<thead>
<tr>
<th>Voiced</th>
<th>/f/</th>
<th>/s/</th>
<th>/ʃ/</th>
<th>/h/</th>
<th>/h/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiceless</td>
<td>/f/</td>
<td>/s/</td>
<td>/ʃ/</td>
<td>/h/</td>
<td>/h/</td>
</tr>
</tbody>
</table>

It should be noted that the voiced alveolar fricative z is only found in Greek borrowings
or as a result of feature spreading in nasal environments:

(16) Coptic /anza/ < */anza/ < */anza/ 'school'

3.3.2.3 Sonorants

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BC (Loprieno 1995: 38) involved: (i) the loss of the uvular trill /r/ and its lenition to
glottal stop /Ɂ/ and eventually to s (17); and (ii) the loss of final approximants (18) in
the same environments in which a final voiceless dental t was dropped, as in (8):
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The reconstruction of the rhotics is complicated by different facts: etymological considerations would opt for an approximant /J/, which also provides the best explanation for the graphic representation of /l/ by <r> as well as the later attested Lamdacism, i.e., llle graphic representation of words containing <r> by </>, e.g., Ssalmi, <r>mi = rami, in Fayyumic Coptic (Peust 1999: 130-1) and Fayyumic Greek (Milani 1981: 221-9). However, the graphic representation of Semitic words containing /d/ in the early second millennium, such as Semitic bd servant > Eg. pr or Sem. ds-n 'fennil' > Eg. rsn > Coptic arsn, as well as the representation of some Egyptian words in contemporary foreign languages, such as Eg. ry(i) ink > Hebr. dyw, seem to point to the articulation of this phoneme as flap or tap. Whether this should be considered a diachronic development (Earlier Eg. J/ > Later Eg. /l/) or a synchronic distribution (Earlier Eg. /r/ ~ /l/ conflating into Later Eg. /l/) must remain undecided.

Sonorants in the Egyptian domain

<table>
<thead>
<tr>
<th>Nasal</th>
<th>/m/</th>
<th>/n/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trill</td>
<td>/w/</td>
<td>/j/</td>
</tr>
<tr>
<td>Approximant</td>
<td>/r/</td>
<td>/l/</td>
</tr>
<tr>
<td>Lateral</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3.3 Vowels

The set of vowels posited for Earlier Egyptian (Osing 1976: 10-30) is the same as for most Afroasian languages in their earliest stage of development (Diakonoff 1965: 30-1) – see (20).

Vowels in Earlier Egyptian

<table>
<thead>
<tr>
<th>SHORT</th>
<th>LONG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>/i/</td>
</tr>
<tr>
<td></td>
<td>/u/</td>
</tr>
<tr>
<td>Central</td>
<td>/a/</td>
</tr>
<tr>
<td>Back</td>
<td>/u/</td>
</tr>
</tbody>
</table>

This system underwent a certain number of historical changes, only some of which can be discussed here. First and foremost, because of the presence of a strong expiratory stress, Egyptian unstressed vowels gradually lost phonological status, until in Coptic they were generally realized as schwa. Only the short unstressed /a/ was maintained in pretonic position in specific phonetic environments (Schenkel 1990: 91–3):

| (21a) | Old Eg. rmt nj' km.t */jammac-ni-kaujati/ > Coptic rmnjem /mpqkwem /Egyptian man"
| (21b) | Old Eg. nk */janak/ > Coptic anok /panok/ 'I'

Stressed vowels underwent a global shift: during the second millennium BC, long /a:/ turned into /e/, and short stressed /i/ and /u/ merged into /e/. In the main Coptic dialects and unless followed by glottal stop, this /e/ evolved into /a/:

| (22a) | Old Eg. rnt */sin/ > Late Eg. */sen/ > Coptic ran /san/ 'name'
| (22b) | Old Eg. mJ.t */medat/ > Late Eg. */me?Na/ > Coptic me /me?/ 'truth'
| (22c) | Old Eg. km.t */kaujati/ > Late Eg. */kaujati/ > Coptic keme /kem/ 'Egypt'

Around 1000 BC, long /a:/ became /a:/ (after nasals) and short /a/ became /a/, a change limited to the same portion of the Coptic linguistic domain to which /i/, /u/ applied:

| (23a) | Old Eg. nk */nau/ > Coptic nute /nute/ 'God'
| (23b) | Old Eg. sn */san/ > Coptic son /son/ 'brother'

Vowels in Sahidic Coptic

<table>
<thead>
<tr>
<th>(24)</th>
<th>FRONT</th>
<th>CENTRAL</th>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long</td>
<td>/i/</td>
<td>/e:/</td>
<td>/a:/</td>
</tr>
<tr>
<td>Short</td>
<td>/e:/</td>
<td>/a:/</td>
<td>/o:/</td>
</tr>
</tbody>
</table>

3.3.4 Phonotactics, alternations, and prosody

In Earlier Egyptian, the stress lay on the ultimate (oxytone) or penultimate (paroxytone) syllable of a word (Schenkel 1990: 63–86). Closed (cv)c and open (cv) syllables could...
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be found in pre-tonic, tonic, and post-tonic position. Two consecutive open syllables forming a moraic foot were exposed to syncopation (cv, cv > cvc). The stressed vowel of a penultimate open syllable was always long (cv); according to some scholars, extra-syllabic additions under oxytone stress could generate syllables of the type cv(c) or cvc(c) (Loprieno 1995: 36–7). Syllables of the type v or vc were not allowed in Egyptian (see 25).

### Earlier Egyptian syllabic structures

<table>
<thead>
<tr>
<th>Type</th>
<th>Pre-tonic</th>
<th>Tonic</th>
<th>Post-tonic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>cv$</td>
<td>cv$</td>
<td>cv#</td>
</tr>
<tr>
<td>Closed</td>
<td>cvc$</td>
<td>cvc$</td>
<td>cvc#</td>
</tr>
<tr>
<td>Doubly closed</td>
<td>cvcc$</td>
<td>cvcc$</td>
<td>cvcc#</td>
</tr>
<tr>
<td>Long</td>
<td>cvc$c</td>
<td>cvc$c</td>
<td>cvc$c</td>
</tr>
</tbody>
</table>

These syllabic structures were modified under the influence of the strong expiratory stress, which always characterized the Egyptian domain (Fecht 1960) and prompted significant typological changes in morphology and syntax. The gradual loss of short unstressed vowels led to the emergence of complex consonantal clusters in syllable onset (i.e., word-initially) in Coptic (Loprieno 1995: 48–50) – see (26).

### Coptic syllabic structures

<table>
<thead>
<tr>
<th>Type</th>
<th>Pre-tonic</th>
<th>Tonic</th>
<th>Post-tonic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>cv$</td>
<td>cv$</td>
<td>cv#</td>
</tr>
<tr>
<td>Closed</td>
<td>cvc$</td>
<td>cvc$</td>
<td>cvc#</td>
</tr>
<tr>
<td>Doubly closed</td>
<td>cvcc$</td>
<td>cvcc$</td>
<td>cvcc#</td>
</tr>
<tr>
<td>Long</td>
<td>cvc$c</td>
<td>cvc$c</td>
<td>cvc$c</td>
</tr>
</tbody>
</table>

Syllables graphically represented as <v> or <vc> are considered to contain an initial glottal plosive /ʔ/, as in ejētu /e'ke'we/ 'ships'. Examples for the evolution of oxytone patterns are:

(27a) CVCCVC > CVCC
Old Eg. ʔ/hm'tw /'i'xamtauw / Bohairic somt f'omt / 'three'

(27b) CVCCVC > CVCCVC
Old Eg. ʔ/hm'tw /'h'j'j'amtauw / Coptic hıom / 'women'

(27c) CVCCVC > CVCC
Old Eg. ps'hw /'p'is'c'atw / Coptic psit /psit / 'nine'

Earlier Egyptian displayed only few phonological or morphophonemic alternations. The most common were the evolution of t and r to /ʔ/ and eventually to ɾ in a final syllabic environment (jtrw /'jatiau/ > Sahidic /jrətu/ 'river'; hr /'hrə/ > Sahidic /hɾə/ 'face'). Typical for Coptic, but sporadically attested in earlier times, was the progressive assimilation of n > m in a labial environment: *hn-p-ei /hm-p-ʔe:j/ > Coptic /hm-p-ʔe:j/ 'in the house'. The Coptic grammar of Athanasius of Qus reports some more features that are generally veiled by the graphic representation, such as the plosive articulation of Bohairic <b> in the coda position versus a fricative one in the onset of a syllable (Bauer 1971: 56; the other features he reports pertain to Greek words only).

### 3.4 Morphology

#### 3.4.1 Word formation

Earlier Egyptian was a language of the flectional or fusional type, in which morphemes were unsegmentable units combining many grammatical functions. Morphological forms exhibited a number of correspondences with the patterns of word formation in other Afroasiatic languages (Schenkel 1990: 94–121). In recent years, scholars have also emphasized the importance of prehistoric contacts between Egyptian and Indo-European (Ray 1992: 124–36; Kammerzell 1994: 37–58).

The basic structure of an Egyptian word was a lexical root, an abstract phonological entity consisting of a sequence of consonants or semi-consonants which varied in number from one to four, with an overwhelming majority of biconsonantal, triconsonantal, and so-called ‘weak’ roots, which displayed a vocalic or semivocalic last radical or a gemination of the second radical. Within the root, rules of compatibility applied which prevented the combination of homorganic phonemes: e.g., within the same root, the clustering of b and p was not allowed. Superimposed on the root as a separate morphological tier was a vocalic or semivocalic pattern, which together with the root formed the so-called stem, the surface form acquired by the root; the stem determined the

Examples for the evolution of paroxytone patterns:

(28a) CVCCVC > CVCC
Old Eg. ʔ/hm'tw /'i'xamtauw / Bohairic somt f'omt / 'three'

(28b) CVCCVC > CVCCVC
Old Eg. ʔ/hm'tw /'h'j'j'amtauw / Coptic hıom / 'women'

(28c) CVCCVC > CVCC
Old Eg. ps'hw /'p'is'c'atw / Coptic psit /psit / 'nine'
functional class to which the word belonged. It was transformed into an actual word by means of inflectional affixes (in Egyptian, these were for the most part suffixes), which conveyed deictic markers and other grammatical functions such as gender, number, tense and aspect, and voice (Reintges 1994).

Vocalic skeletons generally determined the structure of nominal patterns and of basic conjugational forms, whereas semivocalic suffixes conveyed the expression of the plural, of adjectival forms of the verb (participles and relative forms), and of some conjugational patterns. A $j$- or $w$- prefix could be added to biconsonantal roots to form triradical nominal stems; conversely, a triconsonantal root might lose a semivocalic glide and be reduced to a biradical stem. Examples of consonantal additions prefixed to a root were $s$- for causative stems, $n$- for singulative nouns and reflexive verbs, and $m$- for nouns of instrument, place, or agent. Egyptian stems resulting from the addition of a consonantal phoneme to a root tended to be lexicalized as new autonomous roots rather than treated as grammatical forms of the basic root: Egyptian, therefore, did not possess a fully fledged paradigm of verbal stems conveying semantic nuances of a verbal root similar to the ones known in Semitic.

Common modifications of the root were:

(a) The reduplication of the entire root or of a segment thereof. This pattern affected the semantic sphere, creating new lexemes – see (29).

(29) ROOT REDUPLICATION

|sn 'brother' | snsn 'to befriend' |
|gmj 'to find' | ngmj 'to be gathered' |
|snb 'to be healthy' | snbb 'to greet' |

(b) The gemination of the last radical, which affected the grammatical sphere and was thus a postlexical rule (Reintges 1994: 230–40) – see (30).

(30) ROOT GEMINATION

|dd 'to say' | dd.t 'what has been said' |
|mef 'to love' | mrr 'that I love' |
|sfb 'to hear' | sfnm 'he will be heard' |

3.4.2 Nouns

In Earlier Egyptian, nouns were built by adding to the stem a zero- or a non-zero suffix, depending on whether the stem ended in a consonant, in which case the suffix was zero, or a vowel, in which case a w-suffix was added. Nouns inflected for gender (masculine vs feminine) and number (singular, dual, and plural). Case marking might have been existent in pre-historic phases of the language and even marked by a vowel in Earlier Egyptian, but the latter never showed in writing. The feminine marker was a $t$-suffix added to the masculine noun; the plural displayed a $w$- (appearing as $j$ with the feminine sometimes) or $ww$-suffix or showed no graphical marking at all; the dual had a $j$-marker added to the stem of the singular noun – see (31).

<table>
<thead>
<tr>
<th>Nouns in Earlier Egyptian</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGULAR</td>
</tr>
<tr>
<td>-$n$</td>
</tr>
<tr>
<td>-$mj$</td>
</tr>
<tr>
<td>-$n$</td>
</tr>
</tbody>
</table>

Under the pressure of a strong expiratory stress, which reduced the distinctive function of unstressed vowels, the flectional system underwent a profound crisis in Later Egyptian, requiring a reorganization of the morphological carriers of information.

The general trend was to replace synthetic structures by analytic constructions: for example, nominalized participles (32) or abstract nouns (33) were replaced by lexicalized compounds with nominal classifiers (Till 1970: 71–5).

(32) PARTICIPLE > 'MAN-WHO'-V

<table>
<thead>
<tr>
<th>njw</th>
<th>ref-jjowe</th>
</tr>
</thead>
<tbody>
<tr>
<td>steal(PART)</td>
<td>'man-who'-steal(INF) 'thief'</td>
</tr>
</tbody>
</table>

(33) ABSTRACT NOUN > 'THING-OF'-N

<table>
<thead>
<tr>
<th>r3 nj km.t</th>
<th>mnt-rm-n-keme</th>
</tr>
</thead>
<tbody>
<tr>
<td>mouth of Egypt</td>
<td>'THING-OF'-man-of-Egypt 'Egyptian language'</td>
</tr>
</tbody>
</table>

Thus, because of the loss of regular flectional patterns, the only device by which Coptic conveyed the distinction between different patterns (masculine vs feminine, nominal vs verbal) was the presence of morphological markers preceding the noun (34a–c; a zero-marker in the case of c):

(34a) snf: stem *jamac-$+$Ø(MASC.SG) = */jamaci/ > Coptic p-rôme 'the man'

(34b) sn: stem *san-$+$Ø(FEM.SG) = */samati/ > Coptic t-sône 'the sister'

(34c) bpr: stem *xapal-$+$INF.O = */xapal/ > Coptic sôpe 'to become'

Some nouns, however, did retain different forms for masculine vs feminine nouns, e.g. Coptic son 'brother' vs sône 'sister', or singular versus plural, e.g. Coptic hîto 'horse' vs hâdôr 'horses'.

Ancient Egyptian and Coptic
3.4.3 Articles

Later Egyptian developed two sets of articles. The indefinite singular article came from
the numeral wj 'one', the plural form developed out of the quantifier nhy n 'a little of' (35).

(35) \[N[-\text{SPEC}] > \text{INDEF.ART-N}.
\]

Earlier Eg. sn.t > Late Eg. > Coptic ou-sône
'a.sister'
wj(t)-sn(t) 'a.sister'

Earlier Eg. sw > Late Eg. > Coptic hen-esou
'sheep'

The definite article (Loprieno 1980a) derived from a grammaticalized anaphoric
clausal pronoun (p3, t3, n3 'this, these') – see (36).

(36) \[N[+\text{SPEC}] > \text{DEF.ART-N}.
\]

Earlier Eg. rm > Late Eg. p3-rm(t) > Coptic p-rôme
'the.man'

Earlier Eg. gb > Late Eg. n3-(n)-gb(t) > Coptic n-tô6be
'the.bricks'

The definite article also attracted the pronominal affix indicating the possessor, which
in Earlier Egyptian followed the head noun (37a). Similarly, deictics now preceded the
noun they modified (37b).

(37a) \[N-\text{POSS} > \text{DEF.ART-POSS-N}
\]

sn.f
brother-his

(37b) \[N-\text{DEICTIC} > \text{DEICTIC-N}
\]

hjm.t
woman this(FEM)

3.4.4 Adjectives

Adjectives were morpho-syntactically treated like nouns. However, as they could be
expanded by adverbs they constituted a separate morphological class in Egyptian. In a
common derivational pattern, called nisbation, a morpheme – masculine *ij, feminine
*i – was added to a stem, which might be different from the stem of the singular or
plural noun, to form the corresponding adjective: ntr 'naccaš/ 'god', ntr.w 'naccaš/w/
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(39a) jnk jt-k
I(TOPIC) father-you
'I am your father.'

(39b) nts s-cnub m-j
she(FOCUS) CAUS-live(PART) name-me
'She is the one who makes my name live.'

Unstressed pronouns were used for the object of verbal phrases (40a), and for the subject of adjective clauses (40b) and of adverb clauses (40c):

(40a) h3b-f wj send(PERF)-he me
'He sent me.'

(40b) nfr tw hnf-j
be.good(PART) you with-me
'You are happy with me.'

(40c) mk wj m-h3h-k
behold me in-presence-you
'Look, I am in front of you.'

Suffix pronouns were used as the subject of verb phrases, as possessive marker, and as the object of prepositions (41). (NB: Though they are formally identical, we gloss suffix pronouns functioning as subjects as being in the English nominative case and all others as being in the accusative case in order to distinguish them from one another. This does not imply that there is accusative case marking in Egyptian.)

(41) dj-k r-k n-j h-t-j
give(PROSP)-you toward-you to-me thing.FEM-me
'You shall indeed (lit. 'toward-you') give me my possessions.'

3.4.5.2 Demonstrative pronouns

Demonstratives were characterized by a deictic element preceded by the indicator of gender and number – masculine pn, pf, pw; feminine tn, tf, tw: rmj pf 'that man', htm.t tn 'this woman'. They followed the noun they referred to. While the -w-series is distance-neutral, the -f-series is distal but is used only in contrast to a proximal referent. The difference between the -w- and -n-series is situated on a pragmatic level (Jenni 2010). The plurals (originally neuter) nw, nf, nn were also used as pronouns in partitive constructions with the demonstrative pronoun nj: nn nj stj.w 'these officials' < *‘this of officials'. The determinative pronoun nj, feminine nt, plural n.w was used primarily as a marker of genitival relation: rmj.w n.w km.t 'men of Egypt' > *‘Egyptians’. Of these, only members of the -n-series can be used absolutely: dd-n.f nn 'he said this'.

While the demonstratives followed the noun they referred to in Earlier Egyptian, those of Later Egyptian precede their nouns: p3y rmj ‘this man’, t3y st-hm.t ‘this woman’, n3y jnr ‘these stones’. Furthermore the pattern of a triple series is replaced by an assumed twofold one, yet the earlier phases of Later Egyptian do not mark that assumed distance graphically. Hence, p3y rmj might mean ‘this man’ as well as ‘that man’ in Late Egyptian and Demotic. From Late Egyptian onwards, the demonstratives can be found used regularly in absolute function: p3y, t3y, n3y ‘this/that/these one/s’. Coptic, however, displays a suppletive paradigm. The proximal function is expressed by the series pai, tai, nai (absolute use) and pi-, ti-, ni- (use in front of noun). For the expression of the distal function, Coptic employs an expression being etymologically a relative clause – ‘which is there’: etmmau in Sahidic (< nty n-im=w attested in Demotic: n-hmhal etmmau ‘those servants’, and et-tê in Bohairic: pi-rêmi ettê ‘that man’. The absolute pronoun is pê, tê, nê.

3.4.5.3 Relative pronouns

The relative pronoun was masculine nj, feminine nt, plural n.w ‘who, which, that’. It was morphologically derived from the determinative pronoun. In Earlier Egyptian, these pronouns agreed in gender and number with the head noun, which had to be semantically specific. Characteristic for Earlier Egyptian was the presence of a relative pronoun – masculine jwtf, feminine jwtt, plural jwt.w – which semantically incorporated negation (’who not / which not / that not’):

(42) jwtf phrf-f ddw m h-t-f
who.does not vent(AOR)-he say(PART.IMPF.PASS) in belly.FEM-him
'He who does not vent what is said in his belly.'

In Later Egyptian, the gender and number agreement had been dispensed with and only one morpheme, i.e. the masculine nj, was thereafter employed in both affirmative (43a) and negative (43b) constructions as a relative particle.

(43a) p3 nj nb jw-j (r) ddt-f
the(MASC) REL all COMPL-1 (to) say(INF)-it
‘everything I will tell’

(43b) nj bn st r st-w
REL NEG they to place-their
'(bad things), which are not appropriate (lit. not at their place)'
3.4.5.4 Interrogative pronouns

Egyptian employed interrogative adverbs and interrogative pronouns. The majority of interrogative pronouns were generic: *m 'who/what?*, *jh 'what?*, *jst 'what?' They could be combined with prepositions or particles to form complex pronouns: *jn-m 'who?', hr-m 'why?' (literally 'on-what?'). Interrogative pronouns could not be used as relative pronouns.

3.4.6 Verbal morphology

3.4.6.1 Finite verb stems

Earlier Egyptian finite verb phrases displayed a limited number of stems (three or four) indicating tense, aspect, and voice followed by either the pronominal suffix (44a) or the nominal subject (44b):

(44a) *

(44b) *

Typical Egyptian verb inflection (utilizing the suffix pronouns) is illustrated in (45) with the verb-stem *sdm* 'hear':

(45) *

In addition to variations in the stem, complementizers inserted between the stem and the subject indicated some verbal features: the most important of these indicators were *n* for the preterite tense (*sdm.n-f 'he heard'*); *f* for non-paradigmatic occurrences of the perfective aspect (*sdm.t-f 'before he had heard'*) and for the prospective aspect of a few irregular verbs (e.g., *jn.t-f 'he will fetch'*); *w* for prospective aspect (*mr.f-w-f 'he will love'*) and passive voice (in perfective stems, *sdm.w-f 'it was heard'*, *sw* for passive (in non-perfective stems, *sdm.tw-f 'it is heard'*)

A particular verbal stem displayed the tonic vowel between the second and the third radical, and in weak verbal classes the reduplication of the second radical: *stp- 'sa'tap- (choose.REL), mrr- 'ma'Ja1- (love.REL). A similar verbal form indicated in Semitic languages the imperfective aspect; in Egyptian, this may indeed have been the original meaning of the form, but in the language of literature its main function was to mark the verb phrase as pragmatic theme of the sentence in which it appeared (Polotsky 1976: 4-25). In these sentences, the pragmatic theme was usually a modifier or an adverb clause:

(46) *

The imperative had no suffix element in the singular, but sometimes, especially with weak verbs, a semi-vocalic suffix in the plural.

Egyptian also exhibited a verbal form, variously called Old Perfective, Stative, or Pseudoparticiple, which indicated the wide semantic range of 'perfectivity', from perfect aspect (with intransitive verbs) to passive voice (with transitive verbs). This form was built with a special set of suffixes that were etymologically linked to the forms of the Semitic suffix conjugation (Schenkel 1990: 104-8; Kammerzell 1991: 165-99):

(47) *

In Later Egyptian, finite VSO forms were replaced by a paradigm of SVO-constructions, called 'sentence conjugations' or 'clause conjugations' (Polotsky 1960), resulting from the grammaticalization of a form of the verb 'to do' followed by the infinitive:

(48) *

In this way, Coptic ultimately has maintained only two flectional patterns from most verbal roots: (i) the infinitive for process predicates, and (ii) the so-called 'qualitative', derived from the third masculine singular (more rarely, third feminine singular) form of the Old Perfective, for stative predicates (Polotsky 1987–90: II 197–221):

(49) *
Thus, with the productivity of root and stem variations massively reduced, Later Egyptian linguistic typology gradually moved from the original flexional toward the polysynthetic type, which to a large extent characterizes Coptic:

(50) Earlier Eg.
  jw  sdm.n-t  hryw
  COMPL hear.PRET-1 voice

Late Eg.
  jr-j-sdm  w-hryw
  do.PRET-I-hear a-voice

Coptic
  a-i-setm-ou-hrouw
  PRET-I-hear-a-voice
  'I heard a voice.'

The evolution toward a lexicalization of compound expressions also affected the verbal system (Winand 1992: 20). In many instances, an earlier verbal lexeme was replaced in Later Egyptian, particularly in Coptic, by an auxiliary of generic meaning ('to do', 'to give', 'to take', etc.) followed by the verbal infinitive or by a noun object:

(51) VERBAL LEXEME > AUXILIARY + NOUN
  wg  r-hap, ti-hap
  judge(INF) do(INF)-law, give(INF)-law
  'to judge'

Non-finite forms of the Coptic verb are the infinitive – which usually indicates (i) activities (et 'to come'), (ii) accomplishments (aò 'to conceive'), or (iii) achievements (cine 'to find') – and the qualitative, which conveys states (eet 'to be pregnant'). Although synthetic participial functions, as we saw in section 3.4.2, were analytically conveyed in later Egyptian by relative constructions, there were still a few remnants of Ancient Egyptian synthetic participles (mai-noute 'lover of god' > 'pious').Finite verbal forms consisted in Coptic of a marker which conveyed aspectual, temporal, or modal features, followed by the nominal or pronominal subject and by the infinitive (for actions) of the verb: a-prime stom 'the man heard', a-t-hrouw 'I sat down.' In the present and imperfect tense which were treated as adverbial constructions, the infinitive could be replaced by the qualitative (for states); ti-hkaeit 'I am hungry.' The most important verbal markers were as follows (the '*' symbol indicates pronominal subjects; the hyphen, nominal subjects):

(1) e=, ere-: circumstantial present (e=ti-hkaeit 'while I am hungry')
(2) sa=, sa-re: aorist of habit (sa=ti-ka-pajoi na=s 'I keep my ship for me')
(3) ne=, mere-: negative aorist (me=r-f-stom 'he cannot hear')
(4) e=PRON e, ere-N e: prospective of wish (e=s-e-stom 'may it happen', 'amen')
(5) m(e)=, me-re: negative prospective (m(e)=r-f-stom 'may he never be thirsty')
(6) mar(e)=, mare-: optative (mar(e)=pekran ouop 'hallowed be your name')
(7) (n)are=, (n)are-: final (ai-tei tariou-iti ne=s 'ask, that you may be given')
(8) sante=, sante-re: completive (sante-prê hopt 'until the sun sets down')
(9) mpat(e)=, mpat(e)-: Negative Completive (mpat(r)=f-stom 'he has not yet come')
(10) a=, a-re: preterite (a-ousa stomp 'a festival took place')
(11) mpe(e)=, mpe-re: Negative Preterite (mpe=r-he 'I did not rejoice')
(12) ne=, ne-re-: imperfect (ne-ntamau n-tesous mmu 'Jesus' mother was there')
(13) ntere=, ntere-re: temporal (ntere=f-je nai 'when he said these things')
(14) n=, nne-re-: conjunctive (e=k-e-nau n-g-eine 'may you see and understand')

In addition to these so-called 'sentence (or clause) conjunctions', Coptic displayed:
(i) an inflected form of the infinitive (p-tre=f-stom 'the fact that he hears') that could also be used after prepositions (hm-p-tre=f-stom 'while he heard'); (ii) a special suffix conjugation for adjective verbs (nau=f-je 'he is good'); and (iii) a marker for the future of the present and imperfect tense (ti-na-stom 'I shall hear').

3.4.6.2 Non-finite verbals

Non-finite forms of the Egyptian verb were: (i) the participles, with nominal stems derived from the verbal root (e.g., sdm*/sacim/ 'hearer'); and (ii) the infinitives which displayed a suffix  in the regular verbs (sdm */saccard/ 'to hear') or an allomorph  in some classes of weak verbs (mr.t*/miint/ 'to love'; mr.t*/miint/ 'to cry'), and a suffix  after verbs of negative predication, such as (mr.t*hrm-jr-w/ 'to cry', lit. 'to complete-to do.NEG-INF').

Participles were diachronically superseded by analytic constructions with relative pronouns (52):

(52) PARTICIPLE > RELATIVE CONSTRUCTION
Old Eg. > Late Eg. > Coptic
  sdm  p-snty (hr) sdm  p-et-stom
  hear(PART.IMP) the-who-(on)-hearing(INF) the-who-hear
  'the hearer'
3.4.7 Particles

The basic negative particle was *n*, which was used for unmarked (*contradictory*) negation, i.e., when the scope of the negation is the lexical relation between a predicative base and a predicate (53a); when combined with the adverb *jš* ‘indeed’, this morpheme expressed *contrariety* (53b; see Loprieno 1991):

(53a) *n rdi-f n-j mw*

*not* give(PFP)-he to-me water

‘He did not give water to me.’

A morphological variant of *n*, conventionally transcribed *mn*, is used in noun clauses to negate existence (54a), and in verb clauses to negate the prospective aspect (54b):

(54a) *mn m3J tw*

*not.exist* trnsl.ADJ.PL

‘There are no trustworthy people.’

(54b) *mn mvet-k*

*not.exist* die(PROSP)-you

‘You shall not die.’

3.4.8 Numerals and quantifiers

Numerals preceded the noun they referred to. The number 5 was etymologically derived from the word for ‘hand’; 20 is the dual of 10; 50 through 90 represent the plural forms of the respective units 5 to 9 (see table 3.4). Ordinals were derived from cardinals through the addition of a suffix *nw* (from 2 to 9: *fmt nw* ‘third’), and from the later 2nd millennium BC through the prefixation of the participle *nm* ‘filling’ to the cardinal number: *nm 20* ‘(twentieth)’. An exception was the ordinal number ‘first’, for which discrete lemmae derived from nouns were used in place of a derivation: *tpj* ‘first’ (still marking gender such as *tpj mt/f* ‘first’ [*FEM*]) in Earlier Egyptian, *hjswf* in Later Egyptian. Multiples were derived by the help of the noun *sp* ‘time’ following the number (4 *sp* ‘four times’). The derivation of fractions was achieved via the prefix *r* (from *r* ‘part’) plus the number of the fraction (r-5 1/2). Only for ‘half’ was a specific word, *gs*, used. Fractions other than 1/2 could be expressed only for 1/2 (*cwy* ‘the two parts’) [*PART.DUAL*] and 1/4 (*bmt nw* ‘the three parts (out of four)’ [*PART.PL*]). All other fractions were obtained by addition (e.g., 5/4 + 1/2 + 1/4 = 5 1/4).

Egyptian had a universal quantifier *nb*: since it was morphologically an adjective, this quantifier inflected for gender and number (*nb ‘every’, *rnb ‘every.FEM’, *nrb ‘every.PL.ACC’, *nrb ‘every.PL.PART’). The numeral ‘two’ was also employed to express the meaning ‘other’. The function of scalar quantifiers was usually performed by adjectives such as *s3 or grw*, which meant ‘many’, or by genitive constructions which involved the noun *nhy ‘a little’ (nhy n n3 hbu.w ‘some of the clothes’).

3.5 Syntax

3.5.1 General remarks

Egyptian phrasal syntax was head-initial. This distribution was obligatory with nominal (noun-genitive, noun-adjective), adjectival, and prepositional phrases. In Earlier Egyptian, however, determiners such as quantifiers or demonstrative pronouns followed the noun they referred to. From a diachronic point of view, the hierarchy within nominal phrases changed from head – determiner – quantifier – adjectival phrase – genitive nominal phrase in Earlier Egyptian to determiner – head – quantifier – adjectival phrase – genitive nominal phrase in Later Egyptian. All numbers except the numeral ‘2’ preceded the noun, which itself appeared in the singular. Up to 299, numerals showed gender agreement with the noun they referred to, but from 300 upwards numbers appeared always as feminine. In Coptic this gender distribution was no longer valid and numbers were generally treated as masculine. Scalar expressions could be expressed by using an adverb to specify an adjective or by repetition of the adjective (e.g. *jrm nfr nfr* ‘very good wine’).

Verbal valency limitations circumvent the double accusative position even in causative constructions (both morphological (synthetic) causatives in *s*- and syntactic (analytic)
The typical phrasal coordination pattern of Earlier Egyptian was juxtaposition. Later Egyptian regularly used conjunctions developed out of prepositions such as hr or jrm ‘together with’, but even these conjunctions were initially limited to NP-coordination. No discrete adversative coordination pattern seems to have existed before Coptic, at least not for phrasal coordination. Coptic employs, besides the Greek-based alla ‘but’ (being the prototypical connector), various other Greek and Egyptian particles. The expression of disjunction was achieved by means of a post-positional element r-pw ‘or’ (e.g., m nb m nb m jwms r-pw ‘as lord, as brother, or as friend’) or by juxtaposition. Clausal coordination patterns will be described in detail below in section 3.5.3.

Egyptian allowed for the following deletion pattern of co-referential elements within verbal sentences (a–d are the arguments of the verbal predicate; P, Q indicate predicates; co-referential elements are set in bold). Note that in Earlier Egyptian, conjunction is mainly expressed by juxtaposition; it is only in Later Egyptian that a conjunct gradually becomes obligatory:

(i) \[ \text{P a b} + \text{P c b} \rightarrow \text{P (a + c) b} \]

(ii) \[ \text{P a b} + \text{P a c} \rightarrow \text{P a (b + c)} \]

(iii) \[ \text{P a b} + \text{Q a b} \rightarrow \text{P a b} + \text{Q a b} \]

(iv) \[ \text{P a b} + \text{P c d} \rightarrow \text{P a b} \]

(v) \[ \text{P a b} + \text{P c d} \rightarrow \text{P a b} \]

No limitations seem to have existed for the conversion of any sentence type into a relative clause in Later Egyptian. Earlier Egyptian displays a fully developed paradigm of participles and relative forms in addition to relative clauses introduced by a relative pronoun (positive and negative, see above, section 3.4.5.3). Diachronically, the synthetic morphological patterns for relative forms and participles tended to be replaced by analytic relative clauses built with the help of a relative marker (nty > et, see above, section 3.4.5.3, and below, section 3.5.4).

Complement clauses could be finite or non-finite; in the latter case, infinitive constructions were used. Finite complement clauses might appear introduced by a particle (ntt, jwtt, or r-dj) or directly juxtaposed to the main clause expressing the speaker’s attitude toward the propositional content of the reported sentence (Uljas 2007). The difference between direct and indirect speech was expressed through deictic reference shift. Earlier Egyptian behaved like most modern languages in shifting all referents (56a). In Late Egyptian, however, usually only one referent was shifted, as in (56b) (Kammerzell & Peust 2002):
3.5.2 Sentence types and word order

Egyptian syntax knew four types of sentences. These are classified according to the phrase which occupied the predicate position: noun clauses, adjectival clauses, adverb clauses, and verb clauses.

Syntactic patterns proved rather stable throughout the history of Egyptian. Late Egyptian (Satzinger 1981) and Coptic (Polotsky 1987–90: 9–43) displayed more or less the same variety of sentence types as in Earlier Egyptian.

3.5.2.1 Noun clauses

In noun clauses, the predicate is a noun: \( S > [NP\ NP] \) (Doret 1989–92; Loprieno 1995: 103–31). Any NP could occur in either position; pronouns, however, had a tendency to occupy the initial position. Typical were bipartite (juxtaposed NPs) and tripartite patterns (adding a copula as third element). In categorical statements a demonstrative \( pw \) ‘this’ functioning as copula was usually inserted between the two phrases (59):

\[
(59) \text{dmj.t} \ pw \ jmn.t \\
\text{city.FEM COP west.FEM}
\]

‘The west is a city.’

The distribution of predicate and subject was not consistent. Both \( S > [NP\ NP] \) and \( S > [NP\ NPs] \) were possible. The syntactic order Predicate-(Copula)-Subject was modified into a pragmatic order Topic-Comment in: (i) classifying sentences in which the subject was a first- or second-person pronoun (60a); (ii) identifying sentences in which both the subject and the predicate were determined or semantically specified (60b); and (iii) in cleft sentences in which the predicate was a participle and the subject was focalized (60c) (Loprieno 1988: 41–52):

\[
(60a) \text{ntk} \ jij \ n \ \text{nhhw} \\
\text{you father for orphan}
\]

‘You are a father to the orphan.’

\[
(60b) \text{zh3w-f} \ pw \ hrw \\
\text{scribe-him COP Horus}
\]

‘His scribe is the god Horus.’

\[
(60c) \text{jn} \ \text{sn.t-j} \ s\text{3-nh} \ \text{rn-j} \\
\text{FOCUS sister.FEM name-me}
\]

‘My sister is the one who makes my name live.’

Later Egyptian showed typologically similar patterns: it displayed an unmarked syntactic order Predicate-Subject when the subject was a noun (61a), replaced by a marked
pragmatic order Topic-Comment in three environments: (i) when the subject was a pronoun (61b); (ii) when both the subject and the predicate were semantically specific (61c); and (iii) in cleft sentences, in which the predicate was a participle and the subject was focalized (61d):

(61a) ou-me te te-f-mnt-mitre
   a-truth COP.FEM the-his-thing-witness
   'His testimony is true.'

(61b) anok ou-šōs
   TOPIC.l a-shepherd
   'I am a shepherd.'

(61c) t-arxe n-t-sophia te t-mnt-mai-noute
   the-beginning of-the-wisdom COP the-thing-lover-god
   'The beginning of wisdom is piety.'

(61d) p-noute p-et-sooun
   the-god the-REL-know(INF)
   'God is the one who knows.' (= 'Only God knows.')

3.5.2.2 Adjectival clauses
The predicate position of adjectival clauses is occupied by an adjective (62a) or a participle (62b): S > [AdjP NP] (Loprieno 1995: 112-14). In the subject position, either a nominal phrase (62a-b) or a clause (62c) may appear. The normal order of constituents is Predicate-Subject (62a):

(62a) nfr mtn-j
   be.good path-me
   'My path is good.'

(62b) sw3w sw r h'py $3
   rejuvenate(PART) he than Nile high
   'He is more rejuvenating than a high Nile.'

(62c) bjn-wj jw-k
db-PTC come-you(MASC.SG) safe(stat)-you sound(stat)-you
   'How very unfortunate that you have come safe and sound!'

In the presence of a first-person subject, the bipartite nominal pattern (63a) was used.

In Later Egyptian, this pattern tended to become very rare: although it still existed in Late Egyptian, it is completely absent in Demotic and Coptic, where adjectival clauses were replaced by nominal (63a from Coptic) or verbal patterns (63b from Demotic).

(63a) ang ou-agathos
   I a-good (one)
   'I am good.'

(63b) p3 hyn nm n3$3$3-f iwq3$3$3 m-f
   the little dwarf be.great-he because name-him
   'The little dwarf is big because of his name.'

3.5.2.3 Adverb clauses
In adverb clauses, the predicate is an adverbial or prepositional phrase: S > [NP AP] (Loprieno 1995: 144-72). The word order is always Subject-Predicate. In Earlier Egyptian, adverbial main clauses were often introduced by particles functioning as discourse markers (64a); in absence of a discourse marker, the clause is to be understood as syntactically dependent (64b):

(64a) jw nzw jr p.t
   COMPL king towards heaven.FEM
   'Now the king is (directed) towards heaven.'

(64b) hct-k m pr-k
   rations.FEM-you in house-you
   '(Because) your rations are in your house.'

In Later Egyptian, the syntax of adverb clauses did not change; the order is Subject-Predicate (Polotsky 1987-90: 203-24):

(65) ti-hm-pa-ćiôt
   I-in-my-father
   'I am in my father.'

3.5.2.4 Verb clauses
In verb clauses, the predicate is a verbal phrase (Loprieno 1995: 183-220); the word order is Predicate-Subject:

(66) jju-nj m nw1-t-j
   come.PRET-I from city.FEM-ME
   'I came from my city.'

As we observed in the discussion of morphology, a peculiarity of Egyptian syntax was that the predicate of verb clauses might function as the theme of the utterance.

In general, Egyptian verbal syntax displayed a comparatively high incidence of topicalization and focalization phenomena. The most common topicalization device
was the extraposition of the topicalized argument through the particle *jr* 'concerning' (67a); used as a conjunction, the same particle introduced the protasis of a hypothetical clause (67b):

(67a) *jr sf wsjr pw*

concerning yesterday Osiris COP

‘As for “yesterday”, it is Osiris.’

(67b) *jr jqr-k grg-k pr-k*

concerning be.important(PROSP)-you found(PROSP)-you house-you

‘If you become important, you should have found a household.’

Unmarked VPs not introduced by discourse markers were less frequent than in related languages. They mostly functioned as dependent or modal clauses:

(68) *hyper-k appear(PROSP)-you*

‘May you appear.’

In Later Egyptian verb clauses (Polotsky 1987-90: 175-202), the predicate was conveyed by SVO-patterns in which the subject could be extraposed to the right of the predicate and anticipated by a cataphoric pronoun in the regular syntactic slot:

(69) *a-n-rime nci ne-snêêu*

PRET-they-weep(INF) namely the-brothers(PL)

‘The monks wept.’

In Coptic verbal sentences, the tendency to have the verb phrase function as theme or rheme of the utterance reached its full development: in the former case, the verb phrase was preceded by a relative marker *e*- or *nt*- and is described in linguistic literature as 'second tense' (Polotsky 1987-90: 129-40); in the latter, the form is preceded by the circumstantial marker *e*- and is described as 'circumstantial' (Polotsky 1987-90: 225-60):

(70) *nt-a-n-jpo-f e-f-o n-blle*

REL-PRET-we-beget(INF)-him CONJ-he-do(STAT) as-blind

‘He was born to us blind.’ (lit. ‘That we begot him was while he is as blind.’)

3.5.3 Coordination and subordination

The presence or absence of morphemes indicating paragraph initiality was an important syntactic feature of adverb and verb clauses in Egyptian. The general rule was as follows: (i) adverbial and verbal patterns introduced by a discourse particle were initial main clauses; (ii) bare patterns were non-initial clauses, either paratactically juxtaposed to the initial predication as non-initial coordinate main clauses or controlled by it as subordinate clauses. This flexibility in sentence patterns, which could appear as main sentence or as subordinate clause, depending on the syntactic environment, was a common feature of Egyptian syntax, being shared by the majority of patterns, whether they were nominal, adverbial, or verbal.

The dialectic between the initial main sentence introduced by a particle and the non-initial coordinate bare adverb clause is captured in the following example:

(71) *jw lw nmr jwsm jb.w m gmw rw.tj*

COMPL residence in silence heart.PL in mourning portal.FEM.DUAL

wr.tj ltm.w
great.FEM.DUAL shut(STAT).3PL

‘The Residence was in silence, the hearts in mourning, the two great portals shut.’

An example of coordinate verb clause syntax is provided by the following passage, in which a series of non-initial main clauses was paratactically linked to the initial verb form:

(72) *jrw.t-j sm.t m nby.t nj k3.j*

make(INF)-I go(INF) in sail.south(INF) NEG think(PERF)-I

spr r hnw pn hmt.n-j hpr

reach(INF) to residence this contemplate(PERF)-I happen(PROSP)

h33t nj ngd-j ‘nh-j r-s3-f nmj.n-j

tumoli NEG say(PERF)-I live(PROSP)-I after-it pass(PRET)-I

m3.rj m h3w nh.t zm3.n-j m jw-snfwr

Maaty in area sycamore arrive(PROSP)-I in island-Snefru

‘I made a journey southward, and did not plan to reach the residence; I thought that there would be turmoil and I did not expect to survive after it; I crossed the lake Maaty in the sycamore neighborhood, and arrived at Snefru Island.’

It is important to appreciate the difference between initiality as a property of discourse and coordination vs subordination as syntactic features of the clause. In examples (71) and (72), there are only main clauses, in the sense that – if taken individually – all clauses represent well-formed Egyptian sentences paratactically organized within a
chain of discourse (Collier 1992). In both cases, however, only the first sentence is paragraph-initial: in the case of (71), it is introduced by an overt particle of initiality, the complementizer ju, which indicates that the corresponding adverbial sentence hm3 m xgr opens a new segment of discourse; in example (72), the initial verb form, a narrative infinitive, provides the temporal and aspectual references for the chain of paratactically linked clauses.

We need, therefore, to draw a distinction between the level of clause and the level of discourse. Adverbal and verbal sentences introduced by a particle were always main clauses; non-initial patterns might be paratactically linked main clauses or embedded subordinate clauses. The difference between forms with and without an introductory particle lies on the discourse level, that the sentence introduced by an initial clitic particle opened a paragraph, i.e. a new segment of text. In this respect, rather than operating with the traditional two levels of clausal linkage (parataxis vs subordination, or coordination vs subordination), it seems suitable to analyse Egyptian syntactic phenomena by positing three forms of linkage between sentences.

(1) **Parataxis**, i.e., the linkage between main clauses: this linkage usually remained unexpressed in Egyptian syntax, as in the case of bare adverbial or verbal sentences which followed an initial main clause within a chain of discourse. Specimens of paratactic chains are provided in (71)–(72). Later Egyptian restricted the employment of parataxis to verbal sentences in the perfective aspect.

(2) **Hypotaxis**, i.e., a semantic, rather than syntactic, dependency of a sentence on the discourse nucleus: hypotactically linked clauses were usually introduced by particles such as jsk, jhr, or js; their semantic scope and their pragmatic setting could be properly understood only in reference to the message conveyed in the textual nucleus, as in example (73), which in the original text immediately follows (71):

(73) jst rf zbj.n hm3 msa

meanwhile to-it send.PRT majesty-him army

r tj3-jmh.w zj3-f smsw m jry

to land-Libyans son-him elder as superior thereof

'Meanwhile, His Majesty had sent off to the land of the Libyans an army whose leader was his elder son.'

(3) **Subordination**, i.e., the syntactic dependency of a clause on a higher node, which itself could be a main or a subordinate clause. Subordination was usually signalled by morphological markers such as prepositions
(76c) b3s.t nb.t rwj.t-n-j r-s
country.FEM every.FEM advance(REL).FEM.PRET-I against-it
'Every country against which I advanced.'

Non-specific antecedents, on the other hand, were modified by relative clauses, which lack overt agreement-markers (Collier 1991; Loprieno 1995: 158-61). They were syntactically subordinated by means of embedding into the main clause:

(77) kj.t n.t msdr dj-f mw
another.FEM that.of.FEM ear give(AOR)-it water
'another (remedy) for an ear which gives off water.'

3.6 Lexicon

3.6.1 Structured semantic fields

Family terms made basic use of the following: h3y 'husband' and hjm.t 'wife', jt 'father' and mw.t 'mother', sn 'brother' and sn.t 'sister', z3 'son' and z3.t 'daughter'. These were extended to clarify the reference as in m hjm.t 'my wife's brother' or h3y n sn.t mw.t 'my aunt's husband' (Franke 1983). The system can be conveniently represented as in Figure 3.1.

Egyptian differentiated the colour terms 'black' (km), 'white' (ft), 'red/yellow' (dsr) for warm colours, and 'green/blue' (w3g) for cold colours (Schenkel 1963: 140-7).

Body parts were finely differentiated (Westendorf 1999: 108-236); a similar degree of sophistication applied to cooking and food-processing terminology (Verhoeven 1984; Faltings 1998).

Egyptian displayed a binary system for primary spatial deixis: '3 'here' vs jm 'there', later conflating graphically into dy 'here/there' but possibly differentiated nevertheless – cf. the Coptic forms tai 'here' vs te 'there'. Secondary spatial deixis showed intrinsic as well as relative features (M. Müller in press). The unmarked distribution seems to be:

back
m-ph.wj
right
j3b/smh
wnnj

front
hnj/m-h3t
↑
EGO
intrinsic frame of reference

back
m-ph.wj
left
j3b/smh
wnnj

front
hnj/m-h3t
↑
EGO
relative frame of reference

Figure 3.1 Family relations.

3.6.2 Lexical contacts

Owing to Egypt's geographically protected location, Ancient Egyptian did not display in its earlier phase (from 3000 BC) detectable influences from other languages, although the neighbouring languages certainly contributed to the lexical development of historical Egyptian. The majority of the lexicon was of Afroasiatic origin and showed convergences especially with the Semitic and Libyan Berber branches of this family (Schenkel 1990: 49-57); for example, sp.t *lip*, cf. Arabic safat-un; sftJw 'seven', cf. Arabic sabr-un; jnm 'skin', cf. Berber a-glim. There is also some evidence for the possible impact of an Indo-European adstratum in the area of basic vocabulary (Kammerzell 1994: 37-58); e.g., Egyptian jrt.t 'fjalaqat/ 'milk', cf. Greek gala, galak-tor; or hnij */xantu-li/ 'before,' cf. Greek anti, Latin ante. In some cases, for the same concept – for example, 'heart' – Egyptian displayed the coexistence of an Afroasiatic (*jib*, cf. Akkadian libb-um) and of an Indo-European connection (*h3tj* */hnutij/, cf. Latin cor, cord-is), probably rooted in different dialectal areas of the country. During the Late Bronze Age (1550-1100 BC), contacts with the western Asiatic world led to the adoption of a considerable number of mostly West Semitic loanwords (Hoch 1994), many of which remained confined to the scholarly and administrative sphere: for example, sp.r from Northwest Semitic soper 'scribe'; mkh/t (Coptic brocoout/berecoout) from Northwest Semitic marakabah 'chariot'; mryn from Mitanni (Iranian) maryannu 'chariot-fighter'.

In the Late Period, after the seventh century BC, when the productive written language was Demotic, a limited number of (mostly technical) Greek words entered the Egyptian...
domain: gawma from καῦμα ‘fever’; wynn through Aramaic from ḫwōw ‘the Ionians’ i.e., ‘the Greeks’. The impact of Greek vocabulary became more dramatic with the Christianization of the country, Hellenistic Greek being the language in which the Christian Scriptures were transmitted in the eastern Mediterranean world. The number of Greek loanwords in Coptic is therefore very high (Kasser 1991a), depending on the nature of the text: up to one-third of the lexical items found in a Coptic text may be of Greek origin. Most of these words stem from the spheres of: (i) religious practice and belief (angelos ‘angel’, diábolos ‘devil’, ekklesia ‘church’, hagios ‘saint’, sóter ‘saviour’, etc.); (ii) administration (arkhón ‘governor’, oikonomi ‘to administer’, etc.); and (iii) high culture (anagnōsis ‘recitation’, logikos ‘spiritual’, etc.). In some texts translated from Greek, the influence of this language extends to the realm of syntax. A limited number of words from the military context are Latin (douks ‘general’, from Latin dux), whereas documents from the end of the first millennium begin to display the adoption of loanwords from Arabic (alpesour from al-bāṣūr ‘haemorrhoids’). The terms referring to the basic vocabulary, however, usually remain of Egyptian origin: for example, rmt > rōme ‘man’; hjm.t > s.(t)-hjm.(t) > shime ‘woman’; msw > mau ‘water’; sn.wj > snau ‘two’.

4

Semitic

Gene Gragg and Robert Hoberman

See Map 4.1.

4.1 Distribution of the Semitic languages in time and space

4.1.1 Mesopotamia

The main language in this group, Akkadian, is attested on many thousands of clay tablets, written in a mixed logographic–syllabic writing system with wedge-shaped characters (‘cuneiform’) adapted from the Akkadians’ Sumerian predecessors in the region. The huge Akkadian corpus starts from the middle of the third millennium BC (Old Akkadian), and subsequently, in a northern (‘Assyrian’, centring around the northern capital city of Assur, near present-day Mosul) and southern (‘Babylonian’, roughly from present-day Baghdad to the Persian Gulf) variety, continues down to the last scholarly texts written in the final centuries BC. On chronological grounds, Assyrian and Babylonian are conventionally divided into ‘Old’ (first half of second millennium), ‘Middle’ (second half of second millennium), and ‘Neo’ (first millennium). Old Babylonian, the administrative and literary language of Babylon at the time of Hammurabi, is often taken as a ‘classic’ form of the language; Neo-Babylonian and Neo-Assyrian are the languages of the last great Mesopotamian empires preceding the rise of the Persian Empire. It is generally assumed that Akkadian was replaced by Aramaic as a spoken language in Mesopotamia in the course of the first millennium BC. A smaller body of texts, more recently discovered at the Syrian site of Tell-Mardikh (=Ebla), is also written in cuneiform and is roughly contemporary with Old Akkadian. Eblaite is sometimes taken to be an extreme western dialect of Akkadian, but sometimes as a separate Mesopotamian Semitic language. Much work remains to be done on this difficult corpus.

4.1.2 The Levant

The eastern coast of the Mediterranean is the home of three important languages. Ugaritic, the earliest of them, was written for only about 200 years, from 1400 to
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