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# On the polysemy of motion verbs in Ancient Greek and Coptic

Why lexical constructions are important

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In this paper, we propose a constructional analysis of the meanings of two generic motion verbs in Ancient Greek and Coptic (Sahidic dialect), the verbs  $bain\bar{o}$  and  $b\hat{o}k$ , respectively, both of which are glossed as 'go' and are characterized by extensive polysemy. We argue that an adequate analysis of these meanings can only be achieved in a framework that recognizes lexical constructions at the level of the verb sense, showing that each meaning correlates with encoding features (ranging from morpho-syntactic to semantic, discursive, and lexical ones) that are not predictable, or at best are only partially motivated. Through extensive corpus analysis, we identify such significant, frequency-based patterns of correlation, each of which represents a lexical construction. Our data thus argue strongly for an approach to polysemy in which individual meanings are represented as enriched lexical constructions, which include morphological and discursive specifications (in addition to standard valence information).

**Keywords:** lexical constructions, polysemy, motion verbs, Ancient Greek, Coptic (Sahidic dialect)

#### 1. Introduction

The present paper investigates the polysemy of a basic motion verb in Ancient Greek, the verb  $bain\bar{o}$ , as it is used in three different authors representing different eras and genres. We also investigate a semantically related motion verb in Coptic

(Sahidic dialect),  $b\hat{o}k$  ( $b\bar{o}k$ ), which like  $ba\acute{n}n\bar{o}$  is highly polysemous. Our claim is that an adequate analysis of lexical polysemy can be achieved in a constructional framework, in this case applied to ancient languages that have not been investigated in this perspective. In particular, we seek to highlight the appropriateness and applicability of lexical constructions (e.g. Boas 2003, 2008) as clusters of features that correlate with particular senses and representing gestalts of morpho-syntactic, semantic and on occasion discourse-pragmatic information.

Baínō, whose most general gloss is 'go', is characterized by Napoli (2006: 164-166) as a verb inherently denoting "a Goal-directed movement". In the verbsof-motion literature baínō would be classified as a verb denoting self-propelled motion (cf. Nikitina 2013 among others). This basic semantics interacts with perfective and imperfective morphology respectively in order "to represent the movement by including its final goal" or "to represent the movement as not having attained its final goal, or indicate that such a goal-directed movement is habitual or iterative" (Napoli 2006: 165). This characterization, intended only for Homeric Greek, goes some way in predicting its interpretation in Homer, but in no way accounts for the full range of actual uses in the Homeric texts or, for that matter, for the later uses we find in Euripides and Plato, whose texts are also investigated here. While, as noted by Napoli, aspect is certainly one parameter that contributes to the meaning of the verb in a particular instance, it is certainly not the only one (cf. Bartolotta 2017, who claims that the inclusion of the final goal is possible even with the imperfective). Indeed, the different senses of baino in the three authors and corresponding genres systematically correlate with features like (a) the type of syntactic complement the verb appears with, (b) morphological features other than the perfectiveimperfective contrast, (c) the order of the verb with respect to its complement, (d) the type of sentence it is found in, and (e) the lexical fillers of the complements (including the subject), which for some meanings tend to be totally fixed. In addition, although our sample is not representative enough to support genre-sensitive meanings, there are clear indications that some of these lexico-grammatical combinations function as formulaic style markers for particular authors.

Like *baínō*, *bôk* is first and foremost glossed as 'go' (Crum 1939: 29a) and is in complementary distribution with the deictic verb *ei* 'come'. Depuydt (1986: 29) characterizes the relationship of these verbs and, more generally, of deictic verb couplings as a marked-unmarked opposition of a pragmatic feature:

(a) 'come' requires as the *marked* member the *presence* of the feature 'direction to the interlocutors' ... (b) 'go' requires as the *unmarked* member the *absence* of the same feature (which does make it incompatible with 'to me' and 'to you').

<sup>1.</sup> The transliteration follows the suggestions made by Grossman & Haspelmath (2015).

This corresponds perfectly to Wilkins and Hill's (1995) analysis of 'go' verbs in other languages and their claim that these verbs are not necessarily inherently (semantically) deictic. Dictionaries list more meanings than the deictic ('go') and Source-oriented ('depart') ones. Westendorf (2008: 22), for instance, adds a particular meaning to the so-called qualitative or stative form  $b\hat{e}k$  ('be on the way') suggesting that aspect also plays a role in the meaning of the verb. The parameters that contribute to the meaning of  $b\hat{o}k$  overlap, but are not identical with those that apply to the Greek data. Of particular significance for Coptic are (a) the type of syntactic complement the verb appears with, (b) morphological features, (c) the type of sentence, (d) the lexical fillers of the complements (including the subject), and (e) pragmatic factors.

The finding that a particular sense may correlate with particular features (morpho-syntactic, lexical, semantic, pragmatic) is hardly surprising and fits well with the realization that polysemy inheres in particular contextual features. There is a long and by now solid tradition in this line of work, which in more recent years has been supported by corpus-based analysis. To mention just a few influential studies, Atkins (1987) is perhaps the first to propose "ID tags", i.e. "syntactic or lexical markers in the citations which point to a particular dictionary sense of the word". In the same line, the Fillmore and Atkins (1992) analysis of the polysemy of risk relies on the distinction of the different types of complements in corpusderived examples, while Hanks (1996) also suggests that the polysemy of a verb is determined by its complementation patterns. More recently, Gries (2006) and Berez and Gries (2009) provide behavioral profiles of the verbs run and get respectively (for run see also Glynn 2014), annotating corpus examples for all kinds of syntactic, morphological, and lexico-semantic features. This type of corpus-driven semantic analysis has been applied to verbs from ancient languages, e.g. to the Ancient Greek verb plēróo 'fill' (Ioannou 2017), and has been extended to cover semantic change in a recent paper by Jansegers and Gries (2017), who develop a dynamic behavioral profile for Spanish sentir. In addition, Newman and Rice (2006) have shown how semantic properties of the verbs eat and drink may inhere not only in the type of complement but also in individual inflections of the verb (hence their term inflectional island). Croft's (2009) analysis of eat and feed derives different senses of these verbs (and corresponding frames) from distinct lexicogrammatical features of their complements. Hilpert (2016) highlights the relationship between the collocates of may and its different senses, showing how the shift in collocational preferences over a period of time correlates with the different meanings of the modal (see also an analysis of will along the same lines in Hilpert 2008).

Our work here is inspired by the methodology implemented in the works above; we essentially annotate corpus examples for all kinds of morpho-syntactic, lexical, and semantic features at the same time paying attention to all kinds of contextual and pragmatic detail. Given that our sample comes from two dead lan-

guages and intuitions are not available to begin with,<sup>2</sup> we assign meanings relying on clues and systematic correlations in the linguistic context. The diverging treatment of baínō in dictionaries and the different rendering of the relevant passages in the available translations of these texts in effect testifies to the lack of such a systematic, corpus-based analysis. Different meanings or translation equivalents are also assigned to bôk beyond its core meaning 'go (to/away)' in the more exhaustive dictionaries (Crum 1939; Westendorf 2008). In fact, translating bôk as 'go' often appears too literal or foreignizing (De Vries 2007), i.e. it does not capture its full meaning range in particular constructional contexts. The approach taken here tallies with the steadily growing realization in the cognitive linguistic tradition to the effect that focus has shifted "from words as building blocks to usage events, in all their contextual detail" (cf. Cuyckens, Dirven & Taylor 2003: 21). The point is that context (in our case, including morpho-syntax, semantic-pragmatic properties, and lexical collocates) systematically favors particular meanings and interpretations to an extent that focusing exclusively on de-contextualized semantic nodes seems simplistic (see also Bergs & Diewald 2009; Boogaart 2009). This is of course equally relevant for synchronic polysemy as for diachronic change; as we also show here, any observations regarding semantic change in later vis-à-vis earlier uses of baíno need to refer to differences in the complementation possibilities and lexical collocates of the verb at different periods.

In line with other work in Construction Grammar (e.g. Boas 2005, 2008; Croft 2001; Nemoto 2005), our data thus argue strongly in favor of lexical constructions representing the individual senses of the verb. It is sometimes assumed that idiomaticity and constructional status are derived solely from the noncompositionality of an expression. However, as seminal papers of constructional literature amply demonstrate (e.g. Fillmore 1986 on English conditionals, Kay & Fillmore 1999 on the What's X doing Y? construction), even instances of transparent syntactic structures "involve all sorts of unpredictable constraints that cannot be simply derived from the syntax alone" (Fried 2015: 976), highlighting a more subtle approach to idiomaticity and constructionhood than the one that is based simply on semantic non-compositionality. This is true of both grammatical constructions and of lexical ones, the latter being our focus here. Indeed, most of the patterns we discuss below (with the exception perhaps of the grammaticalized pattern in 3.1.4) are compositional and their meaning can be computed on the basis of the verb and its lexical arguments; however, they also have constructional status on the basis of encoding idiomaticity, which encompasses all

<sup>2.</sup> And even when dealing with a modern language, intuitions have been shown to be unverifiable since speaker motivations and speaker intent cannot be directly ascertained in a replicable manner. For an early statement of such shortcomings see, for example, Sankoff (1988).

the idiosyncratic morphological, syntactic, lexical, and on occasion discursive features associated with the relevant meanings, including, for instance, the correlation of a meaning with a particular morphological aspect, particular prepositions (as opposed to other, semantically compatible, ones) and/or lexical complements, a certain syntactic position, or specific discursive contexts. Such specifications emerge from frequency-based correlations in our data and amount to constraints that should be directly linked to a lexical construction since they do not seem to be derivable from other more general patterns or principles; in other words, it is not enough to state that baínō is an intransitive verb whose subject bears the role of 'goer' and whose complement is predictably a goal- or path-denoting prepositional phrase; it is not enough because some of its intransitive uses and meanings correlate with particular inflectional forms (cf. the term inflectional island in Newman & Rice 2006) and with particular types of complements that need to be both syntactically and lexically specified. When found in transitive contexts, it is also not enough to say that the relevant interpretation comes from the interaction of the transitive construction with the semantics of the verb, since again the meaning depends on specific lexical complements and contextual cues. All this information needs therefore to be incorporated in enriched lexical entries or lexically-based, "mini" constructions in the sense of Boas (2013:191).

The lexical patterns discussed in the following sections are thus constructions in being *encodingly* idiomatic and grounded in frequency-based correlations. Constructional approaches are usage-based, which among other things entails that frequent associations of meaning and form are an integral part of speakers' knowledge (Goldberg 2006, 2013). It is thus widely recognized that frequent patterns, even if fully compositional, may be stored independently and redundantly, thus rendering the compositional vs. constructional dichotomy vacuous. For example, the expression *Boys will be boys* is an instance of a fully regular syntactic pattern whose interpretation is derived compositionally and through Gricean implicature. It is, however, recognized as a distinct idiom (construction) on the basis of its entrenchment and conventionality (Goldberg 2006:55). As noted by Ariel (2019),

following the Gricean turn linguists have tended to adhere to Occam's Razor Principle, which dictates that any interpretation that *can* be inferred should be assumed (by the linguist) to actually *be* inferred, and hence, banished from the grammar. But as has been argued for quite some time now (Bod 2006; Bybee 2002, 2010), speakers do store frequently used linguistic strings, even ones which are interpretable compositionally (see especially Thompson 2002). We should then recognize both weaker and stronger form/function associations.

The argument concerns mostly grammatical (as opposed to lexical) constructions, but our analysis here demonstrates that frequency-based entrenchment is highly relevant to lexical constructions as well. Some of the verb patterns we identify are in fact so entrenched (practically exceptionless) that ignoring such preferences would seriously detract from descriptive adequacy.

In terms of polysemy analysis, we thus argue that a lot of sense-related unpredictability can only be represented adequately in terms of lexical (mini) constructions. At the same time, it is obvious that the senses of these verbs in both languages are related in different ways, forming a motivated polysemy structure – it is not after all accidental that the range of meanings discussed here significantly overlaps with that identified for GO motion events cross-linguistically (e.g. Newman 2004; Newman & Lin 2007; Radden 1996). Our focus, however, is not on that aspect of semantic structure and, although we offer sporadic remarks on metaphorical motivation, we do not aspire to produce a representation of the relevant polysemy networks. Rather, we aim to show that an adequate representation of *each* sense requires a truly enriched template which both departs from and complements, valency-grammar grammatical approaches, where valence descriptions are limited to the syntactically required set of semantic roles (agent, patient, etc.). In Section 5, we outline such an enriched template for lexical constructions, contributing to constructional theory.

The paper is organized as follows. In Section 2, we discuss our data and methodology. Section 3 focuses on Ancient Greek. In 3.1, we describe the lexical constructions headed by  $bain\bar{o}$  in Homer, in 3.2 the constructions in Euripides and in 3.3 those in Plato. Section 4 is devoted to the description of the constructions of  $b\hat{o}k$  in Sahidic Coptic. In Section 5, we discuss the relevance of lexical constructions and their enriched structure as it emerges from the present data, the division of labor between productive and idiosyncratic patterns, and conclude.

### 2. Data and methodology

The current study is part of a larger project which focuses on the encoding of motion events in the diachrony of Ancient Greek and Ancient Egyptian. As such, it can be seen as the first step towards a thorough investigation which aims at a qualitative and a quantitative analysis of motion verbs in the two languages, from a diachronic, comparative, and cross-linguistic angle.

The two genealogically diverse languages differ in many respects but also share some common features. They differ, for example, in that nouns are inflected for case in Ancient Greek. In contrast, in Coptic case-marking exists only to a certain extent.<sup>3</sup> There are two genders in Coptic and some nouns inflect for number, whereas Ancient Greek nouns also inflect for number and belong to three genders. Regarding the encoding of motion events both languages behave similarly. Research has looked into motion verbs in Ancient Greek suggesting that it is a satellite-framed language (see Skopeteas 2002, 2008a, 2008b; but see Nikitina 2013, Nikitina & Maslov 2013, who show that in Homeric Greek satellite-framed patterns are not as consistent as in Classical Greek). Coptic exhibits characteristics of the satellite-framed pattern, as well (note that Earlier Egyptian belongs to the verb-framed type).

In the present paper, we focus on particular motion constructions headed by two generic verbs in Ancient Greek and Coptic, viz.  $baín\bar{o}$  and  $b\hat{o}k$ , respectively. Regarding Ancient Greek, our investigation has a chronological span from Homeric poems to Classical Greek, and covers three text types, namely epic poetry, tragedy, and philosophy. Other text types, such as comedy and historical narratives, were excluded from the analysis, since they contain very few instances of  $baín\bar{o}$ . The data were extracted from the Perseus digital library. The Coptic data are synchronic<sup>4</sup> and come from canonical Christian texts. References to attestations of  $b\hat{o}k$  were taken from Wilmet's (1957) concordance while the instances themselves were copied from the Askeland/Schulz electronic version of the Sahidic Bible and the retrieved tokens were checked against the respective editions (Aranda Pérez 1984; Quecke 1972, 1977, 1984). Table 1 presents an overview of the individual works and their size.

Table 1.	The corp	us from A	ncient G	reek and	Coptic	constructed	for t	he current study	7
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Language/ Subcorpus	0 0	Approx. date	Author	Work	Text type	Database	Words
Homeric Greek	Indo- European	8th-7th c. BC	Homer	Iliad, Odyssey	Epic Poetry	TLG and Perseus	≈ 200T
Classical Greek		5th c. BC	Euripides	Andromache, Bacchae, Electra, Hecuba, Heracles, Hippolytus	Tragedy	TLG and Perseus	> 96T

<sup>3.</sup> Under certain conditions, there are prefixes that mark syntactic relations of a noun. We gloss them as 'subject marker' and 'object marker', respectively. But in a typological/functional understanding of the term *case*, they can also be considered markers of *nominative* and *accusative* case (see Grossman 2015 on *nominative* case in Coptic and Engsheden 2008 on *accusative* and the evidence for Differential Object Marking in Coptic).

**<sup>4.</sup>** *Bôk* is only attested in Coptic but not in earlier chronolects of Egyptian. For verbs of motion, including GO verbs, their constructions and grammaticalization cf. Funk (2017); Grossman, Lescuyer & Polis (2014); Grossman & Polis (2014).

Table 1.	(continued)
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Language/ Subcorpus	Language family	Approx. date	Author	Work	Text type	Database	Words
				Iphigenia in Aulis, Iphigenia in Tauris, Medea, Orestes Phoenissae			
Classical Greek		5th c. BC	Plato	Apology, Crito Euthydemus, Euthyphro, Gorgias, Meno, Phaedo, Protagoras	Philosophy	TLG and Perseus	> 108T
Sahidic Coptic*	Afro- Asiatic, Egyptian branch	3rd-4th c. CE**	Various authors	Gospels of Matthew, Mark, Luke, John	Religious text	Askeland/ Schulz (The Bible Tool)	≈ 120T

<sup>\*</sup> Sahidic Coptic is only one of the several dialects of Coptic and is attested from late 3rd to 14th c. CE (but receding since the 11th c. CE), mostly in Upper and Middle Egypt. The language is extinct now, but the Bohairic dialect of Coptic is still preserved as the liturgical language of the Coptic-Orthodox Church. For descriptions of the morpho-syntax of Egyptian-Coptic and its terminology cf. Allen (2013); Haspelmath (2015); Layton (2011); Loprieno (1995); Loprieno & Müller (2012); Loprieno, Müller & Uljas (2017); Reintges (2015).

We retrieved 364 tokens from Homer,<sup>5</sup> 180 from our Classical Greek sample, and 204 tokens from our Coptic sample. The extracted data were coded for the morphological, syntactic, semantic and discourse properties listed in Table 2. This coding was based largely on previous studies using the Behavioral Profile approach (Hanks 1996; Gries 2006; Berez & Gries 2009; Gries & Divjak 2009).

<sup>\*\*</sup> Askeland (2013: 208-210); Funk (2013).

<sup>5.</sup> In Homer, we excluded clear instances of tmesis, because in such cases we deal with compound verbs that are different from the non-compound  $bain\bar{o}$ . Note that their inclusion would result in the proliferation of verbs in the analysis of Classical Greek (all 18 Ancient Greek preverbs can form compounds with  $bain\bar{o}$ ). Such an endeavor would demand a whole new study. For the identification of cases of tmesis, we relied on the criteria in Haug (2011), which suggests that for an instance to count as tmesis, the following restrictions should apply (together): (a) the particle is separated from the verb; (b) the particle and the verb constitute an attested compound verb; and (c) the particle does not govern the noun next to which it appears (or there is no oblique noun accompanying the particle in the clause; for this see Hewson & Bubenik 2006:6–7). For example, ek (ELAT) d' (PTC)  $hekat\acute{o}mb\bar{e}n$  (sacrifice(F):ACC.SG)  $b\hat{e}san$  (go:AOR.3PL) ["They brought forth the hecatomb" (Homer, Iliad 1.438)] should count as tmesis, because (a) ek is separated from the verb  $ba\acute{n}n\bar{o}$ ; (b) there is an attested compound verb  $ekba\acute{n}n\bar{o}$ ; (c) ek cannot govern the accusative  $hekat\acute{o}mb\bar{e}n$ .

However, we made some adjustments in the morphological and syntactic variables in order to ensure that the labels used capture the relevant categories in Ancient Greek and Coptic studies (see, e.g., the category "succeeding construction" for Coptic). Methodologically, this is important because it shows that in different languages we need to take into account different parameters that contribute to the meaning of verbs.

**Table 2.** Morphological, syntactic, semantic, and discourse features used for tagging a.

	Animacy of subject	Transitivity	Type of complement	Succeeding construction	Semantic role of complement
Ancient Greek	Animate (Human vs.	Transitive, Intransitive	Prepositional Phrase, Noun in Accusative, Adverb or Suffix, Infinitive, Participle, Zero	N/A*	Source, Path,
Coptic	Non- human), Inanimate	N/A	Prepositional Phrase, Prep. + Infinitive, Zero	Consecutive, Past, Circumstantial Conversion, Zero	Goal, Other

<sup>\*</sup> The N/A value means that a category is either absent in the language or not relevant for the data analyzed.

	Sentence type	Inflection of Verb	Number/ Person	Word order	discourse type
Ancient Greek	Main (Declarative, Interrogative, Imperative), Subordinate	Tense, Mood	1sg, 2sg, 3sg, 1pl, 2pl, 3pl, 3du	Verb-Complement (VC), Complement- Verb (CV), Complement-Verb- Complement (CVC)	N/A
Coptic	Main (Declarative, Interrogative, Imperative), Subordinate	Verb form/ Conjugation prefix	1sg, 2sg, 3sg, 1pl, 2pl, 3pl	N/A	Direct Speech, 3rd P. Narrative, 3rd P. Narrative embedded in Direct Speech

After the coding of the material, we created separate pivot tables for each language with MS Excel 2016 and MS Excel for Mac 2011, for Ancient Greek and Coptic, respectively. These tables allowed us to automatically sort our data, to display them in a multidimensional chart, and most importantly to extract significant

patterns. Through this process we were able to determine which senses correlate with which morpho-syntactic, lexical and semantic features. Tables 3–4 summarize the senses identified for both languages and present the various clues associated with each sense as well as the number of attestations of each pattern.<sup>6</sup> As in other Behavioral Profile studies (see Gries 2006; Glynn 2014), we first assigned labels to senses on the basis of matching each example to the senses found in dictionaries (for Greek: Pantazidis 1888; Liddell & Scott 1996; Montanari 2015; for Coptic: Crum 1939; Westendorf 2008) and then sought to establish a constructional environment for each sense in the corpus, thus arriving at systematic correlations.

Let us explain briefly how Tables 3–4 should be read, exemplifying this with  $bain\bar{o}$ . The meaning GO is attested 174 times in Homer. Out of the 174 attestations, this meaning appears 120 times with the following contextual cues (pattern [1a] in the meaning GO): Human, Intransitive, PP, Goal element (PP, Noun in accusative, Adverb or Suffix). If the verb in this pattern is in the aorist, the number of tokens decreases (N=93; pattern [GO1b] in the meaning GO). Note that all instances of [GO1b] should be subsumed under [GO1a]. Finally, we find 24 tokens of the meaning GO in cases in which intransitive  $bain\bar{o}$  is followed by a prepositional phrase denoting the Path (GO2).

**Table 3.** The meanings of *baínō* and their contextual cues in Ancient Greek

	Meaning	Co	onstructional cues	Tokens in the pattern	Total N of meaning
Homer	GO	1.	a. Human, intransitive, Goal element (PP, noun in accusative, adverb or suffix)	120	174
			b. Human, intransitive, Goal element (PP, noun in accusative, adverb or suffix), aorist	93	
		2.	Human, intransitive, PP, Path	24	

<sup>6.</sup> Further meanings that were identified in the two corpora but do not appear in the table due to their low frequency are the following: Ancient Greek: GO (metaphorical), SET OUT (metaphorical), DEPART (metaphorical), PASS/GO BY, STEP ON, WALK, RESULT, GO AWAY (metaphorical); Coptic: ACCOMPANY, COVER A DISTANCE, BE DIRECTED TOWARDS, PURPOSE (GO with a metaphorical Goal), SINK/DIE, DESERT. Note that there were 29 tokens that remained uncategorized for Coptic and four for Ancient Greek, because it was difficult to provide an accurate label based on the criteria we tagged for. For instance, in Coptic, there were instances in which it is unclear if the Source-oriented or the Goal-directed meaning is profiled, e.g. in "Go into the village ahead of you, ..." (Luke 19:30) with Goal phrase, followed by 'So those who were sent went and found it [the village] as he had told them' (Luke 19:32) with implicit Source (Jesus who sent them) and contextual Goal (as encoded in Luke 19:30).

Table 3. (continued)

	Meaning	Constructional cues	Tokens in the pattern	Total N of meaning
	SET OUT	a. Human, intransitive, infinitive, declarative, aorist, indicative	76	80
		b. Human, intransitive, infinitive, declarative, aorist, indicative, 3rd person (3sg or 3PL), Verb-Complement	71	
	MOUNT	Human, intransitive, Goal PP (lexically specified, in particular the nouns <i>naûs</i> 'ship', <i>díphros</i> 'stool', <i>pûrgos</i> 'tower, castle', <i>ókhea</i> 'chariot', and <i>hárma</i> 'chariot')	38	48
	LEAVE	Human, intransitive, Source element (PP or adverb or suffix)	27	42
		2. Human, intransitive, zero complement, declarative, aorist, indicative	12	
	MAKE GO	Human, transitive	5	5
Euripides	GO	Human, intransitive, Goal element (PP, Noun in accusative, adverb or suffix)	41	69
	DIE	Human, intransitive, zero complement, past tense (aorist, perfect, pluperfect)	5	6
	LEAVE	1. Human, intransitive, Source PP	4	10
		2. Human, intransitive, zero complement	6	
	COME	<ol> <li>Human, intransitive, PP/ adverb or suffix, Source</li> </ol>	6	29
		2. Intransitive, PP/ adverb or suffix/ NP, Goal/ Goal animate	10	_
		3. Past tense (aorist, perfect)	22	
Plato	OVERSTEP	Human, intransitive, PP, Source non location (lexically specified, in particular nouns relating to justice, e.g. <i>díkē</i> , or legislation, e.g. <i>nomothesía</i> )	4	5
	STAND	1. PP, other non location, perfect, CV	3	6
		2. Inanimate, perfect	4	

The following sections are essentially discussions and elaboration of the results in Tables 3 and 4. Section 3 discusses the Ancient Greek data and Section 4 the Coptic.

	Meaning	Constructional cues	Tokens in the pattern	Total N of meaning
Coptic	GO	1. Human, intransitive, Goal	64	100
		a. Goal PP		
		b. Contextual Goal	16	
		2. Human or personification, intransitive, adverb (lexically specified: <i>ebol</i> ) + Path PP	5	
	GO AWAY	1. Human, intransitive, direct speech	4	49
		a. Self-motion of speaker		
		<ul><li>b. Figure ≠ speaker, contextual Source (speaker = deictic center)</li></ul>	12	
		2. Human, intransitive, adverb (lexically specified: <i>ebol</i> ) + Source PP	4	
		3. Human, intransitive, 3rd-person, zero complement, $b\hat{o}k$ is the final constituent of the clause	14	
	GO DO	Modal form of GO, consecutive form of $\boldsymbol{v}_2$ , direct speech	29	32
	BE ON	1. Circumstantial (conversion), stative $(b\hat{e}k)$	6	8
	THE WAY	2. Circumstantial (conversion), future	2	
	WENT AND DID	GO in past, $v_2$ in past, 3rd-person	8	8

**Table 4.** The meanings of bôk and their contextual cues in Coptic

#### 3. Lexical meaning in constructional contexts: Ancient Greek baínō

#### **3.1** Baínō in Homer

## 3.1.1 The 'go somewhere' construction

As shown in Table 3, in co-occurrence with a human subject and a Goal or Path prepositional complement  $bain\bar{o}$  denotes its principal (in the sense of most frequent) meaning of directed, self-propelled motion. Where deictic conditions apply, the verb implies movement away from the speaker or the person whose point of view the narration assumes, so that its deictic profile appears analogous

<sup>7.</sup> The results reported here from Homer do not in fact support the first meaning given for  $baín\bar{o}$  in Liddell and Scott (1996), i.e. 'walk', which makes it a manner-of-motion verb. The collected examples and interpretations point to a meaning of self-propelled motion of indeterminate manner (see examples (3) and (5), among others).

to that of English go. The Goal argument is headed predominantly by the prepositions eis/es followed by a noun in the accusative, but also by  $pr\acute{o}s$  and  $ep\acute{i}$  (also with accusative). The Path argument is headed by the preposition  $di\acute{a}$  (with genitive). Examples (1) and (2) illustrate  $ba\acute{i}n\bar{o}$  with Goal and Path arguments respectively:<sup>8</sup>

(1) énth' ébē eis eunèn pollà phresì
there go:AOR.3SG to bed(F):ACC.SG many:NOM.PL.N heart(F):DAT.PL
mermērízōn.
be\_anxious:PTCP.PRS.NOM.SG.M
'thither went to his bed, pondering many things in mind'
(Homer, Odyssey 1.427)

(2) bê dè dià promákhōn
go:AOR.3SG PTC through champion(M):GEN.PL
kekoruthménos aíthopi khalkôi
be\_equipped:PTCP.M/P.PRF.NOM.SG.M flashing:DAT.SG.F spear(F):DAT.SG
'and strode through the foremost fighters, harnessed in flaming bronze'
(Homer, Iliad 5.562)

In a frame-semantic approach (as the one informing this work), we take the prepositional phrase in this lexical construction to be an argument (and syntactic complement) of the verb. Accounting for regular correspondences between the lexical meaning of predicates and their role in sentence structure, Construction Grammar incorporates reference to Fillmorean semantic frames, representing the background scenes associated with a linguistic expression (i.e. the scene's participants, settings, props, and any other unique semantic features; Fillmore 1977, 1982). The analysis of the prepositional phrase as an argument-complement of the verb naturally follows from the frame evoked by this verb, in which the Goal or Path argument is a core Frame Element, i.e. a role required for understanding an event of directed motion (as opposed to a non-core Frame Element, such as a temporal adjunct; for other motion verbs in Ancient Greek, see Georgakopoulos 2018). This analysis is further supported by the fact that the presence of a Goal/

**<sup>8.</sup>** As can be seen in Table 3, the same meaning arises in combination with a directional suffix on a locative expression (e.g. Homer, *Odyssey* 3.410) or with the so-called accusative of direction in which a noun in accusative plays the role of a prepositional complement (e.g. Homer, *Iliad* 4.180). Both of these are much less frequent than the prepositionally marked Goal/Path complement, semantically and syntactically though they appear to be completely analogous to the more dominant pattern.

<sup>9.</sup> A reviewer raised the possibility that in Homer these prepositions may be considered as having adverbial status in accordance with their Indo-European origin (as suggested by Meillet

Path phrase actually forces a directed motion (telic) reading for the verb even when a Source argument is also present (e.g. (3)).

(3) hồs éphat', oud' apíthēse PTC say:IMPRF.3sg NEG disobey:3sg.Aor goddess(F):Nom.sg leukólenos Hḗrē. ď eks bê Idaíon white-armed: NOM.SG.F Hera: NOM go: 3SG.AOR PTC out of of Ida: GEN.PL.N es makròn Ólumpon. mountain(N):GEN.PL to long:ACC.SG.M Olympus(M):ACC.SG 'So he spoke, and the goddess, white-armed Hera, failed not to hearken, but went her way from the mountains of Ida unto high Olympus. (Homer, *Iliad* 15.78–79)

Conversely, when there is no explicit or contextually-given (from the immediate context) Goal/Path phrase, the interpretation is compatible with, indeed favors, the meaning 'leave/start off' (see next construction), e.g. (4):

(4) autàr egồ krínas hetárōn duokaídek'
PTC 1sg.nom separate:PTCP.AOR.NOM.sg.m comrade(m):GEN.PL twelve
arístous bên
best:ACC.PL.M go:1sg.AOR
'but I chose twelve of the best of my comrades and went my way.'

(Homer, Odyssey 9.195–196)

A final correlation depicted in Table 3 is the predominance of perfective aspect in this sense of the verb (with a Goal/Path argument). As is well known, Greek (Ancient and Modern) has a morphological aspectual opposition (perfective/aorist vs. imperfective) marked obligatorily on verb forms. In principle, both perfective and imperfective aspect are compatible with a verb like *baínō* (cf. Horrocks 2004; Horrocks & Stavrou 2007; Moser 2008; Napoli 2006). The latter is used to indicate that the motion has not attained its final Goal or that it is habitual or iterative, the former construes the event as completed; given the lexical *aktionsart* of the verb, the perfective morphology amounts to an interpretation in which the Goal has been reached or the Path traversed. While both aspects are lexically

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<sup>1912[1958]),</sup> combining with predicates on a semantic basis rather than being part of the valence of the verb. Leaving aside that the exact time in which they acquired adpositional status is not clearly established (Luraghi 2006: 488), for instance, recognizes a class of prepositions already in Homer, but she states that this class is not yet *fully* established in Homeric Greek and that different items display various degrees of grammaticalization (see also Luraghi 2003:77–79; Hewson & Bubenik 2006; cf. Horrocks 1981). From a frame-semantic perspective, as outlined above, prepositions instantiate semantic roles in the frame evoked by the verb, hence belong to its valence.

compatible with the verb, in Homer we find a strong preference for the perfective, possibly motivated by the narrative type of epic poetry and the passages of third person narration of deeds and past events. This, however, is only a motivation; extended dialogic passages between the heroes also exist and these do not a priori favor use of the perfective. In addition, this preference for the perfective does not characterize equally other verbs of motion (e.g., *érkhomai*; cf. Georgakopoulos 2018) and is only evidenced as strongly in this sense of the verb. While it is possible that this aspectual idiosyncrasy is genre-specific, it should be accommodated in a representation of the relevant lexical construction (see our proposal in Section 5), given that the Homeric texts are the only texts from that period of the language.

#### 3.1.2 The 'leave' construction

As already noted above, when  $baín\bar{o}$  is not accompanied by a Goal element, this intransitive construction is associated with the meaning 'leave' or 'start off' (in the sense of 'begin going'). In that case, it may be in combination of an explicit Source argument in the form of a prepositional phrase primarily headed by the prepositions  $kat\acute{a}$  'down' followed by a noun in the genitive, or by  $\acute{e}kso$  'out from' also with a genitive-marked noun<sup>10</sup> (see Luraghi 2003; George 2004), e.g. (5):

(5) hồs éphat', oud' ára patròs anēkoústēsen Apóllōn,
PTC say:IMPRF.3sg NEG PTC father(M):GEN.SG disobey:3sg.aor Apollo:Nom,
bê dè kat' Idaíōn oréōn írēki
go:Aor.3sg PTC down of\_Ida:GEN.PL.N mountain(N):GEN.PL falcon(M):DAT.SG
eoikòs ōkéi phassophónōi,
like quick:DAT.SG.M dove-killing:DAT.SG.M
'So he spoke, nor was Apollo disobedient to his father's bidding, but went
down from the hills of Ida, like a fleet falcon, the slayer of doves'

(Homer, Iliad 15.236–37)

The meaning 'leave', however, also arises in the absence of an explicit prepositional Source (zero complement) in contexts where the point of origin is known from context at large. Consider example (6), in which Eumaios leaves the place of his encounter with Odysseus without the latter being mentioned in the sentence:

<sup>10.</sup> Less frequently, Source is also denoted by the suffix -then 'from'.

(6) hốs pháto, bê dè suphorbós, epeì tòn
PTC say:IMPRF.3SG go:AOR.3SG PTC swineherd:NOM.SG.M when DEF.ACC.SG.M
mûthon ákouse.
saying(M):ACC.SG hear:3SG.AOR
'So he spoke, and the swineherd went when he had heard this saying.'
(Homer, Odyssey 17.574)

The fact that the zero complement is understood as 'Source' shows that  $bain\bar{o}$  can also function as a 'Source-oriented' verb in the sense of Fillmore (1972), namely as a verb in which the Source is lexically encoded. It also indicates (albeit non-conclusively) that the characterization of  $bain\bar{o}$  as telic throughout (in terms of lexical aktionsart) is not as straightforward as implied in previous analyses (cf. Napoli 2006) and it certainly cannot be determined outside of the constructional environment.

#### 3.1.3 The 'mount/climb' construction

Whereas the 'go' and the 'leave' meanings are triggered by the overall interpretation of the complement as Goal or Source respectively, the 'mount' meaning arises in the context of lexically specified complements, in particular the nouns naûs 'ship' and diphros 'stool' (most frequently), pûrgos 'tower, castle', ókhea 'chariot', and hárma 'chariot'. These appear as the objects of the prepositions epí (either with an accusative- or with a genitive-marked noun), eis/es (with an accusative), en (with a dative) and aná. It should be noted that the use of aná in this context represents further idiosyncratic behavior; as a preposition, aná can occur with all three cases in Homer (dative, accusative, genitive) and with the genitive and accusative in the mount/climb sense. In the Odyssey, however, it only appears with the genitive and the noun 'ship' (Luraghi 2003:188), amounting to another lexical (cf. formulaic) constellation of features and indicating different conventions in the two poems (with all concomitant implications for the chronology and authorship of the texts). This meaning is also found marginally with nouns in the accusative (cf. the accusative of direction in footnote 9) which, lexically, is again instantiated by one of the regular fillers of the 'mount/climb' construction (see Homer, *Iliad* 3.261). It is therefore the particular lexical fillers which correlate exclusively with this sense, e.g. (7).

<sup>11.</sup> Note that at least some of these words share semantic properties and could be described in more general terms as a class. This in turn has ramifications for the "productivity" of the pattern and its characterization as (semi)-schematic or (semi)-substantive (Fillmore 1997; Kay 2013).

(7) ..., toì mèn pálin aûtis ébainon nēòs épi glaphurês:

DEM.DAT.M PTC back again go:IMPRF.3PL ship(F):GEN.SG on hollow:GEN.SG.F

emè d' ékrupsan theoì autoì

1SG.ACC PTC hide:AOR.3PL god(M):NOM.PL DEM.NOM.PL.M

'they went back again on board their hollow ship and the gods themselves hid

me' (Homer, Odyssey 14.356–57)

This particular meaning is found in both the perfective and the imperfective (cf. 7), with the imperfective being more frequent (e.g. (7)). The imperfective morphology construes the action as incremental resulting in an insider's, close-by perspective of the event and a concomitant vividness of the description (cf. Horrocks & Stavrou 2007; Napoli 2006).

#### 3.1.4 The inchoative 'start/ set out' construction

The second most frequent meaning in the Homeric texts illustrates a fairly grammaticalized use. The formal features of this construction include the following: (a) the verb  $bain\bar{o}$  is almost always in the (perfective) aorist, and in the vast majority of examples (N=65) in third person singular form (most of the rest being third plural; N=6); (b) it is followed by the present infinitive of another (motion) verb, primarily  $i\acute{e}nai$  'go' (also in the forms  $i\acute{m}enai$  and  $i\acute{m}en$ ) and marginally  $t\acute{h}e\acute{e}in$  'run' and  $e\acute{l}a\acute{a}n$  'drive'; (c) the order of the two components is fixed ( $bain\bar{o} + infinitive$ ); (d) the aorist form is always unaugmented (cf. the use of the past augmentation prefix in other contexts); (e) when the infinitive starts with a vowel (as is the case with  $i\acute{e}nai$ ) the formal makeup of the construction includes a euphonic particle (d' or r'); f) the combination strongly favors sentence-initial position and in most remaining cases only an adverb (e.g.,  $aut\grave{a}r$ ) may precede the verb, e.g. (8):

(8) bê d' iénai pròs dôma, phílon
go:3sg.Aor PTC go:Inf Prox house(n):ACC.sg beloved:nom.sg.m
tetiēménos êtor,
sorrowing:PTCP.PRF.M/P.NOM.sg.m heart(n):nom.sg
'but began his way to the house, his heart heavy within him.'
(Homer, Odyssey 2.297)

Semantically, the co-occurrence of two semantically related verbs in this fixed order motivates a reinterpretation of the first (i.e.  $bain\bar{o}$ ) as inchoative, yielding an overall interpretation of 'start/set out to go/run etc.', as in (8).<sup>12</sup> The characterization of  $bain\bar{o}$  as inchoative is further supported by the fact that in the same slot

<sup>12.</sup> This extension is fully consistent with the range of grammaticalized uses of GO verbs cross-linguistically, which include inchoative, durative and persistive aspectual uses (Abdulrahim 2019).

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of the construction one can find the verb árkhō 'begin', which has an inchoative meaning as well (Bartolotta 2017: 286). Given that the subject in the inchoative construction is exclusively human (excluding even metonymic interpretations of human-populated nouns like 'army' or 'fleet'), a more precise characterization of this use would be 'inchoative volitional'. Yates (2011, 2014a) gives a more detailed characterization of the semantics taking into account the inherent diachrony of the Homeric texts (which have been composed over a long period) and the variation in meaning that goes with the dialectal form of the infinitive (iénai vs. imenai vs. imen); on the basis of these he suggests a semantic prototype for this collocation along the lines of "temporally past, aspectually inchoative, and spatially centrifugal with an aim towards accomplishing a purpose or reaching a specific destination" (Yates 2011:55). This is indeed a semantic description that fits our findings and the vast majority of examples. We remain agnostic (and do not embark on a discussion of the relevant literature) as to his conclusion that the pattern represents a serial verb construction; from our perspective, it is important that the presence of an infinitive after the form bê triggers uniquely the particular interpretation. The combination thus represents another semi-substantive (i.e. mostly but not completely fixed) construction, whose features are for the most part idiosyncratic; indeed, except for (e) above that seems to be phonologically motivated, all other characteristics as well as the semantics are conventional and specific to the pattern.

#### 3.1.5 The 'make go' construction

This rather marginal, exclusively *Iliad*, pattern features  $baín\bar{o}$  as a transitive verb with an accusative-marked NP as the object. The causal component in the meaning can be attributed to the transitive construction (cf. Goldberg 1995: 118), which at least prototypically denotes a causative event. Importantly, given the constructional environment of transitivity (transitive) and agent type (Human), we are able to predict, with 100% accuracy, instances of  $baín\bar{o}$  that the dictionary lists as the 'make go' sense. The exact meaning, however, is not exhaustively predicted by that, since each case receives a distinct interpretation depending on contextual cues, some of which (e.g. the semantics of the accusative object) are clearly part of the corresponding lexical construction (with neighboring spatial modifiers, such as prepositions or suffixes, also contributing to the interpretation). In this sense, 'go' is really shorthand for any kind of transitive motion event, coded in this pattern by  $baín\bar{o}$ :

- (9) hồs toùs amphotérous eks híppōn Tudéos
  so dem.acc.pl.m indef.acc.pl out\_of horse(m):gen.pl Tydeus:gen
  huiòs bêse kakôs aékontas,
  son:nom.sg.m go:3sg.aor evil:nom.sg.m involuntary:acc.pl.m
  'so did Tydeus' son thrust both these in an evil way from their chariot'
  (Homer, Iliad 5.163–164)
- (10) *óphr' epì Bouprasíou polupúrou bésamen híppous* till on Vouprasion:GEN rich\_in\_wheat:GEN.SG go:1PL.AOR horse(M):ACC.PL 'till we made the horses go to Vouprasion, rich in wheat' (Homer, *Iliad* 11.756)

In the examles (9) and (10), *baínō* receives a different interpretation due to the different neighboring spatial modifiers used in each case. In the former, the use of the Source expression *eks híppōn* prompts a source interpretation, whereas in the latter the use of the Goal expression *epì Bouprasíou* triggers a goal interpretation.

#### **3.2** *Baínō* in Euripides

#### 3.2.1 The 'go' and 'come' constructions

In Euripides *baínō* appears in truly deictic uses that cover both 'go' and 'come' meanings, the latter denoting motion towards the speaker. As evident from Table 3 above, the syntactic type and range of complements do not really differentiate between those, and there are examples (e.g. (11)) which can be equally well glossed as either 'go' or 'come':

(11) gélase d', hóti tékos áphar éba
laugh:3sg.aor ptc that child(n):nom.sg straightway go:3sg.aor
polúkhrusa thélōn latreúmata
rich\_in\_gold:acc.pl.n be\_willing:ptcp.prs.nom.sg.m worship(n):acc.pl
skheîn:

have:INF.AOR

'He (i.e. Zeus) smiled, that the child so quickly went/ came to ask for worship that pays in gold.' (Euripides, *Iphigenia in Tauris* 1274–1275)

However, other factors distinguish 'go' from 'come' uses; the first, clearly lexical, is the content of the complement, as in (12), where the explicit mention of the speaker as the Goal strongly motivates a 'come' interpretation:

(12) Antigónē tâide tâide bâthí moi,
Antigone:VOC DEM.ACC.PL.N DEM.ACC.PL.N go:2sg.IMP.AOR 1sg.DAT
tâide tâide póda titheís, hốst'
DEM.ACC.PL.N DEM.ACC.PL.N foot(M):ACC.SG place:PTCP.PRS.NOM.SG.M as
óneiron iskhún.
dream(N):ACC.SG strength(F):ACC.SG
'This way, this way, come to me Antigone, place your steps here, like a dream
in your strength.' (Euripides, Phoenissae 1720–1722)

Another type of factor appears to be very significant and that was revealed only through manual annotation; the great majority of 'come' interpretations (23 out of 29 total occurrences) is found in chorus passages. This is a parameter of discursive nature which can be independently motivated through the status and role of the chorus in Greek tragedy. The members of the chorus collectively comment on the action and events in the plot and one common type of comment is to alert the audience and foreshadow upcoming events that will take place on stage (where the chorus already is and performs) in the next scene; in this respect, the chorus functions as a deictic Goal, hence favoring a 'come' interpretation.

#### 3.2.2 The 'die' construction

The semantic shift from 'going' to 'dying' is widespread in the languages of the world (see Zalizniak et al. 2012: 661). The same shift is found not only in  $baín\bar{o}$  in Classical Greek, but also in other motion verbs of the period, e.g. oíkhomai 'go, go away'. A similar DEATH IS DEPARTURE metaphor is unsurprisingly found in Coptic, as well.<sup>13</sup>

The metaphorical meaning 'die' of  $baín\bar{o}$  expectedly correlates with (a) intransitive syntax and (b) with human subjects (expectedly, given the content of classical tragedy). Less expected is perhaps the exclusive correlation with the perfective past as manifested in the use of the aorist (e.g. (13)), perfect and pluperfect tenses:

(13) ô téknon, ébas: oukéti phílon phílas

PTC child(N):VOC.SG gO:2SG.AOR NEG dear:ACC.SG.N dear:GEN.SG.F

ágalm' ópsomai se matrós

treasure(N):ACC.SG see:1SG.FUT 2SG.ACC mother(F):GEN.SG

'My child, you are gone; no more shall I behold you, your own fond mother's treasure.' (Euripides, Suppliants 1163–1164)

<sup>13.</sup> This metaphor is mentioned in the dictionaries under the meaning 'die' for *bôk* (Crum 1939: 29a, meaning b.; Westendorf 2008: 22). This meaning is not, however, included in Table 4 (or discussed further in Section 4) because of its low frequency.

This final correlation minimally indicates that this meaning arises in after-thefact reporting contexts rather than co-temporal descriptions of on-going 'dying' events.

#### 3.2.3 The 'leave' construction

This lexical pattern appears to behave identically with the corresponding pattern in Homer (see 3.1.2.) and need not be commented on any further.

#### 3.3 Baínō in Plato

The decrease in uses that we find already in the classical period is a lot more evident in Plato, where the number of occurrences of the verb is very low. Here we limit our discussion to the 'stand (on)' and the 'overstep' senses, both of which correlate with highly specified, both lexically and morphologically, environments.

#### 3.3.1 The 'stand (on)' construction

This pattern may refer to literal or abstract location (correlating with animate and inanimate subjects, respectively), and is always in the perfect tense. A further subpattern (half of the instances) is exemplified in (14), where the 'stand on' meaning correlates with the perfect *participle* verbal form and with complement-verb order (this latter parameter has not emerged as significant for any of the preceding patterns; e.g. in the intransitive uses in Homer and Euripides the order of the verb and the prepositional complement varies). Thus, these morpho-syntactic features inextricably characterize this use that we find in the Platonic texts.

(14) epì gàr gês bebôtes geốdē
on PTC earth(F):GEN.SG go:PTCP.PRF.NOM.PL.M earthy:ACC.PL.N
génē diistámenoi
element(N):ACC.PL separate:PTCP.AOR.M/P.NOM.PL.M
'Standing on the earth and detaching various earthy substances'
(Plato, Timaeus 63c)

### 3.3.2 The 'overstep' construction

This use of the verb clearly denotes a metaphorical meaning of 'going over, overstepping boundaries' and is always accompanied by prepositional complements headed by *ektós* and *éksō* 'outside of' (as in (15)). The complement filler is further specified to belong to a semantically definable class, that of nouns relating to legislation and justice, supporting the existence of a special construction with lexically and syntactically restricted complements. (15) doûnai tà paradeígmata toîsi dikastaîs
give:INF.AOR ART.ACC.PL.N example(N):ACC.PL ART.DAT.PL.M judge(M):DAT.PL
toû mépote baínein éksō tês dikês
ART.GEN.SG ever go:INF out ART.GEN.SG.F trial(F):GEN.SG
'and gave the judges examples, so as to prevent their ever overstepping the bounds of justice' (Plato, Laws 9.876e)

#### 4. Lexical meaning in constructional contexts: Sahidic Coptic *bôk*

#### 4.1 The 'go' construction

Much like the Greek  $ba\acute{n}$ ō, Sahidic Coptic  $b\^{o}k$  expresses human, self-propelled motion. In deictic contexts (and also their extension in third-person narrative, cf. Fillmore 1972), it denotes motion of a Figure away from the deictic center. With a prepositional complement encoding Goal or Path, it gets a directional reading. As is also the case with its English and Greek 'translational equivalents', this can be accounted for in frame-semantic terms: for the 'go' construction, a Goal or Path complement would be obligatory in a frame that is associated with the directed-motion interpretation. Example (16) shows  $b\^{o}k$  co-occurring with a Goal complement:

(16) auô a-u-tale e-p-čoei a-u-bôk mauaa-u and PST-3PL-mount to-DEF.M.SG-boat(M) PST-3PL-go alone-3PL e-u-ma n-čaeie to-INDEF.SG-place(M) of-desert(M)

'And they got on the boat and went to a deserted place alone.' (Mark 6:32)

Path complements are quite rare with  $b\hat{o}k$ . They are encoded by means of a construction consisting of the (primarily directional) adverb e-bol 'out (lit. to-outside)' and the prepositions hn 'in' or hitn 'by (lit. 'on-hand-of),'<sup>14</sup> yielding lexically specified constructions. This is exemplified in (17):

<sup>14.</sup> For an example with the preposition *hitn*, see Mark 7:31. Path is to be understood in the two ways discussed by Luraghi (2003:172), i.e. either as 'a straight trajectory, that may surpass the limits of the landmark (unidirectional Path)' or as 'a trajectory that changes direction randomly, and remains inside the landmark'. For an example of the latter see Luke 8:39.

(17) auô nter-ou-ei ebol m-p-ma etmmau a-u-bôk
and ANT-3PL-come to:outside in-def.m.sg-place(M) dist.dem pst-3PL-go
ebol hn-t-galilaia ...
to:outside in-def.f.sg-Galilee(F)

'When they had left from there, they passed through Galilee ...' (Mark 9:30)

If a Source phrase is present in addition to a Goal complement,  $^{15}$  which is very rare with  $b\hat{o}k$  in the Sahidic Gospels,  $^{16}$  the directional reading prevails (see also the parallel from Homeric Greek in 3.1.1). In the few attestations in which the path is bounded, the Goal is reached by the Figure.

(18) ... alla a-f-bôk ehol hm-p-ma etmmau but PST-3s.M-go to:outside in-DEF.M.SG-place(M) DIST.DEM e-te-khôra et-hên e-t-erêmos to-DEF.F.SG-region(F) REL-approach.STAT to-DEF.F.SG-desert(F) e-u-polis e-u-moute ero-s če ephraim ... to-INDEF.SG-city(F) CIRC-3PL-call to-3s.F that Ephraim '(But Jesus no longer walked about openly in Judea,) but went from there to a region, close to the desert, to a town called Ephraim ...' (John 11:54)

As with Greek *baínō* (see 3.1.1), Sahidic Coptic *bôk* can prompt for a Goal-directed interpretation if the Goal of motion has been mentioned explicitly in the preceding context, usually in direct speech, as in (19):

```
(The owner of a vineyard had two sons. He went to the first one and said ...)
```

(19) pa-sêre bôk mpoou n-g-r-hôb

POSS.M.SG:1s-child(M) go in:day CNSV-2S.M-do-work(M)

e-pa-ma n-eloole ntof de a-f-ouôšb

to-POSS.M.SG:1s-place(M) of-grape(M) 3S.M PTC PST-3S.M-answer

e-f-čô mmo-s če nno mnnsôs a-f-r-htê-f

CIRC-3S.M-say OBJ-3S.F that no afterwards PST-3S.M-do-mind-3S.M

a-f-bôk

PST-3S.M-go

(The father went to the second son with the same request)

**<sup>15.</sup>** There is no attestation of a Source and a Path phrase with  $b\hat{o}k$  in the Sahidic Gospels (and neither in the other books of the Sahidic New Testament).

**<sup>16.</sup>** Besides the two examples given here, there are only three more (Luke 2:4 and Luke 2:15, John 11:55). Source phrases are much more frequent with *ei ebol* lit. 'come out'.

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```
... ntof de a-f-ouôšb e-f-čô mmo-s če ti-na-bôk
3s.m ptc pst-3s.m-answer circ-3s.m-say obj-3s.f that 1s-fut-go
p-čoeis auô mpe-f-bôk
Def.m.sg-lord(m) and neg.pst-3s.m-go
"'Son, go and work in my vineyard today.' And he answered: 'No.' But later, he thought about it and went (there). ... He [i.e. the second son] answered: 'I will go (there), Sir.' But he didn't go (there)." (Matthew 21:28-30)
```

Note that, in this parable, the Goal of motion (the vineyard) is not even an explicit Goal phrase in the father's request (the prepositional phrase is an argument of the second verb r- $h\hat{o}b$  'work'). Still, it is clear that, in the three instances of  $b\hat{o}k$  that follow, the motion event referred to is not an undirected departure from the current position of the Figure or the father but a directed heading towards the contextually implicit Goal (the vineyard). In this sense,  $b\hat{o}k$  seems more sensitive to contextual cues than its Greek counterpart discussed above.

#### 4.2 The 'go away' construction

Sahidic Coptic  $b\hat{o}k$  gets a deictic-centrifugal interpretation in direct speech when the Figure is not identical to the Speaker (as the anchorage point of the deictic center).

```
(20) bôk eishêête anok ti-čoou mmô-tn n-the n-hen-hieib
go prsntv ls 1s-send obj-2pl in-def.f.sg:kind(f) of-indef.pl-lamb(m/f)
n-t-mête n-hen-ouônš
in-def.f.sg-middle(f) of-indef.pl-wolf(m)
"Go! See, I am sending you like lambs into the midst of wolves." (Luke 10:13)
```

Additionally, when the Speaker appears as moving (= Figure) and there is no explicit expression of either a Goal or a Path element, the predicate expresses motion away from the former position of the Speaker:

```
(21) ... s-r-nofre
                      nê-tn čekas
                                     anok eeie-bôk e-ei-tm-bôk
                                                                         gar
        3s.F-do-good for-2PL so_that 1s
                                          OPT:1s-go COND-1s-not_do-go PTC
     p-paraklêtos
                            nêu
                                      an šarô-tn e-ei-šan-bôk
     DEF.M.SG-advocate(M) come.STAT NEG to-2PL COND-1s-COND-go PTC
     ti-na-tnnoou-f
                       šarô-tn
     1s-FUT-send-3s.m to-2PL
     "... it is good for you that I go, for if I do not go, the Advocate will not come to
                                                                        (John 16:7)
     you. But if I go, I will send him to you.'
```

Note also that outside the prototypical deictic environment, especially in third-person narrative, *bôk* can be Source-oriented. This is clearly the case when it co-occurs with a Source complement (marked by *ebol hṇ* or *ebol hitṇ*), another clearly delimited lexical pattern.

- (22) a-f-tale-nef-cič ehrai ečô-ou a-f-bôk ebol
  PST-3S.M-lift-POSS.PL:3S.M-hand(F) to:top to:head-3PL PST-3S.M-go to:outside
  hm-p-ma etmmau
  in-DEF.M.SG-place(M) DIST.DEM
  'He lay his hands on them and left that place.' (Matt 19:15)
- (23) a-u-sepsôp-f de nci-p-mêèše têr-f
  PST-3PL-ask-3S.M PTC SUBJ-DEF.M.SG-crowd(M) entire-3S.M
  n-t-perikhôros n-n-gerazênos e-bôk ebol
  of-DEF.F.SG-surroundings(F) of-DEF.PL-Gerasenes to-go to:outside
  hitoot-ou ...
  on:hand-3PL
  'Then all the people of the surrounding country of the Gerasenes asked Jesus
  to leave them ...' (Luke 8:37)

Without an explicitly encoded Source, the Source-oriented or extended deictic interpretation (Fillmore 1972) is still possible. It usually encodes the motion event of leaving the setting where the preceding scene has taken place. The interpretation is facilitated by contextual cues such as the 'go' phrase being the final constituent of the clause (or the sentence or even the verse)<sup>17</sup> as demonstrated in examples (24)–(25). These formal indications thus constitute components, of a syntactic nature, of the lexical construction:

- (24) a-f-skorkr n-ou-noc n-ône erm-p-ro
  PST-3S.M-roll OBJ-INDEF.SG-big of-stone(M/F) to:mouth:of-DEF.M.SG-door(M)
  m-pe-mhaau a-f-bôk
  of-DEF.M.SG-tomb(M) PST-3S.M-go
  'He rolled a large stone to the door of the tomb and went away.'

  (Matthew 27:60)
- (25) ntere-nai de bôk a-f-arkhei nci-iês e-čoo-s ...

  ANT-DEM.PL PTC go PST-3s.M-begin SUBJ-Jesus to-say-3s.F

  'When they had left, Jesus began to speak ...' (Matthew 11:7)

<sup>17.</sup> The verb pôt 'run, run off/away, flee' is also attested in this construction.

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#### **4.3** The progressive 'be on the way' construction

Thus far, we have discussed only constructions with a definite start or end point of motion or deictic anchorage. However, there is also a construction in the Sahidic Coptic Gospels in which the ongoing motion is in focus. This is morphologically marked by (a) the morpheme of the circumstantial clause of Present I with the stative form of the verb ( $b\hat{e}k$ , 6 attestations, <sup>18</sup> cf. example (26)), <sup>19</sup> or (b) future + infinitive of the verb ( $na + b\hat{o}k$ , 2 attestations, <sup>20</sup> cf. example (27)). The construction can be considered the Sahidic expression of progressive aspect (imperfective) and either translates the Koine Greek present participle or present infinitive. It serves to provide background information to other events, a typical function of adverbial circumstantials in Coptic (cf. Layton 2011: 338–339, § 421), i.e. something happens while the Figure 'is on the way'.

```
(26) a-f-ouônh na-u ebol hn-ke-morphê e-u-bêk

PST-3S.M-reveal for-3PL to:outside in-other-form(F) CIRC-3PL-go.STAT

e-t-sôše

to-DEF.F.SG-countryside(F)

... he revealed himself to them in other form as they were on the way into the countryside.'

(Mark 16:12)
```

In direct speech, as in (27), this construction imposes the circumstantial interpretation and rules out the unmarked meaning of 'go away' (deictic interpretation).

(Jesus sends the disciples out to proclaim his message and to do good deeds and work wonders.)

```
(27) e-tetna-bôk de tašeoeiš e-tetn-čô mmo-s če ...
CIRC-2PL:FUT-go PTC proclaim CIRC-2PL-say OBJ-3s.F that
"While you are on the way, proclaim, saying ..." (Matthew 10:7)
```

In this construction, the Goal can be either stated explicitly (see, for instance, (26) above) or implicitly understood from context (as in (27) above). The motion is, thus, Goal-directed (as in the 'go' construction) because the Goal is encoded in some way and the Figure is on its way somewhere. However, the Goal is not

**<sup>18.</sup>** Matthew 28:11; Mark 6:33; Mark 14:13 (in manuscript Pierpont Morgan M 569); Mark 16:12 (cf. example (26); Luke 8:42; Luke 17:14.

<sup>19.</sup> This is a durative tense with subject-predicate word order, cf. Haspelmath (2015:127–128) and Loprieno (1995:172–175). Note that the stative form "describes the enduring state of a subject in a condition that is associated with verbal action or verbally expressed acquisition of a quality." (Layton 2011:126, § 162).

<sup>20.</sup> Matthew 10:7 quoted in example (27) and Matthew 25:10.

lexically encoded by the verb itself (as with Goal-oriented verbs, such as 'come'; Fillmore 1972).

#### 4.4 The 'went and did' construction

This construction has clear morphological, syntactic and pragmatic characteristics but also discursive ones: in our corpus, it is attested only in third-person narratives (3sG or 3PL). It consists of two consecutive finite verb phrases, mostly in the past tense.<sup>21</sup> The typical form of this lexical construction is thus PST-3SG/PL-GO-PST-3SG/PL-v<sub>2</sub>. In addition, it is characterized by the following conditions:<sup>22</sup>

- a. the first verb slot must be filled by  $b\hat{o}k$  (GO), the second (V<sub>2</sub>) varies;
- b. the subjects of both verb phrases must be co-referential;
- in clear, unambiguous cases, Source and Goal (be it a place or person) are neither explicitly encoded nor implied by context.

Such features clearly distinguish this construction from the 'go' and 'go away' constructions previously outlined and bring it closer to pseudo-coordination or hendiadys (cf. for instance, Bachmann 2013; Hopper 2002; Matsumoto 2015; Newman & Rice 2008; Nicolle 2009; Wulff 2006). As *bôk* is first and foremost a motion verb, the construction can encode a sequence of events including motion (this will be called the 'spatial component' in the following discussion). However, there are instances in which the spatial meaning of *bôk* either plays a minor role in the ensemble or can even be neglected. The construction thus attests to a scale of spatiality, with a strong, weaker, or marginal/non-existent spatial component. In the last case, the event described by the PST-3SG/PL-GO-PST-3SG/PL-V<sub>2</sub> pattern cannot be decomposed into a sequence of individual actions, GO merely seems to be part of a larger event.<sup>23</sup> This is the case in (28) which is from a parable in the Gospel of Matthew (18:23–34). Due to the conciseness of the parables, contextual information that can imply Source or Goal of motion is scarce. The parable is about a slave who cannot pay his debt to his master. But out of compassion the

<sup>21.</sup> But see Matthew 13:44 for an example with the habitual conjugation prefix/auxiliary followed by a consecutive verb form. In Coptic studies, the habitual is also called 'aorist' but with aspectual implications differing from the Greek aorist. For an overview of aspectual features of aorist morphemes, cf. François (2009).

**<sup>22.</sup>** A particle *de* could also intervene between both core phrases (Luke 22:4) as well as a post-posed nominal subject marked by the subject marker *nci* (Matthew 22:15).

**<sup>23.</sup>** Cf. also Yates (2014b) for a discussion of the constructional nature of similar expressions in Armenian (with examples from the same Greek source constructions).

master forgives the debt. That slave meets a fellow slave who is indebted to him and who begs for a prolongation of the term of payment:

(28) ntof de mpe-f-ouôš alla a-f-bôk a-f-noč-f
3S.M PTC NEG.PST-3S.M-wish but PST-3S.M-go PST-3S.M-throw-3S.M
e-pe-šteko šante-f-ti m-p-et-ero-f
to-DEF.M.SG-prison(M) LIM-3S.M-give OBJ-DEF.M.SG-REL-to-3S.M
'But he didn't want to. Instead he went and threw him into prison until he would pay what was his.'

(Matthew 18:30)

Although it is not too far-fetched to assume that the first slave leaves the scene and goes somewhere else to initiate the imprisonment of his fellow slave, it is unlikely that the *go*-phrase encodes a motion event. *Bôk* rather emphasizes the fact that the first slave takes action. Thus, a nuance of volition is present too. This is comparable to one of the meanings of the English GO-and-V construction. In the GO-and-V construction, *go* can be spatial but it can also stress intention or decisiveness of the Figure/Agent of both verb phrases (Stefanowitsch 2000: 260–262). Stefanowitsch describes the role of GO in the construction as "contributing a component of spatial motion", or as "adding or highlighting a dynamic component in the semantics of V2 via the general metaphor action as Motion" (Stefanowitsch 2000: 261).

### **4.5** The 'go-do' construction

This construction resembles the 'went and did' construction in that its spatial component can be stronger or weaker or even marginal. However, the morphology, syntax and discourse context are different, thus allowing us to consider them as two distinct lexical constructions (for a similar distinction in English between the constructions went and did and go-do, cf. Bachmann 2013; Flach 2015; Matsumoto 2015; Newman & Rice 2008; Nicolle 2009; Wulff 2006). This construction consists of a modal form of  $b\hat{o}k$  (mostly imperative but also others),<sup>24</sup> followed by a verb phrase  $(V_2)$  in a subordinate sequential form (usually called 'conjunctive', glossed here as CNSV for 'consecutive'). The construction can be schematized as follows:  $GO[MODAL]-CNSV-1/2S/PL-V_2$ . The discourse environment is direct speech.

If the context supports an interpretation as a motion event proper, this event is usually centrifugal-deictic (motion away from speaker's location), preceding the action encoded by the consecutive verb phrase  $(V_2)$ . This is exemplified in

<sup>24.</sup> A similar sense may be reached in two other modal verb forms, once jussive (Mark 6:37), once optative (John 15:16, cf. below).

(29), where the Speaker is sending the Addressee away from their current location (hence  $b\hat{o}k$  in imperative) to another location in order to fulfill a task  $(V_2)$ :<sup>25</sup>

(He sent them to Bethlehem, saying)

(29) bôk n-tetn-šine hn-ou-ôrč etbe p-šêre
go CNSV-2PL-search in-INDEF.SG-assurance(M) because\_of DEF.M.SG-child(M)
šêm
small

"Go and search thoroughly for the child!" (Matthew 2:8)

There are, however, examples in which the spatial component is not that prominent. In discussing a similar construction in English, Goldberg (2006: 53) states that "[t]he motion is interpreted as facilitating the action designated by the VP [i.e.  $V_2$ ], where the main assertive event is encoded by the VP."<sup>26</sup> In Sahidic, the lack of a Goal phrase or of a potential Goal in the context impedes an interpretation in terms of the 'go' construction. Additionally, the fact that the Speaker is not present at the described scene rules out a deictic interpretation. The Speaker rather gives advice or instructs the Addressee on how to act. As 'go' primarily encodes volitional self-motion, it presupposes intentional action. As a consequence, the overall event encoded by the construction conveys a meaning of intention and decisiveness that we have already noticed in the 'went and did' construction.

(30) ešôpe de eršan-pek-son r-nobe bôk
if PTC COND-POSS.M.SG:2S.M-brother(M) do-sin(M) go
n-g-čpeio-f outô-k outô-f mauaa-k
CNSV-2S.M-blame-3S.M it\_is\_different-2S.M it\_is\_different-3S.M alone-2S.M
"If your brother sins, go and instruct him about what is yours and what is his when you are alone." (Matthew 18:15)

In another formal variant of this pattern,  $b\hat{o}k$  appears in modal form in a complement clause depending on the verb  $k\hat{o}$  'place, appoint, set down, let'.  $V_2$  is again an instance of the consecutive form.<sup>27</sup> This is illustrated in (30):

**<sup>25.</sup>** Cf. Layton's (2011: 278, § 352b) sequential interpretation of the actions in this example with the consecutive expressing "the next distinct action in sequence".

**<sup>26.</sup>** Cf. Yates (2014b) for a discussion of similar expressions in Indo-European languages, partially on the basis of translation of the same Greek verses from the Gospels. Funk (1995:15–16) interprets Luther's Early-Modern German translations of these instances by means of *gehe/t hin* as a signal for the reader to focus on the following event rather than a description of an actual motion event.

<sup>27.</sup> For object clauses after so-called 'verbs of incomplete predication', cf. Layton (2011: 266, § 338b).

(31) ntôtn an a-tetn-sotp-t alla anok a-i-setp-têutn auô
2PL NEG PST-2PL-choose-1s but 1s PST-1s-choose-2PL and
a-i-ka-têutn čekas ntôtn etetne-bôk n-tetn-ti-karpos
PST-1s-appoint-2PL so\_that 2PL OPT:2PL-go CNSV-2PL-give-fruit(M)
"You did not choose me but I chose you. And I appointed you to go and bear fruit ..."
(John 15:16)

The metaphorical nature of this example supports its non-spatial interpretation (Stefanowitsch 2000); it does not have a strong agentive meaning. It rather emphasizes that the action or event encoded by  $V_2$  is supposed to actually happen in the future (cf. Heine, Claudi & Hünnemeyer 1991 and Hopper & Traugott 1993). However, in the absence of additional examples, this interpretation cannot be definitely substantiated.

In another instance of the construction following  $k\hat{o}$ ,  $b\hat{o}k$  is neither purely spatial nor purely grammaticalized or metaphorical.

```
(To another he said, "Follow me." But ...)

(32) ... peča-f če p-čoeis kaa-t nšorp ta-bôk ta-tôms
say-3s.m that DEF.M.SG-lord(M) let-1s in:first CNSV:1s-go CNSV:1s-bury
m-pa-iôt
OBJ-POSS.M.SG:1s-father(M)
'he said: "Lord, let me go first and bury my father." (Luke 9:59)
```

Since this instance appears in direct speech and refers to an action envisaged at the time of speech, it can be interpreted deictically (i.e. as an instance of the 'go away' construction). However, crucially, the Greek source text does not use a motion verb in two of the three instances.<sup>28</sup> This supports the claim that motion is not foregrounded. Rather, the Speaker is requesting the Addressee (Jesus) to let  $(k\hat{o})$  them eventually do something they strongly desire to do. The sense of  $k\hat{o}$  here is rather permissive as compared to the (31) above, where it is designative.

In sum, the 'go-do' construction foregrounds the dynamic character of the overall event. Like comparable constructions with 'go' in other languages, it signals a future stage in the course of action while the main semantic load of the event is encoded by  $V_2$ . In our sample, it also seems to emphasize the instructive/causative/permissive authority of the Speaker (see examples (29)–(31)) or Addressee (see example (32)) over the agent of  $V_2$  and/or the intentionality of the event encoded by  $V_2$ . This claim, however, needs more evidence in order to be substantiated.

**<sup>28.</sup>** Luke 9:59 and 9:61.

# 5. Idiosyncrasy and predictability in lexical patterns: Discussion and conclusions

In the preceding sections, we discussed in detail the various morpho-syntactic, semantic, and discourse-pragmatic features that correlate with specific senses of the verbs baínō and bôk. Both these motion verbs carry very general basic meanings and are characterized by extensive polysemy. The generality of meaning and the multiplicity of possible interpretations in the context of ancient languages, where native intuition is not even relevant, highlights the need, at the very least, for descriptive adequacy. The divergence of dictionaries (e.g. Pantazidis 1888; Liddell & Scott 1996; Montanari 2015) on the number and description of senses for baínō, for instance, indicates the need for a more rigorous and objective approach, which, we suggest, can be obtained from a corpus-based analysis. In the analysis above, we have identified and tagged for features that can precisely provide reliable (i.e. significantly recurring) indications for a particular meaning. The variability of these features (ranging from morpho-syntax to semantics, discourse, and lexical specificity), their co-existence in particular clusters, and the emergence of senses in precisely those clusters points to the appropriateness of a constructional framework for these data. Indeed, and in fairness to traditional lexicography, it should be noted that the relevant entries regularly include such diverse types of features in particular senses and subsenses.

In identifying relevant features, we have adopted a corpus-based (as opposed to corpus-driven) approach in the sense that our analysis sought to confirm certain observations made from the perusal of the data. At the same time, our tagging has included *all* major categories relevant to verbs, including person-number and tense-aspect inflections and types of complements (specified both syntactically and semantically), while extending to discourse-pragmatic features that seemed a priori relevant for particular senses, and in fact turned out so; in this respect, we have enriched the perspective of preceding corpus-based analyses of lexical polysemy that were limited to morpho-syntactic and semantic features.

Most senses of the verbs  $baín\bar{o}$  and  $b\hat{o}k$  instantiate highly schematic (and productive) constructions in the language, such as the intransitive motion construction (cf. Goldberg 1995: 3, 207) or the transitive one (cf. Goldberg 1995: 117–19). Several properties associated with the individual senses follow (are inherited) from the links to the general productive patterns. It is not for example surprising that a motion verb will be accompanied by an oblique argument denoting Goal, Path, or Source, or that the prepositional complements will be headed by prepositions whose range of meanings includes such roles; indeed, this is what we find for both verbs investigated here. Still, the default 'go away' interpretation these verbs appear to have when no oblique argument is present is a finding which, to our knowledge,

has not been previously noticed, and which required systematic tagging of overt and zero complements.

These inherited (hence predictable) features aside, our work here has demonstrated that each of the senses correlates with features that are not predictable, or at best are only partially motivated. These include (a) morphological idiosyncrasies, such as the perfective morphology correlating with the 'go' and the 'start/ set out' senses in Homer, the 'come' and 'die' senses in Euripides, and the 'stand on' sense in Plato, or the stative or future-marked infinitive form of the verb in Sahidic Coptic when in the sense 'be on the way'; (b) syntactic specifications, such as the fixed order of verb and infinitive and the sentence-initial position we find correlating with the 'start/set out' sense in Homer; or the sentence- final position of the verb in the 'go away' sense in Sahidic Coptic; (c) semantic idiosyncrasies, as for example the restriction of the complement to a semantically-definable class of nouns in Plato's 'overstep' sense; (d) discourse-pragmatic specifications, such as the occurrence of the 'went and did' sense only in third-person narratives in Sahidic Coptic, or the priming of the 'come' sense within chorus passages in Euripides. Finally (e), restrictions of a purely lexical nature are relevant to practically all senses of the verb in Greek, where for instance either the preposition or the filler of the complement slot, or both, are totally fixed or at least restricted to a short list (an example here is the 'mount/climb' sense in Homer). The more such features co-exist in one sense, the more constructional (or idiomatic) the sense is. Prime examples of such highly-restricted patterns are the inchoative 'start/set out' sense in Homer, or the 'went and did' and 'go - do' patterns in Sahidic Coptic, where both morpho-syntactic and pragmatic features correlate with the corresponding senses. Our claim has been that the co-existence of such diverse specifications can only be captured as information associated with individual senses of the verbs at hand, represented as lexical constructions.

As noted in the Introduction, one line of constructional research (e.g. Boas 2003, 2005, 2008, 2013) has treated verb senses as "mini-constructions with their own frame-semantic,<sup>29</sup> pragmatic, and syntactic specifications whenever abstract meaningful constructions overgenerate" (Boas 2013: 191). Several of the individual

**<sup>29.</sup>** In line with the frame-semantic and FrameNet tradition and type of analysis (e.g. Fillmore, Johnson, & Petruck 2003; Baker, Fillmore & Cronin 2003), Boas treats the individual senses of a verb as a function of the semantic frames a verb can evoke. At the same time, the detailed analysis performed in FrameNet research (e.g. Fillmore, Petruck, Ruppenhofer & Wright 2003) has in fact demonstrated that even verbs that are closely related semantically and belong to the same frame do not behave identically with respect to argument structure possibilities, e.g. the difference between *tie* vs. *attach* and *secure* with respect to symmetric and asymmetric syntax;  $tie + plural\ N$  with symmetric interpretation ( $tie\ the\ strings\ (together)$ ) and  $tie\ X\ to\ Y$  are both possible, but *secure the strings to each other* is not.

senses of the verbs *baínō* and *bôk* certainly appear to evoke distinct frames, e.g. the motion frame, the departure frame, the climbing frame, the violation/crossing boundaries frame, and so on, and some of the features we find correlating with these senses appear to follow from the relevant frame (e.g. the lexical fillers in the mount/climb sense are things that can be climbed or mounted, etc.). At the same time, the data analyzed here demonstrate the conventionalization of these senses as clusters of features which, in addition to "pragmatic and syntactic specifications" (as already noted by Boas), imply the association of a sense with a particular *inflected form* of the verb or with specific textual and discursive conditions. There emerge, therefore, highly enriched and sophisticated templates for lexical (or mini-) constructions, which certainly exceed the skeletal form of lexical entries we find in Goldberg (1995), where the only type of information given is the semantic role of the arguments.

This last point is precisely our contribution to constructional theory as well as the differentiating factor of our analysis from traditional valency-grammar approaches.30 The structure, type and amount of information relevant for lexical constructions has been the topic of an ongoing debate among constructional approaches, ranging from skeletal structure in Goldberg's (1995) framework to more fine-grained, detailed representations as suggested by Croft (2001), Boas (2008) and others. On the basis of our data, we argue for enriched, fine-grained lexical constructions at the level of the senses of each of the two verbs, whose template should include morphological properties below the lexical level (in this case, reference to specific inflectional forms), semantic properties of the arguments (e.g. as they relate to the subject argument), lexical constraints on the arguments, correlations with syntactic position in the clause, and finally discourse-specific constraints. Although our focus has not been on relating these senses into a network of polysemy, it should be clear that any such attempt cannot start by connecting simple senses to each other; instead, it needs to link (via metaphor, metonymy, generalization, etc.) gestalts of morpho-syntactic and discourse-pragmatic information, like those represented by our lexical constructions. Generalizing the information in Tables 3 and 4, and following Boas (2008) who suggests that lexical and grammatical constructions should have the same structure and contain the same types of information, we may in fact propose that a relevant lexical construction should include the features in Table 5; the notation makes use of constructional attribute-value pairs (illustrating with values that have emerged as relevant in the present work) and, in line with all constructional frameworks (Croft 2001; Fried

<sup>30.</sup> For an overview and comparison/contrast of valency and constructional approaches see Stefanowitsch & Herbst (2011).

2015; Goldberg 1995, 2006), assumes a broad perspective of the meaning pole that includes pragmatics and discourse. The understanding of course is that such representations are meant to portray *frequency-based*, *encoding* constructions.

Table 5. A template for lexical constructions

	Domain	Attributes	Values
FORM of the (lexical) construction	Morphological properties	tense aspect person number	e.g. aorist e.g. perfective e.g. third e.g. singular
	Syntactic properties	position in sentence verb-complement order 	e.g. initial, final e.g. complement follows
	Phonological properties	phonotactic constraints 	e.g. euphonic particle
MEANING of the (lexical) construction	Semantic properties (including lexical constraints on arguments)	semantics of subject semantics of complements lexical constraints on complements	e.g. animate e.g. abstract e.g. specific prepositions e.g. specific lexical fillers
	Discourse-pragmatic properties	genre text-type discourse context 	e.g. epic poetry e.g. narrative e.g. chorus

While Ariel (2008: 208–9) cautions against identifying salient discourse patterns with grammatical conventions (the former identified mainly, though not uniquely, on the basis of frequency), at the same time acknowledges that ultimately an adequate model should account for a continuum of entrenchment (Ariel 2008: 207). Ariel (2010: 205) further concedes that although some correlations "are only optional preferences, rather than one-to-one form-function conventional associations, their status may have to be grammatically stipulated. It is possible that some form-function correlations are grammatically specified although they only pose weak constraints on language use". The correlations we have identified here and captured in terms of lexical constructions are indeed based on frequency and are appropriately described as optional preferences and weak (or not absolute) constraints. Still, from the perspective of a usage-based theory, such as that implied

by Ariel, they are clearly part of speakers' knowledge and part of the grammar of the language, and their input (as shown above) cannot be predicted or derived from other constructions or inferential pragmatic processes. As noted above, earlier work (Croft 2001, 2012; Boas 2008, 2013) has argued for the necessity of recognizing "verb-class-specific and verb-specific constructions", showing that even verb-class-specific constructions are often not enough to predict the argument structure of verbs that are semantically related (see also footnote 30). As Croft (2012: 393) notes,

Speakers are not exposed to verbs in isolation, nor are they exposed to schematic argument structure constructions without verbs in them. Actually occurring utterances are closest to verb-specific constructions. Verb-specific and verb-class-specific constructions exist as part of a speaker's grammatical knowledge: there are idiosyncrasies in the form-meaning mapping that show that we cannot discard them for more general constructions.

Here, we have raised the possibility that in some cases we may even need to refer to verb-form specific or text/discourse-specific constructions. Although this may at first appear as extreme refining of senses and contexts, from a usage-based perspective it seems a natural consequence. Along with Boas (2005, 2013), we do not dispute the existence of general, schematic constructions such as the intransitive motion, the ditransitive, or the resultative. But we at least entertain the possibility that lexical constructions (of whatever degree of specificity) may exist redundantly and independently of the 'over-generating' of schematic patterns. As Croft (2012: 382) insightfully points out, "if linguists make different abstractions from verb + argument structure construction combinations in verb-specific constructions, speakers might do so as well". If lexical constructions (including all kinds of detailed usage information) are necessary to simulate human language production on a Natural Language Processing system (as suggested, for instance, in Boas 2003: 234-235), or to achieve an adequate theory of language (as suggested in Croft 2012:391), then they can be plausibly said to be necessary for pure and not-so-simple descriptive adequacy; our aim here has been to show that at least for the two verbs discussed here this is actually the case.

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# List of glosses used in Coptic and Greek examples that are not included in Leipzig Glossing Rules 2015 (https://www.eva.mpg.de/lingua/pdf/Glossing -Rules.pdf)

ANT	anterior	M/P	medio-passive
AOR	aorist	OBJ	object (second argument) marker
CIRC	circumstantial converter	OPT	optative
CNSV	consecutive	PRSNTV	presentative
DIST	distal	PTC	particle
IMPRF	imperfect	S	singular (in pronouns)
INDEF	indefinite	STAT	stative
LIM	limitative ('until')	SUBJ	subject (first argument) marker

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