

Yale Egyptological Studies 14

Language, Semantics, and Cognition  
in Ancient Egypt and Beyond

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Gaëlle Chanttrain

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# Language, Semantics, and Cognition in Ancient Egypt and Beyond

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Gaëlle Chantrain

with contributions by

Letizia Cerqueglini, Gaëlle Chantrain, Julien Cooper, Orly Goldwasser,  
Haleli Harel, Joanna Popielska-Grzybowska, Claus Jurman,  
Sherouk Shehada, and Jean Winand

## Yale Egyptological Studies 14

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## 9

### Classifying / Lexicalizing the Outside World

Jean Winand\*  
Université de Liège

#### ABSTRACT

This paper is an attempt to understanding the structure of Ancient Egyptian lexicon as a whole and how it evolved over time. A special attention is devoted to the linguistic expression of newly introduced concepts. While some solutions using internal or external resources have been extensively studied, borrowed concepts could sometimes prompt the creation of a new word after a process of semantic analysis. In this respect, Coptic cases like **mnt-ꝓꝓꝓ-ⲭⲓ-ⲙⲁⲉⲓⲛ** “divination” for translating Greek οἰώνισμα are examined. The paper also focuses on the use of prefixes for lexical creation in Coptic like **ⲁ(ⲛ)** “place”, **ⲁⲧ** “in-/un-, -less”, **ⲁⲱ** “numerous”, **ⲃⲱ** “tree”, **ⲙⲁ** “place, location”, **ⲙⲛⲧ** “matter, property”, **(ⲛ)** **ⲉⲧ** “the one who”, **ⲛⲁ** “the one of”, **ⲛⲙⲛ** “man”, **ꝓꝓꝓ** “the one who does”, **ⲉⲁ** “man”, **ⲱⲱⲱ** “worth, -able”, **ⲉⲓ-ⲛ** “form of”, and **ⲉⲛ** “within”. From a typological perspective, some parallels can be made between “Pharaonic” Egyptian as supported by the hieroglyphic writing and alphabetic Coptic as both phases of the language arguably ended up to typologically comparable solutions for expressing very close concepts. It is then suggested that what was expressed morphologically (< lexically) in Coptic could actually be conveyed in earlier stages of Egyptian by its graphic system by using a generic classifier. Finally, a typological comparison is made with the Chinese writing system. Indeed, instead of borrowing or creating words that would be semantically opaque, Chinese speakers usually analyze a complex idea into key basic concepts. The Chinese writing system thus seems to make a bridge between *linguistic* classifiers, as they are known in certain languages, and *graphic* classifiers that are limited to the graphic system, as is the case in Egyptian.

**KEYWORDS:** *ancient Egyptian lexicon – semantic classifier – Chinese writing – Coptic lexicon – typology – writing systems*

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\* I very warmly express my gratitude to Gaëlle Chantrain for her insightful remarks on this paper. All shortcomings remain mine, of course.

## 1. PRELIMINARIES

Landscape organization, buildings, body language, everything we do as human beings in society translates our perception of the outside world, and the way we organize and classify it. For instance, how the ancient Egyptians understood the differences in social status is clearly expressed in the countless representations of Pharaoh receiving the submission of foreign leaders reduced to a very small scale that unequivocally show their social and symbolic insignificance compared to the majesty of the king.

Language is a particularly refined way for exposing and explaining the world. In a narrow sense, language is a sequence of phonemic units that are realized in oral discourse. Language can also conveniently—and hopefully as regards dead languages like Ancient Egyptian—be supported by a writing system. In the case of Ancient Egyptian, language is arguably augmented by hieroglyphs in the same way one now speaks of augmented reality. The hieroglyphic writing system is wonderful indeed, as it felicitously combines two types of information: phonology and semantics, the latter being expressed by the so-called logographic signs and a complex system of semantic classifiers, as illustrated by the following example (1). In the very simple Late Egyptian sentence *sdm.f p3 h3b.k n.f hr:f* “He has taken note (lit. heard) of what you sent him about,” the spelling is very close to an alphabetic system except for two signs. The first one—a logogram (or, more precisely, a radicogram; Polis & Rosmorduc 2015) depicting a cow’s ear—is used in a series of words derived from the root S-D-M, meaning HEAR (here, the verb *sdm* “to hear”). The second sign—the classifier of the moving legs is added to lots of words that share the idea of motion (here, the verb *h3b* “to send”).

Ex. 1: 

Of course, language, as oral expression, is also supported by intonation, some type of melody, and stress patterns. These are often the sole indication for making a difference between a neutral, unmarked statement, an interrogation, or an order. This is almost entirely lost in writing. The punctuation system, when and where it exists, remains a rudimentary, unsophisticated system of notation that only very partially compensates for the loss of orality.<sup>1</sup> It goes without saying that Egyptologists would be very happy to have even such a poor substitute! In contemporary cultures, the growing use of emoticons, although limited to certain sub-genres, is a partial and limited response to it.

Orality is also complemented by attitudes of the body that can affirm, stress, and sometimes contradict what the speaker intends to say. For ancient Egypt, there is luckily a rich iconographic documentation showing people engaged in different activities. One must however remain cautious on how to interpret it, as these gestures are arguably highly codified, as suggested by the numerous examples showing expressions for lamentation. In texts, emotions can sometimes be described by a specific body attitude, but this remains exceptional. In a passage from the *Two Brothers*, Anoup, who was chasing his younger

<sup>1</sup> On the so-called verse points in Egyptian, see Thacke 2001; Winand 2020. On the paratextual signs in ancient Egypt, see Motte & Sojic 2020.

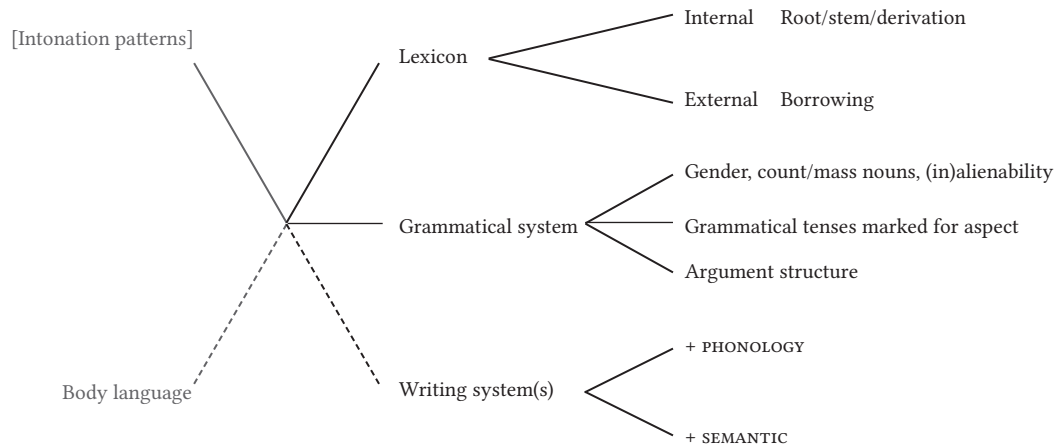


Fig. 9.1 Classifying the world with language.

brother, showed his disappointment by clasping his hands when he realized that he could not reach him:<sup>2</sup>

Ex. 2: *jw p3j.f sn ʕ3 hr jr:t zp 2 n hwy hr dr:t.f n p3 tm hdb.f j.jr:f*  
 “and then his elder brother clasped twice on his hand because he had not killed him” (*Two Brothers* 6,7-8)

#### CLASSIFYING THE WORLD WITH LANGUAGE

Figure 9.1 tries to capture how ancient Egyptians classified the world with language.<sup>3</sup>

On the right side, are 1) the writing systems, which can help extending and refining the semantic expression as is definitely the case for Ancient Egyptian, at least for the pre-Coptic non-alphabetic stages; 2) the lexicon, which is what one has first in mind when dealing with semantic categories as expressed in language; and 3) the grammatical system, which is in its own way a powerful organizer of semantic classification.

On the left side are also mentioned, for the sake of completeness, intonation patterns and body language, as key factors for supporting and supplementing the oral expression. The gray color underlines their lower epistemological status for the study of Ancient Egyptian, not because they would be less relevant, but because they left almost no tangible, easy to use, traces in the documentation.<sup>4</sup>

<sup>2</sup> See Winand, forthcoming a: ex. 3. On words expressing emotion, see Beaux 2017.

<sup>3</sup> A general presentation of the different stages of Ancient Egyptian (Old, Middle, Late Egyptian, Demotic, and Coptic) can be found in Winand 2021.

<sup>4</sup> The general tone of a sentence can of course be sometimes mentioned. Formulations like “he said so while crying, weeping, or being angry” are quite common in literary texts, especially in Late Egyptian and Demotic literature. This remains however at a very general level, with no indication on how it affected the melody or the intonation pattern of the sentence.

- (1) The writing systems that supported the different phases of Ancient Egyptian (with the exception of Coptic) is a mix of phonological and semantic information. In the hieroglyphic system, there are basically two categories of signs: one for expressing the phonological structure (with some limitations), and another that expresses semantic categories.<sup>5</sup> In the latter one, Egyptologists have identified two groups of signs: the logograms, which constitute a mixed category, expressing a lexical entity within a semantic class, and the semantic classifiers, whose function, as the name implies, is to link a word to a semantic class, without supplying any information on its phonological structure. While the logograms are more or less fixed, at least from the MK onwards, classifiers were constantly subjected to variation both in synchrony and diachrony.<sup>6</sup>
- (2) The lexicon of Ancient Egyptian, or rather Egypto-Coptic, is still very poorly understood as a principled semantic network.<sup>7</sup> As regards the production of new words, one can roughly make a distinction between two kinds of processes: an internal one that makes use of the historical morphological system of root patterning and stem derivations, and an external one that imports into the lexicon words from other languages (see below).
- (3) As already hinted at, grammar is a very powerful system for conceptualizing the world. Broad semantic classes like gender, count or mass nouns, alienability or inalienability are often coded grammatically, although there is no need to do so. While in Ancient Egyptian there is a strong distinction for expressing possession between inalienable words and the rest of the lexicon,<sup>8</sup> this is not the case—or very minimally—in French, nor in English.

#### INTERPLAY BETWEEN LEXICON AND GRAMMAR

In Ancient Egyptian, the grammatical system very fruitfully interacts with the lexicon. Indeed, grammatical tenses marked for aspect and variations in the verbal argument structure are powerful means to shape semantic categories. In languages where the expression of aspect is grammaticalized, as is the case in Earlier Egyptian, the relationships between grammatical aspect, argument structure, and verbal *Aktionsarten* open up a fascinating window onto the perception and the semantic classification of basic states of affairs (SoAs) by the Egyptians.<sup>9</sup> From a semantic viewpoint, SoAs are phasal structures that can be

<sup>5</sup> Polis & Rosmorduc 2015; for a general introduction to the hieroglyphic system, see Winand 2022a.

<sup>6</sup> I leave here aside the formidable expansion of the hieroglyphic signs as a creative tool used by the *hierogrammateis* for expressing refined theological thought during the last period of the temples' activity. Semantic classifiers have been subjected to intense scrutiny by Egyptologists since the last century; see the pioneering work of Goldwasser 1995; 2002; 2006.

<sup>7</sup> See Grossman, Polis & Winand 2012. On the lexicon organized as a web of related semantic networks, see Winand 2019.

<sup>8</sup> See Winand, forthcoming a, for the non-predicative possession in Late Egyptian.

<sup>9</sup> *Aktionsart* designates the inherent aspectual structure of a verbal lexeme according to a handful of basic semantic features. State of affairs is a neutral term that covers any type of event, action, and states. On this, see recently Winand 2021.

described with a short set of parameters like 1) durativity or extension in time; 2) dynamicity as opposed to stativity; 3) telicity, which implies that the process intrinsically has a goal which marks the end of the process; and 4) the possibility of having adjacent phases, pre- and post-phase, respectively.<sup>10</sup> Aspectual selections amount to select, and hence give a special focus, to a particular phase of a given SoA. In this process, some type of recategorization frequently happens with certain semantic categories. This is the case, for instance, with *mwt* “to die” (fig. 9.2).

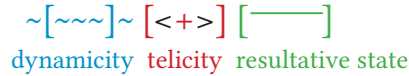


Fig. 9.2 Phasal selections for *mwt* in Egyptian.

This verb is semantically categorized in Ancient Egyptian as a non-durative telic SoA, with a pre- and a post-phase. The use of the progressive, which is in Egyptian a [+ DYNAMIC] [+ DURATIVE] [+ AGENTIVE] tense selecting a phase within the process, should theoretically be blocked.<sup>11</sup> However, the progressive can access the pre-phase of *mwt* as this verb has cognitively a pre-phase with semantic features compatible with the progressive. In this case, the meaning of *mwt* would be best expressed by specialized lexemes in other languages, like *to agonize* in English (*agoniser* in French). In Egyptian however, this SoA and its adjacent phases were expressed by one single lexeme (colexification process; François 2008).

How a community of speakers classifies complex SoAs is admittedly subject to a fair degree of variation. This can also change in diachrony, as shown by the case of falling, which can be analyzed as a complex SoA with at least two phases: cause (to fall) and result (to lay on the ground). In Earlier Egyptian, both activities were colexified by the verb *hr*. In Late Egyptian, however, at least in its earlier stage, the roles were split up into *h3j*, whose core meaning was originally “to go down,” for expressing the process of falling down, and *hr* for the resulting state.<sup>12</sup> In later Late Egyptian, *h3j* took over and finally became the sole lexeme for expressing this complex SoA (see Coptic 2ϵ).<sup>13</sup> As a consequence, *hr* fell out of use.

How languages lexicalize complex SoAs is indeed a fascinating object of study. Very frequently, complex chains of SoAs are segmented into units, and then again subdivided into smaller ones. This of course depends on our cognitive capacities (the concept of non-durativity, for instance, is meaningful in lexical semantics, but less so in quantum physics), but it is also culturally conditioned as evidenced by the simple fact that different communities of speakers do not necessarily find the same solutions to express identical SoAs. Consider for instance the complex SoA of finding. Except for cases when this SoA is associated in some languages to the concept of meeting someone by mere chance, as in

<sup>10</sup> See Winand 2006 for details, and Winand 2021 for a general updated presentation in English.

<sup>11</sup> See Winand 2021: §4.4.

<sup>12</sup> See Winand, forthcoming c.

<sup>13</sup> See *Wenamun* 2,45: *jw t3 h3bw.t n t3j.f srp.t (hr) h3j.t r.j* “the shadow of his umbrella fell upon me” (perfective) vs. 2,46: *t3 h3bw.t n pr-ʕ3 ʕ.w.s. p3j.k nb h3 r.k* “the shadow of Pharaoh, your lord, has fallen onto you” (resultative perfect).

French “*je l’ai trouvé hier par hasard au restaurant*” (“I met [lit. found] him unexpectedly yesterday in a restaurant”), finding is most often associated with a pre-phase expressing the activity of looking for something. While some languages extend the scope of finding to include the pre-phase, as in French “*il est en train de trouver la réponse*,” which means that the subject is about to find the answer if nothing goes wrong, *ceteris paribus*, in Egyptian, for instance, the progressive is never found with the verb *gmj* “to find.” Other lexemes, like *wh3*, which originally means something like “to go here and there looking for something,” have to be resorted to for supplementing the missing pre-phase of *gmj*.<sup>14</sup> Conversely, *wh3* does not combine with a perfective tense to mark the phase of finding itself or a resultative perfect for expressing the post-phase (fig. 9.3).

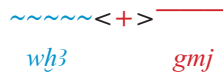


Fig. 9.3 Expressing the SoA of finding in Egyptian.

Ancient Egyptian is also an example of how grammar can to a certain extent “compensate” for a relative lexical poverty. For instance, by varying their argument structure, Egyptian verbs can express types of SoA that would usually be expressed by different lexemes in modern Western languages. Thus, by deleting its second argument, a telic verb frequently becomes atelic, as shown in Egyptian by the recategorization of *jrj* NP “to do, to make NP” in *jrj* Ø “to act,” sometimes “to behave,” and of *šm r* NP “to go somewhere” in *šm* Ø “to walk” without any defined goal.<sup>15</sup> Variations of the verbal valency most often obtain by adding or suppressing an argument. Its syntactic expression can also be modified. For instance, the second argument of a verb that is statistically<sup>16</sup> realized as a direct object can sometimes be expressed obliquely, with a PrepP. A good example of this is provided by the very common verb, *sḏm* “to hear.” While its object is overwhelmingly immediately linked to the verb, it can sometimes be introduced by the preposition *n* “to,” which basically expresses the benefactive. This results in a shift of meaning: *sḏm n* NP literally takes on the meaning of “to listen to the benefit/profit of NP,” hence in some contexts “to obey NP.” The shift from “to hear” to “to listen,” that is, from a non-agentive to an agentive activity, can also be “forced” upon *sḏm* by specific grammatical tenses that have [+ AGENTIVITY] in their set of semantic instructions, like the imperative, for instance, or by tenses that focus on the resultative state, like the perfect which extends the original process of *sḏm* to a post-phase (“to have listened to something,” and hence “to be fully informed”).<sup>17</sup>

<sup>14</sup> See Winand 2015.

<sup>15</sup> See Winand 2006: 127–128, and 2021: §3.1; 3.4.3; 4.4 for relevant examples.

<sup>16</sup> I prefer to state that a construction is statistically prevalent rather than presenting it as the by-default, original, or primary construction.

<sup>17</sup> See Winand 2006: 256–257, and 2021: §4.2. See also the sentence [mtw].k sḏm n.j p3 nty [ ] “and you obey me concerning what [...]” (P. Mond 1, 8) for a case combining a benefactive and an object.

## 2. ADAPTING THE EGYPTIAN LEXICON: A HISTORICAL OVERVIEW

I now turn to the role of the lexicon in shaping our classification of the world. My interest here is mainly diachronic. As is the case in any community of speakers, the Egyptian lexicon was in constant evolution and adaptation—new words replacing older ones for expressing ancient concepts, like LEg *ptr* “to see,” which succeeded to EEg *m33*, or ancient words adapting their semantic field to newer concepts, like Coptic ⲉⲕⲉⲕⲉ “wages,” which goes back to *b3k.w* “works.” New words were also created in Egyptian or borrowed from other cultures. Of course, some words in the lexicon remained semantically unchanged, in some cases even without experiencing major phonological transformations, like the ubiquitous EEg *sdm* “to hear,” which was wonderfully kept in Coptic ⲥⲱⲧⲙ (see *infra* 2.I). As already underlined, the hieroglyphic writing system could also help stressing a particular shade of meaning without automatically leading up to the lexicalization of a new entity.<sup>18</sup>

Figure 9.4 is an attempt to show how old concepts (I) were lexically expressed over time in Egyptian, and how newer concepts (II) were integrated into the lexicon. The term concept, here used for the sake of brevity, is a cover term for all kinds of ideas, artifacts, and SoAs that are lexicalized in a culture. The label “old concept” does not to the least imply that it is genuinely, genetically or ontologically Egyptian, but more succinctly that it was already integrated to the Egyptian culture from the earliest times of the written documentation. It is hardly disputable that the core of the Egyptian lexicon, whatever that means, was indeed continuously enriched by borrowing concepts and loanwords from neighboring cultures before the invention of writing. What I am interested in here is how ancient concepts were lexically expressed during the four-millennia history of Egypto-Coptic, and how newer concepts made their way into the lexicon. Newer concepts could of course emerge from within the Egyptian culture or be borrowed from abroad.

## I. OLD CONCEPTS

As regards concepts already installed in the Egyptian culture, a major division exists between those whose lexical expression remained stable over time (I.a) and those whose expression was transformed or renewed (I.b). In the first case, words were continuously used over a long period of time without significant modification of their semantic field. Formally, one can subdivide this category into two classes according to the presence or absence of modifications in phonology or morphology. The verb *sdm* “to hear, to listen” → Coptic ⲥⲱⲧⲙ is a good illustration of a word which remained in use for centuries without undergoing major changes in its phonological or semantic structure (I.a.1). On the contrary, the phonological structure of *šm* “to go” → Coptic ⲙⲉ, which also remains semantically stable, was more deeply altered (I.a.2), already in later Late Egyptian, as shown by some innovative spellings.<sup>19</sup> Of course, the division in classes should not neces-

<sup>18</sup> For instance, it is very doubtful that  *wrr.t* “the great one,” here the white crown of Upper Egypt, was ever lexicalized as such.

<sup>19</sup> See the spelling  for the infinitive in *Wenamun* (LES 73,9) and other texts from the TIP; Winand 2011: 106.

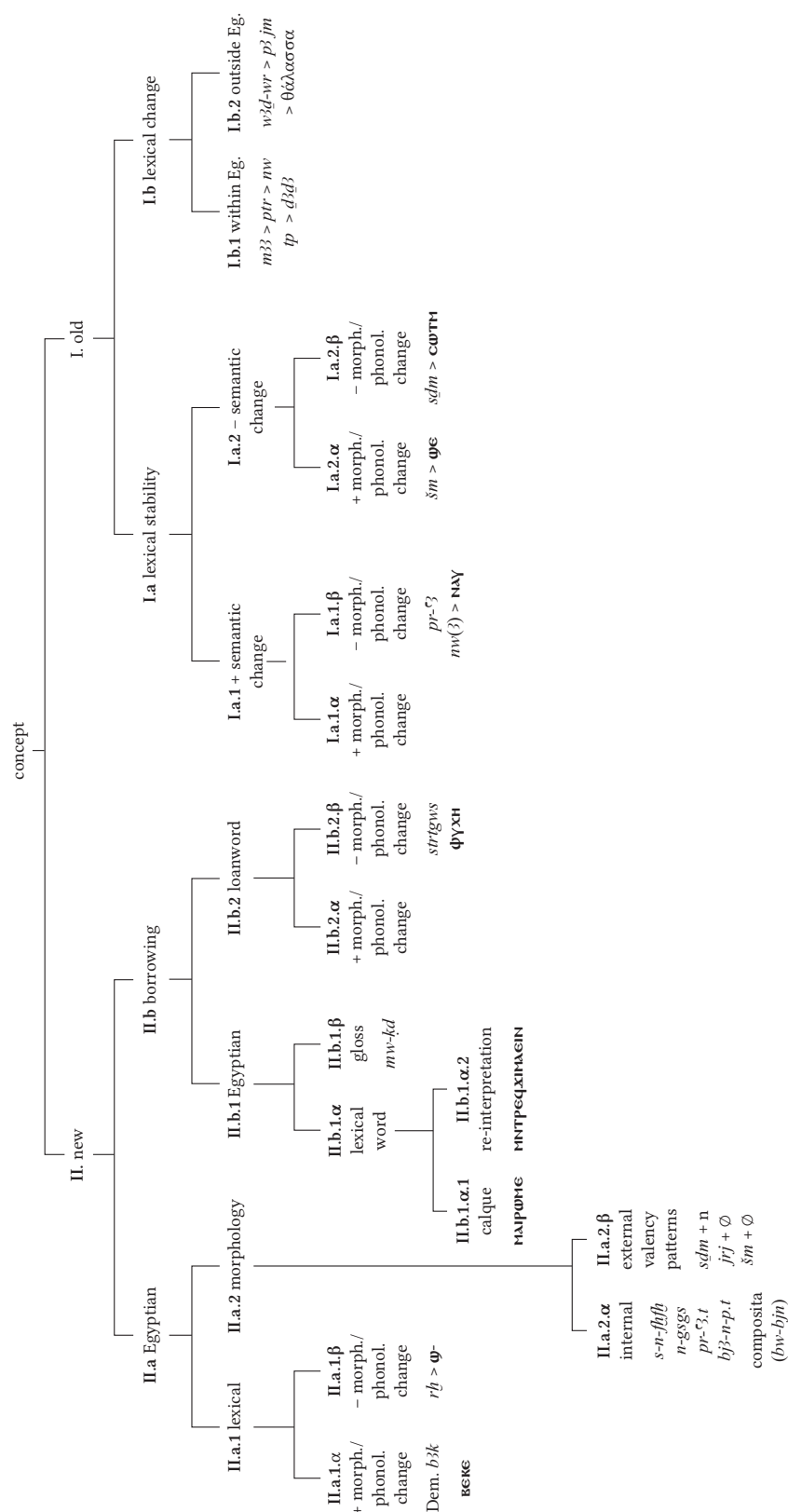


Fig. 9.4 Adapting the lexicon over time.

sarily be understood as a strict binary one, but rather as focal points along a continuous scale. The phonological stability of *sdm*, for instance, is only relative as shown by Coptic **ⲥⲱⲧⲙ** (voiced emphatic → voiceless dental), but felt strongly enough by the scribes to maintain the traditional spelling unchanged until the end of the hieroglyphic tradition.<sup>20</sup>

In other cases, words experienced noticeable changes over time (I.b.1). As already observed in the preceding case, words can formally be more or less transformed. The verb *nw(3)*, which originally was linked to the hunters' activity of looking for their prey, expressed in EEg a particular mode of seeing, involving the full commitment of the agent in the process. In LEg, it expressed the activity of looking at something as opposed to *ptr*, which had taken over the generic activity of seeing from *m33*, before eventually assuming itself this function in Demotic and Coptic (I.a.1.β), thus having experienced over a long period of time a gradual process of agentivity loss.<sup>21</sup>

Old concepts can sometimes be expressed in the course of time by different lexemes without apparent significant semantic changes (I.b). Two options here present themselves, an internal and an external one. In the first case (I.b.1), a concept expressed by an Egyptian word is taken over by another Egyptian word. As already shown, the expression of the generic activity of seeing was successively expressed by *m33* (EEg), *ptr* (LEg and Dem.), and finally *nw* (Dem. and Coptic). The rationale at work in such transformations of the lexicon escapes us most of time.<sup>22</sup> Another well-known example is the substitution of *d3d3* for *tp* "head." The new word, which originally meant "pot," became in LEg by metaphorical extension the usual noun for "head," replacing the older one, *tp*, as would also be the case later for the word "tête" in French from vulgar Latin *testa*, meaning "pot, jug," which replaced classical Latin *caput*.<sup>23</sup>

In the latter case, a foreign word is chosen for expressing a concept already present in the ancient Egyptian culture, and as such lexically expressed by an Egyptian word (I.b.2). This is for instance the case for the sea, which was first expressed by an Egyptian compositum, *w3d-wr*, after a semantic extension of its core meaning (great green water surface → river → lake/sea), before being challenged by *(p3)-jm*, a Semitic word, and finally in Coptic by a Greek word, **θάλασσα**, which became the regular, common word for "sea."

## II. NEWLY INTRODUCED CONCEPTS

The left side of figure 9.4 (II) deals with concepts that were introduced in Egyptian at a historical stage, and needed therefore a lexical expression. For our purpose, it does not

<sup>20</sup> One could also oppose in this respect *h3b* "to send," where the *aleph* was sometimes dropped from the spelling, as is the rule for the class of verbs having the A-3-C scheme.

<sup>21</sup> See also the case of *šp* and *k3mn* for expressing blindness (Winand 2017).

<sup>22</sup> Well-known semantic evolution processes are undoubtedly at work, but other factors can have a strong influence, like dialects (Winand 2022b). See in this respect the regionally conditioned division between **ⲃⲱⲕ** and **ⲙⲣ** for expressing the generic expression of going in Coptic (Peust 1999: 327–328).

<sup>23</sup> Things are never so simple. As "caput" was no longer used for head, it remains the source of many words related to the concept of head, like *décapiter* "to behead," *capitale* "capital," etc.

matter whether these new concepts had their origin within or outside Egyptian culture. For lexically expressing these new realities, Egyptians were basically left with two options: either use the internal resources of their language (II.a), or take a loanword, which was of course the obvious, but not the only possible, solution when the concept was itself imported (II.b). The first option can in turn be divided in two categories. The first one remains in the domain of lexicon, strictly speaking (II.a.1), while the second rather extends the possibilities of the existing lexicon by using grammatical means, *sensu lato* (II.a.2).

Adapting existing vocabulary to new realities by some type of semantic extension was not unknown in Ancient Egyptian. Formally speaking, the word could remain phonologically stable or experience some more or less serious changes.<sup>24</sup> The first case (II.a.1.α) can be illustrated by a very old word, *b3k(w)* “work,” which was used in Demotic and Coptic (ⲃⲉⲕⲉ) to convey the meaning of “wages” in an administrative, technical sense.<sup>25</sup> The second case can be exemplified by the verb *rh*, which is an illustration of an interesting evolutive path (II.a.1.β). For most of its recorded history, *rh* expressed the SoA of acquiring, getting knowledge of (hence, knowing) something. In Coptic, the SoA of knowing (with its pre- and post-phases) was expressed by other lexemes already known in earlier stages, like ⲩⲙ (Coptic ⲉⲓⲙⲉ) and ⲥⲱⲛ (Coptic ⲙⲟⲟⲩⲛ). Old *rh* was nevertheless retained as a modal auxiliary in a strongly reduced phonological form (ϣ-). This last stage was actually the result of a process of specialization, as the epistemic value was already part of the semantics of *rh* previously.

The second possibility was to create a new word, by using internal Egyptian resources.<sup>26</sup> As a member of the Afro-Asiatic phylum, Ancient Egyptian originally had a system of root/stem derivations for creating its vocabulary. Contrary to what can be observed in Semitic languages, where this system of derivation was productively maintained, it was progressively abandoned in Ancient Egyptian. This notwithstanding, some words could still be created by using ancient *Nominalbildung* patterns. This however seems to be restricted to some highly educated people from the elite circles and to specific textual genres. Examples of this are 1) the creation of new causative verbs in Ptolemaic following the old derivative pattern *s-* at a time when the new analytic formation (*rdj* + subjunctive) had already prevailed for a long time; 2) the creation of new verbs based on the rare and sophisticated *n*-ABAB pattern, like *n-fift* attested in the *Tale of Sinuhe* or *n-gsgs* in the 18th

<sup>24</sup> I leave here aside marginal processes like semantic specialization obtained by creating a new lexeme with the opposite gender mark, like *dmj.t* vs. *dmj*, or *dw3.t* vs. *dw3*. On this, see Neven 2013; Chantraine 2018.

<sup>25</sup> Examples are numerous: e.g., ⲁⲉⲓⲕ “consecration (of church)” ← ⲩⲕ “kingly solemn entry” (Wb. 1,232,10).

<sup>26</sup> Societies can of course first consider the internal resources provided by their own language. The Ancient Egyptian lexicon was basically shaped by a system of derivations from a set of roots, very much like what has been extensively studied in Semitic languages. This way of increasing the lexicon was however no longer very productive already in Earlier Egyptian, and became almost completely lost in Later Egyptian (except for some refined compositions in *Egyptien de tradition*). For instance, the causative with prefix *s-* was replaced by a periphrastic construction in Later Egyptian, but was kept very much alive in Ptolemaic *Egyptien de tradition*, with new formations.

dynasty.<sup>27</sup> To this, one can also add several composita whose first element belongs to a restricted set of words, like *jwtj* (negative relative pronoun),<sup>28</sup> *bw* “place,”<sup>29</sup> *md.t* “matter, affair,”<sup>30</sup> *r3-ʿ* “activity,”<sup>31</sup> *rmṯ* “man,” *s.t* “place,”<sup>32</sup> or *kj* “shape, manner,”<sup>33</sup> which would be largely desemanticized to function like prefixes in noun formation in Later Egyptian.

New concepts could also—and very frequently did—come from different cultures ancient Egyptians happened to come across.<sup>34</sup> Very often new concepts are borrowed together with the names used to call them, i.e., loanwords (II.b.2). But it does need to be so. Cultures can also translate, adapt, or reformulate in their own languages the original expressions that designate the newly borrowed concept (II.b.1).

Loanwords in Ancient Egyptian have already received a lot of attention in the past, with a special focus on the Semitic words during the NK and the TIP, and the Greek words in Coptic (and to some extent in Demotic). As already observed for the other cases, morpho-phonological adaptation can happen during the process (II.b.2.β). This is, for instance, the case with στρατηγός (Demotic *strtgws*), and for countless Greek words when they entered the Coptic vocabulary: e.g., ἄλλὰ → ἀλλὰ “but,” ψυχή → ψυχή “soul,” κύριος → κύριος “master,” λίτρα → λίτρα “liter,” μή → μή (negation). On the other hand, words could also be morphologically integrated in Egyptian (II.b.2.α), as illustrated by some Semitic verbs that were used with typical LEg flexions like *bnd* “to dress,”<sup>35</sup> or *prh* “to flourish.”<sup>36</sup>

In some cases, a word or an expression was created in Egyptian to name the newly borrowed concept. While the new concept was generally properly lexicalized (II.b.1.α), in some cases it remained outside the lexicon, being expressed by a periphrasis, or glossed (II.b.1.β).

It is appropriate to mention here interesting insights on how Greek concepts entered the Coptic lexicon, as different scenarios have been observed. Besides the obvious borrowing of xenisms, other phenomena would rightly deserve an in-depth discussion, like Greek

<sup>27</sup> On *nftft* “to make untangled, unravel,” see Vernus 2014; on *ngsgs* “to overflow,” see Paksi 2020: 191.

<sup>28</sup> E.g., *jwtj-ntr* “godless.”

<sup>29</sup> E.g., *bw-dw* “evil (lit. place of evil).”

<sup>30</sup> E.g., *md.t rmṯ rh* “experience (lit. affair of the man who knows);” *md.t rmṯ ʿ3* “richness (lit. affair of the great man);” in combination with *jwtj*: *md.t (n) jwtj mwt* “immortality (lit. affair of the man who does not die).”

<sup>31</sup> E.g., *r3-ʿ-b3k* “building site (lit. work in progress).”

<sup>32</sup> E.g., *s.t-m3ʿ.t* “(lit.) place of truth,” *s.t-nfrw* “(lit.) place of perfection,” *s.t-(n)-ms.t* → *cemici* “(lit.) place of birth.”

<sup>33</sup> E.g., Dem. *gj-n-wnm* “food (lit. the manner of eating).”

<sup>34</sup> Egyptian was never hermetically closed to foreign influence, as was the case for instance of classical Chinese. For the Semitic words that entered the Egyptian lexicon in the New Kingdom, see Winand 2017; Kilani 2019; for the Greek loanwords in Coptic, see the collective volume edited by Grossman et al. 2017.

<sup>35</sup> Old perfective: *bnd.kwj* (pBM EA 10687, r° 3,2), *bnd.tj* (pLeiden AMS 23b, r° ii,2).

<sup>36</sup> *prh.n.f*: pLeiden I 344, v° VI,7.

words challenging existing Coptic words for the same concept, different Greek words competing for the same concept in Coptic, and dialect differences.<sup>37</sup>

The absence of a proper word in the lexicon in relation with a borrowed concept might *a priori* seem counter-intuitive, but it is actually very common. To start with, from a broader perspective, people do not necessarily master all the lexical subtleties of their own language and frequently resort to periphrasis for expressing what they have in mind. An example of this in Egyptian is offered by a well-known passage from the *Doomed Prince*, when the young boy wants to know how to call an animal—actually a dog—he is seeing for the first time.

Ex. 3: *jḥ p3 nty ḥr šm.t m-s3 p3 s ʿ3*  
 “What is that which is walking behind the great person?”  
 (*Doomed Prince*, v° 4,8)

Ancient Egyptian not infrequently used periphrases for concepts—generally abstract ones—that were not lexicalized. Here is a selection of relevant examples: the careful one is in Egyptian “the one who is not neglectful” *p3 nty bn sw ḥr jr.t ḥm* (pChB 4, v° 2,2); the benefactor is “the one who acts for him” *p3 nty ḥr jr.t n.f* (pChB 4, v° 4,11); the obedient one is “the one who bends himself” *p3 nty ḥr ḥn.f* (LEM 124,10); what is captured by one word in French, “*le nécessaire*,” is expressed in Egyptian by a periphrasis *p3 nty nb š3w jr.t.f* like in English “what needs to be done” (LRL 20,8); the suppliant is “the one who makes a request” *p3 nty ḥr dbḥ spr.w* (*Qadesh Poem* §180); someone’s actions are “what one does” as in *p3 nty twk ḥr jr.t.f* “what you do” (KRI 6,817,16); and so on.<sup>38</sup>

Translating the semantic components in the host language, that is, making a calque (II.b.1.α.1),<sup>39</sup> is another common process when borrowing a foreign word. In the following examples, the Coptic words are the almost exact translation of the Greek model:

**ⲙⲁⲓ-ⲣⲟⲙⲉ** “philanthropist” (*mrj rmt* “who loves people,” φιλόανθρωπος);  
**ⲁⲧⲛⲟⲩⲧⲉ** “atheist” (*jwty ntr<.f>* “the one whose god does not exist,” ἄθεος);  
**ⲙⲏⲧ-ⲗⲁⲥ-ⲥⲛⲁⲩ** “duplicity” (*md.t ns sn* “double-tonguedness,” διγλωσσία);  
**ⲕⲣⲟⲟⲩ-ⲛ-ⲕⲟⲟⲩ** “quadrangular” (*jfd n kʿh* “four of corner,” τετραγώνος);  
**ⲡⲧⲁⲓⲟⲩ-ⲛ-ⲁⲓⲟⲩ** “Pentecost” (the [feast of]-fifty-of-day);  
**ⲙⲏⲧ-ⲁⲧ-ⲁⲩⲁⲩ** “poverty” (*md.t n jwty hnw(.f)* “the matter of the one who has no tool/  
 goods, ἀκτημοσύνη < ἄ- + κτῆμα).

<sup>37</sup> As noted by Colin (2015: 57) *à propos* the transposition of the title of Augustus in Egyptian, it is not exceptional to have more than one “translation” equivalent: Σεβαστός > *sbsts* vs. *ntj ḥwj* vs. **ⲉⲧⲥⲱⲧⲏ**. For the Coptic equivalent (found on an inscription dated AD 609/10), one can of course make a parallel with standard divine epitheta like that of Amun-who-listens-to prayers (*jmn p3 nty (ḥr) sdm nh.t*).

<sup>38</sup> Formally, periphraseis with a relative clause become frequent in LEg instead of adjectives or participles: *p3 nty wsr* “the strong one” (HO 5,1), *mntk p3 nty ḥr jr.t* “you are the one who acts” (pAnastasi II, 2,10).

<sup>39</sup> On the concept of calque in lexical borrowing, see Murphy (2010: 17).

Finally, a borrowed concept can prompt the creation of a new word after a semantic analysis (II.b.1.α.2). This has not been much discussed in the literature—and certainly not for Coptic. In this case, a new concept is analyzed into a set of semantic features, which are then translated in the host language. For instance, the word δεσμοτήριον “prison” was interpreted as the place of binding (**MA-M-MOYP** ← *mʔ n mr*), which admittedly retains something of the etymology of the Greek model (cf. δεσμός “bondage”). This is however no longer the case with the following example; indeed, **MNT-PQC-XI-MΛEIN** “divination,” which translates Greek οἰώνισμα, derived from a stem meaning bird,<sup>40</sup> is the result of a reanalysis of the divination procedure as a “matter of the one who takes signs (*omina*):” *md.t jrj.f Bj mnw*. Poverty was along the same mode of reasoning interpreted as a matter concerning the one who has no goods (**MNT-AT-2NAY**).

### 3. EXTENDING THE LEXICON

As already mentioned, in Later Egyptian (i.e., Late Egyptian, Demotic, and Coptic), the old way of extending the lexicon by deriving new words from a stock of ancient roots fell out of use. Instead, Egyptian increasingly relied upon compound expressions that resulted from a semantic analysis of what needed to be expressed. Complex formations like **MNT-PQC-XI-N-6ONC** “oppression” and **MA-N-X(I)-IOOP** “place of ferry, bridge” could not be easily found in Earlier Egyptian. The former one can be related to *md.t jrj.f Bj n kns* “(lit.) matter/ of the one who/takes/violence,” the latter to *mʔ nj d3j jtrw* “(lit.) place/of/crossing/river.”

In this new type of formation, whose first exploratory phases can be spotted in Late Egyptian, if not earlier, Coptic favored a restricted set of elements expressing basic ideas like place, human, activity, matter, etc. These elements were mainly used as prefixes, before the head noun. Table 9.1 gives a list of the main prefixes used in Coptic with their prototypes in older stages.

The origin of these Coptic prefixes can be traced back to older stages of Egyptian:

- α(N)** “place” ← *ʔ nj*: not very much used in LEg except in *ʔ rsj / mhtj* “southern / northern district;”
- AT** “in-/un-, -less” ← *jwty* privative suffix (originally a negative relative pronoun, which was later lexicalized):<sup>41</sup> see already LEg *jwty-h3tj.f* “heartless (lit. “he whose heart does not exist”) → Coptic **AT2HT**; the suffix is still productive in Coptic, as shown by new composita built on Greek words (**ATΦΥΧΗ** “soulless”);<sup>42</sup>
- αϞ** “numerous” ← *ʔ33*: **ϞϞMBAΛ** “with numerous eyes” for rendering Greek nouns with the prefix πολυ- “many;” cf. LEg *ʔ33 (m)* “numerous in, rich of” (*ʔ33 h.t* “rich” [lit. abundant in goods]);

<sup>40</sup> Proto Indo-European \*h<sub>2</sub>éwis “bird” (cf. Latin *avis* “bird”); see Beekes 2010.

<sup>41</sup> See Malaise & Winand 1999: §210–213.

<sup>42</sup> During the lexicalization process, morphological adaptations sometimes happen: in **AT2HT**, for instance, the original suffix pronoun, which was grammatically required, has been dropped. See already in LEg *jwty ph.tj/ph.tj.f* “powerless;” *jwty* was also lexicalized as an autonomous noun meaning someone who has nothing (oPetrie 11, r° 3; see also the formula *ntt jwtt* “what exists and does not exist” (pLeyde I 350, V,3).

Table 9.1 Set of the main prefixes used in nominal compounds in Coptic.

|       |                    |                                |
|-------|--------------------|--------------------------------|
| ⲁ(ⲛ)  | “place”            | ← ⲉ ⲛⲓ                         |
| ⲁⲧ    | “in-/un-, -less”   | ← <i>jwty</i> privative suffix |
| ⲁⲱ    | “numerous”         | ← ⲉⲃⲓ                          |
| ⲃⲱ    | “tree”             | ← <i>bʒ.t</i>                  |
| ⲙⲁ    | “place, location”  | ← <i>mʒʕ</i>                   |
| ⲙⲛⲧ   | “matter, property” | ← <i>md.t n</i>                |
| (ⲛ)ⲉⲧ | “the one who”      | ← <i>pʒ-nty</i>                |
| ⲛⲁ    | “the one of”       | ← <i>pʒ-n</i>                  |
| ⲣⲙⲛ   | “man”              | ← <i>rmt nj</i>                |
| ⲣⲉⲓ   | “the one who does” | ← <i>jr.jf</i>                 |
| ⲓⲁ    | “man”              | ← <i>z</i>                     |
| ⲱⲟⲩ   | “worth, -able”     | ← <i>šʒw</i>                   |
| ⲉⲓ-ⲛ  | “form of”          | ← <i>kj nj</i>                 |
| ⲉⲛ    | “within”           | ← ( <i>r</i> )- <i>hnw</i>     |

- ⲃⲱ** “tree” ← *bʒ.t*: already attested in composition in Demotic (e.g., *bʒ.t hbnj* “ebony”), but still used with its original meaning “bush” in LEg;
- ⲙⲁ** “place, location” ← *mʒʕ*: this formation, not attested before Demotic (*mʒ-n-ⲉⲛⲓ* “living room,” *mʒʕ-n-swr* “drinking place”) and whose etymology remains unclear diachronically succeeds to older composita built on *s.t* “seat, place” (e.g., *s.t-jb* “predilection,” *s.t-ⲉⲓ* “standing place, halt”),<sup>43</sup> exceedingly used in Coptic in different morphological patterns for translating Greek words: **ⲙⲁ-ⲛ-ⲱⲱⲛⲉ** “dwelling place;”
- ⲙⲛⲧ** “matter, property” ← *md.t n*: Eg. *md.t* originally means “word, speech” (cf. *md.t n km.t* “Egyptian” as a language; see Coptic **ⲙⲛⲧ-ⲉⲣⲱⲙⲁⲓⲟⲥ** “Latin”), before expressing the general idea of “matter” (cf. *md.wt ʕʒ.wt* “serious, important matters”); already used to form abstract nouns in Eg.: *md.t nfr.t* “good action,” *md.t bjn.t* “evil, bad action,” *md.t sn.nw.t* “duplicity” (lit. “double word”); in Coptic for expressing abstraction (Layton 2011: §109): **ⲙⲛⲧ-ⲟⲩⲁ** “unity;”
- (ⲛ)ⲉⲧ “the one who” ← *pʒ-nty*: very common in Coptic with some statives (**ⲛⲉⲧ-ⲟⲩⲁⲁⲃ** “holy” ← *pʒ nty wʕb.w* “the one who is pure,” **ⲛⲉⲧ-ⲉⲛⲓ** “secret” ← *pʒ nty hʒp.w* “that which is hidden”),<sup>44</sup> cf. LEg *nkt nb nty nfr* “all good stuff,” **ⲉⲓ-ⲣⲙⲓⲓⲱⲩⲉⲛⲓ** (*w*) “a living person” (lit. a person who is living);<sup>45</sup>

43 But see Bohairic **ⲉⲙⲓⲓⲓ** “place of birth” ← *s.t n msj.t* vs. **ⲙⲁⲙⲓⲓ**.

44 Cf. *nʒy.k md.t nty hʒp* “your secret words” (pBrooklyn 47.218.135, 5,14).

45 Cf. *šb jw.f hʒp* “a secret reward” (pBrooklyn 47.218.135, 5,13).

- πΑ** “the one of” ← *p3-n*: this formation is exceedingly frequent in onomastics, already in LEg;
- PM(N)** “man” ← *rmt (nj)* + noun: see already *rmt-js.t* “crewman,” *rmt-n-km.t* “Egyptian” (Coptic **PMNKHMЄ**), but also with different types of extension like *rmt* + adjective (*rmt-ʕ3* “a rich man” → Coptic **PMMAO**) or *rmt* + *jw*-headed phrase (*rmt-jw.f-mwt* “a dead man” → Coptic **PMЄQMAAYT**);
- PEQ** “the one who does” ← *jrj.f: p3 (rmt) ntj / jw.f* + verb of quality for replacing adjectives (*rmt jw.f nfr:w* “a good man”);
- CA** “man” ← *z*: very common in Coptic for function names (**CANAQ** “butcher” \**s-n-jw.f* “flesh-man”), already attested in EEg (e.g., *s-n-wsrt* “the one of the goddess Weseret,” i.e., Senuseret), but not much in use in LEg; in Demotic, however, attested in occupation names: *s-n-ʕk* “baker (lit. man of the bread);”
- WOY** “worth, -able” ← *š3w: / WOYMCTE* “appalling” (lit. worth of detestation); cf. LEg *š3w-mw.t* “which deserves death;”
- OI-N** “form of” ← *kj nj*: for expressing types of activity (**OI-N-OYWM** “eating,” also “food”), see Demotic *gj-n-wnm* “food,” *gj-n-swr* “beverage,” *gj-n-ʕh* “living means;” in LEg, the lexicalization is under way but not completely achieved, as shown by the possibility of having *nb* “every, all” inserted between the components: *p3 kj nb n mtn*, *p3 kj nb n gws* (pCGC 58032, 23).<sup>46</sup>
- 2N** “within” ← (*r*)-*hnw*: in adverbial expressions (**2NOY6EPH** “quickly”).

As is clear from the following examples, these prefixes can be easily combined to form composita that can be highly sophisticated, as shown by how apparently simple notions like “lie” or “silence” were reanalyzed. The former can be expressed in Coptic by **MNT-PEQ-XЄ-WAXЄ**, that is literally “the property of the one who does say a discourse” (← \**md.t jrj.f dd sdd*), to be understood as “the one who speaks too much,” which was apparently interpreted as a possible cause of lying.<sup>47</sup> For the latter, Coptic has the compositum **MNT-PEQ-KA-PW-Q**, that is literally “the property of the one who does put down his mouth” (← \**md.t jrj.f h3ʕ r(3).f*).

Coptic also frequently used in postposition, after the head noun, **2OOYT** “male” and **C2IME** “female” to mark gender, as illustrated by the pair **BAAMT-2OOYT** “goat” (lit. goat-male) vs. **BAAMTE N-C2IME** “goat” (lit. goat-female).<sup>48</sup> This formation was already known in Late Egyptian, as shown in the Hittite Treaty or the Oracular Amuletic Decrees:

- Ex. 4: *h3 <n> ntr m ntr:w ʕh3wty m ntr:w hm.t*  
 “thousands of gods, male gods and female gods” (*KRI* II, 229,12)<sup>49</sup>

<sup>46</sup> Functionally, *kj* seems to take over from *shr-n: jr:[f p3] kj n smy m-[b3h] p3-rʕ [nty jw].fr jr:f* (pVandier 2,13). In Demotic, a *gj*-headed phrase sometimes functions like a circumstantial phrase: *mtw.f dd n.j p3 gj-n di.t 3k p3 dmj j.jr:w* “and he would tell me how the city was destroyed (lit. the way of letting the city be destroyed they did)” (pRylands IX, 1,7–8).

<sup>47</sup> Compare with **CA-N-MNT-N-OYX** “liar” (lit. “the man of the property of false” ← \**z n md.t n ʕd3*).

<sup>48</sup> Cf. well-known formations like he-dog vs. she-dog in English.

<sup>49</sup> See also the opposition in Coptic between **NTHP N2OOYT** and **ENTHP NC2IME** (Vycichl 1983: 145).

Table 9.2 Correlations between lexical Coptic prefixes and hieroglyphic classifiers.

|         |                    |                                                                                                                                                                                                                                                                |
|---------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ⲁ(ⲛ)    | “place”            |                                                                                                                                                                              |
| ⲁⲧ-     | “in-/un-, -less”   |  ,  ,  |
| ⲁⲱ-     | “numerous”         |                                                                                           |
| ⲃⲱ      | “tree”             |                                                                                                                                                                              |
| ⲙⲁ-     | “place, location”  |  ,  ,  |
| ⲙⲛⲧ-    | “matter, property” |                                                                                                                                                                              |
| (ⲡ-)ⲉⲧ- | “the one who”      |                                                                                                                                                                              |
| ⲡⲁ-     | “the one of”       |                                                                                                                                                                              |
| ⲡⲙⲛ-    | “man”              |                                                                                                                                                                              |
| ⲡⲉⲓ-    | “the one who does” |  ,                                                                                        |
| ⲥⲁ-     | “man”              |                                                                                                                                                                              |
| ⲱⲗ/ⲱⲟϥ- | “worth, -able”     |                                                                                                                                                                             |
| ⲃⲓ-ⲛ    | “form of”          |                                                                                                                                                                            |
| ⲉⲛ-     | “within”           |                                                                                                                                                                            |
| ⲥⲓⲙⲉ    | “woman”            |                                                                                                                                                                            |
| ⲉⲟⲟϥⲧ   | “man”              |                                                                                                                                                                            |

While composita formed with this restricted set of prefixes are exceedingly common in Coptic, other types of composition are attested as well, based on the same principles of semantic (re)analysis, with metaphoric expressions sometimes playing a significant role. In the following list of examples, the semantic gloss has been provided in parenthesis. Besides another illustration of the use of ⲉⲟⲟϥⲧ “male” and ⲥⲓⲙⲉ “female” for expressing gender, the last two examples very clearly show how what is seen as two separate notions in English was conceived of as a single entity with two declensions in Coptic according to gender:

- ⲁⲗ-ⲙ-ⲡⲉ “hail” (pebble of the sky);
- ⲁⲓ-ⲛ-ⲉⲃⲓⲱ “bee” (fly of the honey);
- ⲉⲧ-ⲥⲁ-ⲡ-ⲉⲥⲛⲧ “inferior” (what is close to the ground);
- ⲙⲁⲡ-ⲟϥⲟ(ⲟ)ⲥⲉ “jaw” (bond of mastication);
- ⲡ-ⲉⲛⲧ-ⲁⲓ-ⲙⲟϥ “dead man” (the one who has passed away);
- ⲡ-ⲡⲉⲧ-ⲛⲁⲛⲟϥ-ⲓ “to make good” (to do what is good,” εὐεργετεῖν);
- ⲥⲙⲉ-ⲛ-ⲡⲁⲧ “tibia” (stick of the leg);

**CMOT-N-200YT** “testicles” (aspect of the male);

**CMOT-N-NE-210ME** “menstruation” (aspect of the female).

Now, it should be pointed out that what was expressed morphologically (< lexically) in Coptic could actually be conveyed in earlier stages of Egyptian by its graphic system, more precisely by using a generic classifier. Table 9.2 shows possible graphemic correspondents in “hieroglyphic Egyptian” to the Coptic prefixes already discussed.

#### SOME TYPOLOGICAL CONNEXIONS WITH CHINESE

The process of lexical creation starting with a semantic analysis of a borrowed concept followed by a lexical reconstruction is not without parallels. It is tempting indeed to make connections with the system used in other languages, as for instance in Chinese. The case of how the idea of computer is expressed in different languages will offer some useful introduction to the discussion. In English, the word was created in reference to the idea of computing, which is related to calculus. The word seems to enter the lexicon around 1640, meaning “one who calculates, a reckoner, one whose occupation is to make arithmetical calculations.” The word was then applied in 1897 to whatever machine able to calculate. The modern use, that is, “a programmable digital electronic device for performing mathematical or logical operations,” is first attested in 1945. The word then became extremely popular and was borrowed in many languages, like Russian or Japanese.

In other languages, the idea of computer was kept, but translated as a calque. This is the case in academic Arabic **حاسوب** *hasub*, or in Hebrew **מַחְשֵׁב** *makhchev*. In these two languages, the root is connected to ancient Egyptian *ḥsb*, which precisely means to calculate. Thus, a possible equivalent for computer in hieroglyphic writing would be something like  , that is, a chain of phonograms to write the morphological root, completed of course by the appropriate classifier. In French, the new machine was the subject of an intense intellectual reflection. It is the Latinist and philologist Jacques Perret who suggested to IBM to brand the new machine *ordinateur*, which means a device that brings order. Interestingly enough, it was the people from IBM that wanted to find a better word, for they considered that computer or “*calculateur*,” which would have been the exact French equivalent, was too restrictive to do justice to all the possibilities of the new machine (Guiraud 1959). Computer was nevertheless definitively retained in English. In Chinese, the concept was reanalyzed and split into two semantic components, electricity and brain: **diànnǎo** (电脑) /electricity + brain/.

As it seems, instead of borrowing or creating words that would be semantically quite opaque, Chinese speakers obviously prefer to analyze a complex idea into key basic concepts.<sup>50</sup> The word for “computer” combines two components: electricity and brain. When associated to the word “pool,” electricity creates a new compositum for expressing the concept of battery (**diànchí**), that is, a pool of electricity, which is just fine (电池). The

<sup>50</sup> The way Chinese create words was celebrated from the very beginning, already in the 16th century; see for instance P. du Halde cited by Warburton 1765: III, 87–88.

component pool is also found in a complex formation for expressing the idea of a swimming pool: *yǒuyǒngchí* (游泳池 [water + swim + pool]). The second component of the word for computer, i.e., *nǎo* “brain,” can be combined with a word meaning pocket to form the compound 脑袋 [brain + pocket] *nǎodài* “head.” The next example shows some variation with the basic element *dǎ* (打) for strike. Combined with the word for electricity, already introduced, and the word for speech, it creates a new compound for expressing the idea of calling by phone: 打电话 (*dǎ diànhuà*), 电话 meaning “phone.” If one now introduces the very common element 机 *jī*, meaning “tool,” dozens of new words can be created which all share the idea of /tool, utensil/. Thus, a lighter is a tool for striking fire (打火机 *dǎhuǒjī* [strike + fire + tool, device]), and a printer is a tool for striking a stamp, an imprint (打印机 *dǎyìnjī* [strike + imprint, stamp + tool]). With its strong visual shape at the end of the word, 机 looks like a hieroglyphic classifier. Or rather, it makes a bridge between linguistic classifiers, as they are known in certain languages, and graphic classifiers that are limited to the graphic system, as is the case in Egyptian. Figure 9.5 shows how these basic semantic elements combine to express complex ideas.

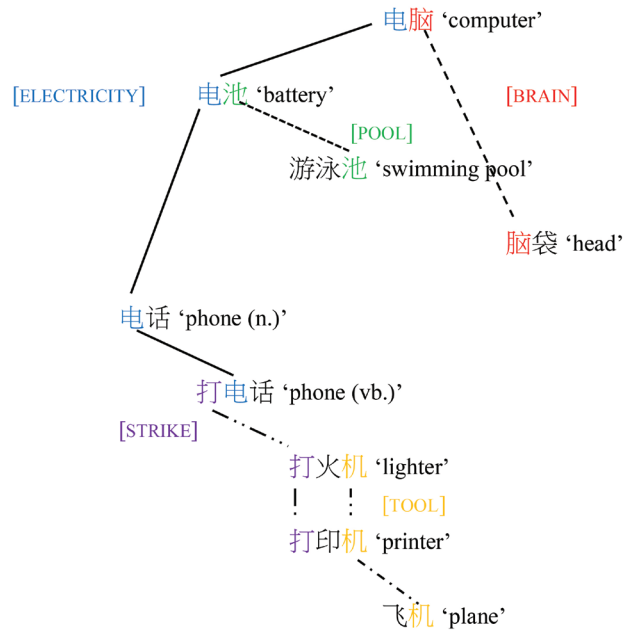


Fig. 9.5 Linguistic classifiers in Chinese.

#### 4. SOME WORDS OF CONCLUSION WITH A PERSPECTIVE

Language is a privileged vehicle for classifying and organizing the world. The lexicon has for obvious reasons received most of the scholarly attention. As I alluded to in this article, albeit very briefly, grammar is also worth looking at in this respect.<sup>51</sup> While it does not provide a fine-grained classification, it nonetheless deserves a closer attention because it *structurally* shapes one's representations of the world. Coding a semantic classification with grammar is indeed no trivial matter, for it clearly indicates how relevant a semantic class is for a community of speakers.

For languages that are supported by non-alphabetic systems, writing can also play a significant role. The number of signs in Chinese (sometimes estimated around 75,000) was a clear indication in the Western reception in the 17th and 18th centuries that there

<sup>51</sup> See Winand 2006 and 2021.

were as many signs as living beings, natural entities, objects, ideas, and concepts to be expressed. It introduced the idea that Chinese writing was completely disconnected from any linguistic expression, as seemed implied by the fact that it was used by different people who did not speak Chinese.<sup>52</sup>

In Later Egyptian, one can observe an increasing move to create complex expressions, *composita*, which result from a semantic analysis of new realities and concepts that entered into the lexicon. This new type of *Nominalbildung* is a natural consequence of the gradual disappearance of the set of pre- and suffixes, and the loss of the older, Afro-asiatic system of morphological derivation.

In the following, I suggest some possible parallels, from a typological perspective—this must be strongly emphasized—between “Pharaonic” Egyptian as supported by the hieroglyphic writing and alphabetic Coptic. The point here is to show that both phases of the language came up with typologically comparable solutions for expressing very close concepts. My first example deals with the concept of affliction.

affliction in EEg: *gmw*   [to be weary + bad/low]  
*nkm*   [division + bad/low]  
 affliction in Coptic: **πΩΩ-Ν-ΖΗΤ** (lit.) division of the heart  
**ΜΚΑΖ Ν ΖΗΤ** sorrow of the heart

In pre-Coptic Egyptian, two basic nouns were used: *gmw* and *nkm*. Both are usually written with two semantic classifiers. The last, generic one is the swallow (G37), which is very common to express everything that is low, little or short, hence bad or evil.<sup>53</sup> As first classifier, *gmw* takes the weary man (A7), which expresses the idea of feebleness or weakness, both physically and psychologically, while *nkm* is more often associated with the crossed sticks (Z9), which globally convey the idea of separation, division, and opposition. As such, the classifiers give a very general idea of how *gmw* and *nkm* were perceived by the ancient Egyptians, a bad feeling that puts you down (*gmw*) or breaks you down (*nkm*). As it seems, the same semantic halo was retained in Coptic and transferred from the graphical to the lexical level. Thus **πΩΩ-Ν-ΖΗΤ** is arguably a close equivalent of *nkm*, while **ΜΚΑΖ Ν ΖΗΤ** is not very distant from *gmw*.

My second example is provided by the verb *rsw* “to be vigilant.” Written with the eye classifier (D6), it links the idea of being vigilant with the attitude of keeping one’s eye wide open. Once again, as part of the spelling of *rsw*, the eye classifier links the activity of being vigilant to a particular body attitude without being part of its lexical expression. This is however the case with Coptic **ϣϣ-ϥⲓⲁⲧ-ϥⲓⲣⲁⲓ**, which literally means “to raise an eye upward.”

to be vigilant in EEg: *rsw* [to keep an eye open]   
 to be vigilant in Coptic: **ϣϣ-ϥⲓⲁⲧ-ϥⲓⲣⲁⲓ** to raise an eye upon

<sup>52</sup> Winand, forthcoming d. This explains why Chinese writing was once considered by the likes of Wilkins and Leibniz as a possible candidate to universal writing.

<sup>53</sup> See David 2000.

Table 9.3 Coptic composita and their ancient Egyptian predecessors.

| Egyptian       | Translation      | Hieroglyphic spelling | Coptic equivalent     |
|----------------|------------------|-----------------------|-----------------------|
| <i>jmnt.t</i>  | “occident”       |                       | MANZΩTTI              |
| <i>ʿ.t-sb3</i> | “school”         |                       | MANXICBΩ              |
| <i>htm</i>     | “prison”         |                       | MA MMOY P, MANCΩN2    |
| <i>mnj.t</i>   | “haven, pasture” |                       | MANXICIOOP            |
| <i>ʿh3wty</i>  | “warrior”        |                       | PƐQXIMAA2             |
| <i>jhwty</i>   | “farmer”         |                       | PMNCΩP                |
| <i>j3w.w</i>   | “old man”        |                       | PMNAC                 |
| <i>b3kw</i>    | “wage earner”    |                       | PMBEKE                |
| <i>nfr.t</i>   | “good” (n.)      |                       | MNTNOYCPƐ             |
| <i>htm</i>     | “ignorance”      |                       | MNTATEIME             |
| <i>sn</i>      | “brother”        |                       | CNHY N2OOYT (sg CON)  |
| <i>sn.t</i>    | “sister”         |                       | CNHY NC2IME (sg CΩNE) |

In this case, one could of course suggest that **ϣι-ειατ-ε2ραι** is actually a calque from the Greek expression ὀφθαλμὸν αἶρειν. Hopefully, the evidence is not too limited, as shown by a small list of words for naming trees. In Egyptian, they are systematically written with a specific classifier (M1). In Coptic, the very same words are formed with the element **ΒΩ**, coming from Egyptian *b3.t* “bush,” which was used as a lexical classifier for all types of trees.

|  |                        |             |
|--|------------------------|-------------|
|  | <i>tr.t</i> “willow”   | ΒΩ-N-ΤΩΡƐ   |
|  | <i>tpḥ</i> “apple”     | ΒΩ-N-ΧΕΜΠƐ2 |
|  | <i>dt</i> “olive-tree” | ΒΩ-N-ΧΟΕIT  |

In the next example, the word *ʿhʿ.t* “funerary chapel” is written with two classifiers [MOVING LEGS + HOUSE], which resurfaced in Coptic, even if the meaning “standing place” is no longer exactly the same (cf. στάσις in *Daniel* 8,17).

|  |                                |                                                                                                                                                                                                                                                          |
|--|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <i>ʿhʿ.t</i> “funerary chapel” | MA-N-A2Ɛ ƐPAT (lit. “place [  ] where one stands [  ] on one’s legs, station”) |
|--|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

As it turns out, a systematic typological comparative study between the graphic level and the lexical means could indeed be highly rewarding. Table 9.3 provides a list of simple nouns with their Coptic equivalents. I here limited myself to the Coptic nouns whose first element belongs to the set of prefixes that have already been discussed.

Table 9.4 Possible typological correlations between hieroglyphic classifiers and Coptic prefixes.

|                |            |                                                                                                                                                                     |
|----------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MA</b>      | [place]    |                                                                                    |
| <b>PEQ</b>     | [actor]    |   |
| <b>PM, PMN</b> | [human]    |                                                                                    |
| <b>N2OOYT</b>  | [man]      |                                                                                    |
| <b>NC2IME</b>  | [woman]    |                                                                                    |
| <b>MNT</b>     | [abstract] |                                                                                    |
| <b>AT</b>      | [negation] |  <sup>a</sup>                                                                      |

<sup>a</sup> The presence of the classifier  suggests that ignorance was analyzed as the absence of knowledge, which is transparent in the Coptic equivalent **MNT-AT-IME**.

The correspondences in Table 9.4 can be made between the semantic classifiers in the hieroglyphic writing and the first element of the Coptic *composita*.

One should not take the last section of this study for what it is not. The system of *graphic* classifiers that was used in the hieroglyphic writing was of course never mechanically and consciously replaced by a new system of *linguistic* classifiers in Coptic. It is rather tentatively suggested that some common cognitive processes could independently be at work, which eventually materialized in different ways.

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