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Eitan Grossman, Stéphane Polis & Jean Winand (eds.)

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Lexical semantics in Ancient Egyptian

An introduction

Eitan Grossman & Stéphane Polis, Jerusalem – Liège

The present volume represents the outcome of a workshop[1] held in Liège in 2009 (10-12 December) under the auspices of the Ramses Project.[2] Most of the articles are based on presentations given during this workshop, but additional papers have been invited in order to cover important issues that had been left untouched by other contributions. This workshop was the first such meeting, to the best of our knowledge, devoted specifically to the topic of lexical semantics in Ancient Egyptian.

Among the numerous subfields of linguistics, lexical semantics[3] is the discipline that aims at studying the units that collectively constitute the lexicon of languages. This encompasses a broad range of issues, including *inter alia* the description (or definition[4]) of the meaning of lexical items, the identification of the different senses of a word according to its syntagmatic distribution and contexts of use[5] (semasiological approach), the analysis of the relationships between these senses, and the study of the links between senses of words that belong to common or contiguous semantic networks (onomasiological approach). While the core of lexical semantics seems to be relatively well-defined, linguists are often just as occupied with 'boundary' phenomena, such as the delimitation of semantics from syntax, on the one hand, and pragmatics, on the other, or the 'interfaces' between these domains. Additionally, all of these research questions have both synchronic and diachronic dimensions, since meaning is part of speakers' knowledge of language, but also changes over time. As such, linguists are interested in the evolution of individual items and the systems of oppositions in which they participate.

Given the fact that Egyptologists work on a dead language, made worse by an interrupted tradition of knowledge, a great amount of time and energy has been spent on the lexicon since the early days of Egyptology, especially insofar as the production

1 The participants of this workshop were: Camilla Di Biase-Dyson (Berlin); Åke Engsheden (Uppsala); Orly Goldwasser (Jerusalem); Eitan Grossman (Jerusalem/Liège); Ingelore Hafemann (Berlin); Anne-Claude Honnay (Liège); Frank Kammerzell (Berlin); Eliese-Sophia Lincke (Berlin); Elsa Oréal (Paris); Stéphane Polis (Liège); Alessandro Stella (Liège); Pascal Vernus (Paris); Daniel Werning (Berlin); Jean Winand (Liège).

2 See Polis 2006; Rosmorduc et al. 2009; Winand et al. 2012.

3 For a critical historical survey of the theoretical frameworks in lexical semantics, see Geeraerts 2010.

4 For example using semantic prim(itiv)es; see e.g. the influential proposal regarding the definition of linguistic meaning in Wierzbicka 1996: 237-sq.

5 On the importance of context, see the plea in Cruse's (1986: 1) introduction to his classical textbook on lexical semantics: "it is assumed that the semantic properties of lexical items are fully reflected in appropriate aspects of the relations it contracts with actual and potential contexts".

of lexicographical tools (dictionaries and specialized glossaries) is concerned.[6] Accordingly, the progress made in the identification of the meanings of words is considerable. However, it is fair to say that Gunn's (1941: 144) statement regarding the state of Egyptian lexicography in 1941 is still fairly accurate[7] at the beginning of third millennium:

> Egyptian lexicography […] suffers chiefly from two defects: first, that to many words, such as names of plants, birds, garments, implements, occupations, no meaning, except within the limits of a rather large category, can be attached with confidence; secondly, that although the meanings of many words and phrases have been ascertained fairly closely, for us they are still synonymous with other words and phrases, which makes it probable that we do not understand them exactly.

More accurately, while further progress is constantly made with respect to the first defect identified by Gunn (i.e. the precise identification of the referents for *naturalia* and *realia*) and while the publication of new texts steadily enriches our knowledge of the Egyptian lexicon, the second defect still definitely holds: Egyptian lexicography — which Gardiner (1948: 12) considered to be "amongst the most important tasks confronting the student of the Egyptian language in its various phases" — still lags behind what could be reached through careful empirical analyses of the extant data and explicit theoretical and methodological frameworks. In short, the progress we have made in our understanding of grammar has still not been matched by comparable progress in the domain of meaning.

The aim of the present volume is not to provide studies about complete corpora of texts that will ultimately be the foundation of a reference dictionary of Ancient Egyptian, as desirable as that might be,[8] but rather to address methodological issues[9] touching upon several domains of Ancient Egyptian lexical semantics that are likely to enhance and enrich future lexicographical studies.[10] As such, the orientation of this volume is primarily lexicological and not lexicographical.[11]

In the following seven sections, we briefly introduce the thirteen papers included in the volume. They have been arranged according to main topic and scope. In doing so, it is not our ambition to do justice to the complexity of their respective arguments,

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6 For comprehensive discussion of the history of Ancient Egyptian lexicography down to recent years, see Strutewagen 1994; Schenkel 1995; Dils 2010 and Watson 2010 (with references to previous literature). Several central projects are described in Grunert & Hafemann 2010.

7 The same holds for Gilula's (1978: 45) observation that "our operative knowledge of the grammar of the Egyptian language far exceeds the workable knowledge of the vocabulary".

8 Regarding this avenue for lexicographical research in Egyptology, see already Gardiner's remarks (1947: 19-21) in "Reflexions on the Hieroglyphic Dictionary" that introduce his *Ancient Egyptian onomastica*.

9 See some preliminary remarks in Winand 1985 and Polis & Winand 2012.

10 As pointed out by Shisha-Halevy (1980: 339), the basis for any lexicographical study should ideally be "a complete semantic-grammatical analysis" at the level of texts.

11 Therefore, in the Egyptological literature, the most penetrating thoughts about the methodological questions linked to lexicology are to be found in the critical reviews of lexicographical works. See e.g. Meeks 1997; 1999; 2002; 2005; Pantalacci 2005; Peust 2000; Roquet 1982; Shisha-Halevy 1980. The field of lexicography would also deserve book-length studies; on this point see already Meeks 1984: 16.

but rather to stress how they contribute to addressing various aspects of lexical semantics in a text language.

1 Lexical semantics and the graphemic system

Perhaps unexpectedly — for Egyptologists and non-Egyptologists alike — this volume opens with two significant contributions on graphemic classifiers ('determinatives') in Ancient Egyptian, written by the foremost specialists in this emerging field of research. Both articles present detailed overviews of the main questions and issues linked to classifier studies in Ancient Egyptian — with special attention to how classifiers contribute to the meaning of lexical units and phrases — and sketch promising avenues for future research. Both studies compare the classifier system of written Ancient Egyptian with other classifier systems in oral languages, providing a strong foundation for the redefinition of *determinatives* (the traditional label in Egyptological literature) as *classifiers*. While there are significant differences between these articles, in terms of their analysis of Ancient Egyptian classifiers, we also note important points of convergence and agreement. For example, both articles explore the phenomenon — of primary concern for contemporary research in lexical semantics (see §4) — of classifiers reflecting the semantic frames of lexical items, e.g., the semantic roles associated with verbs.

In their paper, Orly Goldwasser and Colette Grinevald ask the crucial question: *what are graphemic classifiers ('determinatives') good for?* They argue that the reason that the Egyptian script kept a cumbersome and, in principle, unnecessary system of (multi-)determinatives for more than 3000 years is to be found in the rich array of additional information about the lexemes that is provided by the classifiers. Some types of information are not conveyed by oral language classifiers, but are rather particular to the written medium. In this respect, the study of classifiers is of paramount importance for lexical semantic research in Ancient Egyptian. The authors identify three main kinds of information that are provided by classifiers in pre-Coptic scripts: (1) encyclopedic information (ranging from gender, social status or material for nouns, to event schemata and nature of the arguments for verbs); (2) information that is discourse/pragmatic in nature (the selected classifiers provide additional information about specific referents in actual discourse); (3) grammatical information (as markers of boundaries between words and phrases, and as markers of derivational processes, etc.). The article concludes with a brief appendix, written by Grinevald, which introduces the Egyptological reader to the central phenomena associated with classifier systems in oral languages.

The aim of Eliese-Sophia Lincke and Frank Kammerzell's paper entitled *Egyptian classifiers at the interface of lexical semantics and pragmatics* is to outline the semantics of Egyptian classifiers by describing the semantic and semiotic relations between a classifier and its host, as well as the consequences of these relations for the structure of the category built by such a classifier. The authors make a stimulating new proposal: graphemic classifiers are to be analyzed as bound but fully-fledged morphemes (minimal form-function pairings) of written Egyptian. Classifiers are defined in terms of Kammerzell's typology of sign functions: classifiers are [+meaningful]&[-autonomous] semograms, as opposed to other sign functions: the

[+meaningful]&[+autonomous] logograms, on the one hand, and the [-meaningful]&[+autonomous] phonograms and the [-meaningful]&[-autonomous] interpretants. As a result, the conception of classifiers advocated by Lincke & Kammerzell is more radical than that proposed by Goldwasser & Grinevald, since the latter consider Egyptian classifiers to be a *script* phenomenon, while the former analyze it as linguistic in a narrower sense. Much of this article is devoted to the 'degree of fit' between categories mapped out by classifiers, on one hand, and lexical semantic categories, on the other. Like Goldwasser & Grinevald, the authors distinguish between different motivations for the occurrence of classifiers: the lexical semantics of the host, on the one hand, and the pragmatic discourse situation ('referent classifiers'), on the other, and compare Ancient Egyptian to oral classifier languages.

We think that these two articles will do much to dispel the lingering skepticism of many Egyptologists regarding the analysis of 'determinatives' as classifiers. Furthermore, they show the extent to which the analysis of the relationship between classifier and host involve issues that are crucial to research on lexical semantics, such as the delimitation of semantics from pragmatics.

Also dealing with the particularities of studying semantics in non-oral languages is *Motivated sign formation in Hieroglyphic Egyptian and German Sign Language*, by Eliese-Sophia Lincke and Silvia Kutscher. At first glance, this paper might seem relatively tangential to the topic of the volume. However, this innovative article makes a contribution to the study of lexical semantics in languages whose signs involve a high degree of iconicity. Taking a Peircean approach, the authors examine the ways in which iconic signs, such as those of Hieroglyphic Egyptian and German Sign Language (DGS), are systematically related to lexical semantic meanings (and referents). Such a comparison is unexpected and perhaps provocative, but Lincke & Kutscher argue convincingly that important insights are to be gained by considering a joint typology of systems of different modes (signing and writing) within the same modality (visual). Of the various principles shared by Hieroglyphic Egyptian and DGS, the most directly relevant for the study of lexical semantics is the iconic representation of activities and objects from the semantic frames of lexical items. The authors point to the role that iconicity plays in the inferential processes leading linguists and philologists — as well as language users — to lexical meaning.

2 Polysemic networks and semantic generality

Polysemy, a generic term for the situation in which multiple meanings (or senses) are associated with a single signifier, is a universal phenomenon that has attracted lively debates in the field of lexical semantics. Indeed, "persistent occurrence and regular patterns of certain polysemies and semantic parallels" are not only well documented in a single "linguistic phylum or one geographical area", but they also "transcend genetic or areal boundaries" (Vanhove 2008b: VII). Hence, linguists of different theoretical allegiances (cognitivists, typologists, etc.) have hypothesized the possible existence of a universal semantic conceptual space covered by lexical items in diverse but recurring ways across languages.

Two contributions in this volume specifically introduce theoretical frameworks that have been developed in order to deal with polysemic networks in natural

languages (both within an individual linguistic system and cross-linguistically). In each one, case studies in Ancient Egyptian are presented so as to illustrate the pros and cons of such methodologies for the analysis of patterns of polysemy in a text language.

After a comprehensive overview of the fundamental tenets of cognitive linguistic approaches to lexical semantics (e.g., categorization, the embodied nature of language and thought, conceptual metaphor theory), Rune Nyord illustrates in his paper *Prototype structures and conceptual metaphor. Cognitive approaches to lexical semantics in Ancient Egyptian* how this model can be applied in Ancient Egyptian with two case studies. The first one is devoted to the polysemous verb *fḫ*, "release, etc." in Earlier Egyptian. The author shows how key concepts of cognitive linguistics — such as radial category structure and image schemata — can be used to describe and organize the senses of this polysemic item. The conceptual category of the verb is analyzed as consisting of a radial network of meanings extended from a central prototypical sense with a high degree of embodied and interactional salience, namely "letting go an object held in the hand". All of the attested meanings of the verb are accounted for by image-schematic variation and metaphorical extension based on this central prototypical meaning. This case study ends with the discussion of two ways of presenting certain aspects of a radial category with diagrams, which are meant to illustrate the findings of the lexical semantic analysis. In the second case study, Nyord shows that cognitive linguistic approaches allow us to study lexical meaning not only at the level of individual lexical items, but also at the more general level of conceptual domains (based on conceptual metaphor theory). He exemplifies the method in arguing that a wide range of individual expressions in Earlier Egyptian have in common the fact that they conceptualize discourse elements metaphorically as tangible objects which are moved around and manipulated during communication.

Both aspects of lexical semantics developed in Nyord's paper, namely semasiological and onomasiological approaches to polysemy, are also discussed by Eitan Grossman and Stéphane Polis in their contribution *Navigating polyfunctionality in the lexicon. Semantic maps and Ancient Egyptian lexical semantics*. The methodological framework, however, is markedly different. The authors introduce the classical semantic map model as an alternative to the overwhelming tendency to search for a single basic meaning (*Grundbedeutung*) in Egyptological descriptions of lexical items, even when the item in question has a wide range of meanings or functions. The classical semantic map model is a tool that has been developed by typologists in order to visually represent cross-linguistic regularities in semantic structure. Once a map is drawn for a given semantic domain, it becomes possible to account in a principled way for the relationships between two or more meanings associated with a single linguistic form (either grammatical constructions or lexemes) by mapping them onto the semantic points identified cross-linguistically for this domain. Two case studies are presented in order to examine the applicability and usefulness of this model in Ancient Egyptian. In the first case study, the authors show how the semantic space of comitative and instrumental meanings is structured and expressed in Late Egyptian by several prepositions. A semantic map based on more than 200 hundred languages is evaluated against the Ancient Egyptian material. Additionally, they illustrate how

semantic maps can be used for describing the systems of oppositions in a semantic field as well as for tracking the diachronic reorganization of the system of opposition in this semantic area. The second case study proceeds on semasiological grounds. The polysemy of the preposition *r* "at, to, towards, against, as for" is taken as a point of departure. The authors argue that this preposition is best described as matching the comparative concept *allative marker*, i.e. a goal-oriented preposition that developed a polysemous network typical of other allative markers in the languages of the world. The argument is grounded by drawing a semantic map of allative markers based on cross-linguistic data and by comparing it to the polysemic network of the preposition *r* in Ancient Egyptian.

In her study *Discourse markers between grammar and lexicon. Two Ancient Egyptian cases for (de)grammaticalization?*, Elsa Oréal also addresses the issue of lexical items that have several meanings. She takes a side in the classical debate concerning the distinction between polysemy (as broached in the two abovementioned contributions) and semantic generality or monosemy in lexical semantics. The author argues for the second option, proposing a monosemic approach for describing the semantics of discourse markers in Ancient Egyptian, the basic and characteristic function of which is seen as relating a text unit (or discourse segment) to some point of reference. Based on the observation that a polysemous description of discourse markers runs the risk of splitting up what is one lexeme into as many "meanings" as uses, which appear to be distinct but still represent actualizations of one common semantic core, the proposed model accounts for the polysemy of discourse markers in terms of an underspecified (and, crucially, not vague) lexical core meaning (which can be highly abstract) and contextual parameters (including speaker/addressee's attitude and expectations). In two case studies devoted respectively to the emergence of the discourse markers *js* and *ist*, Oréal examines pathways of evolution that a traditional grammaticalization approach would term counter-directional and describes their semantics. Furthermore, the author emphasizes the role played by formal analogy, together with pragmatic inference, in shaping specific outcomes of change. In a final case study, the author shows, based on a methodological framework anchored in the basic tenets of the *Théories de l'énonciation*, how the modal and connective uses of the discourse marker *ḥm* can be explained in a principled way.

3 Exploring the boundaries of lexical semantics

With her study of discourse markers, Oréal broaches yet another topic central to lexical semantics, namely the distinction between lexicon and grammar, or more specifically between so-called content words and function words or markers. The distinction is held by some to hinge on context-dependence, by others on the kind of meaning involved, and yet by others on the syntactic role fulfilled by the item in question.[12]

This binary distinction between lexicon and grammar is actually misleading, as exemplified most notably by the semantics of adpositions and discourse markers, as

12 See Muysken (2008) for a penetrating multilevel approach to the distinction between lexical and 'functional' items.

well as the diachronic processes of grammaticalization, on the one hand, and of lexicalization, on the other. Instead, an increasingly widespread idea is that there is a continuum between purely lexical items and items possessing meanings that can only be described properly at a constructional (or even textual) level, e.g. the elements of idioms, adpositions and adverbs, and discourse markers.[13]

Besides the case studies on prepositions in Grossman & Polis' paper and the ones on discourse markers in Oréal's, two contributions specifically address the meaning of items at the boundaries of traditional lexical semantics.

Camilla Di Biase-Dyson's contribution *A diachronic approach to the syntax and semantics of Egyptian spatio-temporal expressions with ḥ3-t 'front'. Implications for cognition and metaphor* examines the changing syntactic and semantic features of the spatio-temporal expressions formed with the noun *ḥ3-t* "front" in construction with the simple prepositions *m* "in", *r* "to" and *ḫr* "under", i.e. *m-ḥ3t*, *r-ḥ3t* and *ḫr-ḥ3t*, all of which may be translated as "in front of" or "before". In her semasiological approach, she describes the uses of these expressions in a variety of text types that span pre-Coptic Egyptian, paying special attention to the clarification of the significant similarities and differences in meaning between these constructions (semantic networks based on the uses of these forms are proposed) and to their degrees of grammaticalisation as compound prepositions and as adverbs. She shows that these complex expressions conform only to a limited extent to suggested cross-linguistic patterns of diachronic change: the theory that temporal expressions derived from spatial expressions on the basis of metaphorical mapping between the spatial and temporal domain — the TIME IS SPACE metaphor proposed by Cognitive Metaphor Theory — is hardly supported by the extant Ancient Egyptian written material. Consequently, the metaphorical extension process OBJECT (body part) > SPACE > TIME > QUALITY put forward by Heine, Claudi & Hünnemeyer (1991) does not find strong support in Egyptian. Furthermore, the author provides a sketch of the different spatial and temporal uses of the *ḥ3-t* expressions and the semantic changes they underwent over time.

The aim of Daniel Werning's article *Ancient Egyptian prepositions for the expression of spatial relations and their translations. A typological approach* is to explore the static spatial meaning of basic prepositions in Hieroglyphic Ancient Egyptian, as compared to eight modern target languages. In order to achieve this goal, an innovative tool is used: the Topological Relations Picture Series (TRPS). This series of 70 pictures, developed by Melissa Bowerman, Eric Pederson, and the Language and Cognition Group of the Max Planck Institute for Psycholinguistics, exhibits a wide range of static spatial relations that are meant to cover this very 'semantic space'. The method at work is the following: one explores how languages formally express the situation depicted in each drawing by the means of Basic Locative Constructions. Werning argues that the Basic Locative Construction of Ancient Egyptian is the adverbial sentence with a prepositional phrase as predicate. Accordingly, he collects examples of this constructional scheme expressing situations that are maximally

13 In this respect, see the syntax-lexicon continuum in Croft 2001: 17 and *passim*. One should bear in mind that context-free meanings are hardly accessible even for purely lexical items (see n. 5 & 10).

similar, in terms of 'items' (figures) and 'places' (grounds), to the ones depicted in the TRPS. Thereby, it is possible to compare the use of Ancient Egyptian basic prepositions with the use of prepositions in modern languages based on the TRPS. The relevant spatial meanings are arranged as a map, which is itself a working hypothesis regarding a cognitive structure common to these languages. In this framework, Werning gives what could be labeled a "minimalist polysemic account" of the semantics of Ancient Egyptian basic prepositions, which means that he makes room for more than one (polysemic) basic meaning (monosemic) for each preposition. The suggested basic meanings are as follows: *m* IN and FROM; *r* ATTACHED, CLOSE_TO, and TO; *ḥr* SUPERIOR (i.e. VERT_ON + ABOVE) and AT; and *ḫr* INFERIOR (i.e. UNDER + BELOW); as well as *m ḫnw* INSIDE and WITHIN, and IN_THE_MIDDLE; *dp* (trad. *tp*) head.LOC, AT_TOP, and AHEAD; *ḥr dp* ON_TOP and ABOVE. Further, he highlights the case of the conflation of the meanings BEHIND and AROUND in *ḥ3*, as well as the phenomenon of a 'Paradoxical Figure–Ground Reversal' as exemplified by Egyptian *wrrt m dp* (lit. great_crown IN head) 'the Great Crown on the head'. Although this study mainly deals with static spatial relations, Werning also addresses the question of the analysis of dynamic spatial relations. He claims that, while some languages seem to have prepositions that specifically denote dynamic spatial relations, i.e. a path of some sort, such as English *to*, *from*, *into*, *out of*, *onto*, and *through*, Egyptian does not have many such prepositions. He decomposes the meanings of prepositions as well as the meanings of verbs in examples such as *iw=f ḥr pr*(*.t*) *m pr-nsw* "then he went out of the palace" in the following way: *pr*(*.t*) = come.FROM.IN and *m* = IN. Consequently, he supports the analysis that, in contrast to, e.g., English, in dynamic contexts, Egyptian prepositions often only encode the static source or goal configuration, but not the path proper.

Also dealing with the lexical marking of spatial reference is Matthias Müller's *Spatial frames of reference in Egyptian: Diachronic evidence for Left/Right patterns*. Cast in the framework developed by Stephen Levinson and his colleagues, Müller starts out from a detailed diachronic study of the semantic fields involved in spatial orientation: horizontal spatial areas (right and left, cardinal directions, front and back). Müller demonstrates that while there is significant change in the terms associated with right and left, the cardinal points remain remarkably stable over millennia. Moreover, the use of right/left is relatively extended in comparison to 'front' and 'back.' Like a number of other authors in this volume, Müller goes beyond an onomasiological study, examining the extant linguistic evidence in order to gain insights into the frames of spatial reference of Ancient Egyptian. Based on a careful study of the descriptions of animate beings and inanimate objects, as well as their pictorial representations, Müller identifies Ancient Egyptian as a language characterized by both intrinsic and relative frames of reference.

4 Verbal lexemes and argument structure

The lexical semantics of verbal lexemes — and the constructions in which they participate — is an especially rich domain of investigation.[14] Contemporary theoreti-

14 In Ancient Egyptian, see Winand 1999; 2003; 2006.

cal approaches, often focusing on argument structure and Aktionsart/aspect, range from radically compositional to radically constructional.[15] However, the study of dead languages often requires the traditional, largely philological, descriptive work of identifying the meaning of a verb lexeme from its contexts of use. The papers dealing with the semantics of verbs in this volume vary in terms of scope and focus.

In his study of the verb *nms* (*To clothe or to wipe. On the semantics of the verb nms*), Joachim Fr. Quack illustrates the kind of work involved in identifying and describing the meaning of a verb lexeme, specifically the exhaustive collection of all attested occurrences and the careful analysis of the contextual evidence. The verb studied, especially well attested in ritual contexts, is generally understood to mean "to clothe, to swath in textile" (*Wb.* II, 269). Based on a close analysis of its contexts of use, Quack argues that the current understanding of the word is in need of revision and that it rather means "to wipe (clean)". This suggestion finds strong support in a close analysis of the occurrences of this verbal lexeme in the *Ritual of embalming the Apis*, a technical text that gives the most instructive examples for establishing the actual meaning of the word. Furthermore, the author examines some polysemic extensions of the root that led to the entering of other *nms* verbs into dictionaries and examines possible nominal derivation from this root.

Pascal Vernus' *Essai de sémantique lexicale*, dealing with the verb *gm*(*j*) "to find" is a masterful illustration of the analysis of verbal argument structure in Ancient Egyptian. Vernus describes how the semantics of this verbal lexeme differs according to the constructions in which it occurs and the number and nature of its arguments. The author shows that as a matrix verb (*verbe opérateur*) governing complement clauses, an important part of the meaning of the complex construction depends on the type of complement clause. The semantics of the three main types of complement clauses occurring after *gm*(*j*) (asyndetic complement clauses, complement clauses introduced by a complementizer, and depictive complement clause constructions) is described, with a special focus on the meaning of depictive complement clauses as opposed to other types of complementation patterns. Vernus further argues that when no complement clause is used in the argument structure of *gm*(*j*), most of the semantic load of the construction is carried by *gm(j)*, the basic meaning of which can be glossed as "to find (by accident)". In order to explain the many senses of *gm*(*j*), Vernus systematically studies the contextual variables, taking into account the number of arguments in the valency pattern and their respective semantic features (e.g. intentional vs. unintentional subjects and the notion of "control"), as well as diathesis and verbal aspect. In this fashion, he is able to account for a complex polysemic network with meanings that range from concrete predications such as "to meet", "to come forward", "to find again" to the expression of cognitive processes like "to figure out", "to imagine", "to invent", "to become aware", "to recognize" or "to identify". Additionally, the author describes several examples in which *gm(j)* expresses a positive axiological judgment ("to find something good", "to value", "to like"). One should emphasize that the suggested analysis has a strong impact on the

15 On this point see the chapter on "The interaction between verbs and constructions" in Goldberg 1995: 24-66.

understanding and translation of these occurrences of *gm*(*j*), a welcome practical result of this study. Vernus concludes his analysis by studying the genesis and development of the idiomatic collocation *gm*(*j*) … *r*. He stresses again that the number and type of arguments that enter this constructional scheme deeply affect the meaning of the whole construction. In a final section, the author summarizes the semantic structure of this verbal lexeme and argues that its kernel semantic value is to be linked to the notion of "showing up". Therefore, besides all the other meanings mentioned above, *gm*(*j*) also participates in the onomasiological domain of verbs such as *wnn* "to be present" or *ḫpr* "to be the result of a previous transformation".

Alessandro Stella's contribution, *Le verbe de perception nw*(*ỉ*) *en Égyptien Ancien*, deals with the meaning and argument structure of a number of verbs within the same semantic field, such as *nw*(*ỉ*), *dgỉ*, and *ptr*, all related to the expression of visual perception. Stella traces the diachronic evolution of the verb *nw*(*ỉ*) from a relatively underspecified type of visual perception, which may but need not mark subject control, to a more specific meaning, involving subject control, focus, and effort. Moreover, he shows that the argument structure of the verb changes significantly: in earlier Egyptian, the verb *nw*(*ỉ*) is limited to noun phrase objects, but in Late Egyptian, it is compatible with clausal objects as well. Stella links the semantic and syntactic changes to a major shift in argument structure: in Late Egyptian, the second actant of *nw*(*ỉ*) is increasingly marked by a range of prepositions. Each valency pattern, depending on the (in)animacy of the actants, is argued to encode a distinct lexical meaning. This shift is a watershed in the history of argument structure in Ancient Egyptian, since prepositionally marked actants (especially *r*) 'take off' in Late Egyptian, first with verbs of perception, and, by Coptic, occurring with a much wider range of verb lexemes from different semantic classes (including, but not limited to, verbs of cognition, feeling, and verbal utterance). Stella identifies the origins of prepositionally marked actants in Earlier Egyptian, with verbs such as *mỉỉ* ('see') and *dgỉ* ('look'), arguing that *nw*(*ỉ*) is assimilated to existing — but still relatively marginal or infrequent — valency patterns.

Unlike the abovementioned studies, Jean Winand's contribution *Le verbe et les variations d'actance. Les constructions réversibles* does not take as point of departure a verbal lexeme nor a semantic field, but the argument structure patterns themselves. The paper opens with a comprehensive overview of the different types of valency pattern alternations attested in Ancient Egyptian. In this section, the author examines the regular shifts of meaning that are linked to alternations such as: (a) the direct vs. indirect expressions of the object of transitive predicates, (b) the addition of one argument to monovalent predicates, (c) the deletion of the second or the third argument of bi- and trivalent predicates, (d) the inversion of the second and third argument of trivalent predicates, (e) the alternation between bivalent and trivalent constructions, (f) the alternation between double object constructions and ditransitive constructions; (g) the alternation between several types of trivalent constructions. In this overview, Winand additionally emphasizes the fact that the meaning of verbal lexemes is not only affected by alternations at the syntactic level: the semantic features of the arguments also play an important part in the semantics of the verbal construction in context. The core of Winand's paper is devoted to a specific subgroup

of the aforementioned valency pattern alternation (g), namely "reverse constructions." Reverse constructions are characteristic of trivalent predicates that can be constructed with an inversion of the second and third arguments, like e.g. *ȝṯp* X *m* Y "to load X with Y" vs. *ȝṯp* Y *r* X "to load Y in X": in both cases X refers to the container and Y to the content, but in the first case the container is expressed as a direct object, while in the second case the direct object is the content. In addition to describing all attested argument structures for three semantically related verbal lexemes (*ȝṯp* "to load", *šwi* and *sšwi* "to empty"), the author analyzes the specific semantics of each argument structure. Furthermore, he looks for the reasons or motivations for such valency pattern alternations and reviews several criteria that could trigger reverse constructions, such as the nature of the arguments (animate vs. inanimate), their degree of definiteness, and the aspectuality of the verbal complex. Whereas the nature of the argument appears to play no role in the alternation, Winand shows that the object slot is most of the time occupied by a pronominal element and suggests the existence of a *Principe de continuité thematic* (PCT), which reads as follows: in Ancient Egyptian, one observes a strong tendency towards the expression as direct object of the element that has already been introduced in the discourse environment. Additionally, he argues that the Aktionsart feature *gradability* and the notion of *saturation* can account for the division of labor between several kinds of attested argument structure.

6 Theoretical frameworks, descriptive theory, and problem-driven approaches

Some papers in the present volume focus on language-specific descriptions and analyses, from studies of particular lexical items, e.g., Quack on the verb *nms* and Vernus on the verb *gm*(*j*) 'to find,' to semantic classes, e.g., Stella on verbs of perception, or valency alternation constructions, such as Winand's study of reversible trivalent verbs. These studies are hardly 'atheoretical'; on the contrary, they are often characterized by the sophisticated but eclectic theoretical toolbox of descriptive linguistics (Dryer 2006).

Other papers are framed within specific theoretical frameworks, such as Nyord (Cognitive Linguistics) and Oréal (linguistique énonciative). Still others hold no specific theoretical allegiances, but rather share a set of broad concerns and assumptions associated with functionalist or usage-based and/or cognitive approaches.

Characteristic of a number of contributions is the search for new empirical and theoretical tools that can help in the analysis of difficult problems, such as Werning's use of the Topological Relations Picture Series, or the methodologically oriented exploration of classical semantic maps presented by Grossman & Polis. The most striking, however, are probably the theoretical frameworks developed by Goldwasser & Grinevald and Lincke & Kammerzell in order to deal with the problem of Ancient Egyptian 'determinatives,' here analyzed as classifiers.

An issue that transects different theoretical frameworks is that of semantic change. In lexical semantic research, increasing attention is being given to theoretical and empirical issues related to semantic change, thanks in no small part to work inspired by Elizabeth Traugott, Johan van der Auwera, and their colleagues, on the one hand, and the development of new research tools and frameworks, such as those represented

in Allan & Robinson (2011). A considerable number of contributions in this volume explicitly deal with diachrony. In some cases, a diachronic picture is sketched as part of the general description of lexical items or a semantic field, e.g., Müller's study of lexical items related to spatial reference. In other cases, the actual pathways and mechanisms of change are examined, as in Oréal's work on discourse particles and Di Biase-Dyson's on prepositions. While it is not the main focus of their paper, Grossman & Polis adopt the functionalist position that language change explains synchronic language structure, and follow other linguists in arguing that diachronic information is crucial for analyzing polyfunctionality.

The papers in this volume highlight the growing dialogue between Egyptian and general linguistics, especially language typology. On the one hand, specialists in Egyptian are interested in setting their language-specific descriptive work in a cross-linguistic context, but also in making a contribution — with new data or analyses — to broader discussions of general issues, by presenting their research in a more accessible way and by framing the topics of study in relation to contemporary research agendas.

However, these papers do not simply import theoretical concepts and empirical tools, but rather deploy them critically. For example, Müller, Oréal, Werning, and Grossman & Polis exploit their findings from Egyptian to evaluate cross-linguistic generalizations of different orders. The papers on classifiers, as well as Lincke & Kutscher's article on iconicity in sign formation, all highlight the mode-specific contributions of hieroglyphic writing to the general typologies they invoke.

7 Directions for future research

Of course, many topics in lexical semantics are not represented in the present volume. This was only to be expected, given the broad domain of research covered by the label 'lexical semantics'. In terms of word-class, there is some skewing: prepositions, particles, and verbs are well represented, but there is little on the lexical semantics of adjectives or substantives. In terms of the topics treated, some receive extensive discussion in several papers, while numerous others are neglected, such as lexical relations (synonymy, antonymy, etc.), metaphor and metonymy, ambiguity, the relationship between word meaning and sentence meaning, compositionality and related problems,[16] collocational and selectional restrictions,[17] among others.

Furthermore, the spectrum of theoretical approaches embodied here reflects only some of those prominent in current research on lexical semantics in general linguistics. Structural, functional, and cognitive perspectives are best represented here, but beyond the obvious lack of generative approaches (which are not especially well-represented in contemporary Egyptian linguistics), the present volume also lacks attention to sociolinguistic aspects of lexical semantics. Such approaches have

16 The syntagmatic delimitation of lexical units is not a trivial issue in lexical semantics (see Cruse 1986: 23-48); this problem is especially acute in the linguistic description of Ancient Egyptian (*scriptio continua*, limited material for testing hypotheses, etc.). See the remarks in Oréal 2003 and Vernus 2003.

17 This issue is treated extensively in Grossman & Polis (forthcoming) and Grossman 2009.

become common in the study of more accessible European languages, but their implementation is largely contingent on the existence of appropriate tools that can deal with vast quantities of attested data, especially given the paucity of contemporary native speakers of Ancient Egyptian.

This points to another serious lack in Ancient Egyptian studies, namely, annotated corpora and databases, whose tagging would be sensitive to semantic information, including disambiguated contextual meanings (see n. 2). These are absolutely necessary in order to produce the kind of lexical semantic research that would form the basis of practical lexicographical tools, such as dictionaries and thesauruses. They are also a prerequisite for the kind of quantitative research that is becoming increasingly important in the study of languages with existing databases.

Another problem that remains to be solved is the integration of written texts and other kinds of images, since the distinction between the two — especially in monumental texts — is an artificial and misleading one.

Perhaps particular to Ancient Egyptian and languages with comparable writing systems is the potential practical use of graphemic classifiers to identify and analyze the meaning of lexical items. While philologists often infer the meaning of unknown lexemes based on classifiers, this topic has only been broached in the theoretically oriented contributions of Goldwasser & Grinevald and Lincke & Kammerzell. One could easily envision a 'classifier dictionary,' in which the lexical items are arranged according to the categories mapped out by classifiers.

Another issue to be addressed in future research is the integration of lexical semantic studies in Earlier and Later Egyptian, especially Demotic and Coptic. The present volume is heavily weighted towards the earlier phases of Egyptian, while Demotic and Coptic, are represented only sparsely, despite the fact that lexical semantic studies of these chronolects are not lacking. To an extent this reflects a lamentable disciplinary divide, which threatens to become a chasm, and which future research can do much to bridge.

The eclectic nature of the papers presented here reflects a very real issue in the study of text languages with large but essentially finite corpora: the main incentive for lexical semantic research in Ancient Egyptian has generally been the practical needs of elucidating the meaning of lexical items in texts, and has often stemmed from concerns such as the compilation of dictionaries or the publication of texts. Moreover, individual scholars often follow their own particular research interests, and to date, there have been few if any 'big questions' in lexical semantics — as opposed to morphology, syntax, and information structure — that have occupied philologists and linguists.

We think that the papers here represent a number of new avenues for lexical semantic research, whether in terms of theoretical framework or methodological tools, or in emphasizing the need for a more systematic approach to the study of meaning in Ancient Egyptian. We hope that this volume will trigger a broader dialogue — and encourage further research — in this field.

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