

Commentationes Humanarum Litterarum
147 2024

Scribes and Language Use
in the Graeco-Roman World

edited by
SONJA DAHLGREN, MARTTI LEIWO AND MARJA VIERROS

Societas Scientiarum Fennica

The Finnish Society of Sciences and Letters

Commentationes Humanarum Litterarum
is part of the publishing cooperation between
the Finnish Society of Sciences and Letters and
the Finnish Academy of Science and Letters

This book has received a subsidy granted by the Ministry of Education and Culture
distributed by the Federation of Finnish Learned Societies

ISSN 0069-6587 (print)
ISSN 2736-9374 (open access)
ISBN 978-951-653-520-6 (print)
ISBN 978-951-653-521-3 (open access)
DOI <https://doi.org/10.54572/ssc.1029>

Layout by Vesa Vahtikari

Copyright © 2024 by Sonja Dahlgren, Martti Leiwo and Marja Vierros
& Societas Scientiarum Fennica

Printed by Grano Oy, Vaasa 2024

Contents

Introduction	i
MARTTI LEIWO	
The language use of the Narmouthis scribes: Foreign language perception and native language transfer. A case study	1
SONJA DAHLGREN	
Scribal Revision in the Process of Text Production. A Linguistic Typology of Scribal Corrections in Four Genres of Greek Documentary Papyri	23
JOANNE VERA STOLK	
Whose words? Identifying authors in Greek papyrus texts using machine learning	49
MARJA VIERROS & ERIK HENRIKSSON	
Infinitives at Work. Competing Patterns in Early Ptolemaic Papyrus Letters	79
CARLA BRUNO	
A Bilingual Scribe in Early Roman Tax Receipts from Elephantine	111
RUTH DUTTENHÖFER	
Documentary papyri as ‘multimodal’ texts. Aspects of variation in the Nephros archive (IV CE)	133
KLAAS BENTEIN	
Spoken Greek and the Work of Notaries in the Acts of the Council of Chalcedon	163
TOMMASO MARI	
Bilingual Letter Writers: The Verbs γράφω, οἶδα and θαυμάζω in Formulae, Idioms and Collocations	193
VICTORIA BEATRIX FENDEL	

'You Know Justice and Law and the Kind of Writing of the Notaries' (Rhet)or(ic)al skills and scribal act in P.Col. inv. 600 (a.k.a. P.Budge), Coptic transcript of a hearing in front of an arbitration council TONIO SEBASTIAN RICHTER	221
Early Medieval Scribes' Command of Latin Spelling and Grammar: A Quantitative Approach TIMO KORIKAKANGAS	253

8. Bilingual Letter Writers: The Verbs γράφω, οἶδα and θαυμάζω in Formulae, Idioms and Collocations

VICTORIA BEATRIX FENDEL

1 Introduction

Any verb is surrounded by an argument structure and a participant structure, which map onto each other. Thus, there is a morphosyntactic dimension (the c-structure in Lexical-Functional Grammar (LFG) terms) and a semantic dimension (the f-structure in LFG terms) (Bresnan, Asudeh, Toivonen and Wechsler 2015). Many verbs allow for more than one pattern. If the same lexical verb appears with more than one pattern, not only the morphosyntax but also the semantics of the verb change. Such is the case for γράφω, οἶδα and θαυμάζω, in a Greek-Coptic corpus of private letters on papyrus dating from the early Byzantine period and originating from Middle and Southern Egypt.

The range of argument and participant structures that a lexical verb can appear in has been captured in the form of verb profiles. Profiles have been developed for French verbs in the context of the Lexicon-Grammar Approach (LADL) (Gross 1984) and for German verbs in the context of the Leipzig ValPal project (www.valpal.info; similarly for English, see Hanks (1996, 2013)). Profiles of (seemingly) semantically equivalent verbs across languages often differ. Compare for instance ‘to listen to’, ‘etw. hören’ and ‘écouter qqch’. While the German and French constructions include a second argument referring to what is being listened to without a preceding preposition, the English verb calls for a preposition preceding the argument referring to what is listened to. Grossman (2019) shows for Greek and Coptic specifically that in the case of loan verbs, the argument structure of the model language may not be preserved in the replica language¹ but that the verb in question may be fit into the pattern of the equivalent native verb.

In the early Byzantine period, Egypt had been a bilingual region for more than a millennium. Language contact had initially been limited to the trade *metropoleis* of the north (Bergeron 2015; Torallas Tovar 2010: 255; Villing 2015), but spread southwards during the Ptolemaic and Roman periods (Adams 2003:

¹ For the terminology, see Matras (2009).

534; Crespo 2007; Fischer-Bovet 2014: 23; Hall 2014: 268; Kraus 2000). Over the course of the early Byzantine period, the political situation and with it the relative status of Greek and Egyptian, called Coptic from the fourth century onwards, changed.

Coptic advanced into the official sphere, a former stronghold of Greek. Three good examples of this are (i) the translation of the New Testament into Coptic with the increasing importance of Christian faith, as early as the second century (Wright and Ricchuiti 2011: 497) (ii) the emergence of the Coptic alphabet from around AD 100 onwards (Fendel 2021; Quack 2017), (iii) the use of Coptic in business communications, as early as the Douch ostraca in the fourth century (Choat 2009: 347) and eventually wills, such as the well-known wills from the monastery of St Phoibammon in the early seventh century (Fournet 2019; Krause 1969). Thus, in the cultural, social and political spheres Coptic was gaining in importance and achieving an almost equal status to Greek over the course of time.

From a linguistic perspective, the impact of Egyptian on Greek has been explored for Ptolemaic collections, such as the *agoranomos* contracts (Vierros 2007, 2012), texts written with a rush (Clarysse 1993), and the archive of Kleon and Theodoros (Clarysse 2010), as well as Roman collections, such as the Narmouthis ostraca (Bagnall 2007; Leiwo 2003; Rutherford 2010). It seems that at least from the Roman period onwards, a regional variety of Greek in Egypt had developed and thus must be taken into account (Dahlgren 2016, 2017).² By contrast, the early Byzantine period has often been passed over³ potentially because of it being a transitional period historically speaking (Keenan 2007; Kiss 2007; van Minnen 2007) or because comparative literary sources are scarce (e.g. the New Testament for the Roman period).

What the present chapter is not is a comprehensive overview of language contact in late antique Egypt; research from the historical, socio-historical and linguistic perspectives has been done. Furthermore, this chapter is based on a specific corpus of texts. Thus, the results presented here apply to this very corpus. In order to apply them to different corpora, they would first have to be verified for these. In addition, this chapter is not a study of Coptic in the first place, but a

² The impact of Greek on Egyptian is not our primary concern here, but has also been studied (Grossman, Dils, Richter and Schenkel 2017; Hasznos 2006, 2012).

³ Volumes on language contact and bilingualism in Egypt pass over the early Byzantine period, e.g. Cromwell and Grossman (2017) (with chapter 11 on texts dating up to the third century and chapter 12 on texts dating from the eighth century onwards).

study of Greek; research on the traces which the contact situation between Greek and Coptic has left on the Coptic side is relevant only insofar as it proves that there was a contact situation that worked in both directions; research on Coptic linguistics is relevant to the extent that Coptic and Greek interacted and we need to know what the interactant Coptic looked like in order to recognise its impact on Greek. Finally, the approach taken here is descriptive and linked to the LFG framework; no conclusions about typological issues are claimed.

The aim of the present chapter is to propose a method to approach verbal complementation patterns, that is the collocation-idiom-formula continuum. This method applies the principles of the variationist paradigm to verbal complementation patterns, that is the distinction between standard, variation and deviation. The chapter takes a primarily theoretical approach.

The chapter is divided into four Sections. Section 2 introduces the reader to the method of conceptualising verbal syntax that is applied here. Section 3 considers verbal complementation patterns from a typological point of view as well as Greek and Coptic verbal complementation patterns in particular. Section 4 introduces the corpus of texts and applies the approach introduced in Section 3 to the corpus data. Section 5 summarises the results and concludes by evaluating the usefulness of the approach suggested here.

2 Conceptualising verbal syntax in a language-contact setting

We define verbal syntax as the structure surrounding a lexical verb or verbal phrase (in the case of verbal Multi-Word Expressions). At the morphosyntactic level, this is the argument structure that the verb subcategorises for. At the semantic level, the participant structure that the verb subcategorises for maps onto the argument structure. When analysing data, the structure surrounding a lexical verb or verbal phrase may or may not comply with the expected standard in a language. In the latter case, we must ask what caused the difference between the expected standard and the observed structure. One of the potential reasons, a reason that is unique to language-contact settings, is the adoption of a structure from another language with or without adaptation of this structure.

With Matras (2009: 238) we call the language that adopts or receives a structure the replica language and the language that borrows or gives a structure the model language. Interaction between two languages can happen at several levels. In order to distinguish these, we make a tri-partite distinction reminiscent of Myers-Scotton's (2002) Abstract-Level Model and the two-tier

approach of LFG. We distinguish a surface level, that is the morphosyntactic level (the c-structure in LFG), an underlying structural level, that is level of the grammatical and semantic relations (the f-structure in LFG), and a deeper conceptual level, which captures culturally determined differences. This third level is relevant for example when discussing formulae in different languages (e.g. epistolary formulae). These have usually evolved out of a specific cultural setting and tradition and thus differ between languages, e.g. 'to write' vs. 'to say' in Greek and Coptic epistolary formulae (Depauw 1997; Choat 2007, 2010; Koskenniemi 1956).

Differences between the expected standard and an observed structure may be contextually motivated. We therefore distinguish three types of contexts, that is formulaic, semi-formulaic and free contexts. The select corpus of texts consists of private letters. In these, the formulaic sections appear at the beginning and the end, comparable to English 'dear X' and 'best wishes' (e.g. Fournet 2009; Kim 2011; Koskenniemi 1956; Stolk and Nachtergaele 2016); the semi-formulaic sections appear either close to the beginning and end or they are interspersed in the letter body; the free section of a letter is the letter body. Semi-formulaic expressions are pragmatized expressions that structure the letter body as signposts and / or hedges, such as the disclosure formula $\beta\upsilon\lambda\omicron\mu\alpha\acute{\iota}\ \sigma\epsilon\ \gamma\nu\omega\acute{\nu}\alpha\iota\ \acute{\omicron}\tau\iota$ 'I want you to know that' (Davis and Maclagan 2020; Erman 2001; Hulleberg Johansen 2021; Porter and Pitts 2013).

We distinguish these three types of contexts firstly because in formulaic contexts, a minor variation may disrupt the formulaic structure completely, whereas in freer contexts, minor variations may even be overlooked at times. Secondly, research on speech production as well as research on language learning suggest that speakers / writers and learners approach formulaic contexts differently from less fixed contexts (e.g. Namba 2010; Weinert 2010; Wood 2010; Wray 2009). Thus, we expect there to be differences in language usage between the three types of contexts and we expect these differences to manifest in the types and frequency of the nonstandard structures that appear.

Importantly, not every structure that differs from the expected standard is a language-contact phenomenon. First of all, the expected standard is difficult to determine for early Byzantine Greek in Egypt not only because we are lacking a comprehensive description of the language (cf. Gignac's (1976) third volume), but also because a wide range of parameters has to be taken into account when considering our texts. Greek had developed over the centuries, yet not always in a linear manner (modernisms), and at the same time backward-looking movements (classicisms) had occurred (e.g. Adams 2013; Lee 2013; Luiselli

1999). As mentioned, at least from the Roman period onwards, a regional variety of Greek in Egypt seems to have existed (regionalisms). Our texts originate from different situational contexts (register-related variation), and from different societal groups (sociolectal features) as well as from a range of individuals (idiolectal features). Secondly, the preservation of texts is in essence by chance. Thus, we may have an incomplete view of early Byzantine Greek. This calls for caution when drawing inferences. Thirdly, even language learners do not constantly draw on their first language or any other language they know, but they are often influenced by learning methods and by the context of learning and thus produce structures that are nonstandard but not clearly due to drawing on another language (Birney et al. 2019; Cheng et al. 2021; Evans 2012a, 2012b).

Distinguishing between types of nonstandard structures is often complicated. Therefore, we distinguish broadly between features that differ from the expected standard but are grammatically correct and those that differ from the expected standard and are grammatically incorrect. We call the former variations and the latter deviations. Most variations are context-dependent (register-related),⁴ whereas most deviations are idiolectal (cf. Labov's (1991) variationist paradigm). However, given our incomplete vision of what the early Byzantine Greek standard was, some of our deviations may in fact be patterns that were part of the standard repertoire. Equally, there may be variations that we can plausibly explain, but that were in fact not part of the standard repertoire. This is an issue which every corpus language is faced with and that cannot be completely resolved, but that one has to bear in mind.

Finally, we mentioned that not every deviation is caused by the interaction of two languages. Equally, not every deviation that is caused by the interaction of two languages is a case of bilingual interference. In fact, there are two main options, that is bilingual interference and convergence. Bilingual interference is idiolectal and either momentary (one-offs) or temporary (interlanguage) (Matras 2009: 74–79 and 310–312; Myers-Scotton and Jake 2000; Selinker 1972). Interferences are hence comparatively rare and are not spread across writers (or only by chance), they are ungrammatical⁵ and they show no or a low degree of adaptation of the model structure to the replica language. Conversely, convergence is a gradual

⁴ Variations can be variations towards more elaborate or classicising patterns as well as variations towards simpler or colloquial patterns.

⁵ We can identify in the papyrological data only instances of negative transfer, whereas those of positive transfer may go unnoticed (Butler and Hakuta 2004: 129–34).

process by which two languages merge. The structure that is incorporated into the replica language is adapted to the system of the replica language so as to be grammatical in the replica language. In order to distinguish between instances of interference and convergence, we consider whether an observed structure is grammatical (and idiomatic, in the case of formulaic sections), is frequent and spread across writers and texts, and to what extent the structure is adapted to the replica language, here Greek.

3 Verbal complementation patterns

3.1 Types of complements

The argument slot(s) of a verb can in many cases be filled by several types of linguistic material. We are not interested in the subject slot and call all the other arguments that a verb subcategorises for complements. In essence, complements can be nominal or verbal and phrasal or clausal. Compare for instance *I saw the house* with the two-argument verb 'to see' and a phrasal argument in the second argument slot, that is *the house*, a Noun Phrase (NP), with *I saw that the house was damaged* with the same two-argument verb yet this time with a clausal argument in the second argument slot, that is *that the house was damaged*. Between these extremes, an NP and a clause, there is a range of verbal and nominal phrases and clauses that can fill the complement slot. To use the same two-argument verb as before and give only a few examples, consider *I saw the house being painted green* with a gerund construction and *I saw the house collapse* with an infinitive construction. In both cases, we have a Verb Phrase (VP) in the argument slot. Lehmann (1988, Section 3.1.4) maps the kinds of complements that can appear in the complement slot on a continuum ranging from nominality to sentiality. From a purely structural perspective, we adopt his idea.

Given that there is often more than one morphosyntactic option for the argument slot of a verb, it has been debated whether choosing one or the other complementation pattern is an analytic process. To put it differently, are verbal complementation patterns semantically compositional or non-compositional? In the former case, we would say that a complementation pattern has an intrinsic meaning and that this meaning is added to the meaning of the lexical verb when the complementation pattern is selected. The meaning of the combination of the verb and the complementation pattern is then the summation of two semantic components. In the latter case, that is taking complementation patterns as

semantically non-compositional, we would say that a complementation pattern does not have one meaning that is intrinsic to it, but that the verb and the complementation pattern interact in some (!) way. Consequently, the semantics of the combination of the verb and the complementation pattern are non-compositional.

Based on their distribution across verbs and the meanings associated with the combinations of a verb and a complementation pattern, Cristofaro (2008: esp. 587–95) argues that Greek verbal complementation patterns are non-compositional.⁶ In order to refer to patterns and describe them, we distinguish between finite and infinite patterns on the morphosyntactic level and between factive and prospective patterns on the semantic level with factive to be taken as purely contextually anaphoric rather than in the context of truth-conditional semantics (Schulz 2003). There is no one-to-one mapping between these syntactic and semantic categories as Cristofaro (2008) explains in detail.⁷

3.2 Classes of verbs

So as to put order into our analysis, we organise verbs in classes. The superordinate classes are based on the argument structure and the type of complement that fills a verb's complement slot. The superordinate classes that are relevant to the select corpus of texts are: transitive verbs, intransitive verbs (no direct object!), copular verbs, modal verbs (grammatical relations and semantic contribution), auxiliary verbs (grammatical relations), impersonal verbs (third-person singular subject). Often, these larger classes of verbs fall into smaller semantic groups. These are defined by means of their participant structure.

For example, we have a superordinate class of verbs that subcategorises for a subject and a direct object. Subordinate classes distinguish between complements being nominal or verbal. Further subordinate classes distinguish between the participant roles the complement takes on. Three examples are given in Table 1.

⁶ However, the way people learn(ed) complementation patterns may have been one in which they were treated as being compositional perhaps in order to simplify at early stages of language learning (see also Tomasello 2003).

⁷ Several patterns reflecting degrees of subjectivity, e.g. in result clauses and factive complement clauses, seem to have traded their semantic distinctness for a register-related one in the post-classical period.

Table 1. Classes of verbs.

- (a) {agent}^{nominative} {theme}^{accusative} → speech acts
 → λέγω ‘to say’
- (b) {agent}^{nominative} {patient}^{accusative} → action
 → ἀποδιώκω ‘to chase away’
- (c) {experiencer}^{nominative} {stimulus}^{accusative} → act of perception
 → βλέπω ‘to see / look at’

In [1(a)] to [1(c)], the subject is inflected in the nominative case and the direct object in the accusative case. The combination of participant roles sets the three groups apart. Furthermore, verbs like λέγω *legō* in [1(a)] can alternatively be complemented by an infinitival structure or a factive complement clause. Verbs like βλέπω in [1(c)] can alternatively be complemented by an infinitival or participial structure or a factive complement clause. By contrast, for verbs like ἀποδιώκω in [1(b)], no alternative pattern appears.

Importantly, while there is a valid methodological approach to group verbs into these classes, these classes were established for the select corpus of texts. For a different corpus, the classes of verbs may have to be adapted. For example, in the corpus, there is a clear divide in patterns between verbs of begging, such as παρακαλέω and ἀξιόω, and verbs of command, such as κελεύω and ἐντέλλω. Verbs of begging are primarily complemented with a prospective complement clause; verbs of command preserve infinitival patterns. Yet, verbs of command appear with prospective complement clauses in other corpora, e.g. P.Cair.Zen. 4.59546, 2 (official letter, 257 BC, Philadelphia) ἐνε]τείλατο καὶ σοί, ἵνα κατασκ[ευ]ασθῆι ‘he ordered you that it be prepared’.

3.3 Collocation, idiom, formula

Like the French and German verbs mentioned above, many Greek verbs enter into more than one pattern, that is into more than one combination of an argument structure with a participant structure. The organisation of verbs into groups based on their argument and participant structures is carried out empirically. To put it differently, when a verb appears in pattern a, the relevant instance is assigned to group A; when the same verb appears in pattern b, the relevant instance is assigned to group B and so on. Thus, some verbs are assigned to more than one group of verbs.

In order to conceptualise this situation, we view complementation patterns on a continuum ranging from the most basic pattern, the collocation, to the most specific pattern, the formula. The terms collocation, idiom, and formula have received a number of definitions in research literature. For our purposes, they refer to three distinct complementation patterns of the same lexical verb.

For reasons of illustration, we use οἶδα *oida*, a high-frequency item in the select corpus of texts. οἶδα appear in several syntactically distinct patterns, which are linked by regular internal processes at the syntactic (e.g. intransitivisation), pragmatic (e.g. pragmaticalization) and semantic levels (e.g. metaphorical extension). In (1), οἶδα *oida* is combined first with a nominal direct object and subsequently with a factive complement clause.

(1) PNeph. 18, 15–17

καίτοι οἶδατε τὴν τιμὴν τοῦ σίτου ὅτι γυνή εἰμι, οὐ δύναμαι ἀγοράσαι.

<i>kaitoi</i>	<i>oid-ate</i>	<i>tēn</i>	<i>timēn</i>
yet	know(PERF)-IPL.IND.ACT	the.ACC.SG.F	price-ACC.SG.F
<i>tou</i>	<i>sitou</i>	<i>ḥoti</i>	<i>gunē</i>
the.GEN.SG.N	grain-GEN.SG.M	that	woman-NOM.SG.F
<i>ei-mi,</i>	<i>ou</i>	<i>duna-mai</i>	<i>agora-sai</i>
be(PR)-1SG.IND.ACT	not	can(PR)-1SG.IND.MID	buy(AOR)-INF.ACT

‘yet, you know the price of grain (and) that I am a woman (and that) I can (hence) not make purchases’

With both these patterns, οἶδα *oida* falls into the class of verbs of perception (see Section 3.2).⁸ This is the pattern in which the verb appears most frequently. The pattern is semantically compositional and syntactically transparent. No contextual constraints apply. We call this basic pattern of a verb its collocation.

⁸ The classical distinction between the participial pattern to emphasise the act of perception vis-à-vis the ὅτι-pattern to emphasise the factivity of the event observed is retreating. Moreover, οἶδα was used with the ὅτι-pattern, then emphasizing the factivity of the event observed, already in classical literature (e.g. Lysias 1, Sections 1, 22, 28, and 36).

In (2), οἶδα is treated as an intransitive verb through object deletion. It appears in a comparative clause that is pragmaticalised as a hedge⁹ for claims (see also la Roi 2022).¹⁰

2) P.Oxy. 34.2727, 9–11

ὡς γὰρ οἶδας, ἀπαραίτητός ἐστιν ἡ χρεία·

<i>hōs gar</i>	<i>oid-as</i>		<i>aparaitēt-os</i>
as for	know(PERF)-2SG.IND.ACT		irresistible-NOM.SG.M/F
<i>es-tin</i>		<i>hē</i>	<i>kʰrei-a</i>
be(PR)-3SG.IND.ACT		the.NOM.SG.F	need-NOM.SG.F

‘For, as you know, the need is irresistible.’

In declarative clauses / claims, responsibility for what is said lies with the speaker (or here writer) (Verstraete 2007: 106). By means of the hedge, the writer limits his responsibility for the propositional content and appeals to the hearer (Hulleberg Johansen 2021: 86). In O.Claud. 4.896, 5–7 an asyndetic option instead of the comparative clause seems to be selected.¹¹

Other regular operations, apart from transitivity-related operations as in (2), are the co-existence of classical and post-classical patterns (e.g. ἀξιόω *axioō* ‘to deem somebody/something worth of something’ vs ‘to beg’), factive and prospective patterns (e.g. λέγω ‘to tell somebody that something is the case’ vs ‘to tell somebody to do something’), or grammaticalised and non-grammaticalised patterns (e.g. θέλω ‘to want’ vs ‘will’) for the same verb. We call such an alternative pattern that a verb appears in its idiom. This pattern is usually, but not always,

⁹ A hedge is a lexical or structural element that adds tentativeness to an expression (Hulleberg Johansen 2021: 82), such as English *sort of*, *more or less* and parenthetical *I mean* (Crystal 2008: 227).

¹⁰ In the corpus, the verb λέγω rather than οἶδα seems preferred in these hedges (e.g. PSI 8.938, 5; PSI 8.939, 5; P.Cair.Masp. 1.67061, 4–5). The function is similar, except that the responsibility is shifted to a third party rather than the interlocutor due to the third-person verb forms.

¹¹ Proximity searches in the *Duke Database of Documentary Papyri* show that ὡς οἶδας is the preferred form for the hedge. ὡς οἶδες only appears in P.Fouad. 85 (AD 501–700), ὡς οἶσθα in P.Oxy. 79.5210 (AD 298–299), and ὡς οἴδατε in P.Oxy. 36.2788 (AD 201–300) and P.Tebt.2.420 (AD 201–300). The hedge appears occasionally already in classical literature, e.g. Isaeus 2, Section 12.

less frequent than the collocation and semantically different. The idiom does not have to be limited in its contextual applicability.

Contextual applicability is, however, limited with the formula of a verb, in that the formula appears only in one or a specific number of fixed contexts. In (3), οἶδα *oida* appears in the so-called disclosure-formula (Porter and Pitts 2013).¹²

(3) P. Oxy. 16.1830, 15–17

καὶ ἵδέναι ἔχῃ, ἐν τῇ ὑμετέρῃ εὐδοκίμησιν ἀναφέρω τὰ πάντα.

<i>kai in'</i>	<i>d-enai</i>	<i>ek^h-u</i>
and in.order.that	know(PERF)-INF.ACT	can(PR)-3 SG.OPT.ACT

<i>en tē</i>	<i>h^umeter-a</i>	<i>eudokimēs-in</i>
in the.DAT.SG.F	your- DAT.SG.F	good.repute-DAT.SG.F

<i>anaph^her-ō</i>	<i>ta</i>	<i>pant-a</i>
bring(PR)-1SG.IND.ACT	the.ACC.PL.N	everything-ACC.PL.N

‘and it (sc. your good reputation) may know (that) I will bring everything to your good reputation’

The disclosure-formula consists of a deontic form or periphrasis of a verb of learning / realising (e.g. οἶδα) and a factive complement clause containing the piece of (new) information to be flagged. In (3), the writer opts for an asyndetic pattern instead of the regular factive complement clause. We call a verb’s formula a pattern which semantically and syntactically differs from a verb’s collocation and idiom and which appears in a formulaic context with a very specific function.

We locate collocations, idioms and formula on a continuum ranging from the most basic to the most specific. The collocation, idiom and formula of a verb are each a group of patterns that share a form-function mapping, as is shown in (1) and (3), in that the patterns shown are alternatives to the expected pattern, and in (2), in that an asyndetic pattern appears instead of a complement clause.

¹² The disclosure formula appears rarely already in classical literature (e.g. Xenophon, *Anabasis*, 1.3.15) and relatively commonly in the New Testament. In the papyri, it seems to be used across registers and serves to flag new information. In the corpus, the disclosure formula appears more frequently with μανθάνω (9 instances) and γινώσκω (11 instances).

3.4 Greek and Coptic

Three aspects in which Greek and Coptic typologically differ are relevant to verbal complementation patterns. On the surface level, it is the aspect of word order; on the structural level, it is the aspects of rectional and combinatory elements with the verb and of the morphosyntactic encoding of complements. We discuss these aspects in turn.

To begin with the word order, Celano (2013b, 2013a) argues that Classical Greek word order is determined by information-structural considerations. However, there are aspects of word order that are more syntactically determined, such as the word order with prepositives and postpositives and the word order inside an NP. A similar opinion is held with regard to later Greek, New Testament Greek, by Kirk (2012). Given that Greek is an inflecting language, the word order is not a primary means for indicating syntactic functions. By contrast, Coptic is a noninflecting language and word order is one of the tools to encode syntactic functions. This is not to say that information structure is not important (e.g. Zakrzewska 2006 on Bohairic). Yet often a different word order pattern has to be selected when information-structural considerations require for instance postponing of an element (Layton 2011). Coptic encodes syntactic functions not only by means of position but also by means of prepositions and incorporation. In this context, Grossman (2015) found that the latter mechanisms cannot be applied before the verb phrase.

To move on to rectional and combinatory elements with the verb, rectional elements are elements that have a solely syntactic function, whereas combinatory elements have first and foremost a semantic function. Some elements may be rectional and combinatory at the same time (Layton 2011: § 181). For example, in $\omega\text{INE } \epsilon\text{-}/\epsilon\text{PO}=\text{ } \acute{s}ine\ e\text{-}/ero=\text{ } \text{'to visit (somebody)'}\text{'}$, the entity that is visited is referred to by the complement of $\epsilon\text{-}/\epsilon\text{PO}=\text{ } e\text{-}/ero=\text{'}$. Leaving out $\epsilon\text{-}/\epsilon\text{PO}=\text{ } e\text{-}/ero=\text{'}$ would trigger a semantic change in the VP. Thus, $\epsilon\text{-}/\epsilon\text{PO}=\text{ } e\text{-}/ero=\text{'}$ in this combination is rectional and combinatory. Since we are primarily interested in the syntax of the verb, we leave combinatory elements largely aside and instead focus on rectional elements. The most important rectional elements in Coptic are Direct Object Marking (DOM) elements, a category of elements that Greek does not have. Most often, the DOM element is $n\text{-}/m\text{MO}=\text{ } n\text{-}/mmo=\text{'}$. DOM is obligatory in the durative construction (present tense) with very few exceptions (Grossman 2009 for one hypothesis of how the *status quo* came about; Layton 2011: § 171), but optional in other constructions (Engsheden 2008 on Sahidic; Engsheden 2018 on Lycopolitan).

By contrast, Greek does not operate with rectional elements with the verb. However, one could analyse the repetition of the preverb in order to encode the semantic argument or adjunct of a compound verb, such as ἀπό in Luke 5:2 ἀπ' αὐτῶν ἀποβάντες 'those going away from them', as an instance of a rectional element or perhaps rather an element that is rectional and combinatory (Luraghi 2003 on preverbs; Robertson 1919: 557–65) with the verb. This is a phenomenon that appears already in classical texts but seems to gain in frequency in the post-classical period perhaps due to the restructuring of the case system (Bortone 2010). In essence, adverbial case functions were losing ground and were replaced by analytic phrases built with prepositions and postpositions.

Finally, regarding the encoding of complements, Section 3.1. introduced (i) the morphosyntactic distinction between finite and infinite patterns, (ii) the semantic distinction between factive and prospective patterns, and (iii) Lehmann's continuum ranging from nominality to sentiality as regards the type of complement. Regarding (i), Bentein (2017) argues for Greek that the post-classical tendency towards more finite and fewer infinite complements correlates with a pragmatic restructuring of the complementation system. In essence, finite complementation patterns became the standard option with infinite ones being available primarily in high-register discourse. Regarding (ii), Greek operates a two-tier system where factive complement clauses are usually headed by ὅτι or ὡς (James 2008 for the register-related difference) and prospective ones by ἵνα or ὅπως (Clarysse 2010; Hult 1990 for the register-related difference). Regarding (iii), it should be noted that formally asyndetic structures that rely on logical subordination lie strictly speaking outside the continuum. Asyndetic patterns differ not only syntactically, but also semantically and / or pragmatically from their syndetic counterparts (Debaisieux 2004; Gries and Stefanowitsch 2004; Penner and Bader 1995: 96–117; Ruiz Yamuza 2020).

By contrast, Hasznos (2012, 2017) finds a preference for infinite complementation patterns with verbs of request (begging) across Coptic dialects. Interestingly, however, Greek loan words are more prone to finite complementation patterns (e.g. παρακαλεῖ χεκαδ *parakalei d'ekas* 'to beg that'). Finite complement clauses, both semantically factive and semantically prospective ones, are mostly headed by χε *d'e* (see also Müller 2012). This contrasts with the two-tier system of Greek mentioned above. Coptic does not have morphosyntactically distinct patterns for dependent and independent clauses. In this context, Shisha-Halevy's (2007) zero-conjunction constructions in Bohairic Coptic are notable. These are equivalent to English *I saw the house was damaged*, where *the house was damaged* fills the complement slot of *see* but no complementiser is present. We call these

constructions asyndetic. They exist in the Greek and Coptic parts of the select corpus of texts but are not especially frequent. As mentioned, they lie strictly speaking outside the sphere of the structural complementation of verbs.

4 Operationalising the collocation-idiom-formula approach

The select corpus of texts consists of all private letters belonging to bilingual (Greek-Coptic) papyrus archives (collections of texts) dating from the early Byzantine period, that is the fourth to mid-seventh centuries. The relevant archives are: Apa John, Apa Nephros, Apa Paieous, Papyri from Kellis, Dioscoros of Aphrodito (see further www.trismegistos.org). There are 127 Greek and 137 Coptic letters in total. The number of Greek words in the corpus is 13,609. The number of VPs in the corpus is 2,045, our total of tokens, and the number of distinct lexical verbs in the corpus is 436, our total of types. The three types chosen here, that is γράφω, οἶδα and θαυμάζω, account for 91 tokens, that is about 4 per cent of the total of tokens.

We apply the same methodology applied to οἶδα above to γράφω and θαυμάζω. The collocation of γράφω is a verb of communication, that is an indirect object referring to a recipient (in the dative case) and a direct object referring to a message (in the form of a factive complement clause); the idiom of γράφω is a verb of command, that is an indirect object referring to a recipient (in the dative case) and a direct object referring to an order (in the form of a prospective infinitival structure); the formula of γράφω is a verb of request, that is an indirect object referring to a recipient (in the dative case) and a direct object referring to a request (in the form of a prospective complement clause) (Fendel 2022a).

θαυμάζω has only a collocation and a formula. The collocation of θαυμάζω is a verb of emotion, that is an intransitive verb expanded by a causal clause providing a reason for the emotion; the formula of θαυμάζω is the topic-shift formula (Fendel 2022b, chap. 9), as in P.Kell. 1.65, 3–5 θαυμά[ζ]ω πῶς οὐκ ἔγραψάς μοι μίαν ἐπιστολὴν περὶ οὐδενὸς ἀπλῶς ‘I am wondering why you did not write to me any letter about anything at all’. θαυμάζω appears in the first person singular; the indirect question following contains a verb in a second-person past tense usually referring to a past failure on the addressee’s part.

After assigning tokens to groups and establishing profiles of verbs, we apply the distinction between variations and deviations introduced in Section 2 by taking into considerations the range of factors that impact on our writers’ use of

language. Table 3 summarises the distribution of variations and deviations in the select corpus of texts.

Table 3. The syntax of γράφω, οἶδα oida, and θαυμάζω.

		Standard	Variation¹³	Deviation	TOTAL
γράφω	C	35	∅	2 ¹⁴	37
	I	4	4	∅	8
	F	6	4	3 ¹⁵	13
	lost				3
θαυμάζω	C	1	∅	∅	1
	F	5	1	2 ¹⁶	8
οἶδα	C	8	2	∅	10
	I	1	7	∅	8
	F	2	∅	∅	2
	lost				1
TOTAL		62	18	7	91

When we apply this distinction to the complementation patterns of our three select verbs, we notice that variations appear with all three verbs and with almost every type of complementation pattern, whereas deviations are limited to γράφω (collocation and formula) and θαυμάζω (formula).

The method of establishing verb profiles suggested here is multi-layered, in that we establish groups of verbs based on c-structures, sub-groups within these based on f-structures, and subdivisions within these based on the production circumstances. The latter are relevant to the select corpus, since it consists of documentary texts. The verb profiles established allow for comparison and contextualisation of (i) variant and deviant patterns, (ii) modernised and restructured patterns, and (iii) the linking of patterns of the same verb which have arisen from regular internal e.g. transitivity-related operations or metaphorical

¹³ Variation downwards includes asyndetic and paratactic structures; variation upwards includes infinite (participial and infinitival) structures and circumstantial participles inserted for clarification of the intended pattern of the verb (e.g. P.Lond. 6.1917, 23 ἐντελλόμενοι added to γράφω to indicate that the idiom is intended).

¹⁴ P.Herm. 7, 6 and P.Kell. 1.5, 21, see Fendel 2022b.

¹⁵ P.Lond. 6.1916, 33, see Fendel 2022b; P.Kell. 1.65, 5 and 31, see Fendel 2022a.

¹⁶ P.Kell. 1.68, 10–11 and P.Kell. 1.64, 5–6, see Fendel 2022b.

extension (see e.g. Jiménez López 2016). Moreover, for a corpus that is set in a language-contact situation, the establishment of verb profiles facilitates comparison between languages by acknowledging an ordered range of patterns with each verb (see Fendel 2022a).

5 Summary and conclusion

Section 2 explained the three-partite distinction we make between a surface level, an underlying structural level and a conceptual level, the three-partite distinction we make between standard patterns, variations and deviations, and the tree-partite distinction we make between formulaic, semi-formulaic and free contexts. Section 2 furthermore drew attention to the fact that not every nonstandard pattern we find is due to language contact and not every language-contact phenomenon is an instance of bilingual interference.

Section 3 looked at types of complements therein adopting Lehmann's (1988) continuum and drew attention to the fact that our morphosyntactic distinction between finite and infinite patterns in Greek and our semantic distinction between factive and prospective patterns do not map onto each other one-to-one. Section 3 furthermore introduced the methodology applied here when grouping tokens into classes by means of their argument and participant structures and when grouping complementation patterns into types, that is the distinction between collocations, idioms and formulae. The approach taken here is in essence similar to the idea of verb profiles advanced for modern languages such as French and German. Finally, Section 3 drew attention to three fundamental differences between Greek and Coptic, differences that affect the realisation of complementation patterns in these two languages. The three aspects are the function of word order, the use of rectional and combinatory elements with verbs and the morphosyntactic encoding of complementation patterns.

Section 4 introduced the select corpus of texts, a corpus of private letters belonging to bilingual papyrus archives, applied the collocation-idiom-formula approach to γράφω, οἶδα and θαυμάζω and tabulated the distribution of variations and deviations for the select corpus of texts. Section 4 furthermore evaluated the usefulness of the approach.

In conclusion, the chapter suggests acknowledging an ordered range of complementation patterns for Greek verb phrases (lexical verbs or verbal multi-word expressions) in the form of verb profiles. These verb profiles are multi-layered, in that they are built not only based on the c- and f-structures of a verb

phrase but also based on extralinguistic factors impacting on people's linguistic choices (i.e. variant and deviant patterns). Verb profiles can include patterns that are limited in their contextual applicability, as shown for γράφω, οἶδα and θαυμάζω, but this does not have to be the case. Regular internal processes affecting the number of participants of an event and their roles may also underlie verb profiles, as discussed for ἀξιόω, λέγω and θέλω.

References

- Adams, James 2003. *Bilingualism and the Latin language*. Cambridge: Cambridge University Press.
- Adams, Sean 2013. 'Atticism, classicism, and Luke-Acts: Discussions with Albert Wifstrand and Loveday Alexander', in Stanley E. Porter and Andrew W. Pitts (eds.), *The Language of the New Testament: Context, History, and Development*. Leiden – Boston: Brill, pp. 91–111.
- Bagnall, Roger S. 2007. 'Reflections on the Greek of the Narmouthis Ostraka', in Mario Capasso and Paola Davoli (eds.), *New archaeological and papyrological researches on the Fayyum: Proceedings of the international meeting of Egyptology and papyrology, Lecce, June 8th-10th 2005*. Galatina: Congedo, pp. 15–21.
- Bergeron, Marianne 2015. 'Pots and People: Greek Trade and Votive Rituals at Naukratis', in Damian Robinson and Frank Goddio (eds.), *Thonis Heracleion in Context: The Maritime Economy of the Egyptian Late Period, Proceedings of the Conference in the University of Oxford, 15-17 March 2013*. Oxford: Oxford University Press, pp. 267–81.
- Bentein, Klaas 2017. 'Finite vs. non-finite complementation in Post-classical and Early Byzantine Greek: Towards a pragmatic restructuring of the complementation system?', *Journal of Greek Linguistics*, 17(1): 3–36. <https://doi.org/10.1163/15699846-01701002>
- Birney, Megan E., Rabinovich, Anna, Morton, Thomas A., Heath, Hannah, and Ashcroft, Sam 2020. 'When Speaking English Is Not Enough: The Consequences of Language-Based Stigma for Nonnative Speakers', *Journal of Language and Social Psychology*, 39(1): 67–86.
- Bortone, Pietro 2010. *Greek prepositions: From antiquity to the present*. Oxford: Oxford University Press.
- Bresnan, Joan, Asudeh, Ash, Toivonen, Ida and Wechsler, Stephen 2015. *Lexical Functional Syntax* (2nd ed.). Chicester: John Wiley & Sons.
- Bucking, Scott 2012. 'Towards an archaeology of bilingualism', in Patrick James and Alex Mullen (eds.), *Multilingualism in the Graeco-Roman Worlds*. Cambridge: Cambridge University Press, pp. 225–64. <https://doi.org/10.1017/CBO9781139012775.011>
- Butler, Yuko G. and Hakuta, Kenji, 2004. 'Bilingualism and Second Language Acquisition', in Tej K. Bhatia and William C. Ritchie (eds.), *The Handbook of Bilingualism*. Malden, MA: Blackwell, pp. 114–44. <https://doi.org/10.1002/9780470756997.ch5>

- Celano, Giuseppe 2013a. 'Argument-focus and predicate-focus structure in Ancient Greek', *Studies in Language*, 37(2): 241–66.
- Celano, Giuseppe 2013b. 'Word Order', in *Encyclopedia of Ancient Greek Language and Linguistics*. Leiden – Boston: Brill.
- Cheng, Laurretta S.P., Burgess, Danielle, Vernooij, Natasha, Solís-Barroso, Cecilia, McDermott, Ashley, and Namboodiripad, Savithry 2021. 'The Problematic Concept of Native Speaker in Psycholinguistics: Replacing Vague and Harmful Terminology With Inclusive and Accurate Measures', *Frontiers in Psychology*, 12: 1–22.
- Choat, Malcolm 2007. 'Epistolary formulae in early Coptic letters', in Nathalie Bosson and Anne Boud'hors (eds.), *Actes du huitième Congrès international d'études coptes* (Leuven: Peeters), 667–8.
- Choat, Malcolm 2009. 'Language and Culture in Late Antique Egypt', in Jutta Raithel and Philip Rousseau (eds.) *A Companion to Late Antiquity*. Chichester: Wiley-Blackwell, pp. 342–56. <https://doi.org/10.1002/9781444306101.ch23>
- Choat, Malcolm 2010. 'Early Coptic epistolography', in Arietta Papaconstantinou (ed.), *The Multilingual experience in Egypt, from the Ptolemies to the Abbasids*. Farnham: Ashgate, pp. 153–78.
- Choat, Malcolm 2012. 'Coptic', in Christina Riggs (ed.), *The Oxford handbook of Roman Egypt*. Oxford: Oxford University Press, pp. 581–93.
- Clackson, Sarah 2004. 'Papyrology and the utilization of Coptic sources', in Petra Sijpesteijn and Lennart Sundelin, *Papyrology And The History Of Early Islamic Egypt*. Boston – Leiden: Brill, pp. 21–44.
- Clarysse, Willy 1993. 'Egyptian Scribes writing Greek', *Chronique d'Égypte*, 68 (135–136): 186–201. <https://doi.org/10.1484/J.CDE.2.308932>
- Clarysse, Willy 2010. 'Linguistic diversity in the archive of the engineers Kleon and Theodoros', in Trevor V. Evans and Dirk D. Obbink (eds.), *The language of the papyri*. Oxford: Oxford University Press, pp. 35–50.
- Crespo, Emilio 2007. 'The Linguistic Policy of the Ptolemaic Kingdom', in M.B. Chatzopoulos and Vassiliki Psilakakou (eds.), *Phōnēs Charaktēr Ethnikos: Actes Du Ve Congrès International de Dialectologie Grecque (Athènes 28-30 Septembre 2006)*, pp. 35–49.
- Cristofaro, Sonia 2008. 'A constructionist approach to complementation: Evidence from Ancient Greek', *Linguistics* 46: 571–606. <https://doi.org/10.1515/LING.2008.019>
- Crystal, David 2008. *A Dictionary of Linguistics and Phonetics* (6th edn). Malden, MA; Oxford: Blackwell.

- Cromwell, Jennifer and Grossman, Eitan 2017. *Scribal Repertoires in Egypt from the New Kingdom to the Early Islamic Period*. Oxford: Oxford University Press.
- Dahlgren, Sonja 2016. 'Towards a definition of an Egyptian Greek variety', *Papers in Historical Phonology*, 1: 90–108. <https://doi.org/10.2218/pihph.1.2016.1695>
- Dahlgren, Sonja 2017. *Outcome of long-term language contact: Transfer of Egyptian phonological features onto Greek in Graeco-Roman Egypt* (Thesis, University of Helsinki).
- Davis, Boyd H., and Maclagan, Margaret 2020. 'Signposts, Guideposts, and Stalls: Pragmatic and Discourse Markers in Dementia Discourse', in Trini Stickle (ed.), *Learning from the Talk of Persons with Dementia: A Practical Guide to Interaction and Interactional Research*. Cham: Palgrave Macmillan, pp. 63–83.
- Debaisieux, Jeanne-Marie 2004. 'Les Conjonctions de Subordination: Mots de Grammaire Ou Mots Du Discours? Le Cas de Parce Que', *Revue de Sémantique et Pragmatique* 15–16: 51–67.
- Depauw, Mark 1997. *A companion to demotic studies*. Bruxelles: Fondation égyptologique reine Élisabeth.
- Depauw, Mark 2012. 'Language use, literacy and bilingualism', in Christina Riggs (ed.), *The Oxford Handbook of Roman Egypt*. Oxford: Oxford University Press, pp. 493–506.
- Engsheden, Åke 2008. 'Differential object marking in Sahidic Coptic', in Folke Josephson and Ingmar Söhrman (eds.), *Interdependence of diachronic and synchronic analyses*. Amsterdam: John Benjamins, pp. 324–44.
- Engsheden, Åke 2018. 'Verbal semantics and differential object marking in Lycopolitan Coptic', in Ilja A. Seržant and Alena Witzlack-Makarevich (eds.), *Diachrony of differential argument marking*. Berlin: Language Science Press, pp. 153–82.
- Erman, B. 2001. 'Pragmatic Markers Revisited with a Focus on You Know in Adult and Adolescent Talk', *Journal of Pragmatics*, 33(9): 1337–59.
- Evans, Trevor 2012a. 'Complaints of the natives in a Greek dress. The Zenon archive and the problem of Egyptian interference', in Patrick James and Alex Mullen (eds.), *Multilingualism in the Graeco-Roman worlds*. Cambridge: Cambridge University Press, pp. 106–23.
- Evans, Trevor 2012b. 'Linguistic and stylistic variation in the Zenon archive', in Martti Leiwo, Hilla Halla-Aho, and Marja Vierros (eds.), *Variation and chance in Greek and Latin*. Helsinki: Finnish Institute at Athens, pp. 25–42.

- Fendel, Victoria 2021. 'The Missing Piece in the Jigsaw Puzzle: A Psycholinguistic Account of the Beginnings of the Coptic Alphabet', in Anna P. Judson and Amalia E. Gnanadesikan (eds.), *Diversity in Writing Systems Embracing Multiple Perspectives*. Amsterdam: John Benjamins, pp. 198–228.
- Fendel, Victoria 2022a. 'Natural Language Use and Bilingual Interference: Verbal Complementation Patterns in Post-Classical Greek', in Michele Bianchoni and Marta Campano (eds.), *Ancient Indo-European languages between linguistics and philology: Contact, variation, and reconstruction*. Leiden – Boston: Brill, pp. 166–195.
- Fendel, Victoria 2022b. *Coptic Interference in the Syntax of Greek Letters from Egypt*. Oxford: Oxford University Press.
- Fischer-Bovet, Christelle 2014. *Army and Society in Ptolemaic Egypt*. Cambridge: Cambridge University Press.
- Fournet, Jean-Luc 2009. 'Esquisse d'une anatomie de la lettre antique tardive d'après les papyrus', in R. Delmaire, J. Desmulliez and P. Gatier (eds.), *Correspondances. Documents pour l'histoire de l'Antiquité tardive. Actes du colloque international, Université Charles-de-Gaulle-Lille 3, 20-22 novembre 2003*. Lyon: Maison de l'Orient et de la Méditerranée-Jean Pouilloux, pp. 23–66.
- Fournet, Jean-Luc 2011. 'The Multilingual Environment of Late Antique Egypt: Greek, Latin, Coptic, and Persian Documentation', in Roger Bagnall (ed.), *The Oxford Handbook of Papyrology*. Oxford: Oxford University Press, pp. 418–51.
- Fournet, Jean-Luc 2019. *The Rise of Coptic: Egyptian versus Greek in Late Antiquity*. Princeton – Oxford: Princeton University Press.
- Gignac, Francis 1976. *A grammar of the Greek papyri of the Roman and Byzantine periods*. Milan: Istituto editoriale cisalpino-La Goliardica.
- Gries, Stefan and Stefanowitsch, Anatol 2004. 'Extending collocation analysis', *International Journal of Corpus Linguistics*, 9(1): 97–129.
- Gross, Maurice 1984. 'Lexicon-grammar and the Syntactic Analysis of French', *Proceedings of the 10th International Conference on Computational Linguistics*, pp. 275–82. <https://doi.org/10.3115/980431.980549>
- Grossman, Eitan 2009. 'Periphrastic perfects in the Coptic dialects', *Lingua Aegyptia*, 17: 81–118.
- Grossman, Eitan 2015. 'No case before the verb in Coptic', in Eitan Grossman, Martin Haspelmath and Tonio Sebastian Richter (eds.), *Egyptian-Coptic Linguistics in Typological Perspective* (Berlin: Mouton De Gruyter), pp. 203–25.

- Grossman, Eitan 2019. 'Language-Specific Transitivity in Contact: The Case of Coptic', *Journal of Language Contact*, 12(1): 89–115. <https://doi.org/10.1163/19552629-20180001>
- Grossman, Eitan, Dils, Peter, Richter, Tonio Sebastian and Schenkel, Wolfgang 2017. *Greek Influence on Egyptian-Coptic: Contact-Induced Change in an Ancient African Language (DDGLC Working Papers 1)*. Hamburg: Widmaier Verlag.
- Hall, Jonathan M. 2014. *A History of the Archaic Greek World: Ca. 1200–479 BCE* (2nd edn). Malden, MA: Wiley-Blackwell.
- Hanks, Patrick 1996. 'Contextual Dependency and Lexical Sets', *International Journal of Corpus Linguistics*, 1(1): 75–98.
- Hanks, Patrick 2013. *Lexical analysis: Norms and exploitations*. Cambridge, MA: MIT Press.
- Hasznos, Andrea 2006. 'A Case Where Coptic is more Syndetic than Greek', *Acta Antiqua Academiae Scientiarum Hungaricae*, 46(1–2): pp. 91–7. <https://doi.org/10.1556/AAnt.46.2006.1-2.11>
- Hasznos, Andrea 2012. *Graeco-Coptica: Greek and Coptic clause patterns*. Wiesbaden: Harrassowitz.
- Hasznos Andrea 2017. 'Syntactic Patterns Used after Verbs of Exhorting', in E. Grossman, Peter Dils, Tonio Sebastian Richter and Wolfgang Schenkel (eds.), *Greek Influence on Egyptian-Coptic: Contact-Induced Change in an Ancient African Language (DDGLC Working Papers 1)*, Hamburg: Widmaier, pp. 237–64.
- Hulleberg Johansen, Stine 2021. 'A Contrastive Approach to the Types of Hedging Strategies Used in Norwegian and English Informal Spoken Conversations', *Contrastive Pragmatics*, 2(1): pp. 81–105.
- Hult, Karin 1990. *Syntactic variation in Greek of the 5th century A.D.* Göteborg: Acta Universitatis Gothoburgensis.
- James, Patrick 2008. *Retention and retreat: Complementary participles and infinitives with verbs of perception and declaration in the Roman and Byzantine documentary papyri* (Thesis, University of Cambridge). <https://doi.org/10.17863/CAM.31210>
- Jiménez López, Maria Dolores 2016. 'Funciones semánticas alternantes y diátesis verbal: el caso de παρασκευάζω', in Esperança Borrel Vidal and Pilar Gómez Cardó (eds.), *Omnia Mutantur: Canvi, Transformació y Pervivència En La Cultura Clàssica, En Les Seves Llengües i En El Seu Llegat*. Barcelona: Edicions de la Universitat de Barcelona, pp. 199–210.
- Keenan, James 2007. 'Byzantine Egyptian villages', in Roger Bagnall (ed.), *Egypt in the Byzantine world, 300–700*. Cambridge: Cambridge University Press, pp. 226–43.

- Kim, C. 2011. 'Grüße in Gott, dem Herrn' Studien zum Stil und zur Struktur der griechischen christlichen Privatbriefe aus Ägypten (Thesis, University of Trier).
- Kirk, A. 2012. *Word order and information structure in New Testament Greek* (Thesis, University of Leiden).
- Kiss, Z. 2007. 'Alexandria in the fourth to seventh centuries', in Roger Bagnall (ed.), *Egypt in the Byzantine world, 300–700*. Cambridge: Cambridge University Press, pp. 187–206.
- Koskenniemi, Heikki 1956. *Studien zur Idee und Phraseologie des griechischen Briefes bis 400 n. Chr.* Helsinki: sn.
- Kraus, Thomas J. 2000. '(Il)Literacy in Non-Literary Papyri from Graeco-Roman Egypt: Further Aspects of the Educational Ideal in Ancient Literary Sources and Modern Times', *Mnemosyne* 53(3): 322–42.
- Krause, Martin 1969. 'Die Testamente der Äbte des Phoibammon-Klosters in Theben', *Mitteilungen Des Deutschen Archäologischen Instituts. Abteilung Kairo*, 25: pp. 57–67.
- Labov, William 1991. *Sociolinguistic patterns*. Philadelphia: University of Pennsylvania Press.
- Layton, Bentley 2011. *A Coptic grammar: With chrestomathy and glossary: Sahidic dialect* (3rd ed., rev.). Wiesbaden: Harrassowitz.
- Lee, John 2013. 'The Atticist Grammarians', in Stanley E. Porter and Andrew Pitts (eds.), *Linguistic Biblical Studies: Vol. 6. The Language of the New Testament: Context, History, and Development*. Leiden – Boston: Brill, pp. 283–308.
- Lehmann, Christian 1988. 'Towards a typology of clause linkage', in Sandra A. Thompson and John Haiman (eds.), *Clause combining in grammar and discourse* (Amsterdam: John Benjamins), pp. 181–225. <https://doi.org/10.1075/tsl.18.09leh>
- Leiwo, Martti 2003. 'Scribes And Language Variation', in Leena Pietilä-Castren and Marjaana Vesterinen (eds.), *Grapta Poikila I*. Helsinki: Finnish Institute at Athens, pp. 1–11.
- Luiselli, Raffaele 1999. *A study of high level Greek in the non-literary papyri from Roman and Byzantine Egypt* (Thesis, University of London).
- Luraghi, Silvia 2003. *On the meaning of prepositions and cases: The expression of semantic roles in ancient Greek*. Amsterdam: John Benjamins.
- MacCoull, Leslie 2009. *Coptic legal documents: Law as vernacular text and experience in late antique Egypt*. Tempe, Ariz.: [Turnhout, Belgium]: Arizona Center for Medieval and Renaissance Studies ; in collaboration with Brepols.
- Matras, Yaron 2009. *Language contact*. Cambridge: Cambridge University Press.

- Müller, Matthias 2012. 'Greek connectors in Coptic. A contrastive overview II', *Lingua Aegyptia*, 20: 111–64.
- Myers-Scotton, Carol 2002. *Contact Linguistics: Bilingual Encounters and Grammatical Outcomes*. Oxford University Press.
- Myers-Scotton, Carol, and Jake Janice L. 2000. 'Four Types of Morpheme: Evidence from Aphasia, Code Switching, and Second-Language Acquisition', *Linguistics*, 38(6): 1053–1100.
- Namba, Kazuhiko 2010. 'Formulaicity in code-switching: Criteria identifying formulaic sequences', in D. Wood (ed.), *Perspectives on formulaic language: Acquisition and communication*. London: Continuum, pp. 129–50.
- Penner, Zvi, and Bader, Thomas 1995. 'Issues in the Syntax of Subordination: A Comparative Study of the Complementizer System in Germanic, Romance and Semitic Languages with Special Reference to Bernese Swiss German', in Zvi Penner (ed.), *Topics in Swiss German Syntax*. Bern: Peter Lang, pp. 73–290.
- Porter, Stanley E. and Pitts, Andrew 2013. 'The Disclosure Formula in the Epistolary Papyri and in the New Testament: Development, Form, Function, and Syntax', in Stanley E. Porter and Andrew Pitts (eds.), *The Language of the New Testament: Context, History, and Development*. Leiden – Boston: Brill, pp. 421–38.
- Quack, Joakim 2017. 'How the Coptic Script Came About', in Eitan Grossman, Peter Dils, Tonio Sebastian Richter, and Wolfgang Schenkel (eds.), *Greek Influence on Egyptian-Coptic: Contact-Induced Change in an Ancient African Language*. Hamburg: Widmaier, pp. 27–96.
- Richter, Tonio Sebastian 2009. 'Greek, Coptic and the 'language of the Hijra': The rise and decline of the Coptic language in late antique and medieval Egypt', in Hannah M. Cotton (ed.), *From Hellenism to Islam: Cultural and Linguistic Change in the Roman Near East*. Cambridge: Cambridge University Press, pp. 401–46. <https://doi.org/10.1017/CBO9780511641992.019>
- Richter, Tonio Sebastian 2014. 'Greek and Coptic in the Byzantine era', in James G. Keenan, J.G. Manning and Uri Yiftach-Firanko (eds.), *Law and legal practice in Egypt from Alexander to the Arab Conquest. A selection of papyrological sources in translation with introductions and commentary*. Cambridge: Cambridge University Press, pp. 134–44.
- Robertson, Archibald T. 1919. *Grammar of the Greek New Testament in light of historical research* (3rd ed.). London: Hodder & Stoughton.
- la Roi, Ezra 2022. 'Weaving Together the Diverse Threads of Category Change: Intersubjective Ἀμέλει "of Course" and Imperative Particles in Ancient Greek', *Diachronica*, 39(2): 159–92.

- Ruiz Yamuza, Emilia 2020. 'Insubordination in Ancient Greek? The Case of 'Ωστε Sentences', in M. Leiwo, M. Vierros, and S. Dahlgren (eds.), *Papers on Ancient Greek Linguistics: Proceedings of the Ninth International Colloquium on Ancient Greek Linguistics (ICAGL 9) 30 August – 1 September 2018, Helsinki*. Helsinki: Societas Scientiarum Fennica, pp. 383–402
- Rutherford, Ian 2010. 'Bilingualism in Roman Egypt? Exploring the archive of Phatres of Narmuthis', in Trevor V. Evans and Dirk D. Obbink (eds.), *The language of the papyri*. Oxford: Oxford University Press, pp. 198–207.
- Schulz, Petra 2003. *Factivity: Its nature and acquisition*. Tübingen: Max Niemeyer.
- Selinker, Larry 1972. 'Interlanguage', *International Review of Applied Linguistics*, 10: 209–31.
- Shisha-Halevy, Ariel 2007. *Topics in Coptic syntax: Structural studies in the Bohairic dialect*. Dudley, MA: Peeters.
- Stolk, Joanne and Nachtergaele, Delphine 2016. 'Dative for Accusative Case Interchange in Epistolary Formulas in Greek Papyrus Letters', *Symbolae Osloenses*, 90(1): 122–63.
- Till, Walter C. 1964. *Die koptischen Rechtsurkunden aus Theben*. Wien: HBöhlhaus Nachf, Kommissionsverlag der Österreichischen Akademie der Wissenschaften.
- Tomasello, Michael 2003. *Constructing a Language: A Usage-Based Theory of Language Acquisition*. Cambridge, Mass.: Harvard University Press.
- Torallas Tovar, Sofia 2010. 'Greek in Egypt', in E. Bakker (ed.), *A Companion to the Ancient Greek Language*. Oxford: Oxford University Press, pp. 253–66.
- van Minnen, Peter 2007. 'The other cities in Later Roman Egypt', in Roger Bagnall (ed.), *Egypt in the Byzantine world, 300–700*. Cambridge: Cambridge University Press, pp. 207–25.
- Verstraete, Jean-Christophe 2007. *Rethinking the Coordinate-Subordinate Dichotomy: Interpersonal Grammar and the Analysis of Adverbial Clauses in English*. Berlin – New York: Mouton de Gruyter.
- Vierros, Marja 2007. 'The language of Hermias, an Egyptian notary from Pathyris (c. 100 B.C.)', in Bernhard Palme (ed.), *Papyrologica Vindobonensia: Vol. 1. Akten des 23. Internationalen Papyrologenkongress, Wien, 22.-28. Juli 2001*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften, pp. 719–23.
- Vierros, Marja 2012. *Bilingual notaries in Hellenistic Egypt: A study of Greek as a second language*. Brussels: Comité Klassieke Studies, Subcomité Hellenisme, Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten.
- Villing, Alexandra 2015. 'Egyptian-Greek Exchange in the Late Period: The View Form Nokradj-Naukrati', in Damian Robinson and Franck Goddio (eds.),

- Thonis Heracleion in Context: The Maritime Economy of the Egyptian Late Period, Proceedings of the Conference in the University of Oxford, 15-17 March 2013.* Oxford: Oxford Centre for Maritime Archaeology, pp. 229–46.
- Weinert, Regina 2010. 'Formulaicity and usage-based language: Linguistic, psycholinguistic and acquisitional manifestations', in David Wood (ed.), *Perspectives on formulaic language: Acquisition and communication.* London: Continuum, pp. 1–20.
- Wood, David 2010. *Perspectives on formulaic language: Acquisition and communication.* London: Continuum.
- Wray, Alison 2009. 'Identifying formulaic language: Persistent challenges and new opportunities', in Roberta Corrigan, Edith A. Moravcsik, Hamid Oulali and Kathleen M. Wheatley (eds.), *Formulaic Language: Distribution and Historical Change* Vol. 1. Amsterdam: John Benjamins, pp. 27–52.
- Wright, Brian J., and Ricchuiti, Tim 2011. 'From "God" (ΘΕΟΣ) to "God" (ΝΟΥΤΕ): A New Discussion and Proposal Regarding John 1:1c and the Sahidic Coptic Version of the New Testament', *The Journal of Theological Studies*, 62(2): 494–512
- Zakrzewska, Ewa 2006. 'The Hero, the Villain and the Mob', *Lingua Aegyptia*, 14: 325–46.
- Zakrzewska, Ewa 2015. 'L★ as a Secret Language: Social Functions of Early Coptic', in Gawdat Gabra and Hany Takla (eds.), *Christianity and Monasticism in Middle Egypt.* Cairo: American University in Cairo Press, pp. 185–98.

Abbreviations

ACC	Accusative case (Greek)
ACT	Active voice (Greek)
AOR	Aorist tense (Greek)
C	Collocation (Complementation pattern)
DAT	Dative case (Greek)
DIRO	Direct Object
DOM	Direct Object Marking
F	Feminine gender
F	Formula (Complementation pattern)
GEN	Genitive case (Greek)
I	Idiom (Complementation pattern)
IND	Indicative mood (Greek)
INDO	Indirect Object
INF	Infinitive
LADL	Laboratoire d'Automatique Documentaire et Linguistique
M	Masculine gender
MID	Middle voice (Greek)
N	Neuter gender (Greek)
NP	Noun Phrase
PAS	Passive voice (Greek)
PERF	Perfect tense
PL	Plural number
PR	Present tense
PRT	Particle
SBJ	Subjunctive mood (Greek)
SG	Singular number
SUPERL	Superlative (Greek)
VP	Verb Phrase