

# A Comparison between Classifier Languages and Classifier Script: The Case of Ancient Egyptian

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## 1. *Introduction*

Nearly the last words I heard from Prof. Polotsky on my last meeting with him were: “The young generation should go back to the old masters.” There, he said, they would find many of the ideas which were now recycled or hailed as new. It was vital to return to them, both to do them justice, and to refresh our own vision with the primacy of theirs.

In this article I follow the wishes of the “father of the ‘Jerusalem School’” by returning to the “father of modern Egyptology,” Jean-François Champollion, whose fertility of imagination and invention gave him a degree of empathy with the past which enabled him not only to crack the code of the language, but to reach startlingly accurate conclusions as to what may be called the “workings of the Egyptian mind”; these conclusions still stand today, and have often been repeated, unattributed, by scholars great and small through the generations. I shall concentrate on the phenomenon of Egyptian classifiers, which Champollion studied on a large scale as a phenomenon of its own right, and which is only now being revisited by scholarship.

Polotsky the Egyptologist never lost sight of the special case of Egyptian within the wide-ranging landscape of general linguistics. By analysing the phenomenon of Egyptian classifiers in the light of modern linguistics studies of noun categorization, I hope to follow his lead.

The Egyptian hieroglyphic system incorporates the most detailed classification system known in any script of the world. Yet, it has rarely been recognized as such by most Egyptologists. The signs which play the role of classifiers are generally known in Egyptology by the term “determinatives.” The difference in terminology is not merely technical. This terminology reflects the fact that most Egyptologists do not see the determinatives as a system of classifiers, i.e. that reflect *classes*, although most of them would probably agree that some of the determinatives may sometimes play the role of classifiers.

The so-called determinatives are pictograms that are placed after the vowelless root in the Egyptian script, functioning as reading aids but carrying no additional *phonetic* value.<sup>1</sup> They mark the end of words and provide semantic information about the preceding word through their *iconic* meaning alone.<sup>2</sup> The same word may sometimes take different determinatives. A word can be followed by a single determinative, two determinatives or even more. Determinatives never stand in arbitrary relation to the word they classify. First appearing during the Archaic period,<sup>3</sup> this mechanism reached its peak in the Middle Kingdom and later.<sup>4</sup>

In this article I shall try to confront two major issues:

a. Considerations for assessing the determinatives as classifiers. The assessment will be done via a comparison between the operation of determinatives in the hieroglyphic script and the operation of classifiers in classifier languages.

b. Assessment of the reasons which may have impeded most students of Egyptian grammar from conceiving the determinatives as a system of graphemic classifiers.

## 2. History of research: Champollion's contribution to the study of the classifier system

As in many other matters, it was Champollion who identified the special semiotic role of the pictographs that occupy the final position in the hieroglyphic word. He was also the first to coin the term “determinative”.<sup>5</sup> He seems to have taken deep interest in this phenomenon, as he devoted a large part of his *Principes généraux* to the classification and discussions of the signs he recognized and defined as “déterminatifs”.

<sup>1</sup> In the Archaic period, the Old Kingdom, and sometimes later, classifiers may play a role which stands between logogram and classifier. The classifiers in these cases provide through their pictorial meaning essential information which completes the phonetic information provided by the preceding pictograms (Kaplony *Strukturprobleme* 61; Kahl *System* 79). The “phonetic determinatives” are not dealt with in this publication, as their iconic meaning has, in most cases, to be discarded; see Goldwasser *Icon*, and in general Schenkel *Einführung* 47.

<sup>2</sup> “To say that a classifier has meaning is to say that it indicates the perceived characteristics of the entities which it classifies; in other words, classifiers are linguistic correlates to perception ...” (Allan *Classifiers* 308).

<sup>3</sup> Kahl *System* 106–113.

<sup>4</sup> A word may consist of a complete unit of information without a classifier. In these cases the co-text plays the role of enhancing or pointing to the choice of the correct meaning. However, in these cases, no additional *iconic* information is provided for the word. Most prepositions and a limited number of nouns and verbs consistently avoid classification. A discussion of this phenomenon will appear in a forthcoming publication.

<sup>5</sup> On the history of the term see Lefebvre *Grammaire* 18, n.6.

Unlike Champollion, Gardiner dismissed the whole phenomenon of the determinative in a short statement, in which he presents it as a mere variation of his “ideogram”:

“In several of the examples... the ideogram follows one or more phonograms and ends the word. In cases such as these it is called a **determinative**, because it appears to determine the meaning of the foregoing sound-signs and to define that meaning in a general way” (*Egyptian Grammar* 31).<sup>6</sup>

This very brief definition falls short of explaining or even faithfully describing the complex phenomenon.

Champollion’s treatment of the phenomenon of the determinative, in fact, surpasses the treatment of all his followers.<sup>7</sup> He presented it from a perspective which has since unfortunately been neglected by grammarians. His departure point was an attempt at the definition of the possible *semantic relations* that may exist between a word and its determinative.

The first group he singles out are the “déterminatifs figuratifs d’espèce”. He sees this kind of determinative (“repeater” in our terminology, see 4.1 below) as “la représentation même de l’objet dont le mot est le signe oral”.<sup>8</sup>

The second type of possible relation defined by Champollion is “déterminatifs d’espèce, tropique” (*schematic* relations in our terminology; see 4.3 below). Here he suggests the option of four kinds of relations, including “metaphorical” relations.<sup>9</sup> However, an examination of his list of examples (Champollion *Grammaire* 79–81) clearly shows that only two kinds of relations can be identified in the list:

a. *Synecdoche*: In a synecdoche, a part stands for the whole, e.g., “une tête de bœuf  signifiait un bœuf” (Champollion *Grammaire* 23).

b. *Metonymy*: “On figurait..., à la suite du mot, l’image d’un objet physique en rapport plus ou moins direct avec l’objet de l’idée exprimée par le mot ainsi déterminé” (Champollion 1836: 78–79). Most of the examples he cites are of this type — e.g. *irp*   “wine”+[WINE JARS]; *irtt*   “milk”+[JAR]; *mn*  “nurse”+[BREAST] or *h3w*   “day”+[SUN].

<sup>6</sup> Gardiner *Egyptian Grammar* 31. For a recent discussion of terminology, see Depuydt *Hieroglyphic Script*.

<sup>7</sup> An elaborate yet somehow forgotten discussion of the “determinatives” in Demotic, following the approach of Champollion, appears in Brugsch 1855: 22–57

<sup>8</sup> Champollion does not see the semiotic difference between the pictorial and the phonetic. A pictorial representation of a dog does not have the same signified as the word “dog”. For discussions of this problem in the light of modern semiotics, see Goldwasser *Icon*.

<sup>9</sup> In my studies, metaphorical relations are differentiated from metonymic relations.

The third kind of determinatives to be analysed by Champollion were the “déterminatifs de genre (génériques)”. Defining this kind of determinative, Champollion writes:

“D’autres signes ajoutés à la fin des noms écrits phonétiquement sont, à proprement parler, des déterminatifs génériques, puisque chacun d’eux se joint, pour en indiquer l’acception, à un nombre plus ou moins considérable de noms très-différents dans leur signification, mais qui, tous, expriment des individus ou *des objets appartenant au même genre d’êtres bien que d’espèces divers*” (*Grammaire* 82; my italics).

Gardiner’s definition, given more than a hundred years later, of what he calls “generic determinatives” does not go beyond Champollion’s definition, nor does it add to the clarification of the phenomenon:

“Ideograms that serve to determine a considerable number of different words can naturally only express the *kind* of sense borne by these, and not their specific meaning; they are therefore called **generic determinatives**” (Gardiner *Egyptian Grammar* 31).

This statement concerning the “generic determinatives” is very open-ended and says nothing about reasons or constraints for the assemblage of “a considerable number of different words” under a certain determinative. Nevertheless, the “generic determinative” (even if so vaguely and imprecisely defined), was the only kind of determinative that was acknowledged by Gardiner to be a sort of “real” classifier.

In his long discussion of the “déterminatifs génériques”, Champollion makes a clear and important differentiation between central and marginal, and takes the most inclusive and important classifiers of this sort to be the subject of his study.

He begins with the signs    and  as the first “déterminatifs” to be discussed, thus correctly choosing for discussion the most frequent classifiers which present most central “natural categories” of the Egyptian script and livelihood — [HIDE AND TAIL=QUADRUPED] [BIRD] [“SWORM”]<sup>10</sup> and [TREE]. He was the first to identify the iconic meaning of the  [HIDE AND TAIL] sign to be “la moitié inférieure d’une peau de bœuf ou de tout autre quadrupède”, and he also defined its transposed meaning (to borrow a Polotskian term)<sup>11</sup> to be “le déterminatif générique de tous les noms de quadrupèdes à défaut des *déterminatifs figuratifs*” (Champollion 1836: 82).

<sup>10</sup> [SWORM], a portmanteau word = [SNAKE+WORM], see Goldwasser *Wor(l)d*. Champollion defines  as classifier for “tous les noms de reptiles” (Champollion *Grammaire* 86).

<sup>11</sup> Polotsky used this term in the grammatical sense; see Polotsky *Transpositions*.

Many years later, Erman, Gardiner, and Lefebvre,<sup>12</sup> present the “generic determinatives” or “determinatives” in lists according to their iconic meanings (mankind, parts of body, animals, buildings etc.).<sup>13</sup> This method of mechanically assembling determinatives exclusively according to their pictorial features results in an arbitrary accumulation of all sorts of classifiers of different roles and meanings. It misleads the uninitiated reader, as it represents central classifiers and peripheral classifiers as playing an equal role in the system. It also bypasses the elaborate semiotic shift which a pictograph in the role of classifier may undergo (see below). It is only during the last decade that a few Egyptologists have turned again to the path that was pioneered by Champollion.<sup>14</sup>

### 3. Why are the “determinatives” classifiers?

In his article *Classifiers* which deals with the classifier phenomenon in many languages, Keith Allan gives the following definition for morphemes identified as classifiers:

(a) They occur as morphemes in surface structures under specifiable conditions.

(b) They have meaning, in the sense that a classifier denotes some salient perceived or imputed characteristic of the entity to which an associated noun refers, or may refer (Allan *Classifiers* 285)<sup>15</sup>.

If we exchange the word “morpheme” for the word “grapheme” in the above citation, it would be obvious that the Egyptian “determinative” system easily fits the requirements of a classifier system. All basic phenomena that occur in the graphemic classifier system have parallels in morphemic classifier systems. In the following discussion, I shall describe some of these parallel phenomena.

The hieroglyphic classifier system is very detailed and elaborate. Unlike some of the morphemic classifier systems, the script system presents a highly motivated, transparent system of classifiers that is subject to a small number of

<sup>12</sup> Edel (1955: 24–25) described the “Determinative” as ideograms that provides the “Begriffsklasse” to which certain words may belong. He calls classifiers such as □ and  “Das generelle Determinativ (das Klassenzeichen),” thus coming closer to the idea of classification.

<sup>13</sup> Erman 1928: 23–25; Gardiner *Egyptian Grammar* 31–33; Lefebvre *Grammaire* 22–23. Gardiner calls his list “a list of the more important generic determinatives,” while Erman and Lefebvre use simply “wichtigsten Determinative” and “principaux déterminatifs.”

<sup>14</sup> See Rude *Graphemic Classifiers*, a general book about classification. In Egyptology, see, Schenkel 1974; 1976; 1997: 45–47; Kahl *System* 107; Kammerzell *Aristoteles* 8–15; Goldwasser *Icon* 80–107; Goldwasser *Wor(l)d*.

<sup>15</sup> See also Allan *Natural Language* 307.

defined constraints.<sup>16</sup> The reason for this transparency may be considered to be due to a “difference of age”. The system presented by the script is a “young” system, of a life span of about 3000 years, while some of the systems represented in linguistic morphemes in different languages are probably much older. As Aikhenvald remarks, “The basic assumption is that if a system is semantically transparent, and connects easily with lexical sources, it is relatively new” (Aikhenvald *Classifiers* 370).

Moreover, the iconic nature of the script keeps the semantic value of the graphemic classifier alive, thus slowing down or even preventing depletion, grammaticalization processes and, to a large extent, fossilization by convention.<sup>17</sup>

#### 4. Comparative phenomena — classifier languages and Egyptian classifier system

##### 4.1 The “déterminatifs figuratifs d’espèce” as repeaters

In this stage of our discussion, many Egyptologists may feel that the definition of linguistic classifiers made by a general linguist cannot be applied to the determinative phenomenon, as the hieroglyphic script shows a large number of words that receive as determinative nothing but an iconic pictogram that merely repeats in the pictorial the meaning of the word it follows e.g.,  “sandals”<sup>18</sup> or  “carry a child”. In these kinds of examples the icon is a sort of “pictorial tautology” of its preceding word, and a genuine classification process<sup>19</sup> does not seem to take place. This phenomenon, which is very central in the hieroglyphic script and plays an important semiotic role in this system, is, in my opinion, one of the main obstacles that prevented Egyptologists from recognizing the determinatives as a classifier system.

Nevertheless, this very phenomenon is well known in various classifier languages, and makes up part of the general system of classification. Allan

<sup>16</sup> For a detailed definition of these constraints (specifiable conditions), see Goldwasser *Wor(l)d* 35–36.

<sup>17</sup> “It may be true that most noun classes have been established on a perceptual basis; but presumably most classification is fossilized by conventions . . .” (Allan *Classifiers* 296–7).

<sup>18</sup> This statement is incorrect from a semiotic point of view. A picture is never a repetition of a word (see Goldwasser *Icon*, with bibliography there). For example, in the case of “sandals”, the signified of the *word* leaves open for the speaker the kind of the sandals he wants to think of, their form or color or texture, or social significance e.g. royal sandals. The signified of the *grapheme* “sandal” forces on the speaker/reader one specific sandal of a certain shape and sometimes color (see also Goldwasser *Wor(l)d* 15).

<sup>19</sup> Class-inclusion or schematic relations, see below.

(*Classifiers* 295) calls this kind of classifiers “repeaters”.<sup>20</sup> Repeaters “can be said to have identical denotation” with particular nouns. The classifiers activated in the Egyptian script as “déterminatifs figuratifs d’espèces,” play a role similar to the *morphemic classifiers* which are defined as repeaters. Unlike other morphemic classifiers, and like the “déterminatif figuratif d’espèce” the morphemes activated in classifier languages as repeaters do not offer supplementary classificatory information to their antecedent word.<sup>21</sup>

It may be expected that a highly iconic system such as the hieroglyphic script would explore the repeater possibility to its limits. The repeaters in the script play in many cases a most important role, in marking a specific referent for a word with several referents. The word *isbr*<sup>22</sup> carries the meanings of “throne” and “chair” respectively. It seems that the pictorial repeater may guide the reader in this case through the semantic ambiguity to the correct signified (or referent), as the word may take the classifier  or .<sup>23</sup> In many instances the repeater may have an additional ideological value, imposing on the reader the “correct” signified, an “image of the world” which reflects the values and the choices of the literate circles (for a detailed discussion of the case of the *tsm* dog, see Goldwasser *Wor(l)d* Chapter 5).

It seems to me that once the “déterminatif figuratifs d’espèce” can be understood as a form of classifier, there is no difficulty in identifying the determinative system, as a whole, as a classifier system.

#### 4.2 *The determinative as classifier in a taxonomic relationship*

When a pictogram is activated as a classifier it may provide — in *pictorial form* only — an inclusive category concept on the vertical taxonomic axis on which the word is placed.<sup>24</sup> Thus, *wt*  “embalmer,” *sdmi*  “judge” (literally “hearer”), *it3*  “thief” and *tbw* 

<sup>20</sup> The term was coined by Hla Pe in his article “A re-examination of Burmese classifiers.” See also Aikhenvald *Classifiers* 361–362.

<sup>21</sup> An example from Burmese is *qéin ta qéin* “one house”, see Allan *Classifiers* 292.

<sup>22</sup> See *Wb* I, 132. The word *isbr* is possibly of Semitic origin (the earliest examples date to the 18th dynasty; see Hoch *Semitic Words* 36–39). It may also take the  [WOOD] classifier. In such cases, word and classifier stand in stuff/object (“made of”) schematic relations; For schematic relations, see below 4.3 and Goldwasser *Wor(l)d* 33–35.

<sup>23</sup> “Many systems allow variable choice of classifiers; then classifiers may specify the meaning of a polysemous noun” (Aikhenvald *Classifiers* 271). For other examples of this phenomenon see below 4.6.

<sup>24</sup> For a detailed discussion of this kind of classifiers, see Goldwasser *Wor(l)d*.

“sandal-maker,” are all classified into the superordinate category [HUMAN+MALE] by the icon . The nouns *mnꜥt*  “wet-nurse” and *hꜣrt*  “widow” are classified into the superordinate category  [HUMAN+FEMALE]. The words *mit*  “cat” and *db*  “hippopotamus” are classified into the superordinate category of [HIDE AND TAIL] = [QUADRUPED] by the sign , which is a schematization of the hide and tail of a leopard. *Niw*  “ostrich” is classified into the superordinate category [BIRD] by the icon of the duck , which is probably the prototypical bird, the bird *par excellence* for the Egyptians, and as a classifier stands for the representation of the general concept [BIRD].<sup>25</sup> *Is*  “tomb”, *ihw*  “stable,” *hꜣ*  “office”, and *šš*  “nest” take the  [HABITAT] classifier.<sup>26</sup> Such classifiers are of the “generic” type (détérminatifs de genre, generic determinative).

Generic or superordinate nouns very often develop into noun classifiers in classifier languages as well (Aikhenvald *Classifiers* 359, 402 and *passim*). Common examples in different languages are classifiers for categories such as [PERSON] [HUMAN] [MAN] [WOMAN] [ANIMAL] [TREE] [WOOD] [BIRD] [FISH] [WATER] or [DRINK].

#### 4.3 The determinative as classifier in schematic/metonymic relationships

Instead of denoting a set-inclusion relationship, the classifier can stand in a schematic (metonymic, contiguous) relationship to the word that precedes it.<sup>27</sup>

The word *ꜥrryt*  “gate” takes the  [HABITAT] classifier, while the verb *nꜥ*  “travel” is followed by the  [BOAT] classifier — the typical Egyptian travel vehicle, the Nile boat.<sup>28</sup> The word *ꜣtwt* 

<sup>25</sup> For a discussion of the prototype in the script, see Goldwasser *Wor(l)d* 27–29 and *passim*; see also Goldwasser *Determinative System*.

<sup>26</sup> The “nest” shows two classifiers, the first a repeater, the second a taxonomic classifier. The words “horizon” and “netherworld” also may take the  [HABITAT] classifier, as these two locations are conceptualized as the eternal abode of man. On this classifier, see below 4.7.1 .

<sup>27</sup> On the various kinds of schematic relations in the script, see Goldwasser *Wor(l)d* 33–35.

<sup>28</sup> The  [BOAT] classifier in schematic relation is known since the time of the Pyramid Texts, e.g., *dꜣi* “cross the sky”, *Pyr.* 128.

“bed” takes the  [WOOD] classifier.<sup>29</sup> The words *sšmm*  “warm someone” and *ḥ*  “cook” take the  [FIRE] classifier (brazier with flame rising from it).<sup>30</sup> A common metonymic relationship in the script is that of a container which classifies a word denoting a drinkable liquid<sup>31</sup>, e.g., *ḥnkt*  “beer” or *irp*  “wine”.<sup>32</sup>

Classifiers in schematic relations are known in classifier languages. They are defined by Aikhenvald as “extensions” of different kinds. Among other examples she mentions the Ngan’gityemerri Australian language where “fire” is used to classify all things associated with fire, such as firewood charcoal, smoke, firestick (Aikhenvald *Classifiers* 404). Allan mentions a case of metonymy in Navajo, where a classifier appropriate to a bag containing nails is used instead of the classifier for the nails themselves (Allan *Classifiers* 296 [after Landar]).

#### 4.4 *The determinative as classifier in metaphorical relationships*

A rare yet alluring feature of the Egyptian classifier system is that of metaphorical classifiers. Recent studies in cognitive linguistics have defined metaphorical comparisons as *alternative categorization*, i.e., an ad hoc grouping of the conceptual world. The metaphorical classifiers, which are, in effect, forms of metaphorical comparison, fit in nicely with a comprehensive view of Egyptian classifiers as a categorization system.<sup>33</sup>

<sup>29</sup> *šwt* “bed” can also appear with a repeater, e.g., .

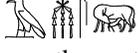
<sup>30</sup> Also “brand-slaves or cattle” (Faulkner *Dictionary* 2). Champollion (*Grammaire* 99) writes: “Plusieurs noms communs, en rapport avec les idées *feu* et *chaleur*, reçoivent pour déterminatif générique le caractère symbolico-figuratif .

<sup>31</sup> To be distinguished from the category  [WATER]. Urine, as an undrinkable liquid, may get the  [WATER] classifier (e.g., Faulkner *Dictionary* 69), but not a  [VESSEL] classifier.

<sup>32</sup> Some of the earliest known examples of classifiers, dating from the Archaic period, are of this type, i.e., various vessel classifiers, which classify the liquid’s name. For examples, see Kahl *System* 83 and Altenmüller *Ölmagazin* (tomb of Hesire, Third Dynasty).

<sup>33</sup> In metaphorical comparisons, as a rule, a less prototypical member of the newly created ad hoc category is compared to a prototypical member of the category. For example, in the comparison metaphor “my job is a jail” a new ad hoc superordinate category of “unpleasant places” is created, of which “jail” is a prototypical example. The less prototypical member of the new category (“job”) is compared to the more prototypical member (“jail”). See Shen *Schemata* and Shen *Metaphors*.

In the Egyptian script, animalistic metaphors are a productive domain. The crocodile plays the role of vehicle<sup>34</sup> in some implicit metaphors which surface only in the script. The word *hnty*  “to be greedy”, which is usually classified into the  [ACTION OF FORCE] superordinate category, may occasionally also take the  crocodile as a classifier —  — creating the implicit simile “greedy as a crocodile”, the crocodile being a prototypical member of the ad hoc category [“THOSE WHO PILLAGE WHATEVER THEY CAN GET”].<sup>35</sup> Other examples of animal classifiers that suggest metaphorical extensions are the words *knd*  and *dnd*  which describe two types of anger — “angry like a monkey” and “angry like a bull”, the first being very noisy, but not essentially dangerous and the latter quiet yet highly menacing.

Another rare but charming classifier is the pictogram of a cow suckling its calf.<sup>36</sup> It may appear as a classifier in the word *3ms*  “to show solicitude.” Somewhat surprisingly for the modern observer, the mother cow is the prototypical member for the Egyptians in the ad hoc category [CARE-GIVING], and not the human mother.

The word *mni* “to moor”, which acquired in Egyptian an additional metaphorical meaning of “DEATH=[FINAL MOORING]”, may take as a classifier  [BOAT] but also the metaphoric classifier  [DEATH] respectively (Gardiner *Egyptian Grammar* 568). This metaphor is part of the deep structure conceptual metaphor [LIFE IS A JOURNEY (ON THE NILE)] which is very dominant in Egyptian world organization (Goldwasser *Icon* 97–99; Smoczyński *Seeking Structure*).

Metaphorical classifiers and metaphorical transfers are a central phenomenon in classifier languages (Becker *Linguistic Images*; Allan *Classifiers* 296; Lakoff *Women, Fire, and Dangerous Things*). Scholars are in agreement that in all languages this type of classification is highly culture-bound (Aikhenvald *Classifiers* 311–316)<sup>37</sup>.

<sup>34</sup> In *The Philosophy of Rhetoric* (1936), I. A. Richards distinguishes the *vehicle* as the basic analogy which is used in the metaphoric comparison; see Hawkes *Metaphor* 61 and *passim*.

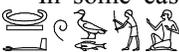
<sup>35</sup> The word *skn* “be greedy”  probably also belongs here. Crocodile autopsies in modern zoos have shown crocodiles to be remarkably voracious and indiscriminating eaters. China, wood, plastic, and other such unlikely objects have been recovered from their stomachs.

<sup>36</sup> This pictogram can also serve as a logogram. In this case, it acts in the double role of a logogram-ideogram, and the iconic signified carries the metaphorical concept.

<sup>37</sup> The “metaphorical classifiers” in Aikhenvald’s terminology also include classifiers of the “Myth and Belief” type. For this type of metaphorical extension, see Lakoff *Women, Fire, and Dangerous Things* 94; Becker *Linguistic Image*. In Egyptian, see Frandsen *Categorization* and

## 4.5 Double and multiple classification

A rather common phenomenon of the hieroglyphic system of classifiers is that of “double classification”. In some cases the script may present two possible superordinate categories. The word *hwnt*  “maiden”, for example, is classified into the superordinate  [CHILDHOOD] (represented by a male child) and the superordinate  [HUMAN+FEMALE]. The word *m3r*  “wretched man”, “pauper” takes the  [INFERIORITY-EVIL] superordinate classifier<sup>38</sup> and the classifier  [HUMAN+MALE].

In some cases we may find up to four classifiers, as in the case of *wḥꜥ*  “fowler; fisherman” (FCD: 66). The first two classifiers — the  duck and the  fish, both integral to the activity of fowling — stand in metonymic (part-whole) relation to the action of fowling and fishing, and thus to the fowler himself. The third classifier assigns the nature of the activity of the fowler to the superordinate action category  [ACTION OF FORCE] that is signified by the man holding a stick,<sup>39</sup> under which the fowling action is classified. Last but not least comes the classifier  [HUMAN+MALE], which represents the taxonomic superordinate category of the fowler himself. This kind of compound classification suggests two schematic knowledge structures and two taxonomic “set inclusion” superordinate classifications, scaffolding the word, as it were, on all sides and in all directions.

Co-occurrence of classifiers is known in classifier languages although it is not permitted in all languages. Aikhenvald remarks that “languages may allow the co-occurrence of several noun classifiers within one noun phrase” (Aikhenvald *Classifiers* 81). She also suggests (after Dixon) that if two classifiers co-occur, one of them must be an inherent nature classifier, and the other has to refer to function/use (*op. cit.* 83–84). However, it seems that the multiple classification phenomenon is more frequent and developed in the Egyptian script than its counterpart phenomenon in classifier languages. The reason may lie in the difference between the two semiotic systems. As the script classifiers are not to be pronounced, they can be accumulated one on top of the other, increasing the information around the word, without causing the noun phrase to become too cumbersome.

Goldwasser *Icon* 94–107; For a comprehensive discussion on this type of classifiers, and on the

 Seth classifier as a “Myth and belief” classifier, see Goldwasser *Metaphor*.

<sup>38</sup> The so-called  “bad bird” classifier, see below note 42.

<sup>39</sup> Or by its abbreviation, the  “hand holding a stick.”

## 4.6 Different classifiers for the same word

The script may often use different classifiers for the same word during the same period. These cases are probably not merely an outcome of an idiosyncratic choice of a scribe, but may also involve a change of focus on the different semantic components of the word.

The verb *rh* “to know” receives the classifier <sup>40</sup>, which categorizes a wide range of words which share the same “abstract”, i.e., not having a concrete referent (see below 4.7). The meaning of *rh* ranges from “know”, “be able to”, “be aware of”, to the transposed Biblical meaning of “knowing a woman”. When referring to the last signified, the word may take the phallus classifier  (Faulkner *Dictionary* 151–152). Alternating classifiers are known also in classifier languages. Allan writes:

“It often happens that a noun may be used with different classifiers, either to focus deliberately on some characteristic of its referent, or simply because the referent happens to bear characteristics that are compatible with more than one classification ...” (Allan *Classifiers* 295).

The option to use different morphemic classifiers in different contexts is highly developed in Burmese. A speaker of Burmese may use eight different classifiers for the word “river”, depending on the “universe of discourse”, as Becker puts it; e.g. “river one line” when it appears on a map, “river one connection” when tying two villages, or “river one sacred object” in mythology (Becker *Linguistic Image* 113).

In some cases classifiers in the script may refer to social status or rank. A prominent example is the word *mnf3t*, which carries the meanings “trained soldiers”, “assault troops”, “infantry”, or “soldiery” (FCD: 108). At least three classifiers may interchange in this case — ,  or . The first classifier carries the most general meaning, and classifies the word into the category  [HUMAN+MALE]. The second classifier represents the more specific prototypical icon of the category  [SOLDIERY] and the third classifier suggests a classification into the category  [HIGH RANK] or the like, which should emphasize the status of the unit.

A clear case of status classifiers are the ,  [REVERED PERSON] classifiers which are used mainly after personal names (Gardiner *Egyptian Grammar* 447; A50–52). These classifiers transfer a classified personal name from the general category  [MALE+HUMAN] into the “better” category of the revered ones.

<sup>40</sup> A sealed papyrus scroll.

Status classifiers are well known in classifier languages. They are widespread in East and Southeast Asian languages and in Australian languages (Aikhenvald *Classifiers* 82).

#### 4.7 Vitality and productivity.

Foreign, mainly Canaanite, words were constantly introduced into the Egyptian lexicon, from the Old Kingdom on. However, during the New Kingdom, shortly after the end of the Hyksos rule, we witness a sharp growth in the number of Canaanite words that surface in the written repertoire.<sup>41</sup> In each and every case the meaning of the loan-word is analysed by the Egyptian scribes, and is almost always assigned into its correct category by a classifier.<sup>42</sup>

An intriguing example of the productivity of the system is the case of the horse. The horse is not only a new word but a new “item in the world” that had to be analysed. The new animal (*ssmt* in Egyptian — a loan-word)<sup>43</sup> was introduced into Egypt during the Hyksos period.<sup>44</sup> The exciting newcomer had a profound influence on Egyptian life, revolutionizing warfare, communications, and the economy.<sup>45</sup> It became a highly prestigious cultural item of elite male society.<sup>46</sup> Within the framework of the script, this newcomer is immediately “analysed” as a  [HIDE AND TAIL] member and is unhesitatingly accepted into the taxonomic category, as a clear “example of”.<sup>47</sup>

A good example of a productive “adoption” of a foreign word into the Egyptian lexicon is the Semitic word *nm* “to slumber, to sleep” (Hoch 1994: 185–186). Similarly to the Egyptian words *sdr*,<sup>48</sup> *ꜥwy*, and *ꜥdd* which carry the

<sup>41</sup> Hundreds of loan words are known from the Egyptian texts up to the end of the New Kingdom. Many became deeply rooted in the language and are used in Demotic and Coptic texts. For a recent comprehensive monograph on the subject, see Hoch *Semitic Words*.

<sup>42</sup> In some rare cases, words are assigned to wrong categories due to a misunderstanding of the Canaanite word; see Givón *Asian Toponyms*.

<sup>43</sup> On the origin of the word, see Hofmann *Fuhrwesen* 42–43. On the horse in Egypt, see Rommelaere *Les chevaux*.

<sup>44</sup> The earliest horse bone we have comes from Tell el-Dab’a, Thirteenth Dynasty (circa 1650 B.C., see Boessneck 1976).

<sup>45</sup> Different crops had to be grown with attention to the special consumption of horses, stables had to be built (see the exquisite stable complex uncovered at Piramesses; see Pusch *Piramesses*) and special manpower trained.

<sup>46</sup> Probably only male elite society, although during the Amarna period women of the royal family are also represented riding chariots (Rommelaere *Les chevaux*, pls. 60, 66b–c). Otherwise only Asiatic goddesses (Leclant *Astarté* 1960: 1–67; Hadley *Asherah* 161–164) are known to have been depicted riding horses.

<sup>47</sup> For a large collection of examples see Müller, *Appendix in: Goldwasser Wor(l)d*.

<sup>48</sup> For *sdr* with the  [EYE] classifier, see *Wb* IV, 390.

meaning “sleep” and “lie down”, the loan word *nm* (which enters the written repertoire already in the 18th dynasty) correctly adopts the  [BED+MAN] classifier and the  [EYE] classifier, which are typical of this category of Egyptian words.<sup>49</sup>

*k3mn* “blind man”<sup>50</sup> is also a loan word from Semitic. The word consistently shows two classifiers, one schematic (the  [EYE] classifier) and one taxonomic  ([HUMAN+MALE]). Precisely like the Egyptian verb *šp* “be blind,” the loan-word receives the  [EYE] classifier, which represents a metonymic extension process typical of all Egyptian words concerned with deficiency. It is always the “missing element” that classifies the word, rather than what exists. Thus *idi* “be deaf” is classified by the  [EAR] classifier which is typical of all words pertaining to hearing; “bald” is classified by  [HAIR], a classifier that encompasses all types of hair, as well as activities in which hair is a central feature, such as “mourning”.<sup>51</sup>

A prevailing type of classifier in the Egyptian script is the schematic classifier which shows stuff/object (or “made of”) relations with its preceding word. This type of classifier is also frequently activated with loan-words. The Semitic loan-word *šbt* “staff”, “rod”, consistently shows the  [WOOD] classifier (Hoch *Semitic Words* 276–277), strongly suggesting a beating tool made of wood. In like manner, the Semitic loan word *ks* “cup”, “goblet” takes the schematic classifier  [METAL] (Hoch *Semitic Words* 338–339), pointing to a metal vessel, to be distinguished from the common pottery cups.<sup>52</sup>

<sup>49</sup>  [BED+MAN] classifier may be regarded as a repeater, while the  [EYE] classifier is a schematic classifier of the type feature/activity; the change in the state of the eyes being a central feature of the “sleeping” activity.

<sup>50</sup> Two references to blind women show the  [HUMAN+FEMALE] classifier, see Hoch *Semitic Words* 320.

<sup>51</sup> *i3kb*    “mourning” (Faulkner *Dictionary* 9) takes the schematic (metonymic) classifier  [HAIR] as well as the superordinate classifier  on the taxonomic axis. For the “missing quality” type of classifier in the script see Goldwasser *Icon* 92–93.

<sup>52</sup> Other Egyptian words for “cup” take the  [CUP] classifier (Gardiner *Egyptian Grammar* 528, W10). One example of *ks* cited by Hoch, shows the  [METAL] schematic classifier, as well as the  [VESSEL] taxonomic classifier (“jar with handles”, see Gardiner *Egyptian Grammar* 530, W23), suggesting a secondary taxonomic superordinate classification into  [VESSEL].

Allan (*Classifiers* 290) states that “[t]he strongest evidence of semantic classification is the ability of native speakers to classify new objects consistently and easily on the basis of their observed characteristics.” Aikhenvald believes that:

“The productivity, or vitality, of a system is measured by its ability to accept and classify new members, and reanalyse and extend the semantic range of a noun categorization device over time ... the Jacaltec system of noun classifiers can be considered as frozen. New loan-words are simply left unclassified...” (Aikhenvald *Classifiers* 313).

#### 4.8 Abusive classification

Into this class may enter mainly classifiers that denote groups or individuals that are the “enemy” of the official institutional society which prescribes the script system, or of a specific author of an inscription.<sup>53</sup> Instead of taking the conventional classifier for human male groups, i.e.  [HUMAM+MALE], these “negative” groups may show the classifier  [(SLAUGHTERED) ENEMY] or  [(BOUND) ENEMY]. An example for this kind of reclassification is provided by the spelling of the word *ist* “crew”, “company” in an inscription of the early 18th dynasty. In this inscription, the word which normally shows the  [HUMAN+MALE] superordinate classifier, changes its classifier, when the writer refers to the “company” of his enemy, into the  [(DEAD) ENEMY] classifier.<sup>54</sup>

Another kind of “abusive classification” can be found in spellings of the word *h3rt*    “widow.” The word is usually classified into the category  [HUMAN+FEMALE] (see above).<sup>55</sup> The  [HUMAN+FEMALE] classifier is the superordinate classification of women in the script (see above 4.2). Yet at least one example from the Middle Kingdom shows the spelling     (FCD: 201). Here the widow is clearly moved by the

<sup>53</sup> It seems that the script system reflects the interests and values of the ruling classes. However, a thorough study of this aspect of the script is yet to be conducted.

<sup>54</sup> *Urak* IV: 6–7, see Gardiner *Egyptian Grammar* 399. The same phenomenon is repeated in the same text with the word *m3c* “army.” When referring to the Egyptian army the word is written by the logogram ; when referring to the enemy’s army the logogram receives an additional classifier, the  [(DEAD) ENEMY].

<sup>55</sup> Sometimes she may also get the [HAIR] classifier. In this case, [HAIR] is a schematic classifier as it must have been an important component in the rituals of mourning.

additional classifier  (“bad bird”) into the unbecoming category of [INFERIOR -EVIL].<sup>56</sup>

Abusive classification is a possibility practised in many classifier languages. Japanese offers the possibility of abusive classification of human beings by animal classifiers. A similar role is played by diminutive classifiers in many languages (Allan *Classifiers* 296).

#### 4.9 Semantic changes on the way: lexeme, logogram, classifier

##### 4.9.1 From logogram to classifier

The icon employed in the role of a classifier cannot be read in its iconic (or logogramic) meaning but is transposed to another meaning (see Goldwasser *Wor(l)d*). B Again, it was Champollion who identified the phenomenon that when a sign is activated as a “determinatif generique” it undergoes a change of meaning. Different sorts of icons undergo different semiotic transpositions.

The sign , which as logogram means “a man,” becomes the marker of the category [HUMAN+MALE] which should be close to the category [MASCULINE]. The sign  with the iconic meaning “a woman,” when activated as a classifier is transposed to the generic category [HUMAN+FEMALE].<sup>57</sup>

Other classifiers undergo changes of meaning by metaphoric or metonymic extensions. An instructive example is the agriculturally destructive sparrow , originally carrying the meaning “small” when used as a logogram. When playing the role of a classifier, the sign is transposed into the meanings of “inferior”, “socially inferior”, and at the end of the Old Kingdom finally clearly maturing into the category [INFERIOR-EVIL] or [EVIL].<sup>58</sup>

<sup>56</sup> Also socially inferior; see David *L'infériorité*.

<sup>57</sup> An example from the 20th dynasty may point to a possible rare use of this classifier to signal gender. The Semitic loan-word *b-r-k* with a clear meaning of “blessings” receives the  classifier. If not a mere mistake, it should signal the grammatical gender of the word as [FEMININE] (Hoch *Semitic Words* 103–104; he sees the word as a masculine “nominal form,” disregarding the ). For other options for marking the category [FEMININE] in the hieroglyphic script, see Goldwasser *Wor(l)d* 85–86.

<sup>58</sup> The existence of the category [EVIL] marked by the  “bad bird” was already discovered by Champollion *Grammaire* 102; he connected it to the fact that the sparrow was a “véritable fléau de l’agriculture égyptienne à une certain époque de l’année.” However, the category matured fully into this meaning only after the First Intermediate Period (e.g., *h<sup>c</sup>d3wt* “robbery” Faulkner *Dictionary* 164). For a study of the evolution of the  classifier during the Old Kingdom and the First Intermediate Period, see David *L'infériorité*. She connects it to the famine that seized Egypt during this period, and could have enhanced the negative role of the sparrow.

The  papyrus roll, which originally encompassed the category “belonging to papyrus” or “belonging to writing” (Wiesmann *Determinative*) has acquired an extended meaning like “what is written on papyrus” or “in words, not in reality”, to the modern mind a definition of [“ABSTRACT”] or the like. The mechanism that operated here may be that of metonymic extension. In the case of “conceptual metonymy”, a certain category or domain was extended by a metonymic process which involved the transition from central cases containing concrete basic level objects (in our case, materials connected to writing), metonymic extension — “thing that exist only in writing”.<sup>59</sup>

A typical metonymic reading of a classifier is that of the  [HIDE AND TAIL]<sup>60</sup> classifier. Iconically probably representing a leopard hide (Goldwasser *Wor(l)d*) the classifier encompasses two main clusters:

a. [HIDE] — a taxonomic classifier for all types of hide, leather and skin (including human skin); also as a secondary schematic classifier with the relation “made of” [HIDE AND TAIL].

b. A taxonomic classifier for the animal world, excluding [BIRD]<sup>61</sup>[FISH] and [REPTILE]. When activated as classifier in this capacity (b), the sign obtains the transposed metonymic meaning [‘those who have’ HIDE AND TAIL].

#### 4.9.2 The “upward mobile” prototype in the script

In many cases in the script we find a prototypical member of a category acting as a superordinate classifier for the whole category. In such cases, the prototype moves from its original meaning to “represent” the whole category (Goldwasser *Wor(l)d* 27–29 and *passim*).

One such sign is *3pd* , which is the logogram for “duck,” but can also assume the role of classifier, representing the superordinate category [BIRD] or [WINGED ONES]. However, the signified “duck” should clearly be discarded when  follows a wide range of different fowl names, as well as orioles,

<sup>59</sup> Such a complicated process is exemplified by Lakoff *Women, Fire, and Dangerous Things* 104–105) in his study on the Japanese classifier *hon*. The Egyptian may have understood what semiotics has constantly struggled to show in the last decades: every word, even a concrete one, is always an abstractization.

<sup>60</sup> For a detailed discussion of the  [HIDE AND TAIL] classifier, see Goldwasser *Wor(l)d* Chapter 4.

<sup>61</sup> By the end of the New Kingdom there are first signs that the  [BIRD] category starts to move towards inclusion within the  [HIDE AND TAIL] category; see Goldwasser *Determinative System*.

cranes, ostriches (*niw* ) and falconides.<sup>62</sup> “Fuzzy edges” members such as mosquitoes, locusts and flies, may also occasionally be classified into the [WINGED ONES] category.<sup>63</sup> Already in 1836 Champollion writes:

“On ne doit pas considérer ce signe  comme un simple *déterminatif d'espèce* lorsqu'il s'ajoute à tous les noms phonétiques des différentes espèces d'oies ou de canards connues des anciens Égyptiens; tels sont, par exemple, le noms suivants . . . Mais ce caractère devient un véritable *déterminatif générique* lorsqu'il termine des noms d'oiseaux de toutes les autres espèces, et il tient alors la place des caractères *déterminatifs figuratifs* qu'emploie habituellement le système d'écriture hiéroglyphique... Il n'est point inutile de faire remarquer que, dans le nom phonétique du scarabée sacré  , ...les signes  et  ne sont que des déterminatifs génériques, le scarabée étant considéré comme appartenant au genre des volatiles” (Champollion *Grammaire* 85–86).<sup>64</sup>

Evidence from lexical material as well as from pictorial art points to the fact that the duck was the prototypical member of the [BIRD] category in ancient Egypt.<sup>65</sup> As such, , when activated as classifier, becomes the pictorial representation of the image-defying superordinate [WINGED ONES] or [BIRD].

In this particular case we can trace an almost parallel process of cognitive knowledge organization occurring in the lexicon as well as in the script. Raymond Faulkner elucidated the *semantic* shift undergone by *3pd*  “duck” from its appearance in the Pyramid Texts onwards:

“It therefore seems not improbable that *3pd* originally meant simply ‘duck’ (including in this term perhaps also other small water-fowl); but in due course this word came to mean ‘bird’ in general, possibly because in the undrained marshes of early Egypt ducks greatly outnumbered the other species of birds” (Faulkner *Duck*).

<sup>62</sup> E.g. *bik*   “falcon” *CT I* 97, one version out of four; the other versions show the iconic classifier of a falcon, i.e., a repeater; see also *CT II* 42.

<sup>63</sup> See also Goldwasser *Determinative System* 56–58.

<sup>64</sup> By the definition of this complex semiotic mechanism, Champollion comes very close to the concept of a classifier system.

<sup>65</sup> “By far the most frequently represented species of waterfowl in Egyptian art and hieroglyphs” (Houlihan *Birds* 71). As life in Egypt was closely related to the Nile, it seems that in the Egyptian animal kingdom waterfowl were conceived as the most prominent type of bird. See also *Wb I* 9, 5; in the *Belegstellen* the *Wörterbuch* adds an emphatic note: “sehr oft zu allen Zeiten.”

Although, as remarked by Champollion, the word *ꜥpd* never completely lost its basic-level meaning of “duck” or “goose,” its primary meaning moved from “duck” to “bird” in the *lexicon*, and, at about the same time materialized as a general [BIRD] classifier in the *script*.

Another prominent example case is the pictogram . When activated as a classifier, it moves away from its iconic ornithological meaning which should be “a falconide god” or “Horus the falcon god” into the general meaning of [GOD] or [DIVINE].<sup>66</sup> This semantic movement must have occurred, since the pictogram is activated as a classifier for diverse divine beings which have clear zoomorphic manifestations, such as Sobek, the crocodile god  , or a strong anthropomorphic nature, such as Amon  .

As a logogram, the sign  carries the meaning *pr* “house.” The hieroglyph probably represents a plan of the “essence of a building” with a door. When activated as classifier, the  sign is transposed to the superordinate meaning of [HABITAT], and may classify a stable, an office, as well as a lion’s den and a bird’s nest (see above 4.2). On the semantic level, the noun *pr* “house”, is also extended. Rather early on, the word *pr* receives an additional transposed meanings of “temple”, “estate”, or “institution”, when combined with another noun.<sup>67</sup> Nevertheless, the icon, when used as an independent logogram, never loses its original meaning of “house”.

Other generic classifiers such as  or  may well be cases of upward movement of prototypes.  represents the prototypical action of the mouth, i.e., “eating”,<sup>68</sup> later extended to stand as classifier of all [ACTIONS OF MOUTH] and [WHAT GOES INTO THE BODY]. From here the road is clear into meanings of [INSIDE THE BODY]. Thus it is nothing but surprising to find under this classifier sentiments such as anger, hate, jealousy and love, as well as the Egyptian word for “perception” (*si3*). All these feelings and abilities are conceived as dwelling “in the body”.<sup>69</sup> Thus, the  classifier represents the most basic conceptual

<sup>66</sup> See Shalomi-Hen *Classifying* and also the forthcoming Shalomi-Hen *Writing*.

<sup>67</sup> E.g. *pr-Imn* “Amon’s temple” lit. “the house of Amon”; *prhd* “treasury”, lit. “the house of silver”; see Faulkner *Dictionary* 89–90.

<sup>68</sup> See Wiesmann *Determinative*. In early writings and (some later ones) of the word *wmm* “to eat”, the icon  appears in a transitory semiotic status between a logogram and a classifier, e.g.,   (Faulkner *Dictionary* 62); see Schenkel *wmm*, and Kammerzell *Varianz*. For taste as the “Ur sense” of the child, see Goldwasser *Wor(l)d* 6 with note 12.

<sup>69</sup> There are numerous examples of this metaphor in Egyptian texts of all periods, e.g. *bit.f m ht.i* “his ideas (qualities) are in my stomach”. These are the words of Tutu describing his devotion

metaphor that prevails in many cultures and societies [THE BODY IS A CONTAINER],<sup>70</sup> using the iconic representation of the most typical way of inserting of “objects” into the body. As words are often conceptualized as objects containing ideas (Lakoff and Johnson *Metaphors* 10–11), many lexemes which involve speaking show this classifier. This should be the explanation of the merger under one classifier of verbs and words denoting eating, drinking, feeling, talking and thinking that always puzzles students of hieroglyphs.<sup>71</sup>

The classifier  may represent the typical aggressive gesture that later became the classifier for the broad category [FORCE], which includes many lexemes ranging from administrative power to different sorts of aggressive and coercive actions.<sup>72</sup>

In the pictorial script, this process is remarkably productive. It may owe its productiveness and success to the ease in which the detailed pictorial lends itself to the depiction of the prototype. ‘World representation by elect prototypes’ is a fundamental concept of the Egyptian culture and is constantly displayed in various manifestations of Egyptian cultural products — two- and three-dimensional art, architecture, and the script system.

#### 4.9.3 Morphemic classifiers of classifier languages – Semantic changes

The semantic change of nouns, once they become morphemic classifiers, is a well attested phenomenon in classifier languages. Nouns may undergo several semantic changes. Aikhenvald suggests four main processes, of which two are very active in the script:

a. A noun with generic reference may become a generic classifier — e. g., “superordinate nouns meaning ‘man’ or ‘woman’ often give rise to NOUN CLASSES; a noun meaning ‘man’ becomes a marker for masculine, and one meaning ‘woman’ is used for feminine” (Aikhenvald *Classifiers* 402). A close parallel can be identified in the Egyptian script (see 4.7.1 above with footnote 41).

b. “Noun with specific reference becomes a classifier for a more general class of referents”. Aikhenvald emphasises:

“The way in which a noun with specific reference can become a generic classifier for the whole species is similar to the development from a

to King Akhenaten and his teachings; see Sandman *Texts* 76,12. For the conceptual metaphor [IDEAS ARE FOOD], see Lakoff and Johnson *Metaphors* 46.

<sup>70</sup> For this conceptual metaphor, see Gibbs *Poetics* 203

<sup>71</sup> See the collection of words under this classifier in Gardiner *Egyptian Grammar* 442 (A2). This classifier will be discussed in detail in a forthcoming publication.

<sup>72</sup> Here compare Gardiner *Egyptian Grammar* 441, remarking the change this “determinative” undergoes.

prototype to its extensions. In Cayuga, the stem for ‘car’ is used as a classifier for all vehicles. In Mohawk the classifier for fruit (-*ahy*-) is also the word for ‘berry’ ... (Aikhenvald *Classifiers* 403).<sup>73</sup>

In this stage of my research, I can not confirm that every semiotic change occurring when a sign acquires the position of a classifier is contained in the possibilities defined by Aikhenvald. A final statement will require the close scrutiny of many classifiers which have not yet been studied.

### 5. Conclusions

The above list of parallel phenomena of Egyptian classifiers in the script and of classifiers in classifier languages is far from being complete. However, it shows beyond any doubt that the “determinatives” are, in essence, classifiers. One may ponder about the importance of the redefinition of the determinative phenomenon as a structured classifier system, asking whether it is not a case of mere change of terminology. The answer to this question is definitely negative. By understanding the determinative as classifier, we move it from its alleged role as a context-bound, secondary element in the word, to the role of a classifier that makes it part of a system *that reflects in detail the world organization of the Ancient Egyptians*.

It seems that the “father of modern Egyptology”, Jean-François Champollion, did not consider the “déterminatif” as a classifier. I believe that what stood in his way, very much as it has stood in our way, was what he called “déterminatifs figuratifs d’espèce”, our “repeaters”. However, in his understanding of the determinative phenomenon, as well as in the space that he allotted to it in his grammar, he surpassed all his successors.

It may indeed be that the classifiers emerged in the script as a result of technical needs. They may have emerged as “phonetically emptied” logograms,<sup>74</sup> which served at the very beginning as reading aids. However, very soon this productive phenomenon gained a life of its own, making the hieroglyphic word a rich information entity, which goes far beyond the simplified task of a script, i.e. “reflecting” in writing the phonetic structure that constitutes the “word”. Every word in the Egyptian lexicon is represented in the script as woven into the network of world-order categorization. A word can be woven into its *taxonomic* axis (e.g., “cup” into [VESSEL]), or into a *schematic* axis (e.g., “cup” into [METAL]; see above). Due to the common phenomenon of

<sup>73</sup> Cayuga and Mohawk are Iroquoian languages; see Aikhenvald *Classifiers* 491, 497.

<sup>74</sup> Or sometimes “partially emptied” logograms.

multiple classifiers, words are often woven into the world classification map by different threads.

The study of the classifier system in the script is still in its infancy. I hope the coming years will yield a deeper and better understanding of this bountiful yet somewhat neglected field of Egyptology.

### References

- Aikhenvald *Classifiers* — A. Y. Aikhenvald, *Classifiers. A Typology of Noun Categorization Devices* (Oxford, Oxford University Press, 2000).
- Allan *Classifiers* — K. Allan, “Classifiers”, *Language* 53 (1977) 285–311.
- Allan *Natural Language* — K. Allan, *Natural Language Semantics* (Oxford: Blackwell, 2001).
- Altenmüller *Ölmagazin* — H. Altenmüller, “Das Ölmagazin im Grab des Hesire in Saqqara (Qs 2405),” *Studien zur Altägyptischen Kultur* 4 (1976) 1–28.
- Becker *Linguistic Image* — A. L. Becker, “A Linguistic Image of Nature: The Burmese Numerative Classifier System”, *Linguistics* 165 (1975) 109–121.
- Champollion *Grammaire* — J.-F. Le Jeune Champollion, *Grammaire égyptienne, principes généraux de l’écriture sacrée égyptienne* (Paris, Typographie de firmin Didot Frères, 1836).
- CT — A. de Buck, *The Egyptian Coffin Texts*, 7 vols. Oriental Institute Publications 34, 49, 64, 67, 73, 81, 87 (Chicago, University of Chicago Press, 1935–1961).
- David *L’infériorité* — A. David, *De l’infériorité à la perturbation: L’oiseau du «mal» et la catégorisation en Egypte ancienne*, Göttinger Orientforschungen IV: Ägypten, Bd. 38. Classification and Categorization in Ancient Egypt, 1. (Wiesbaden, Harrassowitz, 2000).
- Depuydt *Hieroglyphic Script* — L. Depuyt, “On the Nature of the Hieroglyphic Script”, *Zeitschrift für Ägyptische Sprache und Altertumskunde* 121 (1994) 17–36.
- Faulkner Dictionary — R. O., Faulkner, *A Concise Dictionary of Middle Egyptian* (Oxford, Griffith Institute & Ashmolean Museum, 1962).
- Frandsen *Categorization* — P. J. Frandsen, “On Categorization and Metaphorical Structuring: Some Remarks on Egyptian Art and Language”, *Cambridge Archaeological Journal* 7:1 (1997) 71–104.
- Faulkner Duck — R.O. Faulkner, Apd = ‘duck’, *Journal of Egyptian Archaeology* 38 (1952) 128.
- Gardiner *Egyptian Grammar* — A. Gardiner, *Egyptian Grammar. Being an Introduction to the Study of Hieroglyphs*, 3rd edition, revised (Oxford, Griffith Institute, 1952).
- Gibbs *Poetics* — R. W. Gibbs, *The Poetics of the Mind. Figurative Thought, Language, and Understanding* (Cambridge, Cambridge University Press, 1994).
- Giveon *Asian Toponyms* — R. Giveon, “Remarks on the Transmission of Egyptian Lists of Asiatic Toponyms”, In: *Fragen an Die Altägyptische Literatur. Studien zum gedenken an E. Otto*. Wiesbaden (1977) 171–183.
- Goldwasser *Icon* — O. Goldwasser, *From Icon to Metaphor: Studies in the Semiotics of the Hieroglyphs*, *Orbis Biblicus et Orientalis* 142 (Freibourg, Universitätsverlag & Göttingen, Vandenhoeck & Ruprecht, 1995).
- Goldwasser *Determinative System* — O. Goldwasser, “The Determinative System as a Mirror of World Organization”, *Göttinger Miszellen* 170 (1999) 49–68 (with an appendix by M. Müller).
- Goldwasser *Wor(l)d Classification* — O. Goldwasser, *Lovers, Prophets and Giraffes. Wor(l)d Classification in Ancient Egypt* (with an appendix by M. Müller). Göttinger Orientforschungen IV: Ägypten, Bd. 38. Classification and Categorization in Ancient Egypt, 3 (Wiesbaden: Harrassowitz, 2002).
- Goldwasser *Metaphor* — O. Goldwasser, “Where is Metaphor? Conceptual Metaphor and Alternative Classification in the Hieroglyphic Script”, *Metaphor & Symbol* 20:2 (2005) 95–113.

- Hadley *Asherah* — J. M. Hadley, *The Cult of Asherah in Ancient Israel and Judah* (Cambridge: Cambridge University Press, 2000).
- Hawkes *Metaphor* — T. Hawkes, *Metaphor. The Critical Idiom 25* (London: Methuen, 1972).
- Hla Pe *Re-examination* — Hla Pe, “A re-examination of Burmese classifiers”, *Lingua* 15 (1965) 163–85.
- Hoch *Semitic Words* — J. E. Hoch, *Semitic Words in Egyptian Texts of the New Kingdom and Third Intermediate Period* (Princeton: Princeton University Press, 1994).
- Hofmann *Fuhrwesen* — U. Hofmann, *Fuhrwesen und Pferdehaltung im Alten Ägypten*, Inaugural-Dissertation zur Erlangung der Doktorwürde der Philosophischen Fakultät, Rheinische Friedrich-Wilhelms-Universität (Bonn, 1999).
- Houlihan *Birds* — P. F. Houlihan, *The Birds of Ancient Egypt*, The Natural History of Egypt: Vol. I (Warminster: Aris & Phillips, 1986).
- Kahl *System* — J. Kahl, *Das System der ägyptischen Hieroglyphenschrift in der 0.–3. Dynastie* (Wiesbaden: Harrassowitz, 1994).
- Kammerzell *Aristoteles* — F. Kammerzell, “Aristoteles, Derrida und ägyptische Phonologie: Zu systematischen Verschiedenheiten von geschriebener und gesprochener Sprache”, In *Sesto Congresso Internazionale di Egittologia*, II, 243–251 (Torino, 1993).
- Kammerzell *Varianz* — F. Kammerzell, “Zur Interpretation einiger Beispiele graphemsprachlicher Varianz im Ägyptischen”, *Göttinger Beiträge zur Sprachwissenschaft*, 2 (1999) 61–97.
- Kaplony *Strukturprobleme* — P. Kaplony, “Strukturprobleme der Hieroglyphenschrift”, *Chronique d’Egypt* 41 (1966) 60–99.
- Lakoff *Women, Fire, and Dangerous Things* — G. Lakoff, *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind* (Chicago & London: University of Chicago Press, 1987).
- Lakoff & Johnson *Metaphors* — G. Lakoff and M. Johnson, *Metaphors We Live By* (Chicago, Chicago University Press, 1980).
- Leclant *Astarté* — J. Leclant, “Astarté à cheval après les représentations égyptiennes”, *Syria* 37 (1960) 1–67.
- Lefebvre *Grammaire* — G. Lefebvre, *Grammaire de l’Égyptien classique* (Le Caire, Imprimerie de l’institut français d’archéologie orientale, 1955).
- Polotsky *Transpositions* — H.J. Polotsky, “Les transpositions du verbe en égyptien classique”, *Israel Oriental Studies* 6 (1976) 1–50.
- Pusch *Piramesse* — E. B. Pusch, “Piramesse-geliebt-von-Amun, Hauptquartier Deiner Streitwagentruppen”: Ägypter und Hethiter in der Delta-Residenz der Ramessiden. In: *Pelizäus-Museum Hildesheim: Die Ägyptische Sammlung*, edited by A. Eggebrecht, (Sonderheft der Antiken Welt, Mainz, 1993).
- Pyr. — K. Sethe, *Die altägyptischen Pyramidentexte nach den Papierabdrücken und Photographien des Berliner Museums*, 3 Bde. (Leipzig, J. C. Hinrichs, 1910–1922).
- Richards *Philosophy of Rhetoric* — I. A. Richards, *The Philosophy of Rhetoric* (Oxford, Oxford University Press, 1936).
- Rommelaere *Les chevaux* — C. Rommelaere, *Les chevaux du Nouvel Empire égyptien: origines, races, harnachement* (Bruxelles, Connaissance de l’Egypt Ancienne, 1991).
- Rude *Graphemic Classifiers* — N. Rude, “Graphemic Classifiers in Egyptian Hieroglyphics and Mesopotamian Cuneiform”, In *Noun Classes and Categorization*, edited by C. Craig (Amsterdam and Philadelphia, John Benjamins Publishing Company, 1986) 133–138.
- Sandman *Texts* — M. Sandman, *Texts from the Time of Akhenaten*. Bibliotheca Aegyptiaca VII, (Bruxelles, Éditions de la fondation Égyptologique Reine Élisabeth, 1938).
- Schenkel *Einführung* — W. Schenkel, *Tübinger Einführung in die klassisch-ägyptische Sprache und Schrift* (Tübingen, im Selbstverlag des Autors, 1997).
- Schenkel *wmm* — W. Schenkel, “Ägyptisch *wmm* ‘essen’, Zur Interpretation der Graphien”, *Lingua Aegyptia* 10 (2002) 59–77.

- Shalomi-Hen *Classifying* — R. Shalomi-Hen, *Classifying the Divine. Determinatives and Categorisation in CT 335 and BD 17*, Göttinger Orientforschungen IV: Ägypten. Bd. 38. Classification and Categorisation in Ancient Egypt, 2. (Wiesbaden, Harrassowitz, 2001).
- Shalomi-Hen *Writing* — R. Shalomi-Hen, *The Writing of Gods. The Evolution of Divine Classifiers in the Old Kingdom*, Göttinger Orientforschungen IV: Ägypten, Bd. 38. Classification and Categorization in Ancient Egypt (Wiesbaden, Harrassowitz, forthcoming).
- Shen *Schemata* — Y. Shen, “Schemata, Categories and Metaphor Comprehension”, *Poetics Today* 12 (1992) 111–124.
- Shen *Metaphors* — Y. Shen, “Metaphors and Global Conceptual Structures”, *Poetics* 25 (1997) 1–17.
- Smoczyn’ski *Seeking Structure* — W. Smoczyn’ski, “Seeking Structure in the Lexicon: On Some Cognitive-Functional Aspects of Determinative Assignment”, *Lingua Aegyptia* 6 (1999) 153–162.
- Urk. IV — K. Sethe, *Urkunden der 18. Dynastie*, 1–16. Unveränderter Nachdruck der zweiten, verbesserten Auflage von 1927 und 1930 (Berlin, Akademie-Verlag, 1961) 1–1226.
- Wb* — A. Erman and H. Grapow, *Wörterbuch der ägyptischen Sprache*, 7 vols. plus 5 vols. References (Leipzig, J. C. Hinrichs & Berlin, Akademie-Verlag, 1926–1963).
- Wiesmann *Determinative* — H. Wiesmann, “Die Determinative des sprechenden Mannes und der Buchrolle in den Pyramidentexten”, *Zeitschrift für Ägyptische Sprache und Altertumskunde* 57 (1922) 73–78.