

# Support-verb constructions in the corpora of Greek

Between lexicon and grammar?

Edited by

Victoria Beatrix Fendel

Phraseology and Multiword Expressions 7



## Phraseology and Multiword Expressions

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# Proemium: Taking initiative

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This is a *proemium* on rather than an introduction to structures, such as *to have an idea* and *to take into consideration*, which we label support-verb constructions. The *proemium* briefly introduces the reader to past definitions and current approaches (esp. the *Funktionsverbgefüge*, *constructions à verbe support*, and light-verb-construction approaches) and the range of corpora, each representing a different variety of Greek, discussed in this volume. Varieties range from the proto-language to the modern language and thus span a period of more than 3,000 years. The *proemium* provides an overview of the chapters of this volume organising them along the three interfaces that support-verb constructions sit at, the syntax-lexicon, the syntax-semantics, and the syntax-pragmatics interfaces. It closes with a note on practicalities including the bilingual abstracts the reader will observe. Within a heterogenous group (of constructions), we strive for *in varietate unitas*.

Это *proemium* или точнее введение в структуры типа «иметь идею» или «принимать во внимание», которые мы называем конструкциями с опорным глаголом. В *proemium* читателю кратко представлены определения из прошлых исследований и современные подходы (в особенности *Funktionsverbgefüge*, *constructions à verbe support* и подходы на основе легких глаголов) наряду с гаммой корпусов где каждый представляет собой разновидность греческого языка представленного в этой книге. Разновидности языка варьируют от протоязыка вплоть до современного языка, таким образом покрывая период более 3000 лет. *Proemium* предоставляет обзор глав этой книги, организуя их на основе трёх граней на которых расположены конструкции с опорным глаголом: грань синтаксиса и лексикона, синтаксиса и семантики, и синтаксиса и прагматики. В заключение приводится обсуждение практических аспектов, включая двуязычные аннотации замеченные ранее читателем. В гетерогенной группе (конструкций), мы стремимся к *in varietate unitas*.



## 1 Approach(es)

The Oxford English Dictionary defines *proemium* (or proem) as “[a]n introductory discourse at the beginning of a piece of writing; a preface, preamble”. Mel’čuk (2023: 1) begins his *General Phraseology* with the definition that “a preface is supposed to be no more than a polite greeting addressed to the reader and, therefore, to carry no, or very little, relevant information”. Thus, this is a *proemium* rather than an introduction.

It begins like Vergil’s *Aeneid* (1st c. BC) (*arma virumque cano* ‘the weapons and the man I sing about’) – performative and declarative. The following paragraphs briefly outline the motivation and background for this volume, the timeframes and datasets taken into consideration, and the questions and issues that permeate the chapters of the volume. Less craftily than Vergil, this *proemium* will need several paragraphs to provide a brief overview of the chapters of the volume.

This volume arose from the conference *Between lexicon and grammar? Support-verb constructions in the corpora of Greek* which took place at the Clarendon Institute, University of Oxford, United Kingdom on 5 to 6 September 2023. The conference was linked to the Leverhulme-funded project *Giving gifts and doing favours: Unlocking Greek support-verb constructions* (grant n. ECF-2020-181, 2020–2024, University of Oxford). The project focusses on one corpus, literary classical Attic (prose, oratory, and historiography) shown in Table 1:

Table 1: ECF Leverhulme Corpus

Historiography (203,186 words):	Thucydides, <i>Histories</i> vol. 1–5 (98,945); Xenophon, <i>Anabasis</i> vol. 1–4 (32,034), <i>Memorabilia</i> , vol. 1–4 (36,465), <i>Hellenica</i> vol. 1–4 (35,742);
Oratory (143,937 words):	Antiphon, <i>Speeches</i> 1–6 (18,605); Isocrates, <i>Speeches</i> 1–6 and 13 (37,311); Isaeus, <i>Speeches</i> 1–8 (25,018), Lysias, <i>Speeches</i> 1, 3, 7, 12, 14, 19, 22, 30, 31, 32 (24,130); Demosthenes, <i>Speeches</i> 1, 2, 3, 4, 6, 9, 18 (38,873);
Prose (145,497 words):	Plato, <i>Gorgias</i> (27,790), <i>Phaedrus</i> (17,271), <i>Republic</i> , vol. 1–3 (28,688); Aristotle, <i>Rhetoric</i> (44,312), <i>Politics</i> , vol. 1–3 (27,436)

The *ECF Leverhulme corpus*<sup>1</sup> (Fendel & Ireland 2023) is implemented into Sketch Engine, an online corpus analysis tool, and forms the basis for the new

<sup>1</sup><https://ora.ox.ac.uk/objects/uuid:7ab3b631-6c04-42fe-ad80-617b7eaa74f9> (last accessed 08 April 2024).

PARSEME Ancient Greek corpus. Annotation guidelines are available already (select the language label ‘GRC’ in the guidelines)<sup>2</sup>, as are the working-group documents.<sup>3</sup>

The project has approached this corpus primarily from a linguistic perspective with an interest in the morpho-syntax, semantics, and pragmatics of support-verb constructions. However, inevitably, there has been a lexical component. The syntax-lexicon interface, at which support-verb constructions are verbal multi-word expressions and complex predicates and can act as syntagms or words, is the starting point for this volume.

Twenty years after Gross & de Pontonx (2004) *Verbes supports: Nouvel état des lieux*, two recent edited volumes with a specific interest in corpus languages reflect the importance of the syntax-lexicon interface when examining support-verb constructions. Baños et al. (2022) *Collocations in theoretical and applied linguistics: from classical languages to Romance languages* focusses on the lexical characteristics of support-verb constructions and their diachronic development (see also *Diccionario de Colocaciones del Griego Antiguo*<sup>4</sup>); Pompei et al. (2023) *Light verb constructions as complex verbs: Features, typology, and function* focusses on the syntactic characteristics of support-verb constructions from a cross-linguistic perspective. The contributions below show amply that even considering the lexicon and syntax is a simplification of the fascinating diversity.

Indeed, the first stumbling stone is the exact delimitation of the group of support-verb constructions, in other words their definition.<sup>5</sup> Different approaches accept different degrees of internal heterogeneity of this group of constructions. There are three prominent approaches to structures such as δίκην δίδωμι *dikēn didōmi* in (1) (repeated in (5) below):

- (1) τὸ δίδοναι δίκην καὶ τὸ κολάζεσθαι  
*to didonai dikēn kai to kolazesthai*  
 the.ACC give.INF.ACT punishment.ACC and the.ACC punish.INF.PASS  
 δικαίως ἀδικοῦντα ἄρα τὸ αὐτὸ  
*dikaiōs adikounta ara to auto*  
 just.ADV wrong.PRS.PTCP.ACT.ACC PRT.Q the.ACC same.ACC

<sup>2</sup><https://parsemefr.lis-lab.fr/parseme-st-guidelines/1.3/index.php> (last accessed 02 April 2024).

<sup>3</sup><http://www.ancientgreekmwe.com> (last accessed 02 April 2024).

<sup>4</sup><https://dicogra.iatext.ulpgc.es/dicogra/> (last accessed 06 April 2024).

<sup>5</sup>Each chapter provides the author’s definition of the support-verb constructions for this reason.

καλεῖς;

*kaleis?*

call.PRS.ACT.2SG

‘Are you saying that ‘paying the price for one’s actions’ and ‘justly getting punished’ when one does wrong are the same?’

(Plato, *Gorgias* 476a (CG))

The first approach is the German research strain of *Funktionsverbgefüge* ‘function-verb constructions’ (with its sub-category of *Nominalisierungsverbgefüge* ‘nominalisation-verb constructions’) (von Polenz 1987, Kamber 2008, Storrer 2009, De Knop & Hermann 2020, applied to early Greek by Schutzeichel 2014, and to classical Greek by Tronci 2016, Tronci 2017). The focus lies on verb + prepositional phrase constructions, such as *in Betracht ziehen* ‘to take into consideration’ rather than verb + object constructions, such as *Aufmerksamkeit schenken* ‘to pay attention’. Furthermore, the focus is on the verb (and preposition) in the construction rather than the noun, as Kamber’s concept of *Umrahmte Schnittmengen* shows (Kamber 2008: 23). The latter is an attempt at creating sub-categories within a heterogenous group of constructions.

The second approach is the English research strain of light-verb constructions. The term was coined by Jespersen (1954) and remains in use in much of English research literature (Butt 1995, 2010, Butt & Lahiri 2013).<sup>6</sup> The term light verb has been repurposed extensively in language-contact studies (Bakker 2003: 132, Myers-Scotton 2002: 134–139, Reintges 2001, Ronan 2012: 148, Rutherford 2010: 203, applied to early Byzantine non-literary Greek by Fendel 2022) in order to refer to structures such as (2) and (3):

(2) *w3h n3he p3 tmj ir* δῶκιν *n.im=j* (Demotic)

PRF people this village do prosecute.PRS.INF DOM=1SG

‘the people of the village prosecuted me’

(Narmouthis ostrakon n. 103 Rutherford 2010: 203)

(3) Cypriot Greek

a. *κάνω/κάμνω ψώνια* *káno/kámno psonia* ‘to do shopping’

b. *κάνω/κάμνω γυμναστική* *káno/kámno gimnastiki* ‘to do gymnastics’

c. *κάνω/κάμνω τζόκινγκ* *káno/kámno jogging* ‘to do/go jogging’

d. *κάνω/κάμνω ζάπινγκ* *káno/kámno zapping* ‘to do zapping/to zap’

(Fotiou (2010: 73))

<sup>6</sup>Light verbs combine with a nominal component to form the predicate of a sentence. They do not add voice, aspect, or polarity to the predicate phrase.

In language-contact settings, the light verb used most commonly is the verb ‘to do’, as in (2) and (3). A light verb, i.e. a verb that does not contribute aspects of meaning, is used to integrate a loan item into the morpho-syntactic frame of the target language. Fotiou (2010: 73) observes the parallel existence of “native compounds with *káno/kámno* [‘to do’], such as *káno/kámno psonia* (do shopping)” alongside “borrowings in the form of bilingual compound verbs, such as *káno jogging* (do jogging)”. The same is true for the situation in Demotic, shown in (2) (Funk 2017, Grossman & Richter 2017, Egedi 2017), and continued into later Coptic Egyptian.

The term light verb has also been adopted in the natural language processing context, e.g. by the PARSEME initiative. Their decision tree for LVCs (light-verb constructions) is reproduced in Figure 1<sup>7</sup>:

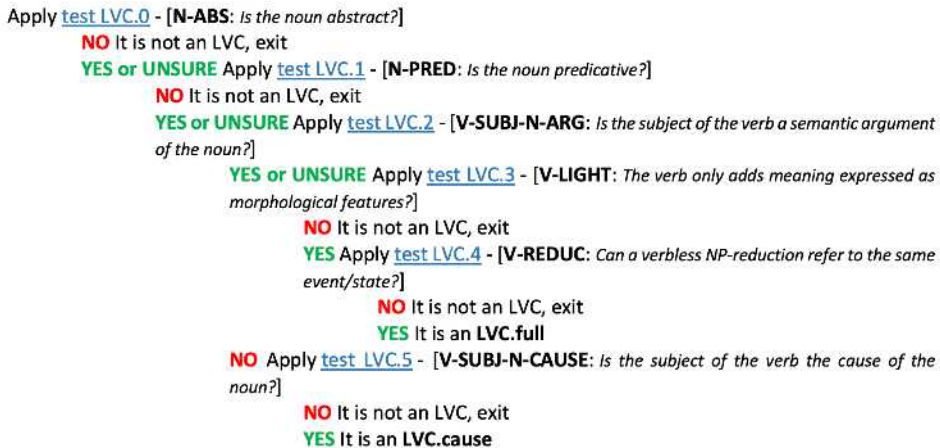


Figure 1: PARSEME LVC-specific decision tree

Any structures in which the verb adds properties, such as aspect (e.g. inchoative), voice (e.g. passive), polarity (e.g. contrastive negation), and the like to the predicate phrase are excluded. The testing starts from the noun, i.e. the semantic head, rather than the verb.

The third approach is the French research strain of *constructions à verbe support* (support-verb constructions) that originated in the work of the *Laboratoire d'Automatique Documentaire et Linguistique* (esp. Gross 1998, applied to classical literary Greek by Jiménez López 2016). The verb plays a supporting role rather

<sup>7</sup>[https://parsemefr.lis-lab.fr/parseme-st-guidelines/1.3/index.php?page=050\\_Cross-lingual\\_tests/020\\_Light-verb\\_constructions\\_\\_LB\\_LVC\\_RB\\_](https://parsemefr.lis-lab.fr/parseme-st-guidelines/1.3/index.php?page=050_Cross-lingual_tests/020_Light-verb_constructions__LB_LVC_RB_) (last accessed 27 April 2024).

than being light. It can be used to add properties such as aspect, voice (*constructions converses*), and polarity, see (4 a–c) (Giry-Schneider 1978, Vivès 1983, Gross 1989), as well as for register-/genre-/style-related nuancing (Biber & Conrad 2009, Mel’čuk 2004), see (4d):

- (4) Aspect, diathesis, polarity, and context (Gross 1998)
- a. *garder, prendre, perdre* (e.g. *de l’importance*) ‘to keep, to take, to lose’ (durative, inchoative, terminative)
  - b. *donner* (e.g. *une gifle*) ‘to give’ (causative)
  - c. *répéter la phrase* ‘repeat the sentence’ (repetition); *montre du courage* ‘show courage’ (exteriorisation); *abandonner, manquer* (e.g. *l’énergie*) ‘to abandon, to lack’ (negation)
  - d. *passer* vs. *signer une contrat* ‘to approve vs. sign a contract’

Support verbs contrast with *verbes distributionnels* (such as *manger* ‘to eat’) which fill the predicate slot in the syntactic structure on their own, as opposed to support verbs which need to combine with a predicative noun to fill the predicate slot. The group of support verbs contains a sub-class, the *verbes supports appropriés* (Gross 2012), such as Latin *committere* ‘to commit’ with nouns referring to crimes (Roesch 2018).

While the volume adopts the term support-verb construction from the French tradition in its title, the contributors work with varying frameworks casting the net more or less wide. Depending on framework, a structure such as *δικην δίδωμι dikēn didōmi* in (5) (repeated from above) would thus qualify as a lexical passive, a verbal idiomatic expression, or be excluded from the range of structures assessed entirely.

- (5) τὸ δίδοναι δίκην καὶ τὸ κολάζεσθαι  
*to didonai dikēn kai to kolazest<sup>h</sup>ai*  
 the.ACC give.INF.ACT punishment.ACC and the.ACC punish.INF.PASS  
 δικαίως ἀδικοῦντα ἄρα τὸ αὐτὸ  
*dikaiōs adikounta ara to auto*  
 just.ADV wrong.PRS.PTCP.ACT.ACC PRT.Q the.ACC same.ACC  
 καλεῖς;  
*kaleis?*  
 call.PRS.ACT.2SG

‘Are you saying that ‘paying the price for one’s actions’ and ‘justly getting punished’ when one does wrong are the same?’

(Plato, *Gorgias* 476a (CG))

If accepted as a support-verb construction, we would consider the nominal element (δίκην *dikēn*) the predicative noun, the verbal element (δίδωμι *didōmi*) the light/support/function verb, and the simplex verb which is functionally although not formally related (κολάζεσθαι *kolazest<sup>h</sup>ai*) the base-verb construction. While some approaches and contributors consider the existence of a formally or functionally related base-verb construction a criterion to define support-verb constructions, others will dismiss this criterion on the basis that language is not redundant.

Faced with the diversity of approaches and the magnitude of disagreements arising from them when working with as internally diverse a group of constructions as support-verb constructions, we still strive for *in varietate unitas*.

## 2 Corpora

All the contributions in the volume take a corpus-based approach in order to lend empirical support to the observations made. Except for Giouli's study of modern Greek, the contributions of the volume examine varieties of Greek that are only attested today in written form. The native speakers of these languages are the texts (Fleischman 2000: 43). It is these native speakers that we question and interview. Like any native speakers, our texts represent idiosyncrasies (idiolects) along with geographically (dialect), societally (sociolect), or diachronically conditioned differences.

The corpora considered in the present volume span over 2,000 years. For the core time periods, we adopt the following timeframes: Archaic Greek (AG) pre 5th c. BC; Classical Greek (CG) 5th/4th c. BC; Ptolemaic Greek (PG) 3rd–1st c. BC; Roman Greek (RG) 1st–3rd c. AD; Early Byzantine Greek (EBG) 4th–7th c. AD, Medieval Greek (MG) post 7th c. AD. If items are e.g. 4th–3rd c. BC, they are counted in PG; if items are e.g. 3rd–4th c. AD, they are counted in EBG. Both Giouli's modern Greek corpus and Ittzés' work on proto-Greek fall outside of these timeframes and constitute the edges of the volume's coverage.

In the first footnote of each chapter, the reader will find the link to the dataset that the chapter is based, on except in two cases. Ittzés' article on the proto-language does not have a dataset as it is based on internal and comparative reconstruction of a variety of the language that is unattested in written sources. Miyagawa examines Greek's long-term contact language Coptic.<sup>8</sup> For ease of

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<sup>8</sup>Coptic is the final stage of the Egyptian language when written with the Coptic alphabet (from ca. AD 100 onwards) (Quack 2017). This alphabet is an adaptation of the Greek alphabet (Fendel 2021).

access and overview, all the datasets (corpora) that are examined by the contributions to the volume are listed below in chronological order:

1. Squeri – Hippocratic Corpus (5th/4th c. BC) <http://dx.doi.org/10.5287/ora-n652gamyj>;
2. Pompei, Pompeo, and Ricci – texts of the *Thesaurus Linguae Graecae* excluding texts classified as *Fragmenta* (5th c. BC – 2nd c. AD) <https://stephanus.tlg.uci.edu>;
3. Veteikis – Aristotle’s Rhetoric (4th c. BC) <http://dx.doi.org/10.5287/ora-n652gamyj>;
4. Baños and Jiménez López – the biblical corpora (the Septuagint, the Greek New Testament, the Vetus Latina, and Jerome’s Vulgate) (3rd c. BC to 4th c. AD) <https://doi.org/10.21950/E98VTJ>;
5. Ryan – the New Testament (1st/2nd c. AD) <http://dx.doi.org/10.5287/ora-dqje065n5>;
6. Madrigal Acero – selection of classical literary Attic and Ionic prose and verse (Aeschylus, Sophocles, Euripides, Aristophanes, Xenophon, Thucydides, Herodotus, Lysias, Demosthenes, Andocides, Plato, Aristotle) (5th/4th c. BC) and a selection of archaic, classical, and early imperial Latin prose and verse (Cicero, Caesar, Catullus, Martial, Livy, Plautus, Sallust, Tacitus, Terence) (2nd c. BC – 1st c. AD) <http://dx.doi.org/10.5287/ora-n652gamyj>;
7. Vives Cuesta – selection of hagiographic texts: (a) New Testament (1st c. AD) (*Evangelium secundum Matthaeum*, *Evangelium secundum Lucam*, *Epistula Pauli ad Corinthios i–ii*, *Epistula Pauli ad Hebraeos*), (b) proto- and mezzo-byzantine hagiography (5th–9th c. AD) (*Vita antiquior Sancti Danielis Stylitae* (BHG 489), *Vita et martyrimum sancti Anastasii Persae* (BHG 84), *Martyrium antiquior sanctae Euphemiae* (BHG 619), *Vita Stephani Iunioris* (BHG 1666), *Vita Symeonis Stylitae senioris* (BHG 1683)), (c) metaphrastic hagiography (10th c. AD) (*Passio sancti Anastasii Persae* (BHG 85), *Passio sanctae Euphemiae* (BHG 620), *Vita tertia Sancti Danielis Stylitae* (BHG 490), *Vita Stephani Iunioris* (BHG 1667), *Vita sancti Symeonis Stylitae* (BHG 1686)), (d) Comnene and late Byzantine hagiography (12th–14th c. AD) (*Vita sancti Zotici* (BHG 2480), *Vita Leontii Patriarchae Hierosolymorum* (BHG 985), *Vita sancti*

*Bartolomaei conditoris monasterii sancti Salvatoris Messanae* (BHG 235),  
*Miracula sancti apostoli Marci* (BHG 1036m), *Vita sancti Lazari* (BHG 980)  
<http://dx.doi.org/10.5287/ora-n652gamyj>;

8. Giouli – selection of news pieces, blogs, and Wikipedia articles from the web (manually collated) along with parliamentary debates and Wikinews articles (via the Greek Dependency Treebank [https://universaldependencies.org/treebanks/el\\_gdt/index.html](https://universaldependencies.org/treebanks/el_gdt/index.html)) (1453-present) <http://hdl.handle.net/11372/LRT-5124>;
9. Miyagawa – Coptic Gospel of Thomas from the Nag Hammadi Codex II (4th/ 5th c. AD) (images) [http://gospel-thomas.net/x\\_facets.htm](http://gospel-thomas.net/x_facets.htm) and Coptic Letter to Aphthonia written by Besa (6th to 8th c. AD) [https://data.copticscriptorium.org/texts/besa\\_letters/to-aphthonia/](https://data.copticscriptorium.org/texts/besa_letters/to-aphthonia/).

The datasets are all available in open-access format and we hope that they will constitute the basis for many future studies building on the present authors' work.

### 3 Interface(s)

The contributions of this volume are diverse not only with regard to the definitions they apply and the native speakers they interview (the corpora they use) but also with regard to the perspectives they adopt on support-verb constructions.

The multiple perspectives adopted are primarily caused by support-verb constructions sitting at three interfaces.

- The syntax-lexicon interface has found its way into the title of this volume, and Plato's comment in (5) quoted above illustrates the issue. Do we consider support-verb constructions lexemes to be listed in a dictionary (like the corresponding base verbs if available) or syntagms obeying the laws of the morpho-syntax?
- The syntax-semantics interface is illustrated e.g. by Gross' *constructions converses*, which are lexical passives that if we believe Plato (*Gorgias* 476d) include δίκην δίδωμι *dikēn didōmi* in (5).
- The syntax-pragmatics interface has been touched upon with Gross' register-/genre-/style-related options but is also visible in the patterns of

negation with support-verb constructions in literary classical Attic, where considerations of intensity and contrast seem to determine the syntactic pattern used (Fendel 2023).

The volume is structured along these interfaces. The first section focusses on the outer edges of the corpora covered, whereas sections two to four each focus on one of the interfaces.

The **first section** of the volume (Between too little and too much: the origins of data) contains the two contributions that form as regards empirical data the outer edges of the period this volume covers, Ittzés' examination of the proto-language and Giouli's account of the modern language.

**Chapter 1** by Ittzés examines traces in amongst others Greek that would suggest that support-verb constructions existed in Proto-Indo-European. Proto-Indo-European is the reconstructed proto-language from which the daughter languages branched off over time (for an accessible introduction, see e.g. Sihler 2008). The Hellenic branch which Greek belongs to is only one of the branches that have been reconstructed. For example, Latin would be part of the Italic branch. Reconstruction of the proto-language is achieved either by comparative methods, i.e. comparing material from different branches in order to determine the moment when they went their separate ways (e.g. the Hellenic and Italic branches), or by internal reconstruction, i.e. comparing material from different stages of the language in one branch in order to determine the moment when subbranches split off (e.g. Mycenaean, the archaic and classical Greek dialects, etc. in the Hellenic branch). Given the reliance on reconstruction for the proto-language, Ittzés emphasises the need to rely on empirical provability (i.e. with data from the daughter languages) rather than theoretical possibility (based on reconstructed processes of development). In particular, he emphasises the need to rely on comparative data rather than overstate internal reconstruction, especially in the case of support-verb constructions which are susceptible to variation synchronically and diachronically. Ittzés critically examines as traces of support-verb constructions in the proto-language especially the so-called root extensions (*Wurzelerweiterungen*) which would have become such due to univerbation and subsequent reanalysis. He applies a narrow definition of support-verb constructions, in that the verb does not add lexical semantics to the support-verb construction but only supplies verbal morphology. Thus, the verb is truly light and a function word. His specific interest lies with  $*d^heh_1$  'to put' which underlies e.g. Greek τίθημι  $títhēmi$  'to put' and Latin *facio* 'to do'. While from a typological perspective, Ittzés argues that support-verb constructions existed in the proto-languages, he cautions that empirical evidence of specific

exponents of the group of constructions are virtually absent because of the impossibility of corpus-based investigations.

**Chapter 2 by Giouli** approaches support-verb construction from the perspective of natural language processing. Her corpus consists of modern Greek internet data including news pieces, blog posts, and Wikipedia articles but also parliamentary debates, thus covering a range of genres and registers. Her work is embedded in the context of the PARSEME initiative, which casts the net around support-verb constructions (light-verb constructions in their terminology) narrow and wide at the same time. Semantically, PARSEME only allows for constructions in which the verb does not contribute lexical semantics; syntactically, PARSEME allows for the predicative noun to appear in the subject, object, and prepositional complement slots. The initiative, whilst relying on “universally” applicable guidelines to determine what to annotate as support-verb constructions (light-verb constructions), acknowledges that these “universal” categories have language-specific realisations, of which Giouli introduces several for modern Greek. Unlike other contributions in this volume, in line with the natural language processing approaches, she applies a deterministic procedure, such that fuzzy lines, even if they exist during the annotation and evaluation stages, disappear in the result stage, i.e. every structure gets assigned a specific category (with *light-verb construction (LVC)* being one of them). Giouli’s corpus, unlike the other corpora presented in this volume, is still continuously growing in the context of the PARSEME initiative.

The **second section** of the volume (Between comparative concept and descriptive category: the syntax-semantics interface) taps into the difficulty that support-verb constructions have repeatedly been considered a comparative concept (Savary et al. 2018: 96 Hoffmann 2023: 29–31), i.e. “a concept created by comparative linguists for the specific purpose of crosslinguistic comparisons” (Haspelmath 2010: 665). However, the instantiation of a comparative concept is language-specific, what Haspelmath (2010: 664) terms descriptive categories. Madrigal Acero explores language specificity by means of a comparison of structures with the support verb ‘to use’ in classical Greek and Latin, whereas Jiménez López and Baños focus on the translation process of the post-classical New Testament. Both contributions square language-specific syntactic structures with across-language semantics.

**Chapter 3 by Madrigal Acero** applies a comparative approach to the role that verbs meaning ‘to use’ (Greek *χράομαι* *k<sup>h</sup>raomai* and Latin *utor*) play in support-verb constructions. The verb meaning ‘to use’ in Greek (*χράομαι* *k<sup>h</sup>raomai*) can be pragmatically motivated when alternating with a neutral option with *ἔχω* *ek<sup>h</sup>ō* ‘to have’ or *ποιέομαι* *poieomai* ‘to do’; alternatively, it can be a diathetically

motivated option when alternating with *δίδωμι* *didōmi* ‘to give’ or *τίθημι* *tithēmi* ‘to put’. The same applies to Latin *utor* ‘to use’ which can be pragmatically motivated when alternating with *facere* ‘to do’ or *habere* ‘to have’ but can also be diathetically motivated when alternating with *dare* ‘to give’, *facere* ‘to make’, and *ferre* ‘to bring’. Her approach in this way aligns with the framework of prototype semantics and support-verb-construction families surrounding predicative nouns (e.g. *to provide help*, *to get help*, *to have help*) (Kamber 2008). Madrigal Acero’s corpus selection contains both Greek and Latin texts written in verse rather than prose. This allows her to disprove the often-assigned label of “prose phrases” for support-verb constructions.

**Chapter 4 by Baños and Jiménez López** examines the Greek and Latin biblical corpora (the Greek New Testament, the Septuagint, the *Vetus Latina*, and Jerome’s Vulgate) (3rd c. BC to 4th c. AD) from a comparative perspective. They cast the net wide by including into the group of support-verb constructions (i) structures with the predicative noun in the subject slot, the direct-object slot, and the complement slot of a preposition, (ii) structures in which the support verb adds information about aspect, diathesis, and intensity, and (iii) structures in which the predicative noun takes the form of a syntactic nominalisation (e.g. Latin *necessarium*). They show how the four gospels differ due to the writers’ idiosyncrasies (including due to their bilinguality) (cf. Hamers & Blanc 2000), different translation practices (from Greek into Latin), and differences in natural language usage regarding support-verb constructions as opposed to simplex verbs in Latin and Greek. The chapter illustrates the language-specificity of support-verb constructions, e.g. with *συμβούλιον διδόναι* *sumboulion didonai* ‘to deliberate’ as opposed to *consilium dare* ‘to counsel’. While their primary focus is synchronic, succinct diachronic observations open up further avenues, e.g. regarding support-verb constructions with *συμβούλιον* *sumboulion* ‘advice’.

The **third section** of the volume (Between context and co-text: the syntax-pragmatics interface) turns to the syntax-pragmatics interface. Support-verb constructions are embedded in their structural (and semantic) co-text (Crystal 2008: 119) but like any other item can also be pointing to the contextual setting in which the utterance containing the support-verb construction is embedded (cf. Bentein 2019). Squeri investigates edge cases of support-verb constructions in the classical Hippocratic corpus of medical writings; Veteikis casts the net wide in the classical Aristotelian corpus on rhetoric; and Vives Cuesta argues for a morpho-syntactic distinction becoming a pragmatically motivated one in hagiographical writings.

**Chapter 5 by Squeri** examines the classical Hippocratic corpus (5th/4th c. BC) of medical treatises. This technical register allows her to consider to what ex-

tent structures with χράομαι *k<sup>h</sup>raomai* ‘to use’ (+ dative case) are support-verb constructions that index a technical context. Squeri focusses on four predicative nouns κατόπλασμα *kataplasma* ‘plaster’, κλυσμός *klusmos* ‘douche’, κλύσμα *klusma* ‘enema’, and πρόσθετον *prost<sup>h</sup>eton* ‘vaginal suppository’. These are non-prototypical predicative nouns in that (i) functionally, they acquire an eventive meaning when used as predicative nouns in a support-verb construction, and (ii) formally, they are not deverbal event nouns (e.g. in -σι- -σι-). Squeri’s chapter explores to what extent such non-prototypical predicative nouns appear specifically in the technical writings of the Hippocratic corpus and to what extent there is a relationship between support-verb constructions and cognate-object structures.

**Chapter 6 by Veteikis** examines the first two books of Aristotle’s *Rhetoric* (4th c. BC). His interest lies with the stylistic value of support-verb constructions while acknowledging that in Aristotle’s *Rhetoric* a technical register and the author’s idiolect play into the surface representation of the support-verb constructions observed. His approach is focussed on (i) support-verb-construction families, i.e. what support verbs appear with each predicative noun of interest and how support verbs modulate the event structure, and (ii) the relationship between support-verb constructions and base-verb constructions (i.e. simplex verbs that are formally or functionally related to the predicative noun of the support-verb construction), specifically with regard to the creation of discourse cohesion. Veteikis draws on the rhetorical definition of periphrasis heralded by the grammarian Quintilian (1st c. AD) and the rhetorician Numenius (2nd c. AD) and seeks to embed support-verb constructions into the catch area of this notion. He thus includes non-prototypical support verbs in his dataset, e.g. compound verbs and the verbs of saying and speaking.

**Chapter 7 by Vives Cuesta** examines a large corpus of Byzantine hagiography spanning about 1000 years (5th to 14th c. AD). His interest lies with the support verb *par excellence* ποιέω/ποιέομαι *poieō/poieomai*. He finds that with an event noun referring to motion and/or movement (e.g. πορείαν/ἐκβασιν ποιέω *poreian/ekbasin poieō* ‘to talk / escape’), the formally morpho-syntactic contrast between the active and middle voices of the verb was gradually replaced by a pragmatic contrast (similarly to what Bentein 2017 finds for verbal complementation patterns). Form-identical with the support verb is ποιέω *poieō* as a verb of realisation, i.e. “indicat[ing] that the purpose for which the action exists has been achieved” (Vives Cuesta [this volume]), in θέλημα/λόγον/κέλευσιν ποιέω *t<sup>h</sup>elēma/logon/keleusin poieō* ‘to do/complete (somebody’s) will/word/command’. These structures noticeably differ from support-verb constructions as the agent encoded by the support verb and that implied by the predicative noun are not co-referential.

Finally, Vives Cuesta, in line with Gross' approach, considers ἄπτομαι *haptomai* 'to touch upon' and ἐμπίπτω *emiptō* 'to fall into' aspectual and diathetic variants respectively of ποιέω/ποιέομαι *poieō/poieomai* with the same predicative noun. These are related to commonly drawn upon conceptual metaphors. In the context of the Byzantine hagiographic works, the diachronic development of support-verb constructions must be set against the *metaphrasis* tradition, which is akin to but different from, as Vives Cuesta emphasises, intralingual translation. Variation can index levels of speech.

The **fourth and final section** of the volume (Between analytic and synthetic: the syntax-lexicon interface) focusses on the support verb *par excellence* 'to do'. The debate on 'to do' is already far ranging. Proposals range from in favour to vehemently against grammaticalisation (Anderson 2006, Slade 2013, Ittézés 2022, Croft 2022) and from 'to do' becoming a derivational suffix to it retaining its lexical status (Butt 2010, Butt & Lahiri 2013).<sup>9</sup> If we reject a lexical-grammatical continuum (Boye 2023), support-verb constructions are either lexemic or syntactic phrasemes (Mel'čuk 2023). Yet how do the fully developed systems of compounding (Tribulato 2015), noun incorporation (Asraf 2021, Pompei 2006), and enclisis (Soltic & Janse 2012) fit in? This is where the contributions of this volume pick up.

**Chapter 8 by Ryan** examines the exegetical implications of using the synthetic simplex verb ἁμαρτάνω *hamartanō* 'to sin' as opposed to the analytic support-verb construction ἁμαρτίαν ποιέω *hamartian poieō* 'to commit (a) sin' in the New Testament corpus. In passing, derivatives such as the result nouns in -μα *-ma*, event nouns in -σι- *-si-*, and agent nouns in -της *-tēs* built from the stem ἁμαρτ- *hamart-* and the significance of their presence/absence in the New Testament corpus are considered. Ryan argues that the locus of agentivity shifts in the support-verb construction from the sinner (i.e. the subject of the simplex verb) to the sin (i.e. the semantic head of the support-verb construction). Sin may subsequently even be interpreted as separate or at least more distant from the sinner than when the process is expressed by means of a synthetic simplex verb. Crucially, the support-verb and base-verb constructions are neither semantically identical for Ryan as outlined nor pragmatically, in that the choice of the support-verb construction over the simplex verb is interpreted along the lines of a technical term motivated by the ethical framework into which the discourse is embedded. For Ryan, the support-verb construction is analytic.

**Chapter 9 by Pompei, Pompeo, and Ricci** examines the difference between analytic and synthetic combinations with ποιέω/ποιέομαι *poieō/poieomai* 'to

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<sup>9</sup>Note that do-support as in English is a key driving force for the debate (see Ellegård 1953 on English, recently Swinburne 2024 on the Camuno dialect of Italian).

do'. Crucially, their interest lies with pairs such as πολεμοποιέω *polemopoieō* vs. πόλεμον ποιέω *polemon poieō* rather than pairs like *to make a decision* vs. *to decide* in English (as Veteikis [Chapter 6] does). The authors consider what the reasons are behind the selection of an analytic as opposed to a synthetic construction and find that in addition to semantic differences, reasons of textual coherence and cohesion play a role (e.g. reference tracking). Furthermore, they distinguish between constructions that are built from event nouns (e.g. πόλεμος *polemos* 'war, battle'), nouns that have an eventive meaning in their lexical structure (e.g. ἄριστον *ariston* '(morning) meal, breakfast, lunch'), and those nouns that are non-eventive (e.g. σῖτος *sitos* 'grain, food, allowance of grain'). Only the analytic constructions that contain a noun with an eventive meaning qualify as support-verb constructions, whereas those with a non-eventive noun and the verb meaning 'to achieve, create' do not qualify as support-verb constructions (compare by contrast Vives Cuesta [Chapter 7] and Baños and Jiménez López [Chapter 4]). Synthetic instances of noun incorporation (i.e. combinations with a non-eventive noun) appear with a disproportionate frequency in Plato's writings, such that they may constitute an idiosyncrasy for personal, genre-, or register-related reasons.

**Chapter 10** by Miyagawa examines Greek's long-term contact language Coptic with a specific focus on texts dating from the 4th to 8th centuries. Greek and Coptic had existed for more than a millennium already by the fourth century AD and language-contact phenomena appear in the form of Coptic interference in Greek (Fendel 2022) but also in the form of Greek interference in Coptic (Grossman 2019). One area that has received considerable debate is support-verb constructions when used to integrate Greek loan verbs into the predicate slot of the sentence (Reintges 2001, Egedi 2017, Funk 2017, Grossman & Richter 2017, Grossman 2019, 2023). The crucial question relates to the status of the support verb, often the verb εἶπε *eire* 'to do', in such constructions – is it a derivational affix, an inflexional clitic, a (semi-)lexical verb, or something entirely different? Miyagawa discusses in detail the so-called prenominal state of the verb in the context of clitics, word segmentation, and (pseudo-)noun incorporation. The support verb appears in this prenominal state, i.e. unstressed and often with a reduced vowel, when combined with a predicative noun, thus raising questions of cliticization or affixation (see also Grossman 2023). However, this construction is not limited to support-verb constructions, but often considered in the context of (pseudo-)noun incorporation of objects in Coptic. Miyagawa embeds the assessment of the status of the support verb (in the prenominal state) into a discussion of the degree of analyticity of the Coptic language from a typological perspective. The chapter thus offers a typological embedding for noun incorporation in

Greek (see Chapter 9) and a critical assessment of the status of the support verb as lexical, grammatical, or both.

## 4 Practicalities

The reader will observe that all the chapters of this volume are prefixed with an abstract in English and one in a pragmatically preferred/dominant language as defined by the author of each chapter (Matras 2009: 23). In the past, research traditions on support-verb constructions have developed in language-specific settings and have been entrenched in the research landscape subsequently (see Section 1). We want to break with this and thus attempt to overcome language boundaries in a small way by providing multilingual abstracts.<sup>10</sup> This *proemium* began with an abstract in Russian, a morphology-rich language which formed the basis for Mel'čuk's recent lexicographic treatment of support-verb constructions (Mel'čuk 2023). The *epilogue* of this volume features an abstract in German, another morphology-rich language which forms the basis for the large *Funktionsverbgefüge* 'function-verb-construction' research tradition.

The reader will furthermore observe that transcription conventions in the present volume are corpus-specific. As no two chapters work on the same corpus, transcription conventions differ between chapters but are selected in order to be corpus appropriate, e.g. we do not want to transcribe modern Greek as if it were classical Attic. Throughout, the *Leipzig Glossing Rules* are observed. Relevant abbreviations used are listed at the end of this *Proemium*. The chapters only list chapter-specific abbreviations for simplicity.

Synthesising the chapters of this volume and ensuring that they are comprehensible to a very interdisciplinary audience often felt like squaring a circle. We have attempted throughout to provide definitions of terms that are (sub-)discipline-specific, such as laryngeals and Occam's razor (Chapter 1 by Ittzés) to comparative philology, the F-score and Cohen's kappa (Chapter 2 by Giouli) to natural language processing, metaphrasis and diglossia (Chapter 7 by Vives Cuesta) to Byzantine studies, and the prenominal state of the verb (Chapter 10 by Miyagawa) to Coptology.

Furthermore, there are terms that adopt different meanings in different (sub-)disciplines and we have endeavoured to define the relevant meaning when these terms are used. A prominent example is "periphrasis" (see e.g. Ledgeway

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<sup>10</sup>Chapter 1 German, Chapter 2 Modern Greek, Chapter 3 Spanish, Chapter 4 Spanish, Chapter 5 Italian, Chapter 6 Lithuanian, Chapter 7 Spanish, Chapter 8 Spanish, Chapter 9 Italian, and Chapter 10 Japanese.

& Vincent 2022, Haspelmath 2000, Aerts 1965) (esp. Chapter 6 by Veteikis) and “verb of realisation” (Mel’čuk 2004, 2023) (esp. Chapter 4 by Baños and Jiménez López and Chapter 7 by Vives Cuesta). The reader is made aware of this situation here in order to avoid confusion.

Finally, the reader will observe that several chapters reflect an interest in the role of support-verb constructions in language-contact settings (e.g. Giouli’s code-mixing examples, Vives Cuesta’s intralingual translation, Baños and Jiménez López’ calques, and Madrigal Acero’s loans). This is an area that would deserve considerably more in-depth work but given the focus on the corpora of Greek in this volume, we only note this aspect in passing.

## 5 Thanks-giving

The project from which this volume arose (*Giving gifts and doing favours: Unlocking Greek support-verb constructions*, University of Oxford, 2020--2024) has been kindly funded by the *Leverhulme Trust*. In this context, the editor would like to acknowledge not only the overall funding but also the funding received for a fantastic Research Assistant, Wyn Shaw, who majorly aided the authors’ (and editor’s) typesetting of the volume.

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As “a preface is supposed to be no more than a polite greeting addressed to the reader and, therefore, to carry no, or very little, relevant information” (Mel’čuk 2023: 1), this is the point where this *proemium* should hand over to the contributors calling for inspiration and insight about debate and controversy, as Homer’s

*proemium* to his *Iliad* (pre 7th c. BC, AG) μήνιν ἄειδε θεὰ *mēnin aeide<sup>h</sup>ea* ‘of the anger, sing, goddess’.

## Abbreviations

Leipzig Glossing Rules: <https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>  
(only abbreviations used in this volume are listed and volume-specific abbreviations are marked with \*.)

1	first person	INDF	indefinite
2	second person	INF	infinitive mood
3	third person	M	masculine
ABL	ablative case	*MID	middle voice
ACC	accusative case	N	neuter
ADJ	adjective	NEG	negation/negative
ADV	adverb(ial)	NOM	nominative case
*AOR	aorist tense	OBJ	object
ART	article	*OPT	optative mood
AUX	auxiliary	PASS	passive voice
CAUS	causative	PL	plural
COMP	complementizer	*PLP	pluperfect tense
COP	copula	POSS	possessive
DAT	dative case	PRF	perfect tense
DEF	definite	PRS	present tense
DEM	demonstrative	*PRT	particle (e.g. μέν <i>men</i> )
*DOM	differential object marker	PTCP	participle mood
F	feminine	Q	question
FUT	future	REFL	reflexive
GEN	genitive	REL	relative
IMP	imperative	SBJ	subject
*IMPERS	impersonal construction	SBJV	subjunctive mood
*IMPF	imperfect tense	SG	singular
IND	indicative mood	VOC	vocative case

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## **Part I**

# **Between too little and too much: The origins of data**



# Chapter 1

## Proto-Indo-European support verbs and support-verb constructions

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This chapter argues that even if typological considerations make it very likely that the category of support-verb constructions did in fact exist in Proto-Indo-European and the support-verb use of roots such as *\*d<sup>h</sup>eh<sub>1</sub>* ‘to put’ or *\*deh<sub>3</sub>* ‘to give’ may be assumed for the parent language with a sufficient degree of certainty, the reconstruction of specific support-verb constructions will probably never be entirely successful. Apart from the almost complete lack of comparable constructions built of cognate elements in the individual daughter languages it also runs counter to various theoretical and methodological principles of comparative historical linguistics.

In diesem Beitrag soll argumentiert werden, dass, auch wenn typologische Überlegungen es sehr wahrscheinlich machen, dass die Kategorie der Funktionsverbgefüge im Urindogermanischen tatsächlich existierte, und die Funktionsverbverwendung von Wurzeln wie *\*d<sup>h</sup>eh<sub>1</sub>* ‘setzen’ oder *\*deh<sub>3</sub>* ‘geben’ für die Grundsprache mit hinreichender Sicherheit angenommen werden kann, die Rekonstruktion bestimmter Funktionsverbgefüge wahrscheinlich niemals völlig erfolgreich sein wird. Abgesehen von dem fast vollständigen Fehlen vergleichbarer und aus kognaten Elementen gebildeter Konstruktionen der indogermanischen Einzelsprachen läuft sie auch verschiedenen theoretischen und methodischen Prinzipien der vergleichenden historischen Sprachwissenschaft zuwider.

### 1 Introduction: Proto-Indo-European support verbs and typological considerations

According to the definition adopted in this chapter, support-verb constructions are Noun + Verb (N+V henceforth) constructions consisting of a so-called nomi-



nal host (for the term cf. Mohanan 1997: 433), which embodies the lexical meaning of the expression and is the syntactic object argument of the verb, and a semantically reduced or bleached support verb, which conveys the grammatical information and no lexical semantics, filling together the predicate slot of the clause. The category of support-verb constructions itself is not homogeneous (cf. Kamber 2008: 21–18; Vincze 2008 among countless others), but rather to be conceived of as a continuum that ranges from constructions behaving more like free syntagms to those that have more in common with idiomatic expressions.

There are many tests in the secondary literature that are used to delimit these three categories. For the sake of simplicity, I will make use of the approach of Vincze (2008: 288–294), who argues that there are two tests that give grammatical results for support-verb constructions (or “semi-compositional constructions” in her terminology), but not for the other two neighbouring categories: 1. The test of *variativity*: Is it possible to replace the whole construction with a derivationally related simple verb?; 2. The test of the *omission of the verb*: Is it possible to recover the meaning of the construction when the verb is omitted?

Although the applicability of one of these tests alone is sufficient for a multiword expression to be regarded as a support-verb construction, prototypical or core items, of which the nominal host is a verbal action noun, pass both. Consider as a prototypical example OIA *praveśanaṃ cakre* Mahābhārata (MBh) 2.4.1a ‘entered; lit. made entering’, which is equivalent to the etymologically related simplex-verb form (i.e. *praviveśa*) and the meaning of which could be fully reconstructed if the verb were omitted (i.e. the whole construction is in fact about *praveśana*- ‘entering’).

The category of support-verb constructions seems to be a (near-)universal phenomenon, since it occurs in genetically unrelated languages all over the world. For instance, the studies of Schultze-Berndt (2008, 2012) have shown that so-called generalised action verbs (or ‘do-verbs’) are used as support verbs in a large number of languages (her investigations cover Samoan, Hausa, Kalam, Yimas, Jaminjung, Ewe, Kham, Chantyal, German, English, and Moroccan Arabic), while Vincze’s frequency lists (Vincze 2011: 40–44) based on a corpus analysis in English and Hungarian have revealed that the most common support verbs, regardless of genetic affiliation, tend to be cross-linguistically the same verbs with a wide range of meanings.

Furthermore, recent investigations (Butt 2010: 72–74; Butt & Lahiri 2013: 18–23) have emphasised that light verbs<sup>1</sup> are not diachronically derived from full

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<sup>1</sup>The relationship between support verbs and light verbs is disputed. Some scholars claim that the two notions are identical (cf., e.g., Mel’čuk 2022), while others, including myself, believe that light verbs constitute the larger category which includes support verbs.

## 1 Proto-Indo-European support verbs and support-verb constructions

verbs via historical processes, such as semantic bleaching, but have existed beside form-identical full verbs at all stages and in all periods of human languages, even if their frequency might be subject to change, primarily increase, over time.<sup>2</sup>

Accordingly, we may assume with a sufficient degree of certainty that support-verb constructions must have existed in Proto-Indo-European (PIE henceforth) as well and verbs with a general meaning, such as *\*d<sup>h</sup>eh<sub>1</sub>* ‘to put, to set’, *\*deh<sub>3</sub>* ‘to give’ or *\*h<sub>1</sub>ej<sub>i</sub>* ‘to go’ were indeed used as support verbs in the proto-language. Recent studies more or less agree that the PIE support verb *par excellence* was the verb *\*d<sup>h</sup>eh<sub>1</sub>*.<sup>3</sup> This assumption is made indeed plausible by the fact that the reflexes of *\*d<sup>h</sup>eh<sub>1</sub>* are used as a support verb in several branches of the Indo-European language family (Old-Indo Aryan (OIA henceforth)  $\surd dhā$ ; Avestan (Av. henceforth)  $\surd dā$ ; Greek (Gr. henceforth) τίθημι *tithēmi*; Latin (Lat. henceforth) *facio*; Old High German (OHG henceforth) *tuon*; Hittite (Hitt. henceforth) *dai-*; Tocharian B (Toch. B henceforth) *tā-*), although some of the daughter languages have apparently replaced it in this function over the course of time (cf., e.g., ποιέω/ποιέομαι *poieō/poieomai* and  $\surd kr$  as the most frequent support verbs in Greek and Old Indo-Aryan, respectively).<sup>4</sup> Consider the following examples of support-verb constructions in a number of early attested Indo-European languages, which all involve a general ‘do’-verb (for the term cf. Schultze-Berndt 2008) and an eventive noun, see (1) to (5).

- (1) *ubi mentionem ego fecero de filia* (Old Latin)  
 when mention.ACC 1SG do.FUT.PRF.1SG about daughter.ABL  
 ‘when I make mention of his daughter’

(Plautus, *Aulularia* 204)

<sup>2</sup>It has to be added, however, the Butt and Lahiri’s claims about light verbs are not universally accepted. See, e.g., the alternative views of Hook 1993; Slade 2013; Hock 2014; Itzész 2020/2021 [2022].

<sup>3</sup>See, e.g., Hackstein (2002b: 6): “Es darf zunächst außer Zweifel stehen, daß die uridg. Wurzel *\*d<sup>h</sup>eh<sub>1</sub>-* bereits grundsprachlich zur Bildung von Funktionsverbgefügen gedient hat.”

<sup>4</sup>Since the most common support verbs of the daughter languages (i.e. Lat. *facere* from PIE *\*d<sup>h</sup>eh<sub>1</sub>k* (LIV: 139–140), certainly related to *\*d<sup>h</sup>eh<sub>1</sub>*, mentioned above, even if the origin of the *\*k* extension is disputed (on which see, e.g., Harðarson 1993: 148–150; Untermann 1993; Kortlandt 2018); OIA  $\surd kr$  from PIE *\*k<sup>u</sup>er/\*(s)k<sup>u</sup>er* ‘to cut, to carve’ or/and *\*(s)ker* ‘to crop, to scrape, to scratch’ (LIV: 391–392; 556–557; LIVAdd: s.v. 1. *\*(s)ker*; VIA: 168–170; 259); Gr. ποιέω *poieō* from PIE *\*k<sup>u</sup>ej<sub>i</sub>* ‘to collect, to stack’ (LIV: 378–379); Hitt. *ie/a-* from PIE *\*h<sub>2</sub>eh<sub>2</sub>* (?) ‘to make, to do’ (EDHIL: 381–382)), with the exception of the Hittite verb, all have a primary, concrete meaning (on their semantics cf. the lemmata in LIV), it is possible that their use as semantically light support verbs is only a post-PIE development.

- (2) οὐκ ἐξέχρησέ σφι ἡ ἡμέρη ναυμαχίην  
*ouk exek<sup>h</sup>rēse sp<sup>h</sup>i hē hēmerē naumak<sup>h</sup>iēn*  
 NEG suffice.AOR.3SG they.DAT ART day.NOM see-fight.ACC  
**ποιήσασθαι** (Ancient Greek)  
*poiēsast<sup>h</sup>ai*  
 make.INF.AOR.MED  
 ‘There was not enough daylight left for them to fight the naval battle.’  
 (Herodotus, *Histories* 8.70.1)
- (3) *śruṣṭīm cakrur bhṛgavo druhyávaś ca*  
 obedience.ACC do.PRF.3PL Bhṛgu.NOM.PL Druhyu.NOM.PL and  
 (Vedic Old Indo-Aryan)  
 ‘The Bhṛgus and the Druhyus obeyed.’  
 (Ṛgveda (RV) 7.18.6c)
- (4) *yōi mōi ahmāi sərəoṣəm dən*  
 who.NOM.PL 1SG.GEN this.DAT readiness\_to\_listen.ACC give.AOR.SBJV.3PL  
*caiiascā* (Old Avestan)  
 whoever.NOM.PL  
 ‘whoever are ready to listen to this [word] of mine’  
 (Yasna (Y) 45.5c)
- (5) *takku āppatriwanzi kuišk[i p]aizzi ta šullatar iezzi*  
 if seize.INF someone.NOM go.PRS.3SG and offense.ACC do.PRS.3SG  
 (Old Hittite)  
 ‘if someone goes to make a legal seizure and commits offense’  
 (Keilschrifttexte aus Boghazköi (KBo) 6.26 i 28–29)

## 2 Proto-Indo-European support-verb constructions: reconstructs or *Transponats*?

In the last decades, there have been efforts to go beyond this general theoretical observation and reconstruct specific support-verb constructions (or ‘Funktionsverbgefüge’) for PIE, a trend which is indicated in the first place by the publication of Marc Schutzeichel’s comprehensive monograph entitled *Indogermanische Funktionsverbgefüge* (Schutzeichel 2014) as well as several individual papers and articles.

However, if we have a look at the secondary literature, we can see that PIE support-verb constructions are posited most of the time on the basis of evidence from a single daughter language. To mention just one illustrative example, Olav Hackstein in his famous and often-cited 2002 article (Hackstein 2002b) assumes the existence of a PIE support-verb construction  $*k^h o k i d^h e h_1$  ‘to take into account, to consider; Acht geben’, the nominal host of which ( $*k^h o k i$ ) is derived from the PIE root  $*k^h e k$  ‘to see’ (cf., e.g., OIA  $\sqrt{caks}$  ‘to shine, to see’; OCS  $kažo$  causative ‘to show, to remind of’; see LIV: 383–385). Nevertheless, his entire argumentation is based on the Tocharian B phrase  $keś tā-$  ‘to judge, to consider’ alone ( $keś$  ‘number’), which means that the alleged support-verb construction  $*k^h o k i d^h e h_1$  is, strictly speaking, not a reconstruct based on comparative evidence, but – to use a term coined by Heiner Eichner – only a *Transponat*. *Transponats* are “Formen, die nicht aufgrund von belegten Gleichungen in anderen altindogermanischen Sprachen rekonstruiert werden, sondern die eine einzelsprachliche Form mit den bekannten Lautgesetzen ins Indogermanische zurücktransponieren”<sup>5</sup> (Krisch 1996: 12).

However, precisely due to the lack of comparative evidence, *Transponats* cannot claim certain PIE status, since it is entirely possible that such forms, be they independent lexemes or multi-word expressions, were created as innovations only well after the break-up of PIE in the prehistory of the individual languages.

As far as support-verb constructions are concerned, this methodological consideration must be taken into account all the more seriously as languages may, and in fact very much tend to, create constantly new light-verb (including support-verb) constructions based on the analogy with earlier, potentially inherited, constructions or patterns, as emphasised by Bovern (2008) in her important summarising article about the diachrony of complex predicates. This means that if we observe a particular support-verb construction in a single language, the default assumption must be that it was coined in the history of the individual language in question and we may not project it back out of hand to the parent language (PIE, in our case) or, for that matter, to a so-called transitional proto-language (such as, e.g., Proto-Indo-Iranian or Proto-Balto-Slavic).

Furthermore, although the methodological principle of *Occam’s Razor* in linguistic reconstruction may lean towards reducing (all else being equal) the number of independent developments in the daughter languages, the fact that the category of support-verb constructions is notoriously liable to proliferate suggests that even if we happen to have apparently related constructions in more

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<sup>5</sup>I.e. forms which are not reconstructed on the basis of documented equations in other Old Indo-European languages, but which transpose a single-language form back into Proto-Indo-European with the help of the known sound laws.

than one daughter language, it cannot be excluded that they are independent innovative creations of the separate languages due to the analogy with other constructions rather than cognates in the true sense of the word, which were inherited from their common proto-language.

Accordingly, the positing<sup>6</sup> of a PIE support-verb construction on the basis of the single Tocharian B phrase *keś tā-* ‘to judge, to consider’ is to be rejected as being methodologically and theoretically unfounded.<sup>7</sup> On the other hand, a potentially good example of an entire PIE construction reconstructed on the basis of comparative evidence may be the phrase ‘to give (lit. to place, to put) a name; to name’, which is attested in a relatively large set of Indo-European languages as consisting of etymologically cognate elements (cf. Hackstein 2002b: 6; Schutzeichel 2014: 115–117).

- (6) Gr. ὄνομα τίθεσθαι *onoma tū<sup>h</sup> est<sup>h</sup> ai*  
 OIA *nāma* √*dhā*  
 Lat. *nomen facere/indere*  
 Toch. B *ñem tā-*  
 Hitt. *lāman dai-*  
 SCr. *īme djěsti*

The perfect equation of the above-mentioned constructions as well as their individual parts convincingly speaks in favour of a PIE reconstruction *\*h<sub>3</sub>neh<sub>3</sub>mn<sup>8</sup> d<sup>h</sup>eh<sub>1</sub>* ‘to give (lit. to place, to put) a name; to name’.<sup>9</sup> However, it must be taken

<sup>6</sup>As should be clear from what has been said so far, I deliberately avoid using the term “reconstruction” in this context.

<sup>7</sup>Hackstein’s second Tocharian example, *śāp tā-* ‘to curse’ is even more evidently a late creation, as shown by its nominal member being a loanword from Old Indo-Aryan (*śāpa-* ‘curse, oath’; cf. Adams 2013: s.v. *śāp*).

<sup>8</sup>The precise reconstruction of the PIE word for ‘name’ is irrelevant to our question. Beside the most plausible reconstruction mentioned above in the main text (cf. EDHIL: 282–285; EDG II: 1084–1085; van Beek 2011: 52–53) see also the alternative opinions by Stüber (1997); Hackstein (2002b: 6) (both with initial *\*h<sub>1</sub>*).

<sup>9</sup>As one of my anonymous reviewers points out, it is important in the context of Proto-Indo-European textual or syntactic reconstruction to look at the exact nature of the collocations. Namely, if the combination of the members of a phrase is banal or unremarkable and does not have anything peculiarly Indo-European, its reconstruction for the parent language is questionable. If, however, the components of a collocation and their combination are unexpected or idiomatic, its tracing back to Proto-Indo-European is more reasonable. On this argument see also Matasović (1996: 72–76) (on Indo-European N-Adj phrases or formulas, in which the adjective is metaphoric and therefore “informative” or banal and thus “uninformative” with respect to the noun), Matasović (1996: 78–80) (on the V-O type, i.e. formulas consisting of a transitive verb and its object); see also Ittzés (2017: 118–124). Since the combination of ‘name’ + ‘to place, to set’ is not (entirely) trivial, its reconstruction for PIE may indeed seem reasonable.

into account that the nominal element of this construction is not an abstract action noun, which means that it is, depending on one's definition, either no support-verb construction at all or at least not a prototypical representative of the category.

Namely, as summarised by Fendel (2023: 383), "narrow definitions of support-verb constructions only accept deverbal formations in the predicative-noun slot", while "wider definitions will include any eventive noun". Under the latter view, even a non-deverbal concrete noun may form a support-verb construction if it is reconceptualised as eventive (cf. Radimský 2011) or undergoes metaphorical extension.

Following the latter approach, one might in fact regard the noun  $*h_3néh_3m\eta$  in the phrase  $*h_3néh_3m\eta d^heh_1$  as being reconceptualised as eventive (i.e. referring somehow to the process resulting in the given name) and take the whole phrase as a support-verb construction. However, it seems that neither of the two tests mentioned above yields a positive result when applied to this phrase.

Firstly, scholars who reconstruct an initial laryngeal<sup>10</sup>  $*h_3$  in the 'name' word (cf. above) usually connect it to the PIE root  $*h_3neh_3$ , which is reflected in Gr. ὀνομα *onomai* 'to blame, to treat scornfully' and Hittite *ḫanna-i* / *ḫann-* 'to sue, to judge'. Even though the original meaning of the PIE root could indeed be 'to call (by name)', whence Gr. 'to call names' > 'to treat scornfully' and Hitt. 'to call to court > to sue' (see EDHIL: 284), I do not think that in synchronic PIE the simplex verb  $*h_3neh_3$ , which, as judged from its reflexes in the daughter languages, had already developed a special semantics, was still able to replace the putative support-verb construction  $*h_3néh_3m\eta d^heh_1$  'to give a name'. Secondly, in the case of omission of the verb the meaning of the construction is not recoverable either.

### 3 Open-slot constructions and lexical substitutions

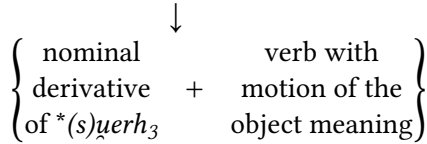
A similar case with equally far-reaching methodological implications will be taken from another influential study of Olav Hackstein (2012: 96–101). Hackstein takes into account three collocations attested in the daughter languages: OHG *wara tuon* 'to pay attention/heed (to)'; Gr. (ἐπι) ἤρα φέρειν (*epi ēra p<sup>h</sup>erein*) 'to bring help, to give a favour' and Hitt. *warri nāi-* 'to bring as help'. As can be seen, the support verbs<sup>11</sup> of the three attested constructions are etymologically unrelated (OHG *tuon* < PIE  $*d^heh_1$  'to put'; Gr. φέρειν *p<sup>h</sup>erein* < PIE  $*b^her$  'to bring');

<sup>10</sup>The so-called 'laryngeals' (notated as  $*h_1$ ,  $*h_2$ ,  $*h_3$ ) were probably fricatives in PIE phonology, but their exact phonetic reality is disputed (see Byrd 2015: 10–13 for a brief overview).

<sup>11</sup>Hackstein (2012: 96) refers to them as light verbs.

Hitt. *nāi-* < PIE *\*neh<sub>x</sub>i*<sup>12</sup> ‘to lead’), neither are the nominal hosts exact cognates, but different nominal derivatives of the same root (OHG *wara* < PIE *\*(s)uorh<sub>3</sub>-eh<sub>2</sub>*; Gr. ἤρα *ēra* < PIE *\*(s)uēr<sub>3</sub>-*; Hitt. *warri* < PIE *\*(s)uēr<sub>3</sub>-*; all ultimately from PIE *\*(s)uēr<sub>3</sub>*<sup>13</sup> ‘to observe, to be attentive’; cf., e.g., Gr. ὄραω *hōraō* ‘to see’).<sup>14</sup> What Hackstein (2012: 96) posits for PIE on such evidence is a so-called “open slot construction” with the meaning ‘to pay heed to, to pay attention to’, in which the two slots could be filled by some nominal derivative of *\*(s)uēr<sub>3</sub>* and an optional transitive support verb with a motion-of-the object meaning.

(7) *\*(s)uēr<sub>3</sub>* ‘to perceive, to heed, to be attentive’



Later on, Hackstein (2012: 100–101) analyses the Hittite verb *waritē-* (later *weritē-*) ‘to be attentive, full of awe, to be afraid’ as well, which he interprets, following earlier accounts, as containing the reflex of PIE *\*d<sup>h</sup>eh<sub>1</sub>* preceded by the same noun *warri* being an incorporated object. If this is correct,<sup>15</sup> then Hittite (*wari \*dai-* > *waritē-*) also seems to offer evidence for the original use of the light (or support) verb *\*d<sup>h</sup>eh<sub>1</sub>* in the open-slot construction in (7). Nevertheless, I think that the derivational differences, i.e. non-cognateness, of the nominal hosts of the above-mentioned three phrases and the fact that their support verbs themselves are partly etymologically unrelated point to their being independently created constructions of the daughter languages rather than inherited ones from the proto-language.<sup>16</sup>

Syntactic reconstruction as such may aim at reconstructing either abstract syntactic configurations and rules of the proto-language (such as constituent order

<sup>12</sup>*\*neh<sub>x</sub>i* (actually *\*neHi*) is the form reconstructed by Hackstein himself. For other reconstructions cf., e.g., LIV: 450–451 (*\*neĭH*, i.e. *\*neĭh<sub>x</sub>*); Kloekhorst & Lubotsky 2014 (*\*(s)neh<sub>1</sub>*).

<sup>13</sup>Hackstein’s reconstruction (originally proposed in Hackstein 2002a: 123–131) is not universally accepted. It is not even mentioned by LIVAdd. Note that Gr. ὄραω *hōraō* is derived from a root *\*ser* ‘aufpassen auf, beschützen’ by LIV: 534 and from *\*uer* ‘observe, note’ by EDG II: 1095–1096.

<sup>14</sup>The connection of the Greek and Hittite phrases with the OHG one is not mentioned by García-Ramón (2006).

<sup>15</sup>Note, however, the alternative etymology of the first part of this verb by EDHIL: 1003–1004.

<sup>16</sup>For the assumption of a formal variation of the nominal host cf., as a similar case, Balles (2009: 23), where the family of Gr. δολιχός *dolik<sup>h</sup>os*, Lat. *longus*, etc. is traced back to a PIE support-verb construction *\*d(o)lh<sub>1</sub>(i/u/o)-* (sic!) + *\*g<sup>h</sup>eh<sub>1</sub>* ‘to reach length’. However, a form like *\*d(o)lh<sub>1</sub>(i/u/o)-* is, in my view, not a meaningful PIE reconstruction.

## 1 Proto-Indo-European support verbs and support-verb constructions

of various clause-types, agreement relations within the noun phrase, etc.) or individual syntactic units consisting of more than one word, i.e. phrases, in their material reality. Since the existence of support-verb constructions in human languages, as mentioned above, is probably a linguistic (near-)universal, statements about the mere existence of PIE support-verb constructions which can be described only in terms of their semantics without formal specification would not add much new to our knowledge about PIE as a natural human language. In my view, it is only the latter understanding of syntactic reconstruction which could in principle be meaningful in the case of support-verb constructions. Therefore, the fact that the formal aspects of the PIE construction ‘to pay heed to’ hypothesised by Hackstein must necessarily remain unspecified (“open”), or at least underspecified, due to the absence of exactly cognate nominal elements and support verbs makes its “reconstruction” for PIE, in my view, unfounded.

Instead of positing a formally un(der)specified construction for PIE (such as “nominal derivative of  $*(s)\mu\epsilon rh_3$  + verb with motion-of-the-object meaning”) one might also assume that one of the attested nominal derivatives and one of the attested support verbs are indeed the reflexes of the original constituents of the PIE support-verb construction<sup>17</sup> and the languages that do not have them underwent a process of innovation usually called “lexical substitution” or “lexical renewal”<sup>18</sup> in their prehistory. At first sight, this assumption seems to be well-founded if we bear in mind that lexical substitutions in general happen and are well attested in the history of various Indo-European languages and, which is more, it can be textually demonstrated in the case of the above-mentioned High German construction itself. Namely, as Hackstein describes in detail, the Old High German phrase *wara tuon* got gradually replaced by the phrase *wara niman* by the time of Middle High German (whence New High German (NHG) henceforth) *wahrnehmen*.

In my opinion, however, we can base our argumentation on the idea of lexical substitution neither in this particular example nor in any other case whenever we have to *reconstruct* something for earlier, unattested linguistic stages and not merely *describe* and analyse historically attested developments. It cannot be stressed enough that linguistic reconstruction should always be based on cognates which are actually attested in the daughter languages. While this *caveat* is taken into account as a matter of fact in phonological, morphological, or lexical reconstruction,<sup>19</sup> it is often forgotten or deliberately ignored when it comes

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<sup>17</sup>It remains, of course, to be seen which ones these were. As regards the support verb, many scholars would agree that it was  $*d^neh_1$ .

<sup>18</sup>As far as the nominal host is concerned, in our case this would not mean the substitution by an etymologically unrelated lexeme, but only by a different derivative of the same root.

<sup>19</sup>Note as an example that there is no entry *equus* in the etymological dictionary of the Romance

to syntactic reconstruction in the sense of “material” reconstruction of syntactic units larger than single words. I consider it crucial that we should avoid referring to the notion of lexical substitution in making our reconstructions, since even though lexical substitution as such is a diachronic reality from the perspective of language change (i.e. when tracking attested historical processes “forwards”; cf. documented examples such as OHG *wara tuon* above), its application when performing comparative reconstruction (i.e. when thinking “backwards”) is not falsifiable and therefore to be avoided on methodological grounds.<sup>20</sup>

It will have become clear by now that I firmly disagree with those who think that the method of “reconstructing” without having cognates and not just etymologically loosely related elements can be applied in the case of PIE support-verb constructions. Furthermore, I think that it cannot be applied to entirely non-compositional multi-word expressions, i.e. idioms or phraseological units, either. I do not accept the opinion of West (2007: 79), who believes that “in looking for Indo-European idioms [...] it is not necessary to limit ourselves to comparisons where all the terms stand in [an] etymological relationship. It is legitimate to adduce expressions that are semantically parallel, even if the vocabulary diverges, provided that they are distinctive enough to suggest a common origin”.<sup>21</sup> In my view, this approach cannot be applied to phraseological units either, and it works still less in the case of support-verb constructions, in which we do not even have the factor of sufficient distinctiveness.

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languages (REW), even if it was the common word for ‘horse’ in Classical Latin, precisely because the ‘horse’ words of the Romance languages continue the Proto-Romance (Vulgar Latin) word *caballus* (> It. *cavallo*, Fr. *cheval*, etc.) and provide no evidence whatsoever for the reconstruction of *equus*. For similar reasons, the REW does not have an entry *loquor* ‘to speak’ either, even if it was an extremely frequent verb in Classical Latin (cf. Herman 2003: 11–12; Adamik 2009: 32–33).

<sup>20</sup>My anonymous reviewer refers, in a similar vein, to the case of Gr. δωτήρες ἐάων *dōtēres eaōn* (Homer, *Odyssey* 8.325; Hesiod, *Theogony* 46+) vs. Ved. *dātā vāsūnām* (Ṛgveda (RV)), built of cognate elements and both meaning ‘givers of good’, and their later transformations or modernisations in Gr. πλουτοδοται *ploutodotai* (Hesiod, *Works and Days* 126+) and Skt. *dātā ... (a)rthasya* (*Mudrārākṣasa* (*Mudr.*) 5.19) and points out that we would probably be unable to identify the latter “as, in some sense, the same expressions”, were it not for the earlier, i.e. Vedic and Homeric/Hesiodic, forms. While I partly agree with this conclusion, I have to add that I am not convinced that the Vedic and Homeric/Hesiodic phrases must necessarily be regarded as the reflexes of a single Proto-Indo-European formula, since I can see nothing really idiomatic, unexpected, or specifically Indo-European in a construction like ‘giver of good’ that would prevent us from considering them as later independent creations (cf. n. 9 above).

<sup>21</sup>For instance, Calvert Watkins, in his famous monograph on Indo-European poetics (Watkins 1995: 210–213), referring to the notion of lexical substitution, goes so far as to posit a PIE formula *\*pah<sub>2</sub>-ūih<sub>x</sub>ro-peku-* PROTECT MEN (and) CATTLE, even if literally none of the collocations collected by him from the daughter languages, contains the reflex of the root *\*pah<sub>2</sub>-* (i.e. *\*peh<sub>2</sub>* or *\*peh<sub>2</sub>(i)*; LIV: 460) and most of them involve different nouns as well.

## 4 The univerbation hypothesis

It is a matter of fact that incontestable examples of cognate support-verb constructions are virtually lacking in the daughter languages. However, there is another relatively popular method in the secondary literature of tracking down PIE support-verb constructions, i.e. by assuming univerbation.

It is well known that several roots which can be reconstructed either for Proto-Indo-European itself or for some transitional proto-language show some phonetic addition in comparison to other synonymous roots. In Indo-European linguistics (cf., e.g., Szemerényi 1996: 100–101), this apparently meaningless addition is called root extension or root enlargement (German “Wurzelerweiterung”). While root extensions as such can be more or less clearly reconstructed from the formal point of view, it is difficult to determine what their specific function may originally have been before being obscured by the time of reconstructed Proto-Indo-European.<sup>22</sup> Consider, for instance, the following two pairs of roots (on which see LIV: 179–180; 676–677; Hackstein 2002b: 14–15; Balles 2006: 38) in (8) and (9):

- (8) \*ǵ<sup>h</sup>e<sub>u</sub> ‘to pour’ > OIA √*hu*, pres. *juhōti* ‘to pour, to offer’  
 Gr. χέω *k<sup>h</sup>eō* ‘to pour’  
 Toch. A, B *ku-* ‘to pour’
- \*ǵ<sup>h</sup>e<sub>ud</sub><sup>23</sup> > Lat. *fundo* ‘to pour’  
 Umbr. *hondu* imperative ‘let him pour’  
 Goth. *giutan* ‘to pour’  
 NHG *giessen* ‘to pour’
- (9) \**uelh*<sub>2</sub> ‘to be strong, powerful’ > Lat. *valeo* ‘to be strong, to be able’  
 Toch. B *walo* ‘king’  
 OIr. *follnadar* ‘to rule’
- \**ueld*<sup>h</sup> > Lith. *vėldu* ‘to possess, to govern’  
 Goth. *waldan* ‘to rule’  
 OCS *vladq* ‘to rule’

The reason which makes this phenomenon relevant to our topic is that one of the most frequent root extensions, \**-d<sup>h</sup>*- (see (9))<sup>24</sup> is now widely held to be

<sup>22</sup>Recently, there have been attempts to clarify this problem. For instance, an entire workshop at the 15th “Fachtagung” of the *Indogermanische Gesellschaft* (Vienna, September 2016) was dedicated to this topic.

<sup>24</sup>See also \**uerh*<sub>1</sub> ‘to say’ > Gr. fut. ἐπέω *ereō*, perf. εἶρηκα *eirēka* ‘to say’; Pal. *wer-* ‘to say, to call’; Hitt. *wer(iye)-* ‘to call, to name’ vs. \**uerd*<sup>h</sup> in the nominal derivatives Lat. *verbum* ‘word’; Goth. *waurda* ‘word’; Lith. *vardas* ‘word’ (cf. LIV: 689–690).

the univerted and grammaticalised form of the originally independent light or support verb  $*d^heh_1$ . For several scholars, this means that if we can reconstruct a root with the extension  $*-d^h-$  for PIE, it proves the former existence of a support-verb construction built with  $*d^heh_1$  in an earlier phase of the proto-language. For instance, an enlarged root  $*\underline{u}eld^h < *\underline{u}elh_2-d^h$ <sup>25</sup> (root  $*\underline{u}elh_2$  + root extension  $*d^h$ )<sup>26</sup> could be analysed as resulting from the univertation of an alleged support-verb construction  $*\underline{u}elh_2$  (in this construction it would most probably be a root action noun) + support verb  $*d^heh_1$  ‘lit. to do ruling’ (via the intermediate stage  $*\underline{u}elh_2-d^hh_1$ ).

In most cases, the available data do not allow to decide with certainty, whether the alleged process of univertation had taken place already in the proto-language or only later, independently, in the prehistory of the individual languages concerned. Nevertheless, the univertation hypothesis implies that in spite of the problems mentioned above it is still possible to reconstruct support-verb constructions for (Pre-)Proto-Indo-European, at least by means of internal reconstruction.

There are two fundamental questions concerning this hypothesis: firstly, whether the supposed process is theoretically possible and, secondly, whether it can be proven by empirical data.

The answer for the first question is certainly a positive one, since the univertation of support verbs (and light verbs in general) is a cross-linguistically

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<sup>25</sup>As one of my reviewers points out, the reconstruction of an earlier laryngeal in this form seems to be plausible after all on the basis of the Lithuanian acute intonation (a possibility mentioned but finally rejected by Kümmel 2000: 472–473). Note, however, that the loss of the laryngeal here and in similar environments is not a trivial assumption for the PIE period (for a succinct overview of the PIE phonological rules targeting laryngeals cf. Byrd 2015: 25–27). Since the so-called *Lex Schmidt-Hackstein* probably operated in the environment  $*PH.CC$  (cf. Byrd 2015: 134) and not generally  $*CH.CC$  as proposed by Hackstein (2002b) himself (P = plosive/stop, H = laryngeal, C = consonant, and . = syllable boundary), the hypothesis that in the example mentioned above the laryngeal was lost already at the  $*\underline{u}elh_2-d^hh_1$  stage is questionable too. Thus, we would have to suppose that its loss was conditioned by the special circumstances of grammaticalisation (cf. below).

<sup>26</sup>As my anonymous reviewer emphasises, there are some indications (ON preterite *olla* without a reflex of the dental aspirate) that  $*-d^h-$  in this particular case has to be conceived of as a present formation rather than a root extension (cf. also LIV: 676) and similar considerations may apply to other instances of this formant across the Indo-European languages. The Indo-European dental-aspirate presents have recently been studied in detail by Z. Rothstein-Dowden, who mentions a number of difficulties related to the univertation hypothesis, without entirely rejecting “a historical connection between the verbal formant  $*-d^h-$  and the root  $*d^heh_1$  ‘put’” (Rothstein-Dowden 2022: 3–4 with n. 3). I thank my reviewer for having brought Rothstein-Dowden’s dissertation to my attention.

well-attested phenomenon (Bowerman 2008: 175–176). A classic example is the emergence of the so-called German weak or dental preterite (cf., e.g., Goth. *salbō-da* ‘anointed’; Eng. *work-ed*; Germ. *mach-te*), which probably originated in a support-verb construction with *\*d<sup>h</sup>eh<sub>1</sub>* (Hill 2010; Schutzeichel 2014: 69–72).

It is also a matter of fact that the process of univertation, similarly to other types of grammaticalisation, is frequently accompanied by irregular sound changes and phonological reductions (often called “erosion”) which are not observed under “normal” conditions. This fact might in principle account for the loss of the root-final laryngeals before the univertated support verb even at a stage when the latter had already lost its final laryngeal (e.g. *\*ueld<sup>h</sup>* < *\*uelh<sub>2</sub>-d<sup>h</sup>*).

It is also worth mentioning in this context that there is a cross-linguistic generalisation that light verbs (including support verbs) are rather stable and more resistant to diachronic changes than auxiliaries. However, this is not meant to claim that light verbs are completely inert in this respect. For instance, there is an ongoing debate whether light verbs can grammaticalise to become auxiliaries. Although some scholars (most notably Butt 2010 and Butt & Lahiri 2013; cf. Bowerman 2008: 174) have argued that light verbs are never reanalysed as auxiliaries, I have demonstrated (Itzész 2020/2021 [2022]) that the history of the periphrastic perfect in Vedic Old Indo-Aryan is a typical example of precisely this kind of grammaticalisation process (the supposed counterarguments presented by Butt & Lahiri 2023 do not seem valid to me).

As far as the second question, the empirical provability of the univertation of a support verb is concerned, there seems to be at least one well-documented case which testifies to the univertation of the root *\*d<sup>h</sup>eh<sub>1</sub>* with a nominal element. I am referring to the famous PIE collocation *\*kréd* (or rather *kréd<sub>s</sub>*) *d<sup>h</sup>eh<sub>1</sub>* ‘to believe, to trust; lit. to place one’s heart<sup>27</sup> (trust) in’, which is continued in the Indo-Iranian branch by a syntagmatic form<sup>28</sup> (Ved. *śrād* √*dhā*, which is frequently attested,

<sup>27</sup>It is beyond doubt that the nominal member of the construction was originally some case form of the PIE word for ‘heart’: *\*kerd-/krd-* (> HLuw. *zārt-*; Lat. *cor, cord-*; Gr. κῆρ, καρδία *kēr, kardia*; Arm. *sirt*; Goth. *hairtō*). However, its exact morphological evaluation is somewhat disputed, since apart from its widespread interpretation as an accusative singular form (as accepted above), it has also been suggested (Sandoz 1973: 6–8; Tremblay 2004: 583–584) to take it rather as an endingless locative (the meaning of the phrase being ‘to place sth. in one’s heart’). For recent detailed analyses of the construction cf. Hackstein (2012: 90–93) (in relation to the issues of “colaescence” and univertation); Weiss (2019).

<sup>28</sup>It has to be added that even Ved. *śrād* had already more or less lost its syntactic autonomy and, as judged from its accentual behaviour and some properties of the argument structure, had become similar to local particles or preverbs (see Hackstein 2012: 92). It is also worth mentioning that PIE *\*krd-* (> PIIr. *\*cṛd-*) ‘heart’ as an independent noun seems to have been replaced in Proto-Indo-Iranian by a phonetically similar word: PIIr. *\*j<sup>h</sup>rd-* > Ved. *hṛd-*; Av. *zarəd-*. The exact relation of PIE *\*krd-* to PIIr. *\*j<sup>h</sup>rd-* is disputed (cf. EWAia II: 818; Weiss 2019: 271).

also with its components separated by intervening words, e.g., *śrād asmai dhatta* ‘Trust in him!’ Ṛgveda (RV) 2.12.5d; Av. *zras=ča dāt* ‘and may she believe’ Yašt (Yt) 9.26), but by a simplex verb in the Italic (EDL: 141–142) and Celtic (EDPC: 221) languages as a result of univerbation (Lat. *credo*; OIr. *creitid*; MW *credu*; MBr. *crediff*, *critim*; Corn. *cresy*, *krysi*, *cregy*).

However illuminating this example may seem, there are some points which have to be borne in mind. Firstly, our data clearly show that the univerbation in this case did definitely not occur in the proto-language, but only in a much later period, certainly not earlier than the common Proto-Italo-Celtic period,<sup>29</sup> thus it can be referred to merely as a typological parallel to the hypothesised PIE (!) processes of univerbation of *\*d<sup>h</sup>eh<sub>1</sub>*.

Secondly, in my view, it is questionable whether *\*kréd(s) d<sup>h</sup>eh<sub>1</sub>* really has to be regarded as a support-verb construction at all. To be sure, as already mentioned above, the wide definition recognises the existence of support-verb constructions involving a non-deverbal concrete noun as the nominal host, if the latter is reconceptualised as eventive or undergoes metaphorical extension. However, similarly to *\*h<sub>3</sub>néh<sub>3</sub>m̃ d<sup>h</sup>eh<sub>1</sub>* treated above, the construction *\*kréd(s) d<sup>h</sup>eh<sub>1</sub>* does not pass either of the two tests mentioned at the beginning of the chapter,<sup>30</sup> therefore it has to be taken in my understanding rather as a phraseological unit, i.e. an idiomatic expression.<sup>31</sup> It follows that this example cannot be considered as a documented example of the univerbation of a genuine PIE support-verb construction belonging to the core of the category, even though the latter process seems to be cross-linguistically common, as Bowerman points out (cf. above).

Similar considerations apply to the apparently parallel Indo-Iranian phrase *\*máns d<sup>h</sup>aH* ‘to think of, to take note; lit. to set one’s mind’ (reflected by Avestan collocations, such as *+māng ... dadē* Yasna (Y) 28.4 ‘I take note of’ (cf. Peschl 2022: 178) and by various nominal forms of both Vedic and Avestan (Ved. *mandhātár-* ‘a thoughtful/devout person’, *medhā-* ‘intelligence, wisdom’, *médhira-* ‘intelligent, wise’, Av. *mazdā-* ‘wise/wisdom’, *mazdra-* ‘wise’; see EWAia II: 313, 378)), except for the fact that, contrary to *\*kréd(s)*, *\*máns* is evidently a deverbal noun derived from the root *\*man* ‘to think’.

Some scholars (e.g., EDG II: 901; NIL: 493–496 with n. 13; Peschl 2022: 281 n. 6) have claimed that Greek *μανθάνω* *man<sup>h</sup>anō* ‘to learn’ is a univerbated

<sup>29</sup>Possibly even much later, as Weiss (2019: 274) assumes.

<sup>30</sup>In fact, it passes the test of variability even less than *\*h<sub>3</sub>néh<sub>3</sub>m̃ d<sup>h</sup>eh<sub>1</sub>* since there is no PIE root which would be derivationally connected to *\*kred-/krd-* ‘heart’ in any way.

<sup>31</sup>I maintain this claim even if it cannot be denied that, as one of my anonymous reviewers reminds me, support-verb constructions, too, may in principle involve some idiomatic components.

reflex of the same combination, but this is disputed (for an alternative view cf. Klingenschmitt 1982: 125).<sup>32</sup> Remember, however, that even if it could be shown that already Proto-Indo-European did in fact have a construction *\*méns* (or *\*ménos*) *d<sup>h</sup>eh<sub>1</sub>* ‘to set one’s mind’, which was later univerbated either in the proto-language itself or separately in the daughter languages, it would still not count as an example of the univerbation of a prototypical PIE support-verb construction, since having in mind that *\*méns* (or *\*ménos*) is deverbal, but not an action noun, this phrase too would rather be classified as an idiomatic unit (or a marginal support-verb construction at best).<sup>33</sup>

## 5 Some case studies

Since it is not possible to offer a comprehensive and exhaustive account of the entire scholarship on this topic, let us see now three representative case studies from the 2000s which hypothesise the univerbation of the original PIE support verb *\*d<sup>h</sup>eh<sub>1</sub>* with some nominal element.

### 5.1 PIE *\*b<sup>h</sup>er(o) d<sup>h</sup>eh<sub>1</sub>*?

The first of them was formulated by Janda (2000: 240–241), who was followed by Schutzeichel (2014: 107–108) in his afore-mentioned dissertation.

The Greek verb πέρθω *per<sup>h</sup>ō* with the primary meaning ‘to loot, to capture; erbeuten’ is taken by Janda to be the reflex of PIE *\*b<sup>h</sup>erd<sup>h</sup>* via the Proto-Greek devoicing of the PIE voiced aspirates and the phonological change called *Grassmann’s law* (i.e. the regressive dissimilation of aspirates): PIE *\*b<sup>h</sup>erd<sup>h</sup>* > PGr. *\*p<sup>h</sup>ert<sup>h</sup>* > Gr. πέρθω-ω *per<sup>h</sup>ō-ō* (LIV: 77–78 with n. 1; cf., on the other hand, EDG II: 1176 with question mark and the comment: “without a convincing etymology”; GEW II: 512: “ohne überzeugende Etymologie”). Remember, however, that in the absence of any cognates of this root in other IE languages,<sup>34</sup> *\*b<sup>h</sup>erd<sup>h</sup>* can in fact be regarded as nothing more than a *Transponat*, the PIE status of which,

<sup>32</sup>On the possible connection of the Indo-Iranian material with OCS *mōdrō* ‘wise’ see, e.g., EWAia II: 378 with references; NIL: 496 with n. 16.

<sup>33</sup>Another example of this type is the phrase *\*g<sup>u</sup>rh<sub>2</sub>- d<sup>h</sup>eh<sub>1</sub>* ‘to offer (a) praise song(s)’ (cf. *\*g<sup>u</sup>erh<sub>2</sub>* ‘to sing’ > OIA √*gṝ* ‘to praise’; EWAia I: 468–469; LIV: 210–211), which is continued by OIA *gīras* √*dhā* ‘to offer praise songs’ and seems to be underlying Celtic *\*bardos* ‘singer, poet, bard’ (Balles 2006: 37–38; see also below in n. 45 and 49).

<sup>34</sup>Frisk (GEW II: 512) refers to Uhlenbeck’s suggestion to connect Gr. πέρθω *per<sup>h</sup>ō* with OIA *bardhaka-* ‘carpenter’ (note that the correct form of this noun is *vardhaka-*; KEWA III: 157) and some Germanic words meaning ‘desk, plank’, but this hypothesis is semantically very doubtful.

if we stick to the methodological rigour of comparative linguistics, is entirely uncertain.

In a second step, the alleged PIE root *\*b<sup>h</sup>erd<sup>h</sup>* is analysed by Janda as the univerbation of an original support-verb construction consisting of the support verb *\*d<sup>h</sup>eh<sub>1</sub>* and what must be a deverbal action noun derived from *\*b<sup>h</sup>er* ‘to carry, to bring’ (i.e. *\*b<sup>h</sup>er d<sup>h</sup>eh<sub>1</sub>* ‘lit. to do “carrying away”’). While Janda himself assumes that the nominal member of the phrase was a root noun *\*b<sup>h</sup>er* (but why in its stem form? or was it a neuter noun with a zero accusative ending?), Schutzeichel posits it in the remarkable form “*\*b<sup>h</sup>ero*”, but fails to explain the reasons for his choice. Therefore, it is uncertain whether he assumes this to be the stem form of a thematic noun *\*b<sup>h</sup>ero-* (but why e-grade of the root?) or a peculiar case form of the root noun *\*b<sup>h</sup>er-* (but which case?). To be sure, phonological attrition or erosion frequently accompanies grammaticalisation and lexicalisation processes including univerbation (cf. Balles 2006: 22–23) and thus it would not be impossible that an *\*o* was lost during the alleged univerbation, but I think that in our case its assumption, at least in its present form, is unfounded.

Furthermore, Janda seeks to underpin his hypothesis by referring to a Vedic Old Indo-Aryan phrase, which is built from etymologically related elements and therefore, according to him, supports the assumption of the earlier existence of the alleged support-verb construction *\*b<sup>h</sup>er d<sup>h</sup>eh<sub>1</sub>*, see (10).

- (10) *sá*          *no*          *vṛṣā*          *vṛṣarathaḥ*                                  *suśipra*  
 such.NOM 1PL.ACC bull.NOM with\_a\_bullish\_chariot.NOM well-lipped.VOC  
*vṛṣakrato*                                  *vṛṣā*          *vajrin*                                  *bhāre*  
 with\_bullish\_will.VOC bull.NOM with\_the\_mace.VOC loot.LOC  
*dhāḥ*    (Vedic Old Indo-Aryan)  
 place.AOR.INJ.ACT.2SG

‘As bull with a bullish chariot, well-lipped one, you with bullish will, as bull, you of the mace, set us up in loot.’

(Ṛgveda (RV) 5.36.5cd, translation following Jamison & Brereton 2014: II: 703)<sup>35</sup>

<sup>35</sup>I depart at a single point from Jamison’s version, i.e. in translating *vṛṣakrato* not as the attributive modifier of the predicative nominative *vṛṣā* (“as bull with bullish will” in her translation), but as a vocative, which it certainly is. Geldner (followed by Schutzeichel 2014: 108) takes the two lines as separate clauses. He regards *no* in pāda c as the enclitic genitive form of the personal pronoun and supplies another *nas* as an accusative in the second clause. His translation runs as follows: “Du bist unser Bulle mit dem Bullenwagen, du Schönlippiger. Du Bullenmutiger verhilf (uns) als Bulle [Anführer] zur Beute, o Keulenträger!” (Geldner 1951: II: 36).

It is, of course, undeniable that the individual members of the Vedic phrase *bhāre dhāh* are etymologically related to the PIE roots *\*b<sup>h</sup>er* and *\*d<sup>h</sup>eh<sub>1</sub>*, respectively. Nevertheless, apart from the obvious semantic discrepancies, the syntactic configuration of *no ... bhāre dhāh* too is entirely different from that of the alleged support-verb construction *\*b<sup>h</sup>er(o) d<sup>h</sup>eh<sub>1</sub>*. Namely, in a support-verb construction such as the one hypothesised by Janda the nominal member, in our case *\*b<sup>h</sup>er(o)*, should be the syntactic object argument of the support verb *\*d<sup>h</sup>eh<sub>1</sub>*, while in the Vedic clause the direct object of the verb predicate is the pronominal clitic *no* and *bhāre* is a locative expressing a goal.<sup>36</sup> Thus, we have to conclude that no support-verb construction *\*b<sup>h</sup>er(o) d<sup>h</sup>eh<sub>1</sub>* may be reconstructed for Proto-Indo-European (or Pre-Proto-Indo-European) and the assumption of its erstwhile existence is in my view nothing more than unfounded speculation.

## 5.2 PIE *\*k<sup>u</sup>olh<sub>1</sub>im d<sup>h</sup>eh<sub>1</sub>*?

Similar considerations apply to the idea of Balles (2009: 21–22), who regards the Greek verb active κλίνδω *kulindō* ‘(trans.) to roll’, middle κλίνδομαι *kulindomai* ‘to be rolled, (intrans.) to roll’ as a thematic verb derived from an adjective *\*k<sup>u</sup>olh<sub>1</sub>imd<sup>h</sup>eh<sub>1</sub>-* or *\*k<sup>u</sup>olh<sub>1</sub>imd<sup>h</sup>h<sub>1</sub>o-* ‘rolling’ and ultimately traces it back to a PIE support-verb construction *\*k<sup>u</sup>olh<sub>1</sub>im d<sup>h</sup>eh<sub>1</sub>* ‘to make rolling(s), (intr.) to roll, to revolve’. The nominal host (*\*k<sup>u</sup>olh<sub>1</sub>i-*) of the construction would be the action noun derived from the PIE root *\*k<sup>u</sup>elh<sub>1</sub>* ‘to revolve, to turn around, to roll’ (cf. OIA √*car* ‘to move, to go’; Av. √*car* ‘to go’; Gr. πέλομαι *pelomai* ‘to move, to become, to be’; Lat. *colo* ‘to cultivate, to inhabit, to dwell’; HLuw. *k(u)wali-* ‘[trans.] to turn’; LIV: 386–388). Since this derivation implies a disputed Greek sound change (*\*ND<sup>h37</sup>* > *ND* “in bestimmten Kontexten”),<sup>38</sup> Balles does not rule out the possibility of the support verb *\*deh<sub>3</sub>* ‘to give’ as an alternative.

However, there are some considerations which make the assumption of PIE *\*k<sup>u</sup>olh<sub>1</sub>im d<sup>h</sup>eh<sub>1</sub>* rather doubtful. Since PIE *\*k<sup>u</sup>elh<sub>1</sub>* was a so-called<sup>39</sup> inattentive (i.e. no second actant is directly affected by the action) and syntactically intransitive verb, its derivative, the action noun *\*k<sup>u</sup>olh<sub>1</sub>i-*, if it ever existed, must have had an intransitive semantics too (‘turning, revolving’ and not transitive ‘rolling sth,

<sup>36</sup>I would like to point out that my argumentation concerning this particular example has nothing to do with the broader question whether non-accusative NP+V or Prepositional Phrase + Verb (PP + V henceforth) phrases in general should be acknowledged as belonging to the category of light-verb or support-verb constructions (as the *Funktionsverbgefüge*-tradition claims: cf., e.g., Germ. *zur Aufführung bringen*) or not.

<sup>37</sup>In our case this would be preceded by the place assimilation *\*md<sup>h</sup>* > *\*nd<sup>h</sup>*.

<sup>38</sup>For this reason, Schutzeichel (2014: 128–129) too considers Balles’ etymology doubtful.

<sup>39</sup>On the terminology see, e.g., Gotō (1987: 25–29); Kümmel (2000: 6–7).

turning sth'). Accordingly, the alleged PIE support-verb construction  $*k^u olh_1 im d^h eh_1$  (or  $*deh_3$ ) would have had to be equivalent to an intransitive simplex verb (cf. above: 'to make rolling(s), [intr.] to roll, to revolve'), which means that the transitive active inflection of the Greek verb κλίνδω *kulindō* would have to be regarded as secondary to its intransitive middle κλίνδομαι *kulindomai*. Otherwise, we would have to suppose that the PIE support-verb construction expressed causativity (i.e. 'to make a/the rolling [of sth./sb. else]; to roll sth./sb.'). Nevertheless, even if these considerations are left aside, the construction still only has the status of a *Transponat* and its assumption for PIE is completely uncertain.<sup>40</sup>

### 5.3 PIE $*b^h sméh_2 d^h eh_1$ ?

Garnier (2006) investigates the etymology of Greek ψάμαθος *psamat<sup>h</sup>os* 'dust, sand' and traces it back to a PIE adjective  $*b^h sm-h_2-d^h h_1-ó-$  'reduced to powder, pulverised', which he then derives from an earlier phrase  $*b^h s-m-éh_2 d^h eh_1$  'to reduce to powder, to pulverate; lit. to make into powder'.<sup>41</sup> Although Garnier himself refers to this syntagm as a periphrastic causative formation (with  $*d^h eh_1$  meaning 'placer, mettre dans tel état' Garnier 2006: 82) and not as a support-verb construction, later it is classified as such by Schutzeichel (2014: 109). In my opinion, the classification of Schutzeichel is incorrect and the alleged PIE phrase  $*b^h s-m-éh_2 d^h eh_1$ , if it ever existed, would have to be regarded as a copula-predicative construction, in which the verb  $*d^h eh_1$  functions as a factitive copula ('to make sth. into sth.') and not as a support verb.

The function of  $*d^h eh_1$  in the collocation supposed by Garnier is thus equivalent to the use of OIA  $\sqrt{kr}$  'to make, to do' in various constructions (Ittzés 2016: 41–44 with references). Beside the very frequent double-accusative construction and the so-called *cvi*-construction,<sup>42</sup> mention has to be made of the use of  $\sqrt{kr}$

<sup>40</sup>Beekes (EDG I: 800) regards κλίνδω *kulindō* as a borrowing from Pre-Greek and adds that "the word is hardly IE".

<sup>41</sup>In Garnier's opinion,  $*b^h s-m-éh_2-$  'siltage, dust, rubbish' is a so-called collective from  $*b^h os-mó-$  'rubbing, sweeping', a derivative of the PIE root  $*b^h es$  'to crumble, to sweep'. He thinks that Proto-Germanic  $*sam\delta az$  'sand' has the same origin as the Greek noun, although it has undergone some additional analogical changes.

<sup>42</sup>The *cvi*-construction is a largely grammaticalised analytic predicative construction of Old Indo-Aryan, consisting of an invariable and synchronically opaque nominal form in *-i* (occasionally *-ū*), which is called *cvi* by the 4th-century Indian grammarian Pāṇini, and one of the two copula verbs ( $\sqrt{kr}$  'to make, to do' or  $\sqrt{bhū}$  'to become'): e.g., *nava-* 'new' → *navī*  $\sqrt{kr}$  'to make new, to revive'; *yuvan-* 'new' → *yuvī*  $\sqrt{bhū}$  'to become young'. For an exhaustive treatment, see Balles (2006).

in combination with predicative instrumentals (cf. Balles 2006: 245–247) and adverbs (Hoffmann 1976b).<sup>43</sup>

With many predicative adverbs, the “Allerweltsverbum” or “passepartout” verb  $\sqrt{kr}$  can be regarded as a colloquial replacement for other verbs with a richer meaning, such as  $\sqrt{dhā}$  ‘to put, to place’ and a few more (cf. also Hoffmann 1976a: 350 with n. 4). Consider, for instance,  $gúhā \sqrt{kr}$  ‘to hide, to conceal’ (Ṛgveda (RV) 4.18.5ab) beside  $gúhā (ni+)\sqrt{dhā}$  (Ṛgveda (RV) 3.56.2d; Ṛgveda (RV) 10.5.2d).<sup>44</sup> Another illustrative example is  $āré$  ‘far’  $\sqrt{kr}$  ‘to put away’ (Ṛgveda (RV) 8.61.16c) beside  $āré$  in combination with  $\sqrt{dhā}$  (Ṛgveda (RV) 8.47.13d),  $\sqrt{bādh}$  ‘to press, to repel, to remove’ (Ṛgveda (RV) 9.66.19c), or  $\sqrt{yu}$  ‘to keep away, to ward off’ (Ṛgveda (RV) 10.63.12c).

An instrumental origin is the most plausible explanation for the whole category of the Old Indo-Aryan *cvi*-formation as well (Schindler 1980: 391–393; Widmer 2005: 190–191; Balles 2006: passim, esp. 287–292; cf. n. 42 above).

It is worth mentioning briefly in this context that PIE constructions consisting of a predicative instrumental and a (factive) copula are thought to be underlying also PIE stative-factive pairs, such as the ones reflected in Latin *caleo* ‘to be hot’ / *calesco* ‘to grow hot’ vs. *calefacio* ‘to make hot’, *rubeo* ‘to be red’ / *rubesco* ‘to turn red’ vs. *rubefacio* ‘to make red’ etc. (see, first of all, Jasanoff 2002/2003). Remember, however, that according to the definition adopted in this paper, the factitive member (\*‘to make sth. [being with] hot[ness]’ etc.) of such putative PIE pairs was not a support-verb construction.

It has also been suggested (Meier-Brügger 1980; Bader 1986: 475 n. 38; EDL: 61; EDG I: 43) that Gr. αἰσθάνομαι *aist<sup>h</sup>anomai* ‘to perceive, apprehend’ and Lat. *audio* ‘to hear’ also go back to a PIE phrase consisting of a predicative adverb followed by the root \**d<sup>h</sup>eh<sub>1</sub>*. The first member of the collocation is now generally thought to have been the adverb known from Ved. *āvīṣ*, Av. *āuuiš* ‘manifestly’; cf. also OCS (*j*)*avě* ‘evidently’. I must add, however, that following this etymology (\*‘to make manifest’), I would expect the verb to mean something like ‘to show’ rather than ‘to perceive’. Meier-Brügger (1980: 290), no doubt having in mind the deponency of the Greek verb αἰσθάνομαι *aist<sup>h</sup>anomai*, gives the meaning of the original collocation as ‘*sich* etwas offenbar machen’ (emphasis mine), but even that implies, in my view, some intention on behalf of the subject, which

<sup>43</sup>Several adverbs that are used predicatively as well go back to instrumental case forms themselves. On the instrumental origin of “Präverbien” in *-ā*, see Hoffmann 1976a (especially 353). In *gúhā* ‘secretly’, note the adverbial accent shift as compared to instrumental singular *guhā* Ṛgveda (RV) 1.67.6b of *gúh-* ‘hiding place’ (Jasanoff 2002/2003: 144; Hoffmann 1975: 116 n. 2.).

<sup>44</sup>Note that  $\sqrt{dhā}$  in such cases is not necessarily a synonym of  $\sqrt{kr}$  as suggested by Jasanoff (2002/2003: 144–145), but might rather be interpreted as a verb with its full lexical meaning.

is generally not characteristic of the process of perceiving or hearing. Furthermore, I have to stress that  $*d^b e h_1$  would not have functioned as a support verb in this phrase, therefore it is not immediately relevant to the present issue of the univerbation of support-verb constructions.

Finally, another related phenomenon, which has no support-verb construction origin, is the Latin adjective type in *-idus*, which has been interpreted as the nominalisation (*-idus* <  $*-id^h o-$  <  $*-i(h_x)-d^b h_1 o-$ ) of a PIE syntagm consisting of the instrumental of *i*-stem adjectival abstracts +  $*d^b e h_1$ ; e.g. *rubidus* ‘red, suffused with red’ < \*(made with) red(ness)’ (Balles 2006: 222–225; cf. Nussbaum 1999; Hackstein 2002b: 13–14, 16–17; Balles 2003).

## 6 The evaluation of the case studies

In spite of the popularity of this kind of approach in recent scholarship, there are virtually no examples in which the univerbation of an earlier support-verb construction in one or more daughter languages could definitely be proven by means of the syntagmatic evidence surviving in others.<sup>45</sup> This is, of course, not to deny that there could be and are indeed cases in which the assumption of univerbation seems in fact to be the best solution (such as, e.g., the origin of the German weak preterit). However, we should remember that in such potential examples the univerbation must have taken place in all probability well after the break-up of the parent language and not within PIE or Pre-PIE itself.

As will have become clear, the application of the “univerbation hypothesis” when looking for PIE (or Pre-PIE) support-verb constructions has several pitfalls. Moreover, it seems to me improbable also on theoretical grounds that so many, if not all, PIE roots with an extension  $*-d^h-$  and so many lexemes of the daughter languages containing a potential reflex of PIE  $*d^h$  would ultimately go back to earlier support-verb constructions with  $*d^b e h_1$ .<sup>46</sup> Nevertheless, the typological considerations mentioned above make it reasonably certain that PIE did have

<sup>45</sup>An exception to this is furnished by  $*k r é d(s) d^b e h_1$ , but as I have argued above, it may be an idiomatic expression rather than a support-verb construction in the strict sense. Schutzeichel (2014: 116) claims that Vedic *nāmadhā-* ‘name-giver’ (cf. Scarlata 1999: 254–255) is a univerbation of the PIE phrase  $*h_1 n é h_3 m̃ d^b e h_1$ , which survives as a syntagm in several daughter languages (cf. (7) with initial  $*h_3$ ), but this assumption is unnecessary. It could simply be a dependent determinative compound (*tatpuruṣa* in the native Indian tradition) built according to the productive patterns of nominal composition (cf., e.g., *somapā-* ‘drinking soma’ etc.). The same applies to Celtic *\*bardos* ‘singer, poet’ beside OIA *gíras* √*dhā* ‘to offer praise songs’ from PIE  $*g^h r h_2- d^b e h_1-$ .

<sup>46</sup>Not to speak about other hypothesised univerbated support verbs, such as  $*g^b e h_1$  (cf. n. 16) or  $*d e h_3$  (cf. above in the main text).

support-verb constructions, among them obviously some (or possibly most) with the support verb *\*d<sup>h</sup>eh<sub>1</sub>*. However, instead of positing an actually existing (Pre-)PIE support-verb construction in each and every case, I consider the following or a similar scenario theoretically more plausible (cf. Schutzeichel 2014: 145–150).

Some support-verb constructions may actually have been univerbated at an early stage of the proto-language. The resulting formations may have been re-analysed<sup>47</sup> as stems containing a suffix-like extension added to what could be reinterpreted as a verbal root instead of the original nominal (root noun) host of a support-verb construction. Such extensions could then acquire a specific grammatical function and become a productive morpheme (e.g. *\*-d<sup>h</sup>-* as a factitive-causative (?)<sup>48</sup> suffix), which may later have been added to other verbal roots with the same function. Finally, the original function of the suffix may have become opaque, which could result in the emergence of secondary roots with apparently meaningless enlargements. This means that several examples mentioned in the secondary literature have probably never been support-verb constructions at all, but were formed only at a later stage of the process just described. This means that, for instance, we had better not posit support-verb constructions such as *\*ǵ<sup>h</sup>ey<sub>3</sub> deh<sub>3</sub>* ‘lit. to give a pour(ing)’ merely on the basis of the “enlarged” root-variant *\*ǵ<sup>h</sup>ey<sub>3</sub>* beside *\*ǵ<sup>h</sup>ey<sub>3</sub>* (cf. (8) above).

## 7 The function of Proto-Indo-European support-verb constructions

In my opinion, the main, but unfortunately inevitable shortcoming of all the studies that reconstruct PIE support-verb constructions is that due to the lack of original texts in PIE, not to mention native speakers with their own grammaticality judgements, nothing can be said with certainty about the function of these constructions within the language system of PIE and about their properties as compared to related simplex verbs. These could namely be detected only by means of corpus-based empirical investigations (cf. Storrer 2006 or Kamber 2008 with respect to German).

Mainly on the basis of typological parallels from living languages, it is usually assumed, insofar as this question is dealt with at all (see, e.g., Balles 2006:

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<sup>47</sup>On reanalysis in general see, e.g., Hopper & Traugott (2003: 50–68).

<sup>48</sup>However, this assumption seems to be incompatible with the observations of Rothstein-Dowden (2022: 3 n. 3 and passim), who argues that the dental-aspirate presents of PIE were originally intransitives.

37; Schutzeichel 2014: 79), that support-verb constructions existed in the proto-language first of all as stylistic-pragmatic variants or technical terms.<sup>49</sup> The reason for this hypothesis is that, on the one hand, simplex verbs constituted an open word class with a fairly large number of elements in the proto-language and on the other hand, PIE formed denominative verbs and expressed various grammatical categories (such as aspect, *Aktionsart*, tense, or mood) fundamentally by means of morphological devices, i.e. bound affixes, thus there seems to have been no need for support-verb constructions in such functions. Accordingly, support-verb constructions may have acquired the function of expressing aspect or *Aktionsart* in the daughter languages only secondarily (cf. Balles 2006: 38 n. 85; Schutzeichel 2014: 79).

However, as I have argued in previous studies on support-verb constructions of Vedic Old Indo-Aryan (Ittzés 2013, 2016), the existence of separate tense-aspect stems in a language does not necessarily mean that support-verb constructions may not have specific grammatical functions related to these categories, mainly in the context of suppletion. An illuminating example is the Vedic support-verb construction *śruṣṭīm √kr* ‘to obey; lit. to do obeying’ beside the simplex verb *√śruṣ* ‘to obey’, which are in complementary distribution (the former is inflected in the aorist and perfect, the latter exclusively in the present-stem forms) and thus make up a suppletive paradigm in terms of the category of aspect (Ittzés 2013: 107–108; Ittzés 2016: 61–65).

Another example of the same phenomenon is *vimócanaṃ √kr* ‘to unyoke; lit. to do unyoking’, which is attested in Vedic with middle inflection of the support verb (*vimócanaṃ kṛṇute* Ṛgveda (RV) 3.30.12d).<sup>50</sup> This feature stands in contrast to the active-only inflection of the agentive-attributive, transitive simplex verb *vi+√muc* ‘to unyoke’.<sup>51</sup> As I have argued elsewhere (Ittzés 2013), this support-verb construction probably supplies the missing (direct-reflexive) mid-

<sup>49</sup>To support this assumption, Balles (2006: 38) also refers to the fact that the category of *cvi*-constructions, which is in a certain sense similar to that of support-verb constructions (cf., however, above on their differences), included some agricultural terms too. She also mentions the PIE phrase *\*gʷr̥h₂- dʰeh₁-* (cf. n. 33 and 45 above), which “könnte ein Fachterminus für das Verfassen und Vortragen von Preisliedern auf eine Gottheit gewesen sein”.

<sup>50</sup>With its single attestation, the support-verb construction *vimócanaṃ kṛṇute* has to be considered as a nonce-formation. However, since it apparently followed the same suppletive strategy as other similar constructions, it is in this sense not isolated in Early Vedic.

<sup>51</sup>The only real exception to this is *ví mucadhvam* Ṛgveda (RV) 1.171.1d. However, as I have demonstrated in Ittzés (2013: 114–116), this aorist imperative middle form is only metrically conditioned and therefore irrelevant to the evaluation of the support-verb construction *vimócanaṃ kṛṇute*.

dle of *vi+√muc* in Early Vedic, i.e. the two can be regarded as making up a suppletive paradigm with respect to verbal diathesis.<sup>52</sup>

Having in mind what has been said here on the status of support-verb constructions in the grammatical system of languages with a tense-aspect system, due to lack of relevant evidence, we necessarily have to remain agnostic about the functions of such constructions in the Proto-Indo-European parent language. They might have been merely stylistic or pragmatic variants of etymologically related simplex verbs, but they might have had some specific grammatical function in the language system.

## 8 Conclusion

To conclude, it seems to be fairly certain from a typological point of view that Proto-Indo-European did in fact have support-verb constructions consisting of verbal nouns (prototypically action nouns) and verbs of a rather broad lexical meaning, such as ‘to put, to set’, ‘to give’, ‘to go’, the most prominent of which was in all probability the root *\*d<sup>h</sup>eh<sub>1</sub>*.

However, when it comes to reconstructing specific PIE support-verb constructions, we immediately have to face several serious issues, the most fundamental of which is the virtually complete lack, or at least extreme rarity, of comparable constructions built with cognate elements in the daughter languages, which in my view would be a necessary prerequisite for the comparative reconstruction of PIE support-verb constructions. In my view, the assumption of “open-slot constructions” for the proto-language or the application of the notion of “lexical substitution” in the reconstructions also have their own pitfalls and run counter to various theoretical and methodological principles of comparative historical linguistics.

<sup>52</sup>A further example is possibly furnished by the construction consisting of the support verb *√kr* and the deverbal noun *\*héd/łana-* ‘angering, making sb. angry’ (a derivative of the causative *hed/łáya-* ‘to make angry’ of the fientive-inattentive, intransitive root *√hīd/hed* ‘to be or get angry’), which is attested in the preventive prohibitive (on this notion, cf. Hoffmann 1967) clause *má karma devahélanam* ‘let us not make the gods angry; lit. let us not do the angering of the gods’ Ṛgveda (RV) 7.60.8d. It seems that in this case the support-verb construction was employed to supply the synthetic reduplicated causative aorist of the verb *√hīd/hed* (*\*má devāñ jīhīlāma*; note that *\*má hełáyāma* would be inhibitive as per Hoffmann), which was apparently still absent from the verb’s paradigm in Early Vedic and was formed only later in Old Vedic (aorist stem *jīhīla-*; cf. 3rd singular aorist indicative *ájihīdat* Atharvaveda (Śaunakiya recension) (AVŚ) 12.4.8b = Atharvaveda (Paippalādarecension) (AVP) 17.16.7b, but with quite different semantics; see Gotō 1987: 351 n. 866). On this example see Ittész (2015: 343–345) and (slightly revising the earlier account) Ittész (2016: 108–111) (also on possible counterarguments).

The nowadays popular approach based on what I would call the “univerbation hypothesis” also fails to produce solid and falsifiable results. Moreover, even if specific support-verb constructions could somehow be reconstructed for the proto-language, we would still be unable to discover their original function in the language system due to the impossibility of corpus-based empirical investigations.

## Abbreviations

Arm.	Armenian	MBr.	Middle Breton
Av.	Avestan	MW	Middle Welsh
C	Consonant	N	Noun
Corn	Cornish	NHG	New High German
EDG	Beekes 2010	NIL	Wodtko et al. 2008
EDL	de Vaan 2008	O	Object
EDHIL	Kloekhorst 2008	OCS	Old Church Slavonic
EDPC	Matasović 2009	OHG	Old High German
Eng.	English	OIA	Old Indo-Aryan
EWAia	Mayrhofer 1992/2001	OIr.	Old Irish
Fr.	French	P	Plosive / stop
Germ.	German	Pal.	Palaic
GEW	Frisk 1960/1972	PGr.	Proto-Greek
Goth.	Gothic	PIE	Proto-Indo-European
Gr.	(Ancient) Greek	PIIr.	Proto-Indo-Iranian
H	Laryngeal	PP	Prepositional Phrase
Hitt.	Hittite	REW	Meyer-Lübke 1935
HLuw.	Hieroglyphic Luwian	SCr.	Serbo-Croatian
It.	Italian	Toch.	Tocharian
KEWA	Mayrhofer 1956/1980	Umbr.	Umbrian
Lat.	Latin	V	Verb
Lith.	Lithuanian	Ved.	Vedic (Old Indo-Aryan)
LIV	Rix et al. 2001	VIA	Werba 1997
LIVAdd	Kümmel 2024		

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## Chapter 2

# Annotating light-verb constructions for Human Language Technologies: The PARSEME-el corpus

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Light-verb constructions (LVCs) are idiosyncratic lexical items, pervasive in many languages. Being complex-verb predicates, they comprise a verb that is light in that it contributes little or no meaning to the phrase and a predicative noun, that is, a noun that has semantic arguments. LVCs—like other Multiword Expressions (MWEs)—are still an obstacle to many natural language processing tasks. Therefore, the existence of quality datasets is a prerequisite for their efficient processing. This chapter introduces a Modern Greek corpus annotated for MWEs, including LVCs. The chapter details the annotation methodology, the guidelines, challenges, and results, highlighting Greek LVC properties. The corpus is available for research via LINDAT/CLARIAH-CZ under a Creative Commons License.

Ως μία κατηγορία πολυλεκτικών εκφράσεων (ΠΛΕ), οι δομές με υποστηρικτικό ρήμα, δηλαδή περιφραστικά ρηματικά κατηγορήματα που αποτελούνται από ένα απολεξικοποιημένο ρήμα και ένα κατηγορικό ουσιαστικό, αποτελούν πρόκληση για διάφορες εφαρμογές Επεξεργασίας Φυσικής Γλώσσας. Τα σώματα κειμένων αποτελούν προϋπόθεση για την αυτόματη αναγνώρισή τους σε κείμενο. Στο κεφάλαιο αυτό παρουσιάζεται σώμα κειμένων της Νέας Ελληνικής, το οποίο φέρει επισημείωση κατάλληλη για την αναγνώριση ΠΛΕ—μεταξύ των οποίων και δομών με υποστηρικτικό ρήμα. Παρουσιάζεται η μεθοδολογία χειροκίνητης επισημείωσης, με έμφαση στις προδιαγραφές, οι προκλήσεις και τα αποτελέσματα της έρευνας. Το σώμα κειμένων είναι διαθέσιμο στην ερευνητική κοινότητα μέσω του αποθετηρίου LINDAT/ CLARIAH-CZ με άδεια χρήσης Creative Commons.



## 1 Introduction

Support- or light-Verb constructions<sup>1</sup> have been the focus of attention in natural language processing (NLP henceforth) under the umbrella term Multi-Word Expressions (MWEs henceforth). The latter term encompasses a large variety of linguistic phenomena that range from nominal compounds (i.e., *cat’s eye*), phrasal verbs (i.e., *give up*, *take off*), multiword terms (i.e., *black hole*, *lithium chloride*), and multiword Named Entities (i.e., *United Kingdom*, *United Arab Emirates*) over light-verb constructions (i.e., *give a lecture*, *take a shower*), to idiomatic expressions (i.e., *spill the beans*).

According to Sag et al. (2002: 190), MWEs are “idiosyncratic interpretations that cross word boundaries (or spaces)” thus posing challenges to downstream NLP applications. These challenges are due to their lexical, syntactic, semantic, and even pragmatic idiosyncrasies (Gross 1982, Baldwin & Kim 2010). In this regard, considerable effort has been made within the research community to efficiently process them in running text and thus to improve the accuracy of downstream NLP tasks, for example dependency parsing (Nivre & Nilsson 2004), probabilistic parsing (Arun & Keller 2005, Korkontzelos & Manandhar 2010, Constant et al. 2019), or applications such as Machine Translation (Ren et al. 2009, Carpuat & Diab 2010, Bouamor et al. 2012, Zaninello & Birch 2020). Other applications that benefit from automatic Verbal Multi-Word-Expression (VMWE henceforth) identification include automatic text simplification (Kochmar et al. 2020, Gooding et al. 2020, Shardlow et al. 2021), social media mining (Maisto et al. 2017), abusive and offensive language detection (Caselli et al. 2020), and language learning and assessment (Paquot 2019).

In this context, their classification in linguistically grounded categories is useful —a task that poses serious theoretical as well as practical difficulties. Verbal fixed or idiomatic expressions (VIDs henceforth), that is, word sequences that constitute a distinct semantic unit or a complex lexical unit are characterised as having a compound phonological, lexical, and morphological structure and a non-compositional meaning (Gross 1982). Similarly, support-verb or light-verb constructions (LVCs henceforth), that is word combinations that consist of a support or light verb and a predicative noun, that is, a noun that has semantic arguments, are ambiguous and variable across texts.

To facilitate training and testing of tools for MWE processing in running text, datasets are needed that model their properties - especially for languages other

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<sup>1</sup>The dataset is accessible via the LINDAT/CLARIAH-CZ repository under a Creative Commons Licence: <http://hdl.handle.net/11372/LRT-5124>.

than the well-resourced ones including English, and even French, German, Spanish, and Chinese. In this regard, considerable effort has been made within the research community to model them in language resources –both lexica and corpora –in a way that facilitates their robust computational treatment (Constant et al. 2019).

This chapter presents work aimed at developing a corpus of Modern Greek<sup>2</sup> annotated with LVCs in the context of modelling VMWEs in running text. Note that we opt for the term light-verb construction as opposed to the term Support-Verb Construction which is used in the title of the volume since it corresponds to the notation adopted in our annotation scheme. The focus will be on the multilingual setting within which the annotation was performed, the typology of VMWEs that applies to Modern Greek, and the criteria set for classifying candidate VMWEs including LVCs; we will further discuss the methodology adopted for reliably annotating our corpus and the results obtained in terms of the types and properties of LVCs identified in the corpus. We will also report on the inter-annotator agreement focusing on the fuzzy or ambiguous instances that fall in between categories posing, thus, a challenge with regard to their identification.

Our contribution is twofold: on the one hand, we briefly present a multilingual – and, thus, to a great extent universal – annotation scheme, and on the other hand, we present the application of this generic scheme to Modern Greek, focusing on LVCs.

The chapter is structured as follows. In Section 2, we present the rationale and scope of our work and we report on the initiative within which corpus annotation took place, including the definition of a light verb (and light-verb construction); in Section 3, we give an account of previous work on light-verb constructions in Modern Greek. We will then present the Greek corpus in Section 4 focusing also on the typology defined and the annotation methodology adopted (Section 5). In Section 6, we discuss our findings in the corpus, and finally, in Section 7, we conclude.

## 2 Rationale and scope

Despite being a phenomenon pervasive in many languages, MWEs present lexical, syntactic, semantic, and even pragmatic idiosyncrasies (Gross 1982, Baldwin & Kim 2010), in a way that is not uniform across languages. This is particularly

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<sup>2</sup>Modern Greek (EL) –henceforth simply Greek –is the official language spoken in Greece and Cyprus (1453- ).

true for VMWEs of all types, which, by default – like their simple-word counterparts – are used to denote the event, state of affairs, or action conveyed in utterances or text segments. As a result, their robust identification and classification in running text is of paramount importance for downstream NLP applications. Similarly to VIDs, LVCs pose challenges to NLP across the following lines:

- their meaning is semi-compositional in that it cannot be computed simply based on the meaning of their parts and the way they are combined. For example, the LVC (en) to **give** a **stare** does not imply a *giving* event but rather a *staring* one. This is possibly a pitfall for natural language understanding tasks, mainly those that involve the semantic interpretation of sentences, for example, event identification and Information Extraction;
- there is hardly any cross-lingual equivalence between LVCs, thus rendering their automatic translation problematic. As shown in (1) and (2) the predicative nouns (el) **απόφαση** *apofasi* ‘decision’ and its translational equivalence (en) **decision** select different light verbs in the two languages, namely (el) **παίρνω** *perno* ‘take’ and (en) **make** respectively. The same holds for the German LVC (de) **Vortrag halten** (lit. ‘to hold a lecture’) ‘to lecture’ and its English counterpart (en) **to give a lecture**; here, word-order discrepancies are also attested.

(1) **παίρνω** **απόφαση**  
*perno* *apofasi*  
take.PRS.1SG decision.SG.ACC  
‘to decide’

(2) to **make** a **decision**  
‘to decide’

- when it comes to corpus occurrences, they appear in a variety of surface forms, including long-distance dependencies, as shown in (3) and (4):

(3) the **effort** he **made** to remain calm

(4) he **gave** himself one last word of **advice**.

- moreover, besides an idiosyncratic meaning or reading, literal occurrences of MWEs are also attested –a phenomenon referred to as the *literal-idiomatic ambiguity* (Savary et al. 2019); a case of such ambiguity is shown in (5) and (6).

- (5) Mary *took* a *photo* of the kids playing
- (6) He *took* the *photo* I left on the table.

In this respect, the automatic identification of LVCs in running text is hindered despite the sound linguistic criteria that have been defined. Therefore, our corpus was developed in the framework of PARSEME,<sup>3</sup> a collective effort to create multilingual harmonised language resources, namely annotated corpora and dedicated tools that would serve as a workbench for training and evaluating tools for the robust identification of VMWEs in running text (Savary et al. 2017) and for as many languages as possible.

Over the years, the corpus has been expanded and made available to the research community via frequent releases (Savary et al. 2018, Ramisch et al. 2018, 2020, Savary et al. 2023). Ultimately, the goal was to build a universal framework of VMWE detection taking into account the special characteristics of each language. The working hypothesis, therefore, was that given a universal framework for annotating a linguistic phenomenon in corpora, the idiosyncrasies of discrete languages can be captured. The annotation of the Greek section of the PARSEME initiative seeks to test whether this hypothesis holds.

## 2.1 The setting: annotation scope

The task of annotating VMWEs in texts can be defined across three axes: (a) spotting all the occurrences of VMWEs in the texts, (b) marking their lexicalised elements as opposed to the non-lexicalised ones, and (c) assigning a tag to the VMWE identified that signals the category it falls into. Therefore, the task is conceived of as a classification one and, in this context, LVC is one of the categories that are foreseen in our typology and the relevant annotation scheme.

Although the exact definition of an LVC varies in the literature, we use the following operational definition: an LVC is a verb-complement pair in which the verb serves as the syntactic head of the phrase, but contributes no lexical meaning and is, therefore, “light”; by contrast, the semantic content of the phrase is retrieved from the complement, being, thus, the semantic head of the expression. The verb is semantically “bleached” contributing to the whole only morphological person, number, tense, and morphological aspect; on the contrary, the complement is a *predicative noun*, that is, one that denotes an event or state, as shown

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<sup>3</sup>Parsing and multi-word expressions. Towards linguistic precision and computational efficiency in natural language processing (PARSEME) IC1207.

in (7); the noun is sometimes headed by a preposition whereas, less often, the complement is an adjective as in (8) and (9) respectively.

- (7) *κάνω*            *ερώτηση*  
*kano*            *erotisi*  
make.PRS.1SG question.SG.ACC  
'to ask'
- (8) *προβαίνω*      *σε διαγραφή*      *χρεών*  
*proveno*          *se διαγραfi*          *chreon*  
proceed.PRS.1SG to delisting.SG.ACC debt.PL.GEN  
'to delist debts'
- (9) *κάνω*            *γνωστό*  
*kano*            *gnosto*  
make.PRS.1SG known.SG.ACC  
'to make known'

Two are the main issues to be taken into account here: (a) the definition of a predicative noun, i.e., a noun that is used to predicate the whole phrase, and (b) the operational definition of the light verb. We will elaborate further on the annotation scheme and the framework within which our work is placed in the next sections.

## 2.2 Annotation scheme

As in any annotation project, the most critical component of our linguistic annotation project was the definition of the annotation scheme that defines the labels and associated features to be linked with the appropriate annotation unit (Ide 2017). This was not a trivial task for our project, –a task that was further hindered by the need to cover languages from different language families. To overcome this obstacle, an experimental procedure was adopted: a set of unified annotation guidelines across many languages from various genera were elaborated which were, then, tested against each language separately.

The outcome was the definition of a VMWE typology that provides the following categories of VMWEs: (a) *Light-verb constructions* (LVCs), which comprise a light verb and a predicative noun or adjective (sometimes headed by a preposition); (b) *Verbal Idioms* (VIDs) which are primarily identified based on semantic properties, i.e., non-compositionality, but also on the grounds of their lexical, syntactic, and pragmatic idiosyncrasies; (c) *Verb-Particle Constructions* (VPCs),

which comprise a verb head and a particle; (d) *Inherently Reflexive Verbs* (IRVs), that is, constructions comprising a verb head and a reflexive pronoun that bear a non-compositional meaning (i.e., (en) to **find oneself** in a difficult situation); and (e) *Multi-Verb Constructions* (MVCs), i.e., constructions with two verb heads, for example, (en) to **let go**, to **make do**.

In our annotation scheme, LVCs are further distinguished into two subcategories, namely, LVCs in which the verb is semantically totally *bleached* (LVC.full), as in (10), and LVCs in which the verb adds a *causative meaning* to the noun (LVC.cause), as shown in (11).

(10) to **give** a **lecture**

(11) to **grant** someone **rights**  
to **give** someone a **headache**

Similarly, the category of VPC is also divided into two subcategories, namely, *fully non-compositional VPCs* (VPC.full), in which the particle changes the meaning of the verb, as opposed to *semi non-compositional VPCs* (VPC.semi), in which the particle adds a partly predictable but non-spatial meaning to the verb; examples of both subcategories are provided in (12) and (13) respectively.

(12) to **do in**

(13) to **eat** something **up**

Of these, LVCs and VIDs are universal categories, in the sense that they are valid for all the languages participating in the initiative. Similarly, VPCs, IRVs, and MVCs are quasi-universal categories, in the sense that they are valid for some language groups or languages but non-existent or very exceptional in others.

The project also allows languages to define their own, language-specific categories, defined for a particular language in a separate documentation. Finally, to give an account of structures of the type **to come across** and **to rely on**, the optional, experimental category *Inherently Adpositional Verb* (IAV) has been proposed, which (if admitted by a given language) would be considered in the post-annotation step.

The guidelines provide an ordered set of linguistic tests that need to be applied in a series; these tests are visualised as a diagram – called a decision tree – that helps annotators move through its paths to identify and categorise VMWEs – especially in difficult or ambiguous cases.<sup>4</sup> The tests are accompanied

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<sup>4</sup>The latest guidelines can be found here: [https://parsemefr.lis-lab.fr/parseme-st-guidelines/1.3/?page=050\\_Cross-lingual\\_tests/010\\_Structural\\_tests\\_\\_LB\\_S\\_RB\\_](https://parsemefr.lis-lab.fr/parseme-st-guidelines/1.3/?page=050_Cross-lingual_tests/010_Structural_tests__LB_S_RB_).

by language-specific examples, whereas language-specific guidelines are also set for specific cases. Each language or language variety is marked in a different colour or shade. The Greek examples appear in pink.

Tools for handling the data, for the visualisation of the annotations, or for the semi-automatic inspection and manual validation of the data have also been made available to the corpus developers (language leaders). Using these tools ensures to a great extent the quality of the annotations performed.

To render the corpus as uniform as possible across all the participating languages, the pre-processing at the levels of lemma, part-of-speech (POS) tagging, and dependency annotation adheres – for most of the languages – to the Universal Dependencies (UD) guidelines (Nivre et al. 2020). Ultimately, conformance to a widely accepted annotation scheme ensures the development of harmonised corpora.

After all, the primary motivation that guided the creation of this highly multi-lingual corpus was to boost the VMWE-aware technology across languages. Therefore, a suite of Shared Tasks, that is, competitions for tools aimed at the identification and classification of VMWEs have been organized, and as one might expect the datasets developed have been used as training and testing data. The outcome of this effort is a rich ecosystem, an infrastructure that is as universal as possible taking also idiosyncrasies of each language into account.

### 3 Previous work: LVCs in Greek

Since initially introduced in the work of Jespersen (1965) for English, the notion of a light verb, that is, a verb that is void of lexical meaning, and therefore its predicational contribution in structures like the ones depicted in (14) is not that of a main verb, has received a lot of attention cross-linguistically. In English, the verbs *have*, *give*, *take*, *make*, *do*, and *get* inter alia, enter in constructions with predicative nouns to form the so-called light-verb constructions.

- (14) *have* a *try* / a *look* / a *shave*  
*give* a *glance* / a *look* / a *hint*  
*make* a *bolt* / a *plunge* / a *try*

Support- or light-verb constructions have received a lot of attention within the linguistic and computational linguistic community. Arguably, light verbs (and LVCs) are in nature a universal phenomenon, exhibiting, however, several idiosyncrasies in each language in terms of lexical, syntactic, and semantic properties (Grimshaw & Mester 1988, Butt 2003, 2010).

The first systematic attempts towards providing a formal definition of support- or light-verb constructions are found in the works of Gross (1982) and Giry-Schneider (1987) – among others – within the Lexicon-Grammar framework. In an attempt to create a universal Deep-Syntactic paraphrasing system, Mel’čuk (1982, 1996, 2004) tries to describe support or light verbs in the lexicon in terms of Lexical Functions based on French data; later on, he defines lexemic collocations (i.e., *pay a visit*) as one of the universal categories of phraseological expressions based also on evidence from Russian (Mel’čuk 2023).

In this regard, LVCs are a well-studied area in theoretical linguistics. Our work builds on the findings of previous work on MWEs and LVCs in Modern Greek. Within the Lexicon-Grammar framework introduced by Gross (1975), the properties of VMWEs in Modern Greek were defined initially by Fotopoulou (1993) who developed Lexicon-Grammar tables in which lexical, syntactic, and distributional properties of Greek VIDs were encoded. Within the same framework of Lexicon-Grammar, Moustaki (1995) gives an account of the so-called “frozen” expressions with the support verb (el) εἶμαι *ime* ‘to be’ in Modern Greek, focusing on structures with prepositions and/or predicative nouns in the genitive or dative cases, and providing their properties at the levels of morphology and syntax.

Along the same lines, support verb constructions in Modern Greek with (el) δίνω *dino* ‘to give’, and (el) παίρνω *perno* ‘to take’ are presented in Tsolaki (1998). Based on the assumption that the semantic nature of different classes of nominal predicates controls the presence of different kinds of intensifying support verbs and that support verbs intensify a different parameter when they actualise an action, Gavriilidou (2004) gives an account of LVCs in Greek that denote emotion.

Previous studies have set the criteria for the identification of LVCs, and have revealed their properties (Sklavounou 1994, Sfetsiou 2007) also from a computational perspective. Cross-language comparative studies seek to capture the universal nature of LVCs (Fotopoulou & Giouli 2018). In this context, and in an attempt to develop Lexical Resources for NLP applications, Fotopoulou & Giouli (2015) try to develop a battery of formal linguistic tests to delineate support-verb constructions from verbal idiomatic expressions, and to apply them to Greek and French data, focusing on ambiguous cases. These formal tests (i.e., substitution, modification, coordination, etc.) help us classify VMWEs with verbs that are not normally considered light, as LVCs. Thus, verbs like (el) τρέφω *trefo* ‘to feed’ and (el) χαίρω *chero* ‘to enjoy’ are considered light when combined with predicative nouns denoting emotion or stance, as shown in (15) and (16).

- (15) *τρέφω*      *ελπίδες*  
*trefo*      *elpides*  
feed.PRS.1SG hope.PL.ACC  
'to have hope, to hope'
- (16) *χαίρω*      *σεβασμού*  
*chero*      *sevasmu*  
enjoy.PRS.1SG respect.SG.GEN  
'to be respected'

## 4 Corpus description

In contrast to corpora for other languages, the development of the Greek corpus spans consecutive releases due to a lack of substantial (human) resources. Over the years, the corpus has been gradually enhanced and enriched, and consecutive editions were released. The main design criteria for the textual material –set up for all languages centrally –were that texts should be written in the original rather than be translated and should be free from copyright issues, so as to be distributed under an open license.

The corpus comprises two main sub-corpora: (a) a collection of texts manually collected from various sources on the web; and (b) a part of the Greek Dependency Treebank (GDT henceforth) (Prokopidis & Papageorgiou 2017). The first sub-corpus was compiled manually by collecting raw data manually from the electronic version of major Greek newspapers (ΚΑΘΗΜΕΡΙΝΗ, ΠΡΩΤΟ ΘΕΜΑ, ΤΑ ΝΕΑ, Athens Voice, etc.), news portals as well as Wikipedia articles; moreover, texts from news blogs (gova stiletto, tromaktiko, etc.) and life-style and gossip news texts (espresso, etc.) were also collected; the latter bear a rather informal register. We managed to cover a variety of text genres, including newswire texts, press releases, opinion and popular science articles in various domains like medicine, physics, finance, etc., whereas the GDT also includes parliamentary debates.

The so-collected textual data were pre-processed at the lemma, POS and dependency annotation levels; all these annotations were performed automatically using UDpipe (Straka & Straková 2017) and the latest models for the Greek language. Due to time and scope constraints, no manual annotation of the pre-processing stages has been performed. To somehow remedy this shortcoming and further enrich our corpus with data manually annotated at the aforementioned levels of linguistic analysis, we also included part of the Greek Dependency Treebank that has been manually annotated and rendered compatible with

the Universal Dependencies initiative (Nivre et al. 2020). In essence, this is our so-called GOLD part of the corpus – GOLD in all levels. It should be noted that within the NLP community, the term GOLD STANDARD – or simply GOLD – corpus refers to quality text collections manually annotated, usually by experts. The annotation at both the VMWE level and at the levels of POS and dependency annotation can be viewed via Grew-match (Guillaume 2021) a dedicated tool for visualising and querying annotated corpora, as shown in Figure 1.

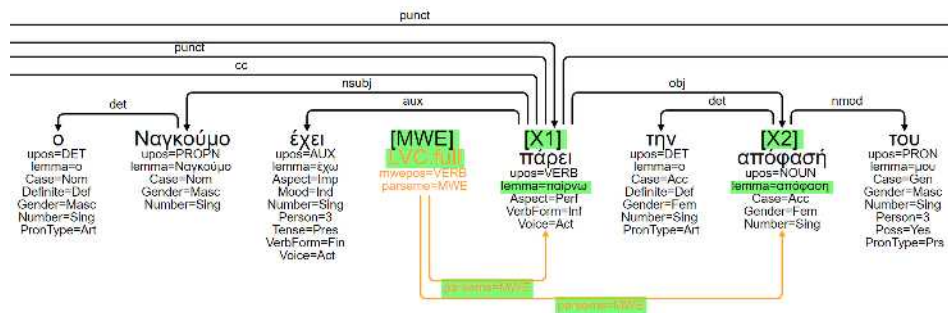


Figure 1: GrewMatch: the annotated VMWE is highlighted.

Using the tools that were made available for all the teams, we managed to improve the quality of the corpus by spotting discrepancies between annotators, and adjudicating as appropriate, ultimately providing annotations that are consistent throughout the corpus.

In the latest release (version 1.3) of the PARSEME corpus, the Greek section (PARSEME-el) amounts to 698,424 tokens or 26,175 sentences (Savary et al. 2023) in which a total of 8,508 VMWEs have been identified of which LVCs are the most frequently occurring category – see Table 1.

Since the corpora were primarily developed to be used as a dataset for the Shared Tasks, the corpus for each language was split into three subsets: the training, development, and evaluation subsets. The former is provided by the Shared Task organisers to the participants to train their MWE identification systems, whereas the development sub-corpus is used to perform model selection and fine-tuning; the evaluation of the systems is performed against the test sub-corpus. Splitting into the three sub-corpora is performed based on specific criteria, and in a way that ensures that there is a balance between the development and test parts of the corpus in terms of VMWEs not previously seen (Ramisch et al. 2020, Savary et al. 2023).

Table 1: The PARSEME-el corpus in numbers for the latest releases.

	Release 1.2	Release 1.3
LVC.full	4,696	5,293
LVC.cause	122	179
VID	2,297	2,842
VPC.full	119	143
MVC	48	51
Total	7,282	8,508

## 5 Annotation methodology

Like all the corpora for all the languages, the Greek corpus was manually annotated for VMWEs as per the guidelines. It should be noted that before annotation proper, a two-phase pilot annotation was performed: during pilot annotation phase 1, two trained linguists, native speakers of the Greek language with extensive experience in annotation tasks and VMWEs alike, worked towards the development and testing of the universal guidelines; during annotation pilot phase 2, extended annotation of naturally occurring text took place and resulted in the consolidation of the universal guidelines. After the guidelines were consolidated, language-specific examples were elaborated as appropriate to help annotators assess difficult or ambiguous cases.

Annotation proper was performed with the aid of the FoLiA Linguistic Annotation Tool (FLAT), a dedicated web-based multi-user and open-source annotation platform (van Gompel & Reynaert 2013). FLAT allows for the annotation of non-contiguous structures and is customised to support the file format adopted by PARSEME. Following the specifications set early in the lifecycle of the project, in this annotation task, all the occurrences of VMWE categories were annotated in the text, as shown in Figure 2. Over the years, expert annotators – all native speakers of the language – contributed to the task of annotation.

Initially, annotations were performed by each annotator separately; annotators then met to discuss difficult and ambiguous cases. After this initial training period was over, annotators worked separately.

However, the task of manually annotating data is always demanding and prone to all sorts of errors. We calculate the degree of inter-annotator agreement in order to assess the consistency or reliability of annotations made by different annotators for the same spans of text. This measure helps us understand the

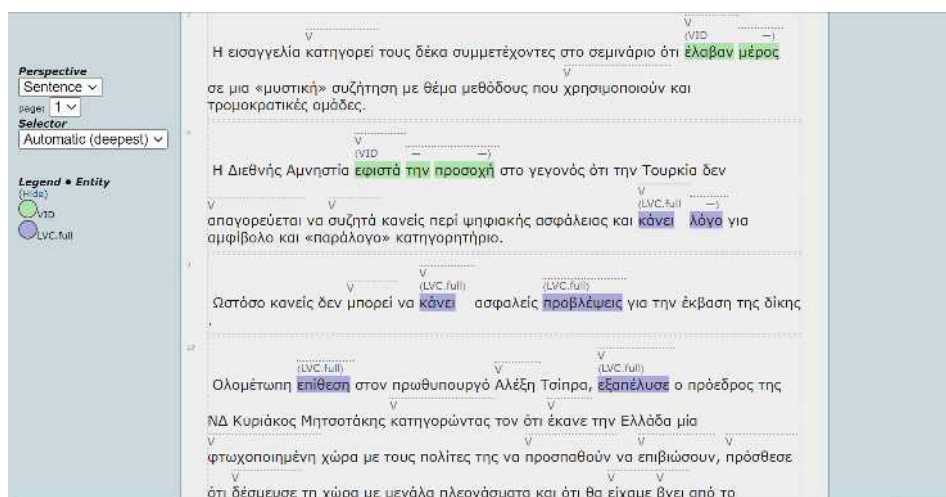


Figure 2: Annotating VMWEs in FLAT.

level of agreement between annotators when labeling data. Ultimately, it is a measure that shows the extent to which multiple annotators can make the same annotation decision for a certain category.

The inter-annotator agreement rate gives us an estimate of how clear the annotation guidelines are, how uniformly the team of annotators understood the guidelines, and how reproducible the annotation task is. High inter-annotator agreement indicates that annotators are interpreting the guidelines consistently and are reaching similar conclusions enhancing the reliability of the annotated data. On the other hand, low inter-annotator agreement suggests inconsistencies or discrepancies in the annotations, which may signal the need for clarifying guidelines or additional training for annotators to improve the quality of the annotations.

Therefore, to ensure the quality of the annotated corpus, a fragment of the data was annotated by all the team members who viewed the data independently. Then, the agreement between annotators was measured using a standard metric, namely Cohen's kappa co-efficient (Carletta 1996, Artstein & Poesio 2008) using the VMWEs for which annotators agree on the span of the VMWE.

The annotation *span* or *scope* is determined by the lexicalised or fixed elements that can form a separate word. Therefore, determiners, modifiers, auxiliaries, and particles are included in the markable only if they are lexicalised. As shown in (17), the determiner (el) *την tin* 'the' and the pronoun (el) *μου tu* 'my' are not included in the span of the VMWE because they are not fixed (or integral) parts

of the expression. Identifying the lexicalised elements of an expression is not always a trivial task.

- (17) *πήρα*      *την*      *απόφασή*    *μου*  
*pira*      *tin*      *apofasi*    *mu*  
 take.PST.1SG the.SG.ACC hope.SG.ACC my.SG.GEN  
 ‘I made my decision, I decided.’

Additionally, we used the F-score metric, since it is particularly relevant in applications that are primarily concerned with the positive class. Note that in our annotation project, negative cases were not annotated.<sup>5</sup> The F-score measures a system’s accuracy and is calculated as the harmonic mean of a system’s precision and recall values. It is used to evaluate binary classification systems, which classify examples into ‘positive’ or ‘negative’. In our case, the F-score is measured based on the annotations of pairs of raters. One rater is considered the one providing the GOLD annotation (as senior or expert annotator) and the other is the one providing the system’s output. The F-score was 68.6 and Cohen’s kappa was equal to 0.632 for the Greek data (Savary et al. 2018) – one of the best scores among the participating languages. In this way, the quality of our corpus is ensured.

Apart from LVCs, the Greek section of the PARSEME corpus bears annotations for verbal idioms, as well as verb-particle and multi-verb constructions. In Modern Greek, we retained the two universal VMWE categories, namely VIDs (verbal idioms) which have an entirely non-compositional meaning as in (18), and LVCs of both sub-categories. In this regard, cases in which the light verb contributes to the meaning of the whole only morphological features (i.e., tense, grammatical aspect, number, and person) are annotated as LVC.full as in (19); on the contrary, they are annotated as LVC.cause once the light verb is causative, in that it indicates that the subject of the verb is the cause or source of the event or state expressed by the predicative noun; these cases are expected to be less idiomatic than other VMWEs and can be understood as complex predicates with a causal support verb, as shown in (20).

- (18) *βάζω*      *λάδι*      *στη*      *φωτιά*  
*vazo*      *ladi*      *sti*      *fotia*  
 put.PRS.1SG oil.SG.ACC to.the.SG.ACC fire.SG.ACC  
 ‘make things even worse’

<sup>5</sup>Given a candidate VMWE, a positive case is when it is considered idiomatic and is therefore annotated, whereas a negative case is when the same candidate is used literally.

- (19) *κάνω*            *επίσκεψη*  
*kano*            *episkepsi*  
 make.PRS.1SG visit.SG.ACC  
 ‘to pay a visit, to visit’
- (20) *προκαλώ*    *καταστροφή*  
*prokalo*        *katastrofi*  
 cause.PRS.1SG destruction.SG.ACC  
 ‘to cause destruction, to destroy’

Our language-specific annotation scheme includes two semi-universal categories, namely MVC (Multi-Verb Constructions) and VPC (Verb-Particle Constructions). MVCs in Greek are phrases that comprise two verbs, a *vector verb* that is the functionally governing verb (*V-gov*) and a *polar verb* that functions as the dependent verb (*V-dep*); in a dependency-based syntactic analysis, *V-gov* might be seen as the head and *V-dep* as the dependent and they have a shared subject. Ultimately, the two verbs function as a single predicate with non-compositional semantics, as shown in (21).

- (21) *απορώ*            *και εξίσταμαι*  
*aporo*            *ke eksistame*  
 wonder.PRS.1SG and get-surprised.PRS.1SG  
 ‘to question myself’

As VPCs, on the other hand, we have annotated those verb + adverb constructions, in which the adverb shares characteristics with particles in languages like English, shown in (22).

- (22) *βάζω*        *κάποιον*            *μέσα / βάζω*        *μέσα* *κάποιον*  
*vazo*        *karion*            *mesa / vazo*        *mesa karion*  
 put.PRS.1SG someone.SG.ACC in / put.PRS.1SG in    someone.SG.ACC  
 ‘to cause someone to go bankrupt’

As we have already mentioned, the annotation guidelines are universal but were adopted in a way that the idiosyncrasies of each language are taken into account. We opted for retaining the category of VPCs, based on linguistic tests that proved that the adverbs in question exhibit most, if not all, of the properties that particles in other languages have (Giouli et al. 2019).

As argued in Giouli et al. (2024), these adverbs are not morphologically derived from adjectives, and they have two distinct functions: as adverbs denoting time or

location, they are used as modifiers; when combined with prepositions, they form complex prepositions (Holton et al. 1997), for example (el) *μπροστά από brosta apo* (lit. ‘in-front from’) ‘in front of’, (el) *μέσα σε mesa se* (lit. ‘in to’) ‘in’, etc. Therefore expressions of the form (el) *πέφτω μέσα pefto mesa* (lit. ‘fall in’) ‘to guess correctly’ and (el) *βάζω μπρος vazo bros* (lit. ‘put in-front’) ‘to start’ were classified as VPCs.

In terms of their semantics, Greek VPCs were identified as non-compositional in meaning. As previously shown (Savary et al. 2019), these constructions are the most ambiguous. Depending on the context, they can be used literally and have a fully compositional meaning. In that case, they are not VMWEs. In the remainder, we will focus on the annotation of LVCs.

## 6 LVCs in the Greek section of the PARSEME corpus

### 6.1 The data

When it comes to annotation, there are two major questions that annotators need to tackle: (a) what to annotate, and (b) how to annotate. The former question – “what to annotate” – has to do with the linguistic phenomenon that we need to capture, which also comes with the extra flavour of “how much” to annotate. The latter brings to mind the question of the markable extent that is always crucial – especially when computational aspects are entailed. In other words, we need to specify the string length and the elements that must be annotated.

In the case of VMWEs in general (and LVCs in particular), we annotate as integral parts all lexicalised elements of the expression that form a separate word. We consider lexicalised those elements that have some sort of morphological, syntactic, or lexical idiosyncrasy or fixedness. For instance, determiners and modifiers of the predicative nouns are not lexicalised, and therefore, they are not part of the markable; similarly, auxiliaries or other dependents of the light verb are not included in the annotation, as shown in (23).<sup>6</sup>

- (23) ο                    **Ναγκούμο έχει**                    **πάρει**    την                    **απόφασή**  
ο                    *Nagoumo echi*                    *pari*    *tin*                    *apofasi*  
the.SG.NOM **Nagoumo** have.PRS.3SG **take**.INF the.SG.ACC **decision**.SG.ACC  
του.  
*tu*  
his.3.SG  
‘Nagoumo has decided’

<sup>6</sup>According to the notation followed, the lexicalised elements of the expression that are marked in boldface are annotated.

The question of “what to annotate” is tackled by the annotation guidelines that we have already mentioned and the operational definition of LVCs provided. This definition obviously includes two elements as integral parts of an LVC: a verb head with void semantics (the syntactic head) and a predicative noun that serves as the semantic head of the expression.

This entails that phrases that comprise *aspectual variants* of light verbs, i.e., verbs that contribute an aspectual meaning to the expression once they substitute the light verb proper were not taken into account and not annotated – a decision that has received criticism (Fotopoulou et al. 2021). In theoretical linguistics, these aspectual variants are usually studied under the umbrella term of LVCs (Gross 1982, Giry-Schneider 1987). However, there are discrepancies between the two which we wish to keep for later study. In this respect, the expression (el) *δίνω απάντηση dino arantisi* (lit. ‘give answer’) ‘to answer’ is annotated as an LVC, whereas its aspectual variant (el) *παίρνω απάντηση perno arantisi* (lit. ‘take answer’) ‘to receive an answer’ is not.

Once again, the data prove the assertion that LVCs form a very productive category of highly idiosyncratic expressions, in that predicative nouns select their syntactic head instead of verbs selecting their dependents, see (24).

- (24) *παίρνω* *απόφαση* / \**κάνω* *απόφαση*  
*perno* *arofasi* / *kano* *arofasi*  
 take.PRS.1SG decision.SG.ACC / make.PRS.1SG decision.SG.ACC  
 ‘to make a decision, to decide’

In our corpus, the most frequently encountered light verbs are (el) *κάνω kano* ‘to make, to do’, *έχω echo* ‘to have’, *παίρνω perno* ‘to take’, and *δίνω dino* ‘to give’. Other light verbs include (el) *ασκώ asko* ‘to exert’, *βάζω vazo* ‘to put’, *βγάζω vgazo* ‘to take.out’, *βγαίνω vgeno* ‘to go.out’, *θέτω theto* ‘to put, to set’, *καταβάλλω katavalo* ‘to give’, *λαμβάνω lamvano* ‘to get’, *κρατάω kratao* ‘to keep’, *παρέχω parecho* ‘to provide’, *αναλαμβάνω analamvano* ‘to undertake’, *αποδίδω apodido* ‘to give’, *διαπράττω diapratto* ‘to commit’, *διενεργώ dienergo* ‘to carry out’, *διεξάγω diexago* ‘to conduct’, *εκπονώ ekpono* ‘to conduct, to carry out’, *εκτελώ ektelo* ‘to execute, to carry out’, and *έρχομαι erchome* ‘to come’.

Alternative light verbs also occur with the same predicative noun, often signalling a shift in the register. In most cases, pairs of verbs like *παίρνω perno* (‘take’) and *λαμβάνω lamvano* (‘take’), or *κάνω kano* (‘make’) and *ασκώ asko* (‘exert’) are variants, the latter bearing a formal register, as attested in (25) and (26).

- (25) *παίρνω* *απόφαση* / *λαμβάνω* *απόφαση*  
*perno* *apofasi* / *lamvano* *apofasi*  
 take.PRS.1SG decision.SG.ACC / take.PRS.1SG decision.SG.ACC  
 ‘to make a decision, to decide’

- (26) *κάνω* *κριτική* / *ασκώ* *κριτική*  
*kano* *kritiki* / *asko* *kritiki*  
 make.PRS.1SG criticism.SG.ACC / exert.PRS.1SG criticism.SG.ACC  
 ‘to criticise’

Similarly, some sort of lexical variation is due to the predicative noun used – notably in the case of LVCs with loan words (neologisms) and terms. For instance, the predicative nouns (el) *εκφοβισμό* *ekfovismo* ‘bullying’ and *μπούλιγκ* *bullying* ‘bullying’ in (27) and (28) are synonymous – the latter being a loanword that has been adopted in Greek (target language) as a transliterated form of the term *bullying* in English (source language). The loanword is also attested in the corpus as non-transliterated, keeping, thus, the orthography of the source language.

- (27) *κάνω* *εκφοβισμό* / *ασκώ* *εκφοβισμό*  
*kano* *ekfovismo* / *asko* *ekfovismo*  
 make.PRS.1SG bullying.SG.ACC / exert.PRS.1SG bullying.SG.ACC  
 ‘to bully’

- (28) *κάνω* *μπούλιγκ* / *κάνω* *bullying*  
*kano* *bullying* / *kano* *bullying*  
 make.PRS.1SG bullying.SG.ACC / make.PRS.1SG bullying.SG.ACC  
 ‘to bully’

The phenomenon of *language mixing* which “is understood as involving lexical items and grammatical features from two languages that appear in one sentence, [...] can either be word internal, [...] or involve lexical elements of two languages”, has been studied for bilingual speakers of many languages/language pairs, including Greek Alexiadou (2017: 166).

In our news corpus, this type of mixing is attested in texts that belong to specific domains. For instance, LVCs with loanwords such as (el) *κάνω σουτ* *kano sut* (‘make shoot’) ‘to shoot’ in the domain of SPORTS is used in parallel with the derived verb (el) *σουτάρω* *sutaro* ‘to shoot’. Similarly, LVCs of the form (el) *κάνω πρέσιγκ* *kano pressing* (‘make pressing’) ‘to press’ are attested in the domain of FINANCE. Finally, LVCs of this type are abundant in the sub-corpus of lifestyle texts. In the next sections, we will elaborate on the linguistic properties of LVCs as they are attested in the corpus.

## 6.2 Linguistic properties of LVCs

Our data reveal the linguistic properties of LVCs. As in many other languages, most of our LVCs are morphologically related to a full verb that can ‘replace’ them without a significant change in meaning. Therefore, (el) *δίνω υπόσχεση* *dino iposchesi* ‘to give a promise’ can be replaced by the verb *υπόσχομαι iposchome* ‘to promise’. According to the guidelines, this was the primary linguistic test used while annotating. Where a morphologically related verb was not found, we checked for a synonymous one to use. To this end, the linguistic tests of lexical substitution or lexical and phrasal paraphrasing were applied.

A high degree of variation was also attested in the corpus, namely morphological, syntactic, and lexical variation. As it has been noticed in many studies, for example, (Butt 2010), the predicative noun may be used in the plural:

- (29) *δίνω*            *υπόσχεση*    / *δίνω*            *υποσχέσεις*  
*dino*            *iposchesi*    / *dino*            *iposchesis*  
 give.PRS.1SG promise.SG.ACC / give.PRS.1SG promises.PL.ACC  
 ‘to make a promise, to promise’

Syntactic variants of LVCs are also attested quite often in the corpus - the most frequent one being LVCs that enter in diathesis alternations (passive, causative-inchoative), as shown in (30) and (31).

- (30) *έλαβα*            *μία δύσκολη απόφαση*  
*elava*            *mia diskoli*    *apofasi*  
 take.PST.1SG one difficult    apofasi.SG.ACC  
 ‘I made a tough decision’
- (31) *ελήφθησαν*        *δύσκολες*            *αποφάσεις*  
*elifθisan*            *diskoles*            *apofasis*  
 take.PASS.PST.3PL difficult.PL.NOM apofasi.PL.NOM  
 ‘Tough decisions were made’

Note that in some cases, different verbs signal diathesis alternation. LVCs which comprise certain pairs of light verbs combined with the same predicative noun signal syntactic alternations (i.e., diathesis alternation, causative-inchoative alternation, etc.). This is mainly true for pairs of verbs like (el) *βγάζω vgazo* ‘to take out’ and (el) *βγαίνω vgeno* ‘to be taken out’, or (el) *κάνω kano* ‘to do, to make’ and (el) *γίνομαι ginome* ‘to be made’. They predominately differ in the grammatical features and the syntactic function that the predicative noun assumes.

For example, the LVCs (el) *βγάζω συμέρασμα* *vgazo symperasma* (lit. ‘take-out.PRS.1SG conclusion.SG.ACC’) ‘to conclude’ and (el) *βγαίνει συμέρασμα* *vgeni symperasma* (lit. ‘is-taken-out.3SG conclusion.SG.NOM’) ‘it is concluded’ enter in the causative-inchoative alternation. In the former, the lexicalised element is the argument in object position (and following the rules of the language, it is realised as a Noun Phrase (NP henceforth) in the accusative case); in the latter, the predicative noun is the subject and is realised as an NP in the nominative, as shown in (32) and (33).

- (32) Οι πολίτες βγάζουν τα συμέρασματά  
*I polites vgazun ta simperasmata*  
 The.PL.NOM citizen.PL.NOM take.out.PRS.3SG the.PL.ACC conclusion.PL.ACC  
 τους.  
*tus*  
 their3SG  
 ‘Citizens come to a conclusion.’

- (33) Βγαίνει το συμέρασμα ότι η χώρα  
*vgeni to simperasma oti i chora*  
 go.out.PRS.3SG the.SG.NOM conclusion.SG.NOM that the country  
 κινδυνεύει.  
*kindinevi*  
 is-in-danger  
 ‘It is concluded that the country is in danger.’

According to the universal guidelines, nominal groups (headed by nominal complements taken from the prototypical LVCs) with relative clauses are also annotated. As a matter of fact, the structure in (34) is also used as a test for deciding whether a candidate LVC should be annotated or not. The test is shown in the decision tree of the guidelines.

- (34) η απόφαση που πήραμε  
*i apofasi pu pirame*  
 the.SG.NOM decision.SG.NOM that take.PST.1PL.PRES  
 ‘the decision we made’

LVCs in running text sometimes appear as constructions in which the predicative nouns share the same verb head, as shown in (35). These LVCs are annotated separately.

- (35) η                   κυβέρνηση                   έχει                   τη βούληση και την  
*i                   kivernisi                   echi                   ti vulisi                   ke tin*  
the.SG.NOM government.SG.NOM have.PRS.3SG the volition and the  
**ικανότητα**  
*ikanotita*  
ability  
‘the government wants and can’

Insertion of other elements, for example, modifiers, and determiners, are a serious drawback not only to systems that seek to automatically identify VMWEs in text but also to human annotators. In effect, long-distance dependencies, that is, dependencies that need not hold between strictly linearly adjacent words or morphemes, are problematic to annotators as well. In most cases, LVCs are non-continuous constructions; sometimes, the elements of the LVC are completely discontinuous.

### 6.3 Ambiguous cases

The distinction between LVCs and fixed or idiomatic expressions is not always straightforward and the limits between the two are often fuzzy. According to Fotopoulou & Giouli (2015) among others, there exists a scalar passage between the two types of VMWEs. The annotation guidelines provide robust linguistic tests that guide annotation. After all, the task of annotation - any annotation - is a deterministic one; decisions need to be made.

Sometimes, synonymous VMWEs fall into different categories based on the noun: if the noun is predicative, the expression is tagged as an LVC, as shown in the examples. We consider predicative a noun that denotes an event, a situation, or a sentiment, etc. (Gross 1975, 1982). VIDs, on the other hand, are defined as having a non-compositional meaning that cannot be deduced from the meaning of their parts (Gross 1982). According to this principle, the noun (el) ρεζίλι *rezili* ‘ridicule’ in (36) is predicative, whereas the noun (el) ρόμπα *roba* ‘robe’ in (37) is not.

- (36) **κάνω**                   κάποιον **ρεζίλι**                   (LVC)  
*kano                   kapion rezili*  
make.PRS.1SG someone ridicule.SG.ACC  
‘to ridicule’

- (37) *κάνω* κάποιον *ρόμπα* (VID)  
*kano* *karion* *roba*  
make.PRS.1SG someone robe.SG.ACC  
'to ridicule'

Literal occurrences of MWEs, also referred to as their literal readings or literal meanings, have received considerable attention equally from the linguistic and computational linguistic communities. In an experiment run for German, Greek, Basque, Polish, and Brazilian Portuguese, (Savary et al. 2019) almost 11.5% of the VMWE occurrences in the Greek corpus were found to be literal readings of the VMWE surface forms – a phenomenon referred to as the *literal-idiomatic ambiguity*.<sup>7</sup> Literal occurrences of LVCs were not annotated.

## 7 Conclusion and outlook for future research

We have presented a corpus of Modern Greek that has been annotated for VMWEs within the framework of a highly multilingual initiative that currently covers 26 languages and language varieties. Before presenting our work, the definition of LVCs in our approach was given. Our work is primarily intended to serve applications in the field of natural language processing, where LVCs are generally treated under the umbrella term MWEs, and to prepare a corpus for Modern Greek that is compatible with multi-lingual initiatives. From another perspective, the corpus and the accompanying infrastructure can be used for the study of LVC-related phenomena.

Future work has already been envisaged towards enriching the corpus with new data and extending the annotation scheme to new grammatical categories, for example, nominal or adverbial MWEs. Of great importance in the future are the adjudication of the pre-processing levels, so as to have a corpus resource that is GOLD at all the levels of linguistic analysis. This will allow us – among other things – to provide the research community with a corpus that is usable for linguistic analyses.

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<sup>7</sup>For a definition of the literal-idiomatic ambiguity, see Savary et al. (2019).

## Abbreviations

FLAT	oLiA Linguistic Annotation Tool
IAV	Inherently Adpositional Verb
IRV	Inherently Reflexive Verbs
LVC	Light Verb Construction
MVC	Multi-Verb Constructions
MWE	Multiword Expression
NLP	Natural Language Processing
NP	Noun Phrase
POS	Part-of-Speech
UD	Universal Dependencies
VMWE	Verbal Multiword Expression
VID	Verbal Idiomatic Expression
VPC	Verb-Particle Construction

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## **Part II**

# **Between comparative concept and descriptive category: The syntax-semantics interface**



## Chapter 3

# What can be used in Greek and Latin? A comparative study of the support verbs *χράομαι* *k<sup>h</sup>raomai* and *utor*

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In this contribution, I offer a comparative approach to support-verb constructions in Greek and Latin. Despite their differences, both languages employ verbs meaning ‘to use’ as support verbs in combination with a vast set of nouns. The objectives of this contribution are: (i) to observe the semantic-syntactic domains in which these verbs operate; (ii) to analyse the properties and functions of these support-verb constructions, together with their distribution; and (iii) to compare these support-verb constructions in Greek and Latin. The conclusions are reinforced by a quantitative analysis of the data. I conclude that *χράομαι* *k<sup>h</sup>raomai* ‘to use’ and *utor* ‘to use’ are both used as support verbs in Ancient Greek and Latin, and that they alternate with aspectual and causative support-verb extensions.

En esta contribución, ofrezco un acercamiento comparativo a las construcciones de verbo soporte en griego y latín. A pesar de sus diferencias, ambas lenguas utilizan verbos con el significado de ‘usar’ como verbos soporte en combinación con un gran número de sustantivos. Los objetivos de esta contribución son: (i) observar los dominios semánticos y sintácticos en que operan estos verbos; (ii) analizar las propiedades y funciones de estas construcciones de verbo soporte, así como su distribución; y (iii) compararlas en griego y latín. Las conclusiones vienen apoyadas por un análisis cuantitativo de los datos. Concluyo que *χράομαι* *k<sup>h</sup>raomai* y *utor* se usan como verbos soporte en griego antiguo y latín y que alternan con extensiones de verbo soporte aspectuales y causativas.



## 1 Introduction

Support-verb constructions (SVCs henceforth)<sup>1</sup> in Greek and Latin have been the subject of several papers by the members of successive research projects in Spain (Baños 2018b, Jiménez López 2016, 2021, Jiménez Martínez 2019, Mendózar Cruz 2020, Tur 2020, Hoffmann 2022),<sup>2</sup> Italy (Tronci 2017, Pompei & Mereu 2019),<sup>3</sup> and the United Kingdom (Fendel 2021, 2023, 2024).<sup>4</sup> The comparative approach taken by some of these contributions (Baños & Jiménez López 2017, 2018, López Martín 2019) has proved productive, since SVCs are frequent in contexts with intense cultural and linguistic exchange and are easily transferred from one language to another (Bowerman 2008, Fendel 2021). The different frequencies of SVCs in Greek and Latin texts have often been highlighted, i.e. Greek texts tend to contain more occurrences of simplex verbs than SVCs, whereas Latin texts show a significantly higher proportion of support-verb constructions (Baños 2015: 229, Jiménez López 2016: 183). Nevertheless, the two also share some similarities.

One of these similarities lies in the use that both languages make of *χράομαι* *k<sup>h</sup>raomai* and *utor* ‘to use’ as support verbs with a surprisingly wide collocative spectrum. Both are often combined with a range of nouns which is difficult to synthesise in a few semantic or lexical labels. In fact, previous papers on *utor* have overlooked this function of the verb, thereby showing astonishment at its wide range of objects (Alonso Fernández 2010, see also Squeri (this volume)).

The objectives of this contribution are: (i) to analyse the properties and functions of the SVCs with *χράομαι* *k<sup>h</sup>raomai* and *utor* (Section 4), together with

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<sup>1</sup>The dataset is accessible here: <http://dx.doi.org/10.5287/ora-n652gamyj>. The Greek and Latin texts have been taken from the *Thesaurus Linguae Graecae* and the *Corpus Corporum* databases. Translations are my own. The examples for SVCs with verbs other than *utor* have been obtained from the *Dictionary of Latin Collocations (DiCoLat)* (Baños & Jiménez López 2024). Some examples for SVCs with verbs other than *χράομαι* *k<sup>h</sup>raomai* have been obtained from the *Dictionary of Greek Collocations (DiCoGra)* (Jiménez López & Baños 2024). The glosses follow the Leipzig Glossing Rules.

<sup>2</sup>The projects are: ‘Interacción del léxico y la sintaxis en griego antiguo y en latín: construcciones con verbo soporte diátesis y aspecto’ (FFI2017-83310-C3-3-P, led by J. M. Baños); ‘Diccionario de Colocaciones Latinas en la Red (DiCoLat)’ (led by J. M. Baños); and ‘Interacción del léxico y la sintaxis en griego antiguo y latín 2: Diccionario de Colocaciones Latinas (DiCoLat) y Diccionario de Colocaciones del Griego Antiguo (DiCoGrA)’ (PID2021-125076NB-C42, led by J. M. Baños and M.D. Jiménez López).

<sup>3</sup>The projects are: ‘Lessico e sintassi in greco antico e italiano’ and ‘Strutture di frase con sintagmi preposizionali predicativi: greco antico, latino e italiano a confronto’, both led by L. Tronci.

<sup>4</sup>The project is: ‘Giving gifts and doing favours: Unlocking Greek support-verb constructions’ (ECF-2020-181, led by V. Fendel).

their distribution by text type and author (Section 5); (ii) to observe the semantic domains in which *χράομαι* *k<sup>h</sup>raomai* and *utor* operate (Section 6); and (iii) to compare these SVCs in Greek and Latin (Sections 4–7). However, my approach to SVCs is different from that of other contributors of this volume (Section 2).<sup>5</sup> To support my analysis, I have used data from two different corpora, one for each language (Section 3). In Section 8, I provide a summary of my conclusions.

## 2 Definition of support-verb constructions

Several different definitions for SVCs have been proposed in the literature. In addition, support verbs (SVs henceforth) have been referred to differently in different languages and the description of their characteristics diverges depending on the language being analysed (Hoffmann 2022: 27). For example, the German concept of *Funktionsverb* ‘functional verb’ is broader than the English *light verb*, the French *verbe support* and the Spanish *verbo de apoyo*. In this contribution, I use the term *support verb* in the more restricted sense (Vivès 1984; Alonso Ramos 2004) and *support-verb extension* in the broader sense (Baños 2014a), that is, collocations that have many characteristics in common with SVCs, but also some distinct properties. The verbs referred to by these expressions are different from auxiliaries in several different ways, but the more obvious is perhaps that auxiliaries are typically used in combination with another verb (*cf.* verbal periphrases, *e.g.* in Bentein 2016). For the purpose of data organisation, I consider SVCs to be a set of different types of verb-noun collocations arranged around a prototype.

For a better understanding of this concept, it is necessary to start with a general definition of *collocation*.<sup>6</sup> Collocations are lexically restricted word combinations that differ from free word combinations because they are fixed in the linguistic norm, and from idioms because they allow for syntactic modification (Corpas 1997: 66, Alonso Ramos 2004: 20–21). In other words, collocations are at a middle point of a *continuum* between free constructions and idioms. In a free

<sup>5</sup>Squeri (this volume) takes into account collocations with *χράομαι* *k<sup>h</sup>raomai* where the noun functions as an object complement, whereas I discard them, and Veteikis (this volume) takes into account collocations with adjectives, while I only include in my analysis verb + noun constructions.

<sup>6</sup>That is the definition of *collocation* that I propose in this paper. Since the appearance of this concept, it has been understood differently by different researchers. Initially, for instance, collocations were merely considered frequent word co-occurrences (Firth 1964, Halliday 1961: 276). However, it was later pointed out that the high co-occurrence of certain items in a sentence was in fact due to the lexical, syntactic, and semantic restrictions of a certain word, which acted as a marker for the higher probability of other items, *i.e.* arguments, prepositions, conjunctions, etc. (Harris 1976).

construction, all the words are chosen by the speaker according to their meaning, and its semantics is a result of the combination of the meanings of all these words. By contrast, the meaning of an idiom does not result from the addition of the meanings of its parts, but rather from social consensus, whereby a combination of words expresses a meaning unrelated to that which the words convey separately. Collocations are partially restricted word combinations: when a speaker wants to say that they have strolled or walked for leisure, they might choose the noun *walk* to build the sentence, but it is the lexical restrictions of *walk* that impose the use of the verb *to take* in *I took a walk*. In other words, it is unidiomatic to say *\*I grabbed a walk* or *\*I did a walk*.

What characterises collocations is that one element (*base word*) is freely chosen by the speaker, while the other (*collocate*) is determined by the base word. For instance, *attention* is *paid* in English, but *gifted* in German (*Aufmerksamkeit schenken*), and *made* in French (*faire attention*). These phrases mean the same in all three languages, but each one takes a different verb to express the same idea. This means that the noun is the semantically chosen element in the sentence, whereas the verb is lexically selected by the noun. That being said, there are several different types of collocations (Baños 2018a). In some cases, both elements – the base and the collocate – retain their original meaning (lexical collocations, such as *to play guitar/piano*), whereas in others, one of the elements undergoes some kind of semantic change, be it de-semanticization or alteration of its original meaning (functional collocations, such as *to give a hug*). Another restriction relates to the lexical specificity of the verb (collocate): collocates may indeed be very widely applicable with a wide set of bases (in general collocations, such as *to have a dream*) or be restricted to a certain set of bases (in specific collocations, such as *to commit a crime*).

SVCs are necessarily functional collocations, but they may be either specific or general. For instance, the verb *to give* has a very vague or general meaning, e.g. *to give a hug*, but the verb *to commit*, by contrast, may only be used in the context of crime. This distinction is relevant because it affects the interpretation of the data. If one of the characteristics that is typically used for the identification of collocations is absolute frequency, but a characteristic of specific collocations is lexical restriction, then there is a methodological caveat: not all the collocations are equally frequent and therefore less frequent word combinations also deserve a collocational analysis, even if they do not have a high absolute frequency.

SVCs are a type of verb-noun collocation which consists of a support verb and a predicative noun. A complete definition of the concept is provided in Mendózar Cruz (2015: 7):

[SVCs are] verb-noun phrases in which the predication is largely borne by the noun, an event noun, and in which the verb, devoid of its nuclear function, becomes a ‘predicator’ of the noun, providing it, on the one hand, with the grammatical features which the noun lacks (tense, mood, voice, etc.) and, on the other hand, with the syntactic slots which are required for its semantic arguments (my translation).<sup>7</sup>

This accounts for prototypical SVCs, that is, Alonso Ramos (2004)’s *construcciones con verbo de apoyo* or Vivès (1984)’s *construcciones à verbe support*. The nature of the nouns in these collocations has been subject to debate (Alonso Ramos 2004: 115-129). Before Alonso Ramos (2004), the terms *abstract*, *de-verbal* or *event* were used to describe them. However, none of these terms account for the whole range of nouns that can be found taking part in SVCs: there are SVCs with non-abstract, non-de-verbal, and un-eventive nouns (e.g. *to give ear*). Alonso Ramos (2004: 115) argues that any noun with actants ( $\approx$  arguments) must be considered predicative. The difficulty here lies in the fact that some nouns can be forced into an SVC and assigned actants despite them not originally taking them (see Squeri (this volume)). This is the perspective I adopt in this contribution.

These constructions are often identified and described by means of batteries of tests (Langer 2004, Jiménez López 2016). So, for instance, SVCs have a higher absolute frequency as opposed to free constructions which are usually less frequent. They can be easily replaced by a simplex verb without having their meaning majorly altered – e.g. *to give a hug*  $\approx$  *to hug* –, even though they can be used to add certain nuances that the simplex verb on its own cannot convey, such as intensification or iteration (Jiménez López 2016).<sup>8</sup> They can have the verb removed without majorly altering the meaning of the sentence (nominalisation)<sup>9</sup> – e.g. *Mary gave a hug to Paul*  $\approx$  *Mary’s hug to Paul* – and, very importantly, they have a subject that is co-referential with the first argument of the base noun. That is, in an example such as *Mary took a walk around Camden*, the subject of *took* is the same entity as the first argument (i.e. the Agent) of *walk*.

<sup>7</sup>Original text: ‘Sintagmas verbo-nominales en los que el peso de la predicación recae sobre el sustantivo, un nombre de evento, y donde el verbo, depuesto de su función nuclear, cumple el papel de «actualizador» del nombre, proporcionándole, por un lado, los accidentes gramaticales (tiempo, modo, voz, etc.) de los que la morfología nominal carece y, por otro, las posiciones sintácticas necesarias para la expresión de sus argumentos semánticos.’

<sup>8</sup>Contrast for instance *He walked*  $\neq$  *He took several walks a week*. This iteration cannot be conveyed by the verb alone. If a speaker tried to communicate the same, they might utter something like *He kept walking*, but that is a durative predicate, not an iterative one.

<sup>9</sup>In other words, the semantics of the predicate are not altered if it is nominalised. Removing the verb implies deleting the grammatical information it conveys, such as tense, mood, etc., but the ensemble of words conveys the same meaning as the original sentence.

However, less prototypical SVCs may behave differently and still have a noun predicated by an SV. These are what I call SV-extension constructions (SVECs henceforth).<sup>10</sup> For instance, causative constructions are incapable of complying with the co-referentiality criterion because the subject of the verb is necessarily a Causer or a Force, and the first argument of the noun is often a different entity. So, for instance, CG φόβον ἔχω *p<sup>h</sup>obon ek<sup>h</sup>o* ‘I have fear’ is a prototypical SVC because the subject of ἔχω *ek<sup>h</sup>o* ‘I have’ coincides with the Experiencer of φόβος *p<sup>h</sup>obos* ‘fear’. However, in CG φόβον ποιέω *p<sup>h</sup>obon poieo* ‘I make/cause/provoke fear’, the Experiencer of φόβος *p<sup>h</sup>obos* is different from the entity which causes it, that is, the subject of ποιέω *poieo*.

These causative/non-causative pairs are what have been called *constructions inverses* (Gross 1982) or *converses* (Gross 1989) in the literature. This can be exemplified with Gross (1982)’s case-study of Fr. *donner* ‘to give’ and *recevoir* ‘to receive’, which convey opposed diathetical meanings. Most importantly, G. Gross’ paper reaches three conclusions crucial to this contribution: (i) the notion of SV is broader than generally assumed and includes verbs which are not entirely devoid of meaning; (ii) SVs have a vague meaning, which can be deduced from the arrangement of its complements; and (iii) the meaning of an SV can also be identified by comparing it with other SVs with which it alternates.

With regard to this last point, Jiménez López (2021) case study of CG γίγνομαι *gignomai* ‘to come to be’ is most illustrative: she concludes that γίγνομαι *gignomai* + noun SVCs perform as the lexical passive of ποιέομαι *poieomai* ‘to make’ + noun SVCs. In other words, the comparison between ποιέομαι *poieomai* and γίγνομαι *gignomai* allows her to elucidate the meaning of γίγνομαι *gignomai* as an SV (see Vives Cuesta (2021) for another case study). This is the methodological approach I have taken in my attempt to establish the properties of CG χράομαι *k<sup>h</sup>raomai* and Lat. *utor*.

The same happens with aspectual or perspectival SVECs.<sup>11</sup> When the noun is the subject of the verb, such as in CG φόβος ἐπίπτει *p<sup>h</sup>obos empiptei* ‘fear falls (upon someone)/someone starts to feel fear’, it is impossible to have co-referential arguments. This phrase cannot be replaced by a simplex verb because Greek, as far as I know, does not have a verb to convey the meaning of ‘to start to feel fear’. Instead, φόβος ἐπίπτει *p<sup>h</sup>obos empiptei* would need to be replaced by a different kind of periphrasis, e.g. CG ἄρχομαι φοβεῖσθαι *ark<sup>h</sup>omai p<sup>h</sup>obeist<sup>h</sup>ai*

<sup>10</sup>These less prototypical SVCs have already been addressed in the literature (Anscombe 1995, Gross 1996, 2004, Gross 1998, Baños 2014a).

<sup>11</sup>The term *perspective* refers to the noun which takes the subject position, which has pragmatic implications in the discourse. For instance, it is not the same to say CG ἔχω φόβον *ek<sup>h</sup>o p<sup>h</sup>obon* ‘I have/feel fear’ as φόβος μ’ἔχει *p<sup>h</sup>obos m’ek<sup>h</sup>ei* ‘fear has/owns me/I am controlled by fear’.

‘I start to feel fear’. Since the verb is not entirely devoid of its original meaning because it possesses lexical aspect, it cannot be suppressed without any semantic consequences: the noun alone does not convey the aspectual meaning of ἐμπίπτει *empiptei* ‘it falls/begins’. However, the close relationship of SVECs to SVCs seems undeniable, particularly if we observe the characteristics of the nouns and how they interact with the verbs they take, that is, their collocational patterns. For these reasons, we consider SVECs a sub-type of SVCs which lie closer to free constructions on the continuum from the latter to idioms.

### 3 Quantitative data

In the process of data collection, I have handled two corpora, one for Greek – 1,082,905 words in total – and the other for Latin – 2,534,029 words in total. The Greek corpus has been searched by means of the *Thesaurus Linguae Graecae* database (Pantelia 2024) and the Latin corpus has been taken from the *Corpus Corporum (Latinitas Antiqua)* database (Roelli n.d.), both of which allow for semi-automated searches.<sup>12</sup> In total, I have analysed 1,003 tokens of CG χράομαι *k<sup>h</sup>raomai* – 0.93‰ of the sample – and 1,237 of Lat. *utor* – 0.49‰ of the sample. Out of these occurrences, 457 – 45.56% of the total tokens of χράομαι *k<sup>h</sup>raomai* – included χράομαι *k<sup>h</sup>raomai* as an SV, and 598 – 48.34% of the total tokens of *utor* – included *utor* as an SV. This means that, despite *utor* – be it as a full verb or an SV – being only half as frequent in Latin as χράομαι *k<sup>h</sup>raomai* is in Greek – on a rate of absolute frequency of 0.49‰ in Latin to 0.93‰ in Greek –, both verbs are used as SVs with a similar frequency – 48.34% of the tokens of *utor* and 45.56% of the tokens of χράομαι *k<sup>h</sup>raomai*. In the following sections, I compare both SVs to explain their similarities and differences.

Three types of constructions have been discarded in this analysis. In the first one, χράομαι *k<sup>h</sup>raomai* or *utor* do not govern any complements at all or govern a [+human/] complement. So, for instance, *utor* might be used in the sense of ‘to

<sup>12</sup>The Greek corpus includes the following works: Aeschylus (*Persae, Septem contra Thebas*), Sophocles (*Oedipus Tyrannus, Antigone*), Euripides (*Medea, Electra*), Aristophanes (*Acharnenses, Nubes, Vespaie, Pax, Thesmophoriazusae*), Xenophon (*Hellenica, Memorabilia, Anabasis, Cynegeticus*), Thucydides (*Historiae*), Herodotus (*Historiae*), Lysias (*De caede Eratosthenis, Contra Simonem, In Eratosthenem, In Agoratum*), Demosthenes (*De falsa legatione, Adversus Leptinem, In Midiam, Adversus Androtionem*), Andocides (*De mysteriis, De reditu suo*), Plato (*Euthyphro, Apologia Socratis, Phaedo, Symposium, Phaedrus, Gorgias, Ion, Respublica*) and Aristotle (*Ethica Nicomachea, Historia animalium, Politica*). The Latin corpus includes all the works in the *Corpus Corporum* by the following authors: Cicero, Caesar, Catullus, Martial, Livy, Plautus, Sallust, Tacitus and Terence.

get along (with someone)’. These cases cannot be accounted for as SVCs, since one of the requirements for the existence of an SVC is the combination of the verb with a predicative noun.

The second type of construction is where either *χράομαι* *k<sup>h</sup>raomai* or *utor* take a non-predicative object. So, for instance, in CG *χράομαι ἵππῳ* *k<sup>h</sup>raomai h<sup>i</sup>ppoi* ‘to use/ride a horse,’ the noun is not predicative, and therefore the construction is not considered an SVC. However, certain nouns can be *forced* into a predicative structure and may acquire complements in the process, in which case the construction has been considered. For instance, in CG *χράομαι τροφῇ* *k<sup>h</sup>raomai trop<sup>h</sup>e<sup>i</sup>* ‘to use food/to eat’ an Agent is imposed upon *τροφῇ* *trop<sup>h</sup>e<sup>i</sup>* ‘food’, which is co-referential with the subject of *χράομαι* *k<sup>h</sup>raomai*. A different analysis is not possible because *χράομαι τροφῇ* *k<sup>h</sup>raomai trop<sup>h</sup>e<sup>i</sup>* is never found with the sense of ‘to feed someone else’ due to the morphosyntactic characteristics of the verb.

*Χράομαι* *k<sup>h</sup>raomai* is a *media tantum* verb, i.e., it is only used in the middle voice. This has some syntactic implications, such as its inability to function as a causative verb or to be passivised. This, in turn, means that the *fed* entity is always the subject of *χράομαι* *k<sup>h</sup>raomai*. This collocation is so relevant that an Athenian author indicates that, in Athens, *χράομαι* *k<sup>h</sup>raomai* is sometimes used with the meaning ‘to eat’, even when *τροφῇ* *trop<sup>h</sup>e<sup>i</sup>* is not explicitly mentioned (Xenophon, *Memorabilia* 3.14.6).<sup>13</sup> When *χράομαι* *k<sup>h</sup>raomai* is used without *τροφῇ* *trop<sup>h</sup>e<sup>i</sup>*, it has been discarded because it cannot be considered an SVC. However, the constructions with *τροφῇ* *trop<sup>h</sup>e<sup>i</sup>* are accounted for as SVCs because the noun is made predicative. This is the procedure I have followed with all the data (see Madrigal Acero (2024)).

Thirdly, I have not considered as SVCs the predicates in which the base noun occupied the position of a third argument – an object complement – rather than a second argument.<sup>14</sup> This decision is based on the ambivalence of *χράομαι* *k<sup>h</sup>raomai* and *utor*: since both are clearly not as de-semanticised as other SVs, such as *ποιέομαι* *poieomai* or *facio* ‘to make’, the boundaries between regular uses of these verbs and their uses as SVs are not always clear. However, I have observed

<sup>13</sup>I understand this case as the result of semantic change in the verb after the collocation had become ubiquitous in language. On this type of semantic change, see Jiménez Martínez & López Martín (in preparation).

<sup>14</sup>In these cases, *χράομαι* *k<sup>h</sup>raomai* and *utor* are translated as ‘to use something as something’, e.g. Lat. *his testibus [...] uteretur* ‘that he uses them as witnesses’ (Caesar, *Commentarii belli civilis*, 3,105,1). These constructions seem to be very close to the basic meanings of these verbs: since desemanticization is not very clear, I have opted to leave them out of my survey. However, there are examples of other SVs more similar to SVEs or *Funktionsverben* where the base noun is the third argument of the verb, e.g. Lat. *tenere aliquid memoria* ‘to remember something/to keep something in memory’.

that, in the cases where the base noun is the third argument rather than the second, it is the verb which conveys the predicative force of the phrase, rather than the noun. For some examples, see Plato, *Euthyphro* 6e and Cicero, *In Q. Caecilium Nigrum oratio* 9.

I have considered regular SVCs the instances in which the noun is in the genitive, rather than the accusative, when it is introduced by nouns such as CG εἶδος *eidos* ‘kind’, CG γένος *genos* ‘type’, Lat. *copia* ‘abundance’, Lat. *genus* ‘type’, etc. This is what Koike (2001: 55-60) calls *complex collocations*, that is, a combination of two collocations in a single phrase. For some examples, see Xenophon, *Cynegeticus* 9.7; Aristotle, *Politics* 1342a; Cicero, *Academici libri ab ipso Cicerone postea retractati* 2,16; Cicero, *Pro A. Cluentio Habito oratio* 45.

## 4 Properties and functions of χράομαι *k<sup>h</sup>raomai* and *utor*

As synonyms in languages with many common characteristics, CG χράομαι *k<sup>h</sup>raomai* and Lat. *utor* behave very similarly. However, they also diverge in some points. In this section I review some of the most relevant points to understand their behavior as SVs.

### 4.1 Predicative frames

The predicative frame (PF henceforth) of Lat. *utor* as a full verb has already been addressed by Alonso Fernández (2010). In her paper, she suggests a single PF for *utor* due to the characteristics of the nouns which it takes as an object.<sup>15</sup>

*utor*: [+human/]Agent/Experiencer [ /x/ ]Instrument

It is not reasonable to suggest a different PF for *utor* + [+abstract/] because it is a metaphorical extension of its literal use with a [+concrete/] object. This is self-evident in cases of coordination with [± abstract/] nouns, see (1).<sup>16</sup>

<sup>15</sup>In Alonso Fernández (2010) paper, “x” means that slot can be filled by a noun without any lexical restrictions.

<sup>16</sup>Although in this particular case the use of the abstract *copia* ‘abundance’ might facilitate the coordination of the objects, the base in the collocation *aquae copia* ‘abundance of water’ is in fact *aquae* ‘water’, which is a concrete noun.

- (1) *at Caesaris exercit-us cum optim-a ualetudin-e*  
 but Caesar-GEN.SG army-NOM.SG because best-ABL.SG health-ABL.SG  
*summ-a=que aqu-ae copi-a ute-ba-tur,*  
 greatest-ABL.SG=and water-GEN.SG amount-ABL.SG enjoyed-IMP-3SG  
*tum...*  
 then...  
 ‘But Caesar’s army, since it enjoyed the best health and the greatest  
 amount of water, then, ...’

(Caesar, *Commentarii belli civilis* 3.49.5)

This is unusual behavior for an SV, which is expected to coordinate only objects showing the same characteristics, for instance, predicative nouns can be coordinated with other predicative nouns, but not with concrete nouns. This is the so-called *zeugma* test, on which there is disagreement in the literature (Langer 2004). However, *utor* might allow these *zeugmata* precisely due to its single PF and the metaphorical conceptualisation of the nouns. The same happens with *χράομαι* *k<sup>h</sup>raomai*:

*χράομαι k<sup>h</sup>raomai*: [/+human/]Agent/Experiencer [/x/]Instrument

The same PF can be proposed for the Greek verb, which also takes coordinated objects with different lexical characteristics, see (2):

- (2) οὐ σπονδ-ῃ χρέω-νται, οὐκὶ ἀύλ-ῶ, οὐ στέμμα-σι,  
*u spond-e<sup>i</sup> k<sup>h</sup>reo-ntai uki aul-o<sup>i</sup> u stemma-si*  
 NEG libation-DAT.SG use-3PL NEG flute-DAT.SG NEG garlands-DAT.PL  
 οὐκὶ οὐλ-ῆσι.  
*uki ul-e<sup>i</sup>si*  
 NEG barley.corns-DAT.PL

‘Neither do they perform libations, or use flutes, garlands or barley-corns.’  
 (Herodotus, *Histories* 1.132.4)

This can be explained from a cognitive perspective. Collocations constitute a single unit or *chunk* in the speaker’s mind, whereas an object governed by a verb constitutes two separate units, e.g. a prototypical transitive predicate. This, in turn, implies that due to its more frequent use and its fixation in language, the noun that participates in a collocation with Lat. *utor* or CG *χράομαι* *k<sup>h</sup>raomai* is more readily available in the speaker’s mind than other types of objects (Bybee & Hopper 2001: 271). This availability is supported by the preferential position

given to Lat. *ualetudine* ‘health’ and CG σπονδῆ *sponde*<sup>i</sup> ‘libation’ in (1) and (2): the nouns which take part in a collocation appear first, whereas the prototypical objects appear afterwards.

#### 4.2 Batteries of tests for support-verb constructions

Regarding the battery of tests proposed for SVCs (Langer 2004, Jiménez López 2016), such as frequency, nominalisation, pronominalisation, etc., the collocations I have identified comply with them (see Section 2). The most important test is probably that for the co-referentiality of the verb’s subject and the first argument of the noun.

Surprisingly, this is the case in Greek even with meteorological nouns, see (3a). Greek meteorological verbs can sometimes take a subject, and, for this reason, it is also possible for SVCs with meteorological nouns to take a subject, which is co-referential with the first argument of the noun — ἡ γῆ <sup>h</sup>e ge ‘the earth’. What is remarkable in this case is that, in Latin, *utor tempestate* ‘I face/fight against a storm’, behaves differently from CG χρᾶται νιφετῶ *k<sup>h</sup>ratai nip<sup>h</sup>eto*<sup>i</sup> ‘it snows’. *Utor* takes a personal subject: *nos* ‘us’ in example (3b). Interestingly, the subject in this case functions as an Experiencer, rather than an Agent, which aligns with *utor* being used as an SV when combined with emotion nouns, as I show in Section 6 below. The function of Experiencer can also be attributed to ἡ γῆ <sup>h</sup>e ge ‘the earth’ in (3a) despite it not being [+human].

- (3) a. ὕ-εται γὰρ ἡ γ-ῆ αὐτ-η τοῦ  
<sup>h</sup>y-etai gar <sup>h</sup>e g-e <sup>h</sup>aut-e tu  
 rain-3SG CONJ the.NOM.SG land-NOM.SG that-NOM.SG the.GEN.SG  
 χειμῶν-ος πάμπαν ὀλίγω, νιφετ-ῶ δὲ τὰ πάντα  
<sup>k<sup>h</sup>eimon-os pampan oligo<sup>i</sup> nip<sup>h</sup>et-o<sup>i</sup> de ta panta</sup>  
 winter-GEN.SG altogether a.little snow-DAT.SG PRT always  
**χρᾶ-ται.**  
<sup>k<sup>h</sup>ra-tai</sup>  
 use-3SG  
 ‘For it rains a little altogether in that region during the winter, but it always **snows.**’  
 (Herodotus, *Histories* 4.50.10)

- b. *ita usque advers-a tempestat-e us-i su-mus*  
 so continuously adverse-ABL.SG storm-ABL.SG used-NOM.PL be-1PL  
 ‘So continuously **did we face an adverse storm.**’  
 (Terence, *Hecyra* 423)

SVCs can be distinguished from idioms by means of tests that look for morphological and syntactic modifications. One of these is the allowance of number variation – e.g. *I took a walk* vs. *I take walks regularly* – or the possibility of adding complements. For instance, a common idiom in English is *to pull somebody’s leg*. One of the reasons this is an idiom is that sentences such as \**We pulled Mary’s legs* or \**Mary’s leg that we pulled* are in fact unidiomatic (see Mel’čuk 2023 for this idiom). However, SVCs do admit pluralisation (4a) and relativisation (4b). These examples do not prove *per se* that the phrases in bold are SVCs, but they show that Lat. *dirimere iras* ‘to put an end to rage’ and CG τίθημι νόμον *tit<sup>h</sup>emi nomon* ‘to impose a law’ are not idioms.

- (4) a. *tum Sabin-ae mulieres, ... dirim-ere ir-as...*  
 then Sabine-NOM.PL women-NOM.PL finish-INF. wrath-ACC.PL  
 ‘Then the Sabines, ... put an end to [their] wrath ...’  
 (Livy, *Ab Urbe condita* 1,13,2)
- b. ἐπειδὴ <δ’> ἀν-ε-γράφ-ησαν, ἐ-θέ-μεθα νόμ-ον, ᾧ  
*epeide <d’> an-e-graph<sup>h</sup>-esan e-t<sup>h</sup>e-met<sup>h</sup>a nom-on <sup>h</sup>o<sup>i</sup>*  
 after PRT in-PST-write-3PL.PASS PST-put-1PL law-ACC.SG REL.DAT.SG  
**πάντ-ες χρῆ-σθε.**  
***pant-es k<sup>h</sup>re-st<sup>h</sup>e***  
 ALL-NOM.PL USE-2PL  
 ‘After they were engraved, we established a law by which you all abide.’  
 (Andocides, *De mysteriis* 1.85)

Nevertheless, corpus linguistics requires a specific treatment of these tests, since it remains a possibility that morphosyntactic variation in a phrase existed but is not attested in the corpus (Fleischman 2000). In these cases, I have resorted to different criteria for the identification of SVCs: (i) Is a certain verb employed as an SV with other nouns? (ii) What is the syntactic structure of the phrase? This means that the data I address in Sections 3 and 5 is open to a certain range of error, but some aspects of historical languages will forever remain unknown to us.

### 4.3 Alternation of *χράομαι k<sup>h</sup>raomai* and *utor* with other verbs

In some contexts, *χράομαι k<sup>h</sup>raomai* and *utor* behave as prototypical SVs and hence alternate with certain SVEs. These SVEs may be used to convey aspectual, see (5–6), or diathetic, see (7–8), information, and their contrast with *χράομαι*

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*k<sup>h</sup>raomai* and *utor* elucidates the syntactic and semantic nuances that they convey. In (5) there is a clear contrast between *χρη̃σθαι ἔργοις k<sup>h</sup>rest<sup>h</sup>ai ergois* ‘to make representations’ and *ἀφείσθαι τῶν ἔργων ap<sup>h</sup>eist<sup>h</sup>ai ton ergon* ‘to stop making representations’.

- (5) διὰ τοῦτο χρη̃ νέ-ους μέν ὄντ-ας χρη̃-σθαι τοῖς  
*dia tuto k<sup>h</sup>re ne-us men ont-as k<sup>h</sup>re-st<sup>h</sup>ai tois*  
 due.to this must young-ACC.PL PRT be.PTCP-ACC.PL use-INF the  
 ἔργ-οις, πρεσβυτέρ-ους δὲ γεν-ομέν-ους τῶν μὲν  
*ergois presbyter-us de gen-omen-us ton men*  
 work-DAT.PL older-ACC.PL PRT become-PTCP-ACC.PL the PRT  
 ἔργ-ων ἀφεί-σθαι  
*erg-on ap<sup>h</sup>ei-st<sup>h</sup>ai*  
 work-GEN.PL leave-INF

‘For this reason, teenagers must **make** [musical] **representations** while they are young and **abandon them** when they grow older.’

(Aristoteles, *Politics* 1340b)

In short, *ἀφείσθαι ap<sup>h</sup>eist<sup>h</sup>ai* ‘to give up’ has a terminative aspect, while *χρη̃σθαι k<sup>h</sup>rest<sup>h</sup>ai* ‘to use’ does not. The same happens in (6). *Utamur ira* ‘we are angry’ is neutral in aspect, whereas *dirimere iras* ‘to put an end to anger’ is terminative.

- (6) a. *verum es-se inscit-i cred-imus ne ut iust-a*  
 true be-INF fool-NOM.PL believe-1PL CONJ.NEG CONJ rightful-ABL.SG  
*ut-amur ir-a*  
 use-1PL anger-ABL.SG

‘... We fools believe that it is true, in order not to be angry rightfully.’

(Plautus, *Truculentus* 192)

- b. *tum Sabin-ae mulieres, ... dirim-ere ir-as...*  
 then Sabine-NOM.PL women-NOM.PL finish-INF. wrath-ACC.PL

‘Then the Sabines, ... put an end to [their] wrath ...’

(Livy, *Ab urbe condita* 1.13.2) (= example 4a)

Examples (7–8) illustrate another aspect of these alternations. While *ἐθέμεθα νόμον et<sup>h</sup>emet<sup>h</sup>a nomon* ‘to establish a law’ and *quod [consilium] dederit* ‘[the advice] that he gave’ are causative SVECs, the contrasting constructions with *χράομαι k<sup>h</sup>raomai* and *utor* are neutral from a diathetic perspective.

- (7) ἐπειδὴ <δ'> ἀν-ε-γράφ-ησαν, ἐ-θέ-μεθα νόμ-ον, ᾧ  
*epeide <d'> an-e-grap<sup>h</sup>-esan e-t<sup>h</sup>e-met<sup>h</sup>a nom-on <sup>h</sup>o<sup>i</sup>*  
 after PRT on-PST-write-3PL.PASS PST-put-1PL law-ACC.SG REL.DAT.SG  
 πάντ-ες χρῆ-σθε.  
*pant-es k<sup>h</sup>re-st<sup>h</sup>e*  
 all-NOM.PL use-2PL  
 ‘After they were engraved, we established a law by which you all abide.’  
 (Andocides, *De mysteriis* 1.85) (= example 4b)

- (8) *is quod mihi ded-erit de hac*  
 he REL.ACC.SG.N me.DAT.SG give-3SG.PRF.SUBJ about this.ABL.SG  
*r-e consili-um, id sequ-ar*  
 thing-ABL.SG advice-ACC.SG.N it follow-1SG.PRS.SUBJ  
 ‘I will follow the advice that he gave me concerning this matter.’  
 (Terence, *Hecyra* 461)

In some other contexts there is no apparent alternation other than the lexical specificity of *χράομαι* *k<sup>h</sup>raomai* and *utor* in contrast with a more general SV. This means that they also behave as what has sometimes been called *appropriated* or *specific* SVs, that is, less frequent and less desemanticised SVs that are usually prescribed by the rules of style, see (9–10) (Gross 2004: 100–107 Alonso Ramos 2004; see also Section 2). This is made clear by their alternation with more prototypical SVs, such as ἔχω *ek<sup>h</sup>o* (9a) and *habere* (10a). In short, ἔχω ὀργήν *ek<sup>h</sup>o orgen* ≈ *χράομαι ὀργῆ* *k<sup>h</sup>raomai orge<sup>i</sup>* ‘to have/use anger’ or ‘to be angry’, see (9a–9b).

- (9) a. ὀργ-ῆν γὰρ αὐτ-οῖς ... πολλ-ῆν ἔχ-ει.  
*org-en gar aut-ois poll-en ek<sup>h</sup>-ei*  
 anger-ACC.SG CONJ they-DAT.PL much-ACC.F have-3SG  
 ‘For she is very angry with them.’  
 (Aristophanes, *Pax* 660)
- b. ὄς... ἀντιστατ-έων τε καὶ ὀργ-ῆ  
*<sup>h</sup>os antistat-eon te kai org-e<sup>i</sup>*  
 you.NOM.SG rebel-PTCP.NOM.SG and and anger-DAT.SG  
 χρεώ-μενος ἐς τ-όν σε ἥκιστα  
*k<sup>h</sup>reo-menos es t-on se <sup>h</sup>ekista*  
 use-PTCP.NOM.SG towards he-ACC.SG you.ACC.SG least  
 ἐ-χρ-ῆν...  
*e-k<sup>h</sup>r-en*  
 PST-should-3SG  
 ‘You..., rebelling and being angry with whom you least should...’  
 (Herodotus, *Histories* 3.52.4)

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Similarly, for *honorem habere* ≈ *honore uti* ‘to have/use honour’ or ‘to hold an honour’, see (10a–10b).

- (10) a. *honor=que e-i a popul-o hab-it-us est,*  
honour=and he-DAT.SG from people-ABL.SG have-PTCP-NOM.SG be.3SG  
*ut in camp-o Marti-o sepel-ire-tur.*  
that in field-ABL.SG of.Mars-ABL.SG bury-IMPF.SUBJ-3SG.PASS  
‘And he had the honour from the people to be buried in the Field of Mars.’

(Livy, *Periochae* 106)

- b. *neque er-at superior-e honor-e us-us*  
and.not be.IMPF-3SG higher-ABL.SG honour-ABL.SG used.PTCP-NOM.SG  
*qu-em praefic-erem.*  
REL-ACC.SG appoint-1SG.IMPF.SUBJ  
‘And there was no one who had held a higher honour for me to appoint.’

(Cicero, *Epistulae ad familiares* 2,15,4)

The fact that the verb in *honorem habere* can be passivised in example (10a) is an indicator of morphological flexibility, hence an indicator that this is an SVC rather than an idiom. *Utor* and *χράομαι* *k<sup>h</sup>raomai* cannot be passivised because they are deponent verbs, but that does not impede an analysis as SVs. As a matter of fact, the Greek middle voice seems to be particularly compatible with the syntactic properties of SVCs, see Jiménez López (2016); Jiménez López (2021). In this section, I have proved that *χράομαι* *k<sup>h</sup>raomai* and *utor* often behave either as specialised SVs or as the diathetically neutral construction in a pair of *constructions converses*.

## 5 Distribution of support-verb constructions with *χράομαι* *k<sup>h</sup>raomai* and *utor*

In Section 3, I stated that *χράομαι* *k<sup>h</sup>raomai* is used in the Greek corpus almost twice as frequently as *utor* is in the Latin, with a proportion of 0.93% of the sample in Greek as compared to 0.49% of the sample in Latin one. This clearly affects the proportions that I discuss in this section, but what is probably more relevant is the distribution by author of each SV. Since the total number of tokens of *χράομαι* *k<sup>h</sup>raomai* or *utor* is a deceiving figure, due to the different sample sizes for each author – for instance, Herodotus’s *Histories* are considerably longer

than any Greek tragedy –, I have calculated normalised counts per 1,000 words (see Section 3 for the discussion on the forms that are considered and discarded in my analysis).

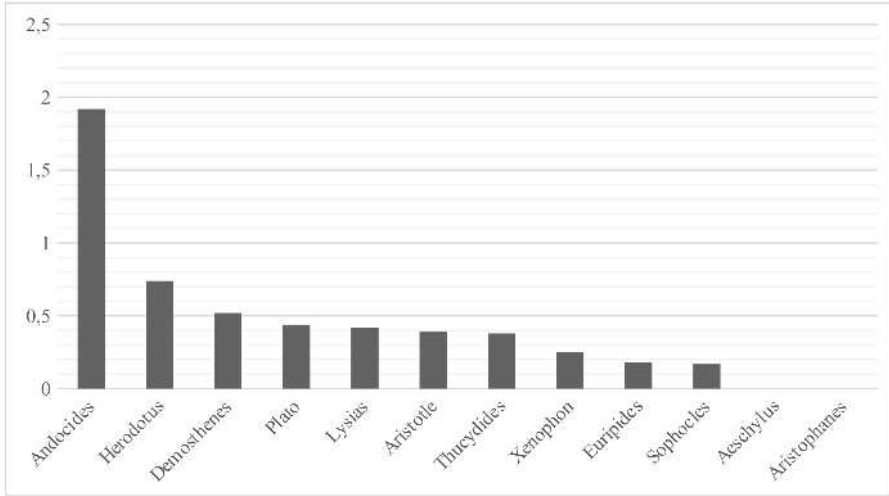


Figure 1: Tokens of SV χρᾶομαι *k<sup>h</sup>raomai* per 1,000 words by author

Figure 1 shows the somewhat even distribution of SVCs with χρᾶομαι *k<sup>h</sup>raomai* throughout Greek prose with few exceptions. The poets make very little or no use at all of this verb in their compositions. By contrast, Andocides shows a preference for this kind of SVCs. One could hypothesise that this verb might have been specialised for some legal contexts, given that the construction he uses in most instances is νόμῳ χρᾶομαι *nomoi<sup>i</sup> k<sup>h</sup>raomai* ‘to use a law’, but, in that case, why would Demosthenes and Lysias not use it the same way? It is also possible that this is just a stylistic characteristic of Andocides’ prose: a recent paper proved that collocations in general are useful for the identification of authorial identity (López Martín 2022). Another author that stands out from the rest is Herodotus, although not as much as Andocides. The collocation he uses most frequently is also νόμῳ χρᾶομαι *nomoi<sup>i</sup> k<sup>h</sup>raomai*.

It seems clear that the data is also conditioned by the content of the texts: since νόμῳ χρᾶομαι *nomoi<sup>i</sup> k<sup>h</sup>raomai* is a very common collocation (17% of the examples), the authors which address topics related to the law and customs in general may display disproportionately high figures, particularly when the sample size is smaller, as in the case of Andocides. However, this is not an idiom: the main evidence is that it admits number variation, i.e., together with νόμῳ χρᾶομαι *nomoi<sup>i</sup> k<sup>h</sup>raomai* I have found νόμοις (pl.) χρᾶομαι *nomois k<sup>h</sup>raomai* ‘to

use laws' (cf. Thucydides, *Histories*, 6.54.6, Thucydides, *Histories* 2.52.4 – which also happens to be pronominalised –, Demosthenes, *Adversum Leptinem* 20.91, Euripides, *Medea* 538, and Herodotus, *Histories*. 4.26.1). Another caveat is that Herodotus is the only writer in the corpus who uses the Ionic dialect: a future research question could be how this dialectal difference affects the use of SVCs by different authors.

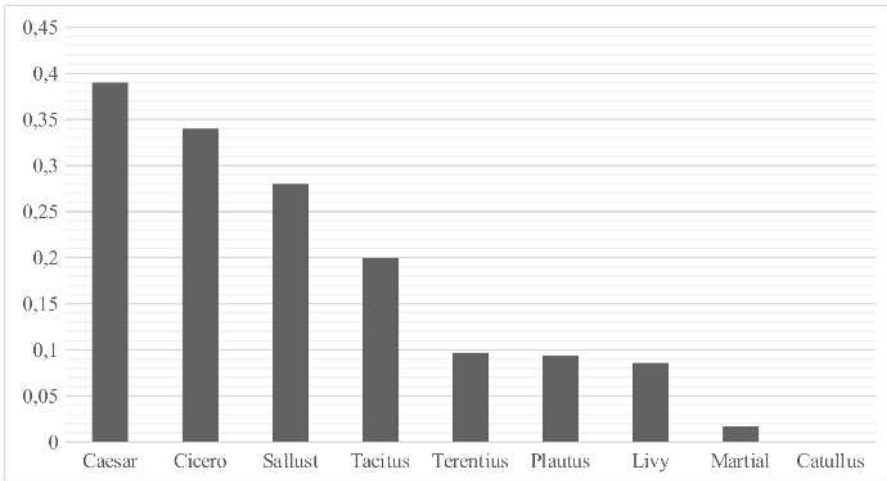


Figure 2: Tokens of SV *utor* per 1,000 words by author

The Latin corpus shows more balance, to a certain extent (see Figure 2). The historians use *utor* as an SV more frequently than the poets, with the sole exception of Livy, who is on a par with the latter. A diachronic trend is quite apparent in Figure 2: in the archaic texts, these SVCs are very rare, but they peak in the classical period only to decline shortly thereafter.<sup>17</sup> As some researchers have already pointed out, collocations are sometimes short-lived, and tend to rapid diachronic renewal (Baños 2018b: 48). However, the distinction between prose and verse also affects this distribution. It has already been proven that SVCs are not exclusively found in prose, but rather that different SVCs are preferred in poetic texts (Baños 2018b: 38). My data confirm Baños 2023's conclusions for Latin that SVCs are subject to rapid diachronic renewal and that differences in authorship and literary genre also condition the choice of SVCs.

<sup>17</sup>This has been thoroughly analysed in a recent paper with abundant data, which shows that this is a general trend in Latin SVCs (Baños 2023).

## 6 Semantic-syntactic domains of χράομαι *k<sup>h</sup>raomai* and *utor*

The wide range of nouns that take either χράομαι *k<sup>h</sup>raomai* or *utor* as SVs is too varied to fit under a few semantic or lexical labels (see full list in Madrigal Acero 2024). There are nouns of thought (CG γνώμη *gnome* ‘opinion’, Lat. *consilium* ‘deliberation, counsel’), of speech (CG βοή *boe* ‘scream’, Lat. *verbum* ‘word’), of emotion (CG ὀργή *orge* ‘anger’, Lat. *timor* ‘fear’), etc. The classifications I attempted previously failed to offer a comprehensive and complete view of the collocative patterns of χράομαι *k<sup>h</sup>raomai* and *utor*. This led me to a different approach, which focuses on the SVs themselves rather than on external evidence in order to organise the data.

Although more could be said on this, I have found two tendencies. Sometimes, χράομαι *k<sup>h</sup>raomai* alternates with ἔχω *ek<sup>h</sup>o* ‘to have’/ποιέομαι *poieomai* ‘to make’, which are used as SVs for states (ἔχω *ek<sup>h</sup>o*) and actions (ποιέομαι *poieomai*). In these cases, χράομαι *k<sup>h</sup>raomai* conveys the same meaning as ἔχω *ek<sup>h</sup>o*/ποιέομαι *poieomai*, but it is less frequent than either of them, which has led me to analyse χράομαι as a more lexically restricted variant – or specific SV – as compared to ἔχω *ek<sup>h</sup>o*/ποιέομαι *poieomai*, see (11).

- (11) a. ὀργ-ἦν γὰρ αὐτ-οῖς... πολλ-ἦν ἔχ-ει.  
*org-en gar aut-ois poll-en ek<sup>h</sup>-ei*  
 anger-ACC.SG CONJ they-DAT.PL much-ACC.SG have-3SG  
 ‘For she is very angry with them.’  
 (Aristophanes, *Pax* 660) (= example 9a)
- b. ὁ Καμβύσ-ης ὀργ-ἦν ποιη-σά-μεν-ος  
<sup>h</sup>o *Kambys-es org-en poiesamenos*  
 the Cambyses-NOM.SG anger-ACC.SG make-AOR-PTCP-NOM.SG  
 ἐ-στρατεύ-ετο ἐπὶ τοὺς Αἰθίοπ-ας.  
*e-strateu-eto epi tus Ait<sup>h</sup>io-p-as*  
 PST-march-3SG.IMP upon the Ethiopians-ACC.PL  
 ‘Cambyses got angry and marched against the Ethiopians’  
 (Herodotus, *Histories* 3.25.3)
- c. ὄς... ἀντιστατ-έων τε καὶ ὀργ-ῆ  
<sup>h</sup>os *antistat-eon te kai org-e*  
 you.NOM.SG rebel-PTCP.NOM.SG and and anger-DAT.SG  
 χρεώ-μενος ἐς τ-όν σε ἥκιστα  
*k<sup>h</sup>reo-menos es t-on se hekista*  
 use-PTCP.NOM.SG towards he-ACC.SG you.ACC-SG least

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ἐ-χρ-ῆν...

*e-k<sup>h</sup>r-en*

PST-should-3SG

‘You..., rebelling and **being angry** with whom you least should...’

(Herodotus, *Histories* 3.52.4) (= example 9b)

However, when χράομαι *k<sup>h</sup>raomai* alternates with δίδωμι *didomi* ‘to give’/τίθημι *tit<sup>h</sup>emi* ‘to put’, which are intrinsically causative, χράομαι *k<sup>h</sup>raomai* is markedly non-causative or neutral, as in (12). In this case, the pairs χράομαι *k<sup>h</sup>raomai*/δίδωμι *didomi* and χράομαι *k<sup>h</sup>raomai*/τίθημι *tit<sup>h</sup>emi* behave as converse constructions.

- (12) ἐπειδὴ <δ’> ἀν-ε-γράφ-ησαν, ἐ-θέ-μεθα νόμ-ον, ᾧ  
*epeide <d’> an-e-graph<sup>h</sup>-esan e-t<sup>h</sup>e-met<sup>h</sup>a nom-on h<sup>o</sup>i*  
 after PRT in-PST-write-3PL.PASS PST-put-1PL law-ACC.SG REL.DAT.SG

πάντ-εσ χρῆ-σθε.

*pant-es k<sup>h</sup>re-st<sup>h</sup>e*

ALL-NOM.PL USE-2PL

‘After they were engraved, we **established a law by which** you all **abide**.’

(Andocides, *De mysteriis* 1.85) (= examples 4b and 7)

This distribution is rather similar in Latin: *utor* behaves as a lexically restricted variant of certain verbs (*habere* ‘to have’, *facere* ‘to make’), see (13), and as a diathetically neutral form in contrast with certain causative extensions (*dare* ‘to give’, *ferre* ‘to carry’, *facere* ‘to make’), see (14). For instance, *rationem habere* ≈ *ratione uti* ‘to have/use reason’; *consilium dare* ‘to give advice’ ↔ *consilium uti* ‘to follow advice’;<sup>18</sup> but *facere* may fall in either category: *verbum facere* ≈ *verbum uti* ‘to speak’, but also *pacem facere* ‘to make peace’ ↔ *pace uti* ‘to enjoy peace.’

- (13) a. *hab-et honor-em qu-em pet-imus.*

have-3SG honour-ACC.SG REL-ACC.SG seek-1PL

‘It is in possession of the office we are trying to obtain.’

(Cicero, *In Quintum Caecilium Nigrum oratio* 5,20,2)

<sup>18</sup> *Consilium* and its collocational pattern have been analysed in depth by Baños (2014b). This particular example is interesting because it could be analysed as a diathetic alternation like ποιέομαι *poieomai* ‘to do’ ↔ γίγνομαι *gignomai* ‘to come to be’, where γίγνομαι *gignomai* is used as the lexical passive of ποιέομαι *poieomai* (Jiménez López 2021). The reason for this is that ποιέομαι *poieomai* cannot be passivised because it is always used in the middle voice when it functions as an SV, which makes voice variations impossible.

- b. *neque er-at superior-e honor-e us-us*  
 and.NEG be.IMP3-3SG higher-ABL.SG honour-ABL.SG used.PTCP-NOM.SG  
*qu-em praefic-erem.*  
 REL-ACC.SG appoint-1SG.IMP3.SUBJ  
 ‘And there was no one who had held a higher honour for me to appoint.’

(Cicero, *Epistulae ad familiares* 2,15,4) (= example 10)

- (14) a. *qu-id d-as consil-i?*  
 what-ACC.SG give-2SG suggestion-GEN.SG  
 ‘What do you suggest?’

(Cicero, *Epistulae ad familiares* 2,15,4)

- b. *ergo ut-ar tu-o consili-o neque me*  
 then use-1SG your-ABL.SG suggestion-ABL.SG and.NEG I.ACC.SG  
*Arpin-um h-oc tempor-e abd-am*  
 Arpinum-ACC.SG this-ABL.SG time-ABL.SG hide-1SG  
 ‘I will follow your advice and will not hide in Arpinum at the moment.’

(Cicero, *Epistulae ad Atticum* 9,6,1)

To summarise, I propose a continuum of agentivity and metaphoricisation (see Figure 3).

More prototypical Agent	<p>χράομαι τροφή <i>k<sup>h</sup>raomai</i>  <i>utor cibo</i> ‘to eat’</p>	Manipulation of a physical object
	<p>χράομαι νόμος <i>k<sup>h</sup>raomai nomos</i>  <i>utor lege</i> ‘to abide by a law’</p>	Manipulation of an abstract entity conceptualized as an object
Less prototypical Agent (e.g. Experiencer)	<p>χράομαι ὀργή <i>k<sup>h</sup>raomai orgē</i>  <i>utor amore</i> ‘to feel rage/love’</p>	No manipulation (prototypical SV)

Figure 3: Agentivity continuum

When the SVC is more agentive, *χράομαι k<sup>h</sup>raomai* and *utor* imply the manipulation of a physical object, which is closer to the basic meaning of the verb. In an intermediate position there are constructions where we can perceive the manipulation of an abstract reality which is metaphorically reconceptualised as an object. Lastly, there are constructions either with a less prototypical Agent, or without an Agent, which do not convey any kind of manipulation. In these latter cases, such as with emotion nouns, *χράομαι k<sup>h</sup>raomai* and *utor* are closer to being a prototypical SV.

## 7 Support verbs and loan words

There is a clear tendency to transmit SVCs from one language to another for the translation of foreign concepts (Bowern 2008: 172-173). I have found two examples in which Cicero uses a collocation of *utor* + Greek noun where the noun is left untranslated, *adiaphoria* ‘indifference’ (Cicero, *Epistulae ad Atticum* 2,17,2) and *ekteneia* ‘zeal’ (Cicero, *Epistulae ad Atticum* 10,17,1, but that seems hardly enough evidence to suggest an influx of Greek upon Latin comparable to the stream of Chinese words that entered the Japanese language in the shape of SVCs with the verb *suru* ‘to do’ (Lanz 2009: 172).

Cicero does not merely translate Greek oratory; instead, he looks to relay Greek ideas in Latin (Cicero, *De optimo genere oratorum* 14). His knowledge of Greek oratory might be a reasonable explanation for his use of foreign words, but not for the abundance of SVCs in his prose. In fact, it has already been argued that Latin uses them a lot more frequently than Greek (Jiménez López 2016: 186).

An analysis of the relationship between Greek and Latin SVCs and the directionality of the influence of either language upon the other is yet to be undertaken. However, some surveys on the influence of other languages on Greek and Latin have suggested that the increased number of SVCs in certain texts is partly due to the interference of other languages during their composition (Jiménez López 2017, 2018, Baños & Jiménez López 2017).

## 8 Conclusions

To sum up, I have identified the following similarities between *χράομαι* *k<sup>h</sup>raomai* and *utor*:

- a. Type frequency. Although *χράομαι* *k<sup>h</sup>raomai* is more frequently used in Greek (0.93% of the sample) than *utor* in Latin (0.49%), both are used with a similar frequency as SVs in roughly half of their instances (45.56% of the instances of *χράομαι* *k<sup>h</sup>raomai* and 48.34% of the instances of *utor*), see Section 3.
- b. Both share the same predicative frame (Section 4.1), with a [+human/] Agent or Experiencer as their first argument and an Instrument as their second argument.
- c. Both behave as SVs according to the most common batteries of tests for ancient languages (see Jiménez López 2016), such as the possibility of pluralisation, relativisation, pronominalisation, etc. (Section 4.2).

- d. Both alternate with aspectual and causative SVEs (Section 4.3). In both cases, *χράομαι* *k<sup>h</sup>raomai* and *utor* behave as neutral or non-marked alternatives to verbs that convey lexical aspect or a causative diathesis. The functions of these collocations seem to be conditioned by the characteristics of the subject of the phrase (see Figure 3). Where there is a more prototypical Agent, SVCs are closer to free constructions, even though I still consider them SVCs because the nouns they take have been made predicative by placing them in the collocation. Where there is a less prototypical Agent, such as the Experiencer that emotion nouns take, the construction is in fact a prototypical SVC.
- e. Both are prevalent in prose (Section 5), but their chronological distribution and their use by author differs. In Latin, there seems to be a clear diachronic trend where SVCs with *utor* peak during the Classical Period, whereas in Greek there does not seem to be such trend. Instead, Andocides and Herodotus peak as the authors who markedly employ the most SVCs with *χράομαι* *k<sup>h</sup>raomai*.
- f. *χράομαι* *k<sup>h</sup>raomai* and *utor* serve as stylistically specialised SVs (Section 4.3) and alternate with diathetic and causative SVEs, depending on the noun with which they are combined and the way they alternate with other SVs or SVEs. For the organisation of these functions, I have proposed a continuum of agentivity and metaphoricisation (Section 6).

However, there are also some differences between Greek and Latin. There is a difference in the base nouns each verb takes. While 17% of the SVCs with *χράομαι* *k<sup>h</sup>raomai* have νόμος *nomos* as the base, *utor* does not have such a strong preference for any single base. Other differences depend directly on the lexical properties of the nouns in each language.

## Abbreviations

Fr.	French	SVE	support-verb extension
Lat.	Latin	SVEC	support-verb-extension construction
PF	Predicate Frame		

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## Chapter 4

# Support-verb constructions in the Gospels: A comparative study between Greek and Latin

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In this article we analyse the data on the frequency of support-verb constructions (SVCs) in the Gospels, both in their original Greek version and in the Latin translation of the Vulgate. In the former case, we identify the most frequent support verbs and highlight the differences among the gospel writers. These differences also speak of their varying proficiency in Greek and are sometimes the result of linguistic influences. The parallel analysis of the Latin text of the Vulgate allows us to compare the use of SVCs in both languages and reflect on the translation criteria employed. The evidence, in addition to highlighting the reasonable tension between the literal translation of the source language (Greek) and the naturalness of the target language (Latin), demonstrates the existence of different translation criteria in each Gospel.

En este trabajo analizamos los datos sobre la frecuencia de las construcciones con verbo soporte (CVS) en los evangelios, tanto en su versión original en griego como en la traducción latina de la Vulgata. Mostramos en el primer caso cuáles son los verbos soporte más frecuentes, así como las diferencias entre los evangelistas. Estas diferencias nos hablan también de su distinta competencia en la lengua griega y son resultado a veces de interferencias lingüísticas. El análisis paralelo del texto latino de la Vulgata permite comparar el uso de las CVS en ambas lenguas y reflexionar sobre los criterios de traducción empleados. Los datos estudiados, además de reflejar la lógica tensión entre la traducción literal de la lengua de partida (el griego) y la naturalidad de la lengua de llegada (el latín), revelan criterios de traducción distintos en cada evangelio.



## 1 Introduction

As part of a much broader study on the whole of the New Testament, this chapter aims to present and analyse general data on the use of support-verb constructions (SVCs) in the Gospels, both in the original Greek version and the Latin translation of the Vulgate.<sup>1</sup>

The structure is as follows: firstly (Section 2), we will define the concept of support-verb construction used in the collection of the data and identify the main support verbs in Greek. Next (Section 3), we will examine the frequency of SVCs in the four Gospels in the original Greek version, paying particular attention to the internal differences among the gospel writers. Finally (Section 4), we will focus on the analysis of the Vulgate, highlighting different degrees of literalness in the Latin translation of the Greek SVCs, which we will illustrate primarily through collocations containing the nouns συμβούλιον *symboúlion* ‘counsel’ and χρεΐαν *chreían* ‘need’. By way of summary (Section 5), we will present the main conclusions of the article and indicate some avenues for research.

In order to facilitate the comparison between the Greek texts and their Latin version, in each example we have tried to align word for word. Obviously, alignment has not always been possible: sometimes the word order does not match in both languages, as in (6a), or a Greek synthetic predicate (e.g., in (2b) ἐράπισαν *erápisan* ‘strike’ is translated into Latin by an analytic predicate (*palmas in faciem ei dederunt*)).

## 2 The concept of support-verb construction

The term support-verb construction (SVC henceforth) is employed in this study to refer to a type of complex predicate formed by a verb and a predicative or eventive noun with its own argument structure. The noun serves as the base that selectively chooses the support verb(s) with which it combines, supplying the relevant semantic content and, consequently, determining the semantic functions of the participants in the construction. The verb, on the other hand, provides the grammatical categories (person, number, tense, mood, voice) and the syntactic positions into which the participants of the event are inserted.

This framework allows us to approach SVCs broadly. Thus, we consider prototypical SVCs, i.e. those collocations in which (i) the verb has a general or vague

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<sup>1</sup>The dataset is accessible here: <https://doi.org/10.21950/E98VTJ>. The Greek and Latin texts are aligned for examples from the synoptic gospels such that the gloss applies to both.

meaning (light verbs), (ii) its subject is co-referential with the first semantic argument of the noun, and often (iii) equivalent to a synthetic predicate (cf. Langer 2004, Jiménez López 2016), as illustrated by examples (1a–1b) and (2a–2b).<sup>2</sup>

- (1) a. πᾶς ὁ ποιῶν τὴν ἁμαρτίαν δοῦλος ἐστὶν [τῆς ἁμαρτίας]  
*pâs ho poiôn tēn hamartían doûlos estin [tēs hamartías]*  
 everyone the practice the sin slave be [the sin]  
*qui facit peccatum servus est peccati*  
 ‘everyone who practices sin is a slave to sin.’  
 (NT John 8.34)

- b. ῥαββί, τίς ἥμαρτεν...;  
*rabbí, tíς hémarten...?*  
 Rabbi who sin  
*Rabbi, quis peccavit...?*  
 ‘Rabbi, who sinned...?’  
 (NT John 9.2)

- (2) a. καὶ ἐδίδοσαν αὐτῷ ῥαπίσματα  
*kai edídosan autōi rapísmata*  
 and give him slaps  
*et dabant ei alapas*  
 ‘and struck him with their hands.’  
 (NT John 19.3)

- b. ἐκολάφισαν αὐτόν, οἱ δὲ  
*ekoláphisan autón, hoi dè*  
 buffet him these and  
*colaphis eum ceciderunt, alii autem*  
*ἐράπισαν*  
*erápisan*  
 strike  
*palmas in faciem ei dederunt*  
 ‘they struck him. And some slapped him.’  
 (NT Matthew 26.67)

However, we also consider collocations in which the verb, possessing a fuller meaning, contributes diathetic values – causative, passive, see (3a) –, aspectual

<sup>2</sup>We follow the edition of Nestle et al. (2012) for the Greek text of the Gospels. The Latin text of the Vulgate follows the edition of Weber & Gryson (2007). The English translations are taken from *The Holy Bible, English Standard Version* (2007).

– inchoative, see (3b), terminative, durative – or even intensive, see (3c),<sup>3</sup> among others.

- (3) a. καὶ ἐν σαββάτῳ περιτέμνετε ἄνθρωπον. εἰ περιτομὴν  
*kai en Sabbátōi peritémnete ánthrōpon. ei peritomḗn*  
 and on Sabbath circumcise man. if circumcision  
*in sabbato circumciditis hominem. Si circumcisionem*  
**λαμβάνει** ἄνθρωπος ἐν σαββάτῳ...  
*lambánei ánthrōpos en Sabbátōi*  
 receive man on Sabbath...  
**accipit homo in sabbato...**  
 ‘you circumcise a man on the Sabbath. If on the Sabbath a man  
 receives circumcision...’

(NT John 7.22-23)

- b. καὶ ἐταράχθη Ζαχαρίας ἰδὼν καὶ φόβος ἐπέπεσεν ἐπ’ αὐτόν  
*kai etaráchthē Zacharías idōn kai phóbos epépesen ep’ autón*  
 and trouble Zechariah see and fear fall upon him  
*et Zaccharias turbatus est videns et timor inruit super eum.*  
 ‘And Zechariah was troubled when he saw him, and fear fell upon  
 him’

(NT Luke 1.12).

- c. καὶ ἔκστασις ἔλαβεν ἅπαντας καὶ ἐδόξαζον τὸν  
*kai éktasis élaben hápantas kai edóxazon tôn*  
 and amazement take all and glorify the  
*et stupor adprehendit omnes et magnificabant*  
 θεὸν καὶ ἐπλήσθησαν φόβου  
*theòn kai eplésthēsan phóbou*  
 God and fill fear  
*Deum et repleti sunt timore*  
 ‘And amazement seized them all, and they glorified God and were  
 filled with awe.’

(NT Luke 5.26)

In most SVCs the predicative or eventive noun is the direct object of the collocative verb, see (1a, 2a, 3a). However, this is not the only possible syntactic construc-

<sup>3</sup>Gross (1998: 34) introduces the concept of intensive variants of support verbs to refer to collocations such as *jump for joy* (‘to be very happy’), *burn with desire* (‘to desire very much’) or, as in (3c), *fill with fear* (‘to be very afraid’). In these, the verb semantically expresses an intensification of the event or experience denoted by the noun of the collocation.

tion. In our corpus, we also consider SVCs, such as φόβος ἐπέπεσεν *phóbos epépesen* in (3b) and ἔκστασις ἔλαβεν *ékstasis élaben* in (3c), in which the noun is the subject. These collocations present the event from a perspective which cannot be expressed by the corresponding synthetic predicate — φοβεῖσθαι *phobeísthai* ‘to be afraid’, ἐξιστάναί *existánai* ‘to be astonished’ —, since in these SVCs the subject is not the Experiencer but the eventive noun itself (Benedetti 2010, 2013, Tur 2019, Jiménez López 2024).

In sum, the concept of SVC as employed in this study encompasses not only support verbs in a narrow sense but also the so-called support-verb extensions<sup>4</sup> (cf. Gross 1981, Vivès 1983, Cicalese 1999, Ježek 2004), as well as converse constructions (Gross 1989, Mendózar 2020). This broad approach is, in our view, necessary, as it allows the description of the full collocational pattern of a predicative noun and of the motivations underlying the selection of the verbs with which it combines.

## 2.1 The most frequent support verbs in Greek

Since it is not possible to present here a full list of the support verbs we have considered, Table 1 includes, as part of the results of our study, the six most frequently used verbs in the Gospels. These represent approximately two-thirds of both the total number of instances examined (521) and of the number of distinct SVCs (231) in which they appear: ποιεῖν *poieîn* ‘to do’, γίγνεσθαι *gígnesthai* ‘to happen’, εἶναι *eînai* ‘to be’, διδόναι *didónai* ‘to give’, ἔχειν *échein* ‘to have’, and λαμβάνειν *lambánein* ‘to take’.

The most frequent of these verbs is ἔχειν *échein* (83 instances), due to the frequency of certain SVCs — χρεῖαν *chreían* ‘need’ (20 instances), ζωὴν *zōên* ‘life’ (15 instances), ἐξουσίαν *exousían* ‘power, authority’ (13 instances) —, followed by ποιεῖν *poieîn* (75 instances) — ἔργον *érgon* ‘deed’ (15 instances), σημεῖον *sêmeion* ‘sign’ (15 instances). Additionally, γίγνεσθαι *gígnesthai* (with 34 distinct SVCs) and διδόναι *didónai* (with 30 distinct SVCs) exhibit the greatest variety of different SVCs.

These data are consistent with the fact that the same predicative noun may often select several of these verbs as part of its collocational pattern to present the event from different perspectives. Let us consider some representative examples.

Starting with the verb ‘to do’, one of the support verbs *par excellence* in many languages, it is important to differentiate in classical Greek between ποιεῖσθαι

<sup>4</sup>In previous studies (Baños 2015b, Baños & Jiménez López 2017a,b, 2022, Jiménez López 2018), the term *verb-noun collocation* is used in the same sense. A list of different designations can be found in Hoffmann (2022: 25–28) and the state of the field in Pompei et al. (2023).

Table 1: Support verbs in the Gospels

SVs	n <sup>o</sup> of distinct SVCs	Total n <sup>o</sup> of instances
ἔχειν <i>échein</i>	26	83
ποιεῖν <i>poieîn</i>	26	75
διδόναι <i>didónai</i>	30	70
γίγνεσθαι <i>gígnesthai</i>	34	58
εἶναι <i>eînai</i>	23	44
λαμβάνειν <i>lambánein</i>	13	22
Total for the 6 verbs	152 (65.80%)	352 (67.56%)
Other verbs	79 (34.20%)	169 (32.44%)
Total	231	521

*poieîsthai* ‘to do’ in the middle voice, which behaves as a prototypical support verb in the narrowest sense, and ποιεῖν *poieîn* in the active voice, which is generally a causative extension (Jiménez López 2012). Although this distinction persists in the Gospels, as shown by (4a) and (4b), the active voice is often used in the New Testament as a general support verb instead of the middle voice, as demonstrated in (1a) above (Jiménez López 2018: 103–113). Other collocative uses of ποιεῖν *poieîn* in the active voice are those in which this verb denotes accomplishment or fulfillment of an action, as in (4c).

- (4) a. οἱ μαθηταὶ Ἰωάννου νηστεύουσιν πυκνὰ καὶ δεήσεις  
*hoi mathētai Iōánnou nēsteúousin pyknà kai deēseis*  
the disciples John fast often and prayers  
*discipuli Iohannis ieianant frequenter et obsecrationes*  
**ποιοῦνται**  
*poiountai*  
do  
**faciunt**  
‘The disciples of John fast often and offer prayers.’

(NT Luke 5.33)

- b. Ἡρώδης τοῖς γενεσίοις αὐτοῦ δεῖπνον ἐποίησεν τοῖς μεγιστάσιν  
*Hērōidēs toîs genesíois autoû deipnon epoiēsen toîs megistâsin*  
Herod the birthday him banquet bring about the nobles  
*Herodes natalis sui cenam fecit principibus*

αὐτοῦ  
*autoû*  
 his

‘Herod on his birthday gave a banquet for his nobles.’

(NT Mark 6.21)

- c. ὅς [γὰρ] ἂν ποιήσῃ τὸ θέλημα τοῦ θεοῦ, οὗτος ἀδελφός  
*hòs [gàr] àn poiḗsēi tò thélēma tou̐ theoû hoûtos adelphós*  
 who [for] PRT do the will the God this brother  
*qui enim fecerit voluntatem Dei hic frater*  
 μου... ἐστίν  
*mou... estín*  
 my... be  
*meus... est*

‘For whoever does the will of God, he is my brother.’

(NT Mark 3.35)

Examples (4b) and (4c) also lead us to consider other parallel cases as SVCs, such as (5a) and (5b), where the verb γίνεσθαι *gígnesthai* ‘to happen’ is used to express the corresponding impersonal passive of these collocations (Jiménez López 2021). Γίγεσθαι *gígnesthai*, as well as εἶναι *eînai*, function in these cases as typical support verbs,<sup>5</sup> denoting the occurrence of an event (Gaaton 2004) in which the Agent is either irrelevant or relegated to a secondary role, as demonstrated in (6a–6b). These verbs may alternate when combined with nouns denoting inagentive processes or natural phenomena, as in (6c–6d). It is worth noting that the Latin translation of the Greek alternation in (6a) and (6b) involves in both cases the verb *feri*.

- (5) a. Καὶ δείπνου γινομένου...  
*Kaì deípnu ginoménu...*  
 And supper happen...  
*Et cena facta...*  
 ‘During supper...’

(NT John 13.2)

<sup>5</sup>We do not include, obviously, cases in which these verbs are used as a copula with an attribute or nominal predicate. On γίνεσθαι *gígnesthai* in the Gospels, see Tronci (2020).

- b. γενηθήτω τὸ θέλημά σου  
*genēthētō tò thélēmá sou*  
 be done the will your  
**fiat voluntas tua**  
 ‘Your will be done’

(NT Matthew 6.10)

- (6) a. Μὴ ἐν τῇ ἑορτῇ, μήποτε ἔσται θόρυβος τοῦ λαοῦ  
*Mē en tēi heortēi mēpote éstai thórybos toû laou̇*  
 Not in the feast never be uproar the people  
*non in die festo ne forte tumultus fieret populi*

‘Not during the feast, lest there be an uproar from the people’

(NT Mark 14.2)

- b. Μὴ ἐν τῇ ἑορτῇ, ἵνα μὴ θόρυβος γένηται ἐν τῷ λαῷ  
*Mē en tēi heortēi ina mē thórybos génētai en tōi laōi*  
 Not in the feast in order that not uproar happen in the people  
*non in die festo ne forte tumultus fiat in populo*

‘Not during the feast, lest there be an uproar among the people’

(NT Matthew 26.5)

- c. ἐγένετο λιμὸς μέγας ἐπὶ πᾶσαν τὴν γῆν  
*egéneto limòs mégas epì pasan tēn gēn*  
 happen famine big over all the land  
**facta est fames magna in omni terra**

‘A great famine came over all the land’

(NT Luke 4.25).

- d. σεισμοὶ τε μεγάλοι καὶ κατὰ τόπους λιμοὶ  
*seismoì te megáloi kai katà tóπους limoì*  
 earthquakes PRT big and in places famines  
**terraemotus magni erunt per loca et pestilentiae**  
 καὶ λοιμοὶ ἔσονται  
*kai loimoì ésontai*  
 and pestilences be  
**et fames**

‘There will be great earthquakes, and in various places famines and pestilences’

(NT Luke 21.11).

In a similar vein, the comparative analysis of the four Gospels allows the description of the collocational pattern of certain highly frequent nouns, such

#### 4 Support-verb constructions in the Gospels

as ἐντολή *entolḗ* ‘order, command’. The verb ἐντέλλεσθαι *entéllēsthai* ‘to command’, see (7a), is used 9 times in the Gospels. However, John (and only he) also has recourse to various SVCs which present the event from different perspectives: ἐντολήν διδόναι *entolēn didónai*, see (7b), and, complementarily, ἐντολήν λαμβάνειν *entolēn lambánein*, see (7c), and ἐντολήν ἔχειν *entolēn échein*, see (7d), that is, ‘to give, receive, and have an order’. Moreover, an order is by definition a command that must be obeyed, observed, and executed. Thus, the verb τηρεῖν *tēreîn* ‘to observe, keep’, see (7d), also forms part of the combinatorial possibilities of ἐντολή *entolḗ*, expressing the fulfillment of the order, as well as the opposite: ‘to break the commandment’, ἀφιέναι *aphiénaí* (NT Mark 7.8) or παραβαίνειν *parabaínein* (NT Matthew 15.3).

- (7) a. καθὼς ἐνετείλατο                    μοι ὁ πατήρ, οὕτως ποιῶ  
*kathōs eneteílato                    moi ho patér houtōs poiō*  
 as        command                    me the Father so        do  
*sicut **mandatum dedit** mihi Pater, sic facio*  
 ‘I do as the Father has commanded me.’  
(NT John 14.31)
- b. ὁ πέμψας με πατὴρ αὐτός μοι ἐντολήν                    δέδωκεν  
*ho pémpsas me patrēr autós moi entolēn                    dédōken*  
 the sent        me Father himself me        commandment give  
*qui misit        me, Pater, ipse        mihi **mandatum dedit***  
 ‘The Father who sent me has himself given me a commandment.’  
(NT John 12.49)
- c. ταύτην τὴν ἐντολήν                    ἔλαβον παρὰ τοῦ πατρός μου  
*taútēn tēn entolēn                    élabon parà tou patrós mou*  
 This        the charge                    receive from the Father my  
*hoc                    **mandatum accepi** a                    Patre meo*  
 ‘This charge I have received from my Father.’  
(NT John 10.18)
- d. ὁ ἔχων τὰς ἐντολάς                    μου καὶ τηρῶν αὐτάς ἐκεῖνός ἐστιν  
*ho échōn tās entolás                    mou kai tērōn autās ekeinós estin*  
 the have the commandments my and keep them that        be  
*qui **habet**        **mandata**        **mea** et **servat** ea,        ille        est*

ὁ ἀγαπῶν με  
*ho agarôn me*  
 the love me  
*qui diligit me*

‘Whoever has my commandments and keeps them, he it is who loves me.’

(NT John 14.21)

In order not to prolong this discussion, let us consider one last example. Concerning the meaning ‘to magnify, glorify’ expressed by the synthetic predicate δοξάζειν *doxázein* in (8a) and (8d), one finds the analytic alternative δόξαν δοῦναι *dóxan doûnai*, see (8b), but also other SVCs with the same noun, which present the event from different perspectives: metaphorically, ‘glory’ is an ‘object’ given, see (8b), but also received, see (8c), or possessed, see (8d–8e).

(8) a. ἐδόξαζον τὸν θεὸν  
*edóxazon tòn theòn*  
 glorify the God  
*magnificabant Deum*  
 ‘They glorified God.’

(NT Luke 5.26)

b. δοῦναι δόξαν τῷ θεῷ  
*doûnai dóxan tōi theōi*  
 give praise the God  
*darent gloriam Deo*  
 ‘Give praise to God.’

(NT Luke 17.18)

c. δόξαν παρὰ ἀνθρώπων οὐ λαμβάνω  
*dóxan parà anthrōpōn ou lambánō*  
 glory from people not receive  
*gloriam ab hominibus non accipio*  
 ‘I do not receive glory from people.’

(NT John 5.41).

d. καὶ νῦν δόξασόν με σύ, πάτερ, παρὰ σεαυτῷ τῇ δόξῃ  
*kai nŷn dóxasón me sý páter parà seautōi tēi dóxēi*  
 and now glorify me you Father near yourself the glory  
*et nunc clarifica me tu Pater, apud temet ipsum claritatem*

ἧ εἶχον πρὸ τοῦ τὸν κόσμον εἶναι παρὰ σοί  
*hēi eichon prò tou̅tòn kósmōn eînai parà soi*  
 that have before the the world be near you  
*quam habui priusquam mundus esset apud te*

‘And now, Father, glorify me in your own presence with the glory that I had with you before the world existed.’

(NT John 17.5)

e. τότε ἔσται σοι δόξα ἐνώπιον πάντων τῶν  
*tôte éstai soi dóxa enópion pántōn tōn*  
 then be you glory face to face all the  
*tum erit tibi gloria coram simul*

συνανακειμένων σοι  
*synanakeiménōn soi*  
 recline together at table you  
*discumbentibus*

‘Then you will be honoured in the presence of all who sit at table with you.’

(NT Luke 14.10)

### 3 Support-verb constructions in Greek: the shared and exclusive SVCs in each Gospel

In accordance with Table 1, a total of 521 SVCs are attested in the Gospels, distributed as follows: 76 in Mark, 117 in Matthew, 138 in Luke, and 193 in John. However, these absolute figures need to be refined considering the different length (number of words)<sup>6</sup> of each Gospel. Thus, if we examine the relative frequency of SVCs (number of SVCs per 1000 words), as shown in Table 2, the synoptic Gospels exhibit similar frequencies, as opposed to the Gospel of John, who is by far the author that most frequently employs SVCs (almost twice as often as Matthew).

This congruence among the three synoptic Gospels (Mark, Matthew, and Luke) is not *a priori* surprising, as they essentially narrate the same events from the life of Jesus. Likewise, one would expect the different aims and content of the Gospel of John to be also reflected in the use of SVCs.

<sup>6</sup>The number of words for each work is taken from the *Thesaurus Linguae Graecae*.

Table 2: Number of examples with an SVC in the Gospels

	Mark	Matthew	Luke	John	Total
n° of examples with an SVC	76	116	136	193	521
n° of words	11,299	18,338	19,451	15,635	64,723
n° of examples/1000 words	6.72	6.32	6.99	12.34	8.04

However, this general impression will undergo considerable refinement upon a closer analysis of the evidence. In fact, differences in SVC usage appear not only between John and the synoptic Gospels but also between Mark, Matthew, and Luke, due to the different nature and varying quality of the Greek they employ (Moulton et al. 1906/1976: vol. IV, Porter 2014).<sup>7</sup>

These internal differences become more evident when comparing not only the total number of occurrences of SVCs, but also the number of distinct SVCs used in each Gospel, regardless of their frequency. Thus, the 521 examples correspond to 231 distinct SVCs. Some of these are shared by multiple gospel writers, while others, as will be seen later, are exclusive to a given text.<sup>8</sup> Table 3 presents the number of different SVCs attested in each Gospel.

Table 3: Number of distinct SVCs in the Gospels

	Mark	Matthew	Luke	John
n° of Greek words	11,299	18,338	19,451	15,635
n° of distinct SVCs	57	67	98	84
n° of SVCs /1000	5.04	3.65	5.04	5.37

In light of the above, Mark, Luke, and John employ, in relative terms, a similar number of SVCs, whereas Matthew uses proportionally the lowest number of distinct SVCs.

<sup>7</sup>It is useful to bear in mind when comparing the three synoptic Gospels that the first published Gospel was that of Mark (hence it is cited first in the tables) and that both Matthew and Luke had the text of Mark in front of them and sometimes varied in the use of certain SVCs.

<sup>8</sup>One should take into account the SVCs shared by multiple authors to understand why the figures in Table 3 total more than 231 cases.

#### 4 Support-verb constructions in the Gospels

However, it is necessary to delve even further into the data. Thus, out of the 231 SVCs attested in the Gospels, 182 are exclusively used in one Gospel; that is, almost four out of every five SVCs (78.79%) are employed solely by one author.<sup>9</sup> Table 4 details the distribution of these 182 SVCs in each Gospel.

Table 4: Number of SVCs unique to each Gospel

	n° of SVCs	n° of unique SVCs	%
Mark	57	24	42.10%
Matthew	68	28	41.17%
Luke	99	69	69.69%
John	84	61	72.61%

According to the data, the Gospel of John displays, in relative terms, the highest number of unique SVCs: three out of every four SVCs used by John (72.61%) do not appear in any other Gospel. Among the synoptic Gospels, Luke employs proportionally the highest number of unique SVCs (two out of every three), a frequency that decreases significantly in Mark and Matthew.

This information is relevant, as it reveals the extent to which the use of SVCs can be idiosyncratic. To mention a few illustrative cases, John employs *σημεῖον ποιεῖν* *sēmeion poieîn* ‘to do signs’, see (9a), in an exclusive manner and with notable frequency (15 instances), while the synoptic Gospels use (7 instances) *σημεῖον διδόναι* *sēmeion didónai*, see (9b).

- (9) a. Πολλὰ μὲν οὖν καὶ ἄλλα σημεῖα ἐποίησεν ὁ Ἰησοῦς  
*Pollà mèn oûn kai állassēmeía epoiēsen ho Iēsoûs*  
 Much PRT PRT and other signs do Jesus  
*multa quidem et alia signa fecit Iesus*  
 ‘Now Jesus did many other signs.’

(NT John 20.30)

<sup>9</sup>Out of the 231 SVCs, only 6 appear in all four Gospels; the most frequent is *χρεῖαν ἔχειν* *chreian échein* ‘to need’ (20 instances). There are only 7 SVCs common to Mark, Matthew, and Luke (e.g., *πίστιν ἔχειν* *pístin échein* ‘to have faith’) and another 7 are shared by John and two of the three synoptic Gospels, such as *θέλημα ποιεῖν* *thélēma poieîn* ‘to fulfill the will’. Two further gospel writers share the use of 29 SVCs.

- b. καὶ δώσουσιν σημεῖα μεγάλα καὶ τέρατα  
*kai dósousin sēmeîa megála kai térata*  
 and give signs big and wonders  
*et dabunt signa magna et prodigia*  
 ‘[They] will perform great signs and wonders.’

(NT Matthew 24.24)

A similar pattern is observed with ψυχὴν τιθέναι *psychḗn tithénai* ‘to lay down the life’, see (10a), attested up to 6 times in John, while Mark and Matthew (2 instances) use ψυχὴν διδόναι *psychḗn didónai*, see (10b):

- (10) a. τὴν ψυχὴν μου ὑπὲρ σοῦ θήσω  
*tḗn psychḗn mou hyper soû thésō*  
 the soul my for you put  
*animam meam pro te ponam*  
 ‘I will lay down my life for you.’

(NT John 13.37)

- b. καὶ γὰρ ὁ υἱὸς τοῦ ἀνθρώπου... ἦλθεν... διακονῆσαι καὶ  
*kai gár ho huiòs toû anthrôpou... êlthen diakonêsai kai*  
 and for the son man come serve and  
*Nam et Filius hominis... venit... ut ministraret et*  
**δοῦναι τὴν ψυχὴν** αὐτοῦ λύτρον ἀντὶ πολλῶν  
*doûnai tḗn psychḗn autoû lýtron anti pollôn*  
 give the soul him price paid instead of many  
*daret animam suam redemptionem pro multis*  
 ‘For even the Son of Man came... to serve, and to give his life as a  
 ransom for many.’

(NT Mark 10.45)

Other SVCs exclusive to John include λόγον τηρεῖν *logon tēreîn* ‘to keep the word’ (8 instances), ἀμαρτίαν ἔχειν *hamartian échein* ‘to have guilt’ (4 instances), and ἀγαπῆν ἔχειν *agapḗn échein* ‘to have love’ (3 instances). In addition to the synthetic predicate μαρτυρεῖν *martyreîn* ‘to give witness’ (33 instances appear in John out of the total of 35 instances in all the Gospels), John exclusively employs, on three occasions, μαρτυρίαν λαμβάνειν *martyrían lambánein* ‘to receive testimony’, see (11), to express the reverse perspective, placing the recipient of the testimony instead of the one providing it in the subject position.

- (11) ὃ ἑωράκαμεν μαρτυροῦμεν, καὶ τὴν μαρτυρίαν ἡμῶν οὐ  
*ho heōrākamen martyroûmen kai tēn martyrían hēmōn ou*  
 what see bear witness and the witness our not  
*quod vidimus, testamur, et testimonium nostrum non*  
**λαμβάνετε**  
*lambánete*  
 receive  
**accipitis**

‘We speak of what we know, and bear witness to what we have seen, but you do not receive our testimony.’

(NT John 3.11)

Matthew uniquely employs (5 instances) the SVC συμβούλιον λαμβάνειν *symboúlion lambánein* ‘to form a plan, to decide’, where Mark uses συμβούλιον διδόναι *symboúlion didónai* or συμβούλιον ποιεῖν *symboúlion poieîn*.<sup>10</sup> In contrast to the systematic use of φονεύω *phoneúō* ‘to commit murder’ in the synoptic Gospels (7 instances), Mark is the only one to employ the SVC φόνον ποιεῖν *phónon poieîn* (NT Mark 15.7). Additionally, alongside the synthetic predicate τρέφειν *tréphein* ‘to nourish’ (5 instances), only Matthew (NT Matthew 24.45) has recourse to τροφήν διδόναι *trophḗn didónai* ‘to give food’.

Finally, Luke is the only author who writes, on two occasions, φόρον διδόναι *phónon didónai* ‘to pay tax’, see (12a), whereas Mark and Matthew, see (12b), use κῆνσον διδόναι *kēnson didónai* for the same episode:

- (12) a. ἔξεστιν ἡμᾶς Καίσαρι φόρον δοῦναι ἢ οὐ;  
*éxestin hēmâs Káisari phóron doûnai ê ou?*  
 it is possible we Caesar tribute give or not  
*licet nobis dare tributum Caesari an non?*

‘Is it lawful for us to give tribute to Caesar, or not?’

(NT Luke 20.22. cf. also NT Luke 23.2)

- b. ἔξεστιν δοῦναι κῆνσον Καίσαρι ἢ οὐ;  
*éxestin doûnai kēnson Káisari ê ou?*  
 it is possible give tribute Caesar or not  
*licet censum dare Caesari an non?*

‘Is it lawful to pay taxes to Caesar, or not?’

(NT Mark 12.14; cf. also NT Matthew 22.17)

<sup>10</sup>NT Mark 3.6 and NT Mark 15.1, respectively. For an analysis of the SVCs with συμβούλιον *symboúlion*, cf. infra Section 4.1 and Jiménez López (2017).

In order to gain a fuller understanding of the evidence presented here (along with other findings yet to be discussed), a dedicated study of the unique collocations of each Gospel writer from a diachronic perspective is required. It is thus crucial to investigate which SVCs are already attested in literary texts from the archaic and classical periods, which ones appear in koine writers contemporaneous with the composition of the New Testament, or if this usage is unique to the Greek of the Septuagint (LXX henceforth). This approach will allow an assessment of the degree of continuity or innovation exhibited by each gospel writer in employing these complex predicates.

By way of example, 7 out of the 24 collocations exclusive to the Gospel of Mark are already attested in classical times.<sup>11</sup> Another 2 are found in the LXX, as well as in koine literary texts.<sup>12</sup> The remaining, that is, more than half of the unique SVCs, are attested for the first time in this author. A similar comparative analysis of the rest of the Gospels will reveal the degree of classicism or, conversely, innovation in the language of each author. It will also shed light on potential interference from Aramaic, Hebrew or Latin within the multilingual context in which the Gospels were written (Janse 2007, 2014, George 2010, Rochette 2010, Horrocks 2010: 124–125).

Thus, for example, the collocation κήνσον διδόναι *kênsōn didónai* in Mark, see (12b), is partially a Latinism (from *censum*), which Luke corrects by opting for the more natural-sounding Greek construction φόρον διδόναι *phónon didónai*, see (12a), in line with the higher-quality Greek attributed to him (Moulton et al. 1906/1976: vol. IV: 47–60, Porter 2014, Jiménez López 2018: 98). Luke, in turn, is the first to use ἐργασίαν διδόναι *ergasían didónai* ‘to make an effort’ (NT Luke 12.58), considered a calque from the Latin *operam dare* (Mayser 1926/1934: II, 1, 123), just like συμβούλιον λαμβάνειν *symboúlion lambánein*, which is exclusively used by Matthew and is a calque from *consilium capere* (Blass et al. 1961: 5–7, Marucci 1993: 7). On the other hand, the combination συμβούλιον διδόναι *symboúlion didónai* in Mark (NT Mark 3.6) is often considered a Hebraism or Aramaism (Westcott & Hort 2007: 852, Zerwick & Grosvenor 2008: 128, Jiménez López 2017).

Finally, the influence of Hebrew, indirectly evident in the Gospels primarily through quotations and phraseology borrowed from the Greek of the LXX, explains, for instance, Matthew’s alternating use of ἀνομίαν ἐργάζεσθαι *anomían*

<sup>11</sup>Specifically, ἀπώλειαν γίνεσθαι *apóleian gígnesthai* ‘to be wasted’, θόρυβον εἶναι *thórybon eínai* ‘there be an uproar’, λόγον λαμβάνειν *logon lambánein* ‘to receive the word’, λόγον παραδέχεσθαι *logon paradéchesthai* ‘to accept the word’, τρόμον ἔχειν *trómon échein* ‘trembling overtakes someone’, φέγγος διδόναι *phéngos didónai* ‘to give light’, and φωνὴν ἀφιέναι *phōnēn aphíēnai* ‘utter a cry’.

<sup>12</sup>Specifically, ἁμαρτήματα ἀφιέναι *hamartémata aphíēnai* ‘to forgive sins’ and φόνον ποιεῖν *phónon poieîn* ‘to commit murder’.

*ergázesthai* (NT Matthew 7.23) and ἀνομίαν ποιεῖν *anomían poieîn* (NT Matthew 13.41). This alternation arises from the use of two different Hebrew support verbs in the Old Testament, לָצַד *pā'al* and הִשָּׂא *ʿāsâ*, and their literal translation in the LXX as ἐργάζεσθαι *ergázesthai* and ποιεῖν *poieîn*, respectively (Baños & Jiménez López 2022, 2024a).

## 4 Support-verb constructions in the Vulgate

In the Latin version of the Vulgate, a total of 644 SVCs are attested in the Gospels with the following distribution: Mark 96 examples, Matthew 162, Luke 158, and John 238. Considering the varying length of each Gospel, their relative frequency (number of SVCs per 1000 words) is presented in Table 5. As expected in a Latin translation which aimed to be literal, a proportion similar to the original Greek version is observed (cf. Table 2): the Gospel of John includes by far the highest number of examples, while the three synoptic Gospels exhibit a comparable usage.

Table 5: Number of examples with SVC in the Gospels (Vulgate)

	Mark	Matthew	Luke	John	total
n° of examples with an SVC	96	162	148	238	644
n° of words	12,076	19,521	20,728	16,576	68,901
n° of examples/1000 words	7.95	8.30	7.14	14.36	9.35

According to the data in Table 5, the Gospels contain 9.35 SVCs per 1000 words. This figure is particularly striking when compared to the frequency of SVC usage in the broader body of Latin literature.

Figure 1 presents the data from Baños (2023)<sup>13</sup> on SVC frequency in 30 Latin works, both in prose and verse, across various literary genres in a comprehensive corpus from Plautus to the *Historia Augusta*. We have incorporated the data from the Gospels into this figure, arranging the works from the highest (leftmost edge of the figure) to the lowest (rightmost edge of the figure) frequency of SVC usage:

<sup>13</sup>The study of Baños (2023) includes an analysis of SVC from 30 different literary works (or fragments thereof) displaying a comparable length (of approximately 4400–4600 words each). Among them was a fragment from the Gospel of Matthew (NT Matthew 1-10.10), with a relative frequency (8.71 SVCs per 1000 words) similar to that in Table 5 (8.30) or the entire Gospel of Matthew.

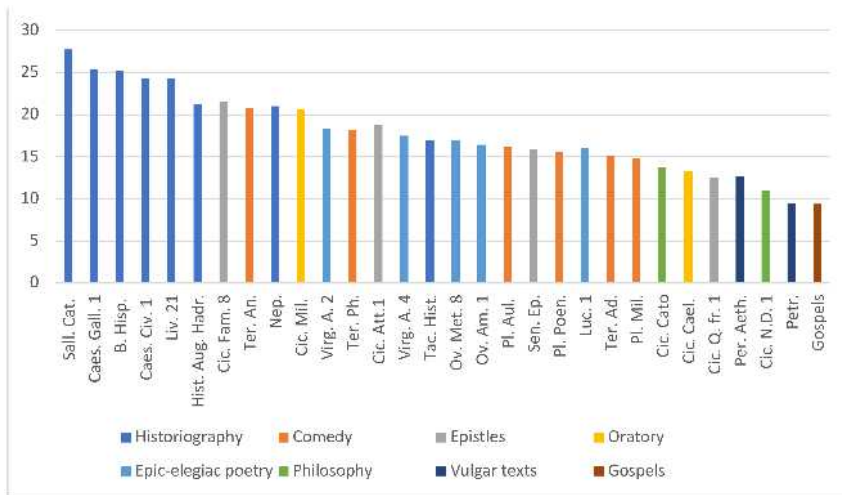


Figure 1: Frequency of SVCs from Plautus to the *Gospels*

The Gospels are primarily narrative works, closely resembling historiographical texts, which are the Latin literary genre that most employs SVCs, as illustrated in Figure 1. However, out of the 30 Latin works examined, regardless of their content or literary genre, the Gospels contain the lowest number of SVCs. This is due to their nature as translations, and particularly, translations from Greek. On the one hand, these complex predicates are generally used much less frequently in ancient Greek than in classical Latin, constituting a fundamental distinguishing feature between the two classical languages.<sup>14</sup> On the other hand, considering that the Latin translation of the Vulgate aimed to be literal, one might reasonably expect that if the source language (Greek) used few SVCs, this would be reflected to a greater or lesser extent in the target language (Latin).

#### 4.1 Translation *verbum e verbo* or *sensum de sensu*?

However, this assumption of a literal translation must be qualified in view of the evidence. Indeed, when comparing the Greek and Latin versions of the Gospels, it is striking that the Vulgate contains many more SVCs (644 examples) than the original Greek (521 examples).

This is largely because, given the more natural use of SVCs in Latin than in Greek, the Vulgate often translates a Greek synthetic predicate with an SVC. To

<sup>14</sup>Cf. Baños (2015b). Thus, for example, when comparing a corpus of similar size and content from Caesar and Xenophon (López Martín 2019), there are four SVCs in Caesar for every one found in Xenophon.

illustrate this point, it is sufficient to compare the original Greek version of the passage on the commandments in the three synoptic Gospels ('Do not murder, Do not commit adultery, Do not steal, Do not bear false witness, Do not defraud') with its respective Latin translation:

- (13) a. μὴ φονεύσης, μὴ μοιχεύσης, μὴ κλέψης, μὴ  
*mè phoneúsēis mè moicheúsēis mè klépsēis mè*  
 not murder not commit adultery not steal not  
*ne adulteres, ne occidas, ne fureris, ne*  
**ψευδομαρτυρήσης, μὴ ἀποστερήσης**  
*pseudomartyrésēis mè aposterésēis*  
 bear false witness not defraud  
***falsum testimonium dixeris ne fraudem feceris***  
 'Do not murder, Do not commit adultery, Do not steal, Do not bear  
 false witness, Do not defraud.'  
 (NT Mark 10.19)

- b. Τὸ οὐ φονεύσεις, οὐ μοιχεύσεις, οὐ  
*tò ou phoneúsēis ou moicheúseis ou*  
 the not murder not commit adultery not  
*non homicidium facies, non adulterabis, non*  
**κλέψεις, οὐ ψευδομαρτυρήσεις**  
*klépsēis ou pseudomartyrésēis*  
 steal not bear false witness  
***facies furtum, non falsum testimonium dices***  
 'You shall not murder, You shall not commit adultery, You shall not  
 steal, You shall not bear false witness.'

(NT Matthew 19.18)

- c. μὴ μοιχεύσης, μὴ φονεύσης, μὴ κλέψης, μὴ  
*mè phoneúsēis mè moicheúseis mè klépsēis mè*  
 not murder not commit adultery not steal not  
*non occides, non moechaberis, non furtum facies, non*  
**ψευδομαρτυρήση**  
*pseudomartyrésēis*  
 bear false witness  
***falsum testimonium dices***  
 'Do not commit adultery, Do not murder, Do not steal, Do not bear  
 false witness.'

(NT Luke 18.20)

As can be seen, the three Greek Gospels express each commandment through the same synthetic predicates, albeit with slight variations among them.<sup>15</sup> However, in the Vulgate these are sometimes translated as SVCs: φονεύειν *phoneúein* = *homicidium facere* ‘to murder’, κλέπτειν *kléptein* = *furtum facere* ‘to steal’, ψευδομαρτιρεῖν *pseudomartireîn* = *falsum testimonium dicere* ‘to bear false witness’, and ἀποστρεφῖν *apostereîn* = *fraudem facere* ‘to defraud’. Moreover, it seems that there is no consistent approach to their translation, as the same Greek predicate is sometimes translated into Latin synthetically and other times as an SVC: φονεύειν *phoneúein* = *occidere* (Mark, Luke) / *homicidium facere* (Matthew); κλέπτειν *kléptein* = *furari* (Mark) / *furtum facere* (Matthew, Luke).

In his revision of the earlier Latin translations of the Gospels (commonly known as *Vetus Latina*), carried out in AD 382 at the request of Pope Damasus, it seems that St. Jerome did not strictly follow, in the case of the SVCs, the general principle which he had laid out in his *Letter to Pammachius* to explain his approach to translating Greek texts:

- (14) *Ego enim non solum fateor, sed libera voce profiteor, ne in interpretatione Graecorum, absque Scripturis Sanctis, ubi et verborum ordo mysterium est, non verbum e verbo, sed sensum exprimere de sensu.*

‘Truthfully, I admit it and also profess it openly: in the translation of Greek texts — *apart from the Holy Scriptures*, where even the order of the words is a mystery —, I do not render word for word but sense for sense’

(*Epistula Hieronymi ad Damasum papam* 57.5-6, italics our own).

As can be seen, St. Jerome explicitly excludes the Bible (*absque Scripturis Sanctis*) in his defense of the non-literal translation (*non verbum e verbo*) of Greek texts, since in his opinion the literalness of the sacred text, including word order, must be respected. However, when it comes to the use of SVCs in the Gospels, he does not strictly adhere, or only partially adheres, to this principle.

In this regard, it is necessary to distinguish between two types of Latin SVCs in the Vulgate (Baños 2015a: 68–69) based on their greater or lesser literalness with respect to the original Greek:

- (i) Greek SVCs consistently translated as Latin SVCs, that is, *verbum e verbo*. Specifically, 502 Latin SVCs follow this principle. This means that 77.95% of the Latin SVCs in the Gospels are, in turn, translations of Greek SVCs.

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<sup>15</sup>In addition to a change in the order of the first two commandments in Luke compared to Mark and Matthew, Mark adds a commandment — ‘do not defraud’ — which is absent from the versions of Matthew and Luke.

- (ii) However, on several occasions, a Latin SVC corresponds to a synthetic predicate in the Greek text, as in the examples discussed in (13). In such cases, a less literal translation is provided, more *sensum de sensu*: 138 Latin SVCs (22.05%) in the Vulgate, that is one out of five, do not have a parallel analytic correspondence in the original Greek text.

In what follows, we will discuss the first type; in other words, how the Greek SVCs are translated in the Vulgate. We will leave the second type, which presents numerous variations and alternatives, for a future study.<sup>16</sup>

#### 4.2 The Latin translation of Greek support-verb constructions

When the Greek text of the Gospels contains an SVC, St. Jerome remains faithful to the principle of literal, word-for-word translation. Out of the 521 occurrences of Greek SVCs in the Gospels, there are only 19 instances in which the Vulgate does not offer a corresponding Latin SVC. In other words, only 3.65% of the Greek SVCs are not translated with Latin SVCs.

Let us take a closer look at these exceptions, drawing a link with other less literal translations of Greek SVCs. We will distinguish for this purpose three types of examples on a scale from less to more literal.

- (i) A Greek SVC is translated in the Vulgate as a synthetic predicate. This is the most exceptional case and only occurs with *χρείαν ἔχειν* *chreían échein* ‘to need’, an SVC to which we will return below, and which is translated with four different Latin verbs: *desiderare* in (15a), *egere* in (15b), *debere* in (15c), and *indigere* in (15d).

<sup>16</sup>Thus, a Greek synthetic predicate can be translated (i) with an SVC (εὐχαριστεῖν *eucharisteîn* ‘to be thankful’ = *gratias agere*), (ii) with various SVCs (ἐπιμελεῖσθαι *epimeleisthai* ‘to take care of’ = *curam agere* and *curam habere*; θανατοῦν *thanatoun* ‘to kill’ = *morte afficere* and *morti tradere*), or (iii) interchangeably with a synthetic predicate and an SVC. To give three illustrative examples, μαρτυρεῖν *martyreîn* ‘to bear witness’ is translated as *testari* (John), as well as *testimonium perhibere* (John), *testimonium dare* (Luke), or *testimonio esse* (Matthew); μετανοεῖν *metanoeîn* ‘to repent’ as *paenitere*, *paenitentiam agere* and *paenitentiam habere* (Baños & Jiménez López 2017a); and μισεῖν *miseîn* ‘to hate’ as *odisse*, *odio habere* and *odio esse* (Baños & Jiménez López 2017b). The translations of types (ii) and (iii) sometimes reveal different translation criteria in each Gospel: *morti tradere*, for example, is an exclusive translation of θανατοῦν *thanatoun* found only in the Gospel of Matthew; the same is true of *odio habere*, which translates μισεῖν *miseîn*, whereas the translators of Luke and John opt for *odisse*.

- (15) a. Τί ἔτι **χρείων** ἔχομεν μαρτύρων;  
*ti éti chreían échomen martýrōn*  
 what yet need have witnesses  
*Quid adhuc desideramus testes?*  
 ‘What further witnesses do we need?’

(NT Mark 14.63)

- b. Τί ἔτι **χρείων** ἔχομεν μαρτύρων;  
*ti éti chreían échomen martýrōn*  
 what yet need have witnesses  
*Quid adhuc egemus testibus?*  
 ‘What further witnesses do we need?’

(NT Matthew 26.65)

- c. Ἐγὼ **χρείων** ἔχω ὑπὸ σοῦ βαπτισθῆναι  
*egō chreían échō hypò soū baptisthēnai*  
 I need have by you be baptized  
*Ego a te debeo baptizari*  
 ‘I need to be baptized by you.’

(NT Matthew 3.14).

- d. Ὁ λελουμένος οὐκ ἔχει **χρείων** εἰ μὴ τοὺς πόδας  
*ho lelouménos ouk échei chreían ei mē toūs pódas*  
 the be washed not have need if not the feet  
*qui lotus est, non indiget*  
 νίψασθαι  
*nípsasthai*  
 wash  
*ut lavet*

‘The one who has bathed does not need to wash, except for his feet.’ (NT John 13.10)

- (ii) A Greek SVC is translated analytically, not as an SVC, but rather as a complex predicate with a verb + adverb, see (16), or a verb + adjective, see (17). Once again, *χρείων ἔχειν chreían échein* provides examples of both possibilities: *nesesse habere* in (16a), *necessarium esse* in (17a), and *necessarium habere* in (17b).

- (16) a. Οὐ **χρείαν** ἔχουσιν οἱ ἰσχύοντες ἰατροῦ ἀλλ’ οἱ κακῶς  
*ou chreían échousin hoi ischýontes iatroû all’ hoi kakôs*  
 not need have the be strong physician but the badly  
*Non **necesse habent** sani medicum, sed qui male*  
 ἔχοντες  
*échontes*  
 have/be  
*habent*

‘Those who are well have no need of a physician, but those who are sick.’

(NT Mark 2.17)

- b. Ἀγρὸν ἠγόρασα καὶ ἔχω ἀνάγκην ἐξελθὼν ἰδεῖν αὐτόν  
*agròn ēgórasa kai échō anánkēn exelthōn ideîn autón*  
 field buy and have necessity go out see it  
*Villam emi et **necesse habeo** exire et videre illam*  
 ‘I have bought a field, and I must go out and see it.’

(NT Luke 14.18).

- (17) a. Ὁ κύριος αὐτοῦ **χρείαν** ἔχει  
*ho kýrios autoû chreían échei*  
 the Lord it need have  
*Domino **necessarius est***

‘The Lord has need of it.’

(NT Mark 11.3)

- b. Ὁ κύριος αὐτοῦ **χρείαν** ἔχει  
*ho kýrios autoû chreían échei*  
 the Lord it need have  
*Dominus eum **necessarium habet***

‘The Lord has need of it.’

(NT Luke 19.34).

- c. τί αὐτῇ **κόπους παρέχετε;**  
*tí autēi kópous paréchete*  
 why her trouble supply  
*quid illi **molesti estis?***

‘Why do you trouble her?’

(NT Mark 14.6)<sup>17</sup>

<sup>17</sup>The same translation of κόπον/κόπους παρέχειν *kópon/kópous paréchein* as *molestum esse* is repeated in NT Matthew 26.10, NT Luke 11.7, and NT Luke 18.5.

- (iii) A third way in which an SVC is not rendered by means of a strictly literal translation is when the text of the Vulgate, although using a Latin SVC, does not employ the expected support verb (γίγνεσθαι *gígnesthai/fieri*, διδόναι *didónai/dare*, εἶναι *eînai/esse*, ἔχειν *échein/habere*, ποιεῖν *poi-eîn/facere*, etc.), but opts for a more suitable Latin verb or provides various translation alternatives.<sup>18</sup>

Since it is not possible to discuss all the examples of this kind, we will focus on those SVCs containing the nouns συμβούλιον *symboúlion* and χρεῖαν *chreían*, as they offer a greater variety of translations and, more importantly, can help illustrate three crucial aspects of the analysis of Greek SVCs and their Latin translations. From the perspective of the original Greek text, SVCs with συμβούλιον *symboúlion* emphasise, on the one hand, the interferences between Aramaic (the native language of the gospel writers), Greek, and Latin in the multilingual context in which the Gospels were composed in the 1st century AD. On the other hand, they reveal the varying proficiency of the gospel writers in Greek. From the perspective of the Vulgate, the multiple Latin translations of χρεῖαν ἔχειν *chreían échein* seem to suggest the existence of different translation criteria in each Gospel.

#### 4.2.1 The translation of the support-verb constructions with συμβούλιον *symboúlion*

Thus, συμβούλιον *symboúlion* (a calque from the Latin noun *consilium* ‘meeting, resolution, counsel’) forms three different SVCs in the Gospels (Jiménez López 2017): συμβούλιον ποιεῖν *symboúlion poi-eîn*, συμβούλιον διδόναι *symboúlion didónai*, and συμβούλιον λαμβάνειν *symboúlion lambánein*.

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<sup>18</sup>Thus, the 44 instances of SVCs with γίγνεσθαι *gígnesthai* in the Gospels are translated into Latin as *fieri*, except for two specific cases where the translator of Mark uses *oriri* (NT Mark 4.17) and *efficere* in the passive (NT Mark 6.2). In the case of SVCs with εἶναι *eînai*, in the previously mentioned example (6a), the Vulgate uses *fieri* instead of *esse*, precisely due to its proximity with γίγνεσθαι *gígnesthai*. Regarding ἔχειν *échein*, when the predicative noun is the subject, Latin does not use *habere* but *invadere* (NT Mark 16.8). A similar example is NT Luke 2.26, where λαμβάνειν *lambánein*, instead of its common translation as *accipere*, is rendered as *aprehendere*. Other examples of non-literal translation include NT Mark 14.65 (ῥαπίσμασιν λαμβάνειν *rhapismasin lambánein* = *alapis caedere* ‘to receive someone with blow, to slap’), NT Luke 14.31 (συμβάλεῖν εἰς πόλεμον *ymbaleîn eis pólemon* = *committere bellum* ‘to engage in war’) and NT John 3.21 (τὰ ἔργα εἰργασμένα *tà érga eirgasména* = *opera facta sunt* ‘to do works’), the only example in the Gospels where an SVC with ἐργάζεσθαι *ergázesthai* is translated as *facere* and not as *operari* (Baños & Jiménez López 2022, e.p.).

#### 4 Support-verb constructions in the Gospels

The first one is translated literally in the Vulgate (NT Mark 15.1: *consilium facientes*). However, the other two are approached differently. The sole instance of συμβούλιον διδόναι *syμβούλιον didónai* is translated as *consilium facere*, see (18), instead of *dare*, and συμβούλιον λαμβάνειν *syμβούλιον lambánein*, a collocation unique to Matthew (5 instances), is once translated almost literally as *consilium accipere* (NT Matthew 28.12), but also more freely as *consilium facere*, see (19), and, most importantly,<sup>19</sup> as *consilium inire* in (20):

- (18) καὶ ἐξελθόντες οἱ Φαρισαῖοι εὐθὺς μετὰ τῶν  
*kai exelthóntes hoi Pharisaiōi euthús meta tôn*  
 and go out the Pharisees immediately with the  
*Exeuntes autem statim Pharisaei cum*  
 Ἡρωδιανῶν συμβούλιον ἐδίδουν κατ' αὐτοῦ ὅπως αὐτὸν  
*Herōidianōn syμβούλιον edídoun kat' autoũ hópōs autòn*  
 Herodians counsel give against him how him  
*Herodianis consilium faciebant adversus eum quomodo eum*  
 ἀπολέσωσιν  
*apolésōsin*  
 destroy  
*perderent*

'The Pharisees went out and immediately held counsel with the Herodians against him, how to destroy him.'

(NT Mark 3.6).

- (19) ἐξελθόντες δὲ οἱ Φαρισαῖοι συμβούλιον ἔλαβον κατ' αὐτοῦ  
*exelthóntes dè hoi Pharisaiōi syμβούλιον élabon kat' autoũ*  
 go out and the Pharisees counsel receive against him  
*Exeuntes autem Pharisaei consilium faciebant adversus eum,*  
 ὅπως αὐτὸν ἀπολέσωσιν  
*hópōs autòn apolésōsin*  
 how him destroy  
*quomodo eum perderent*

'But the Pharisees went out and conspired against him, how to destroy him.'

(NT Matthew 12.14).

<sup>19</sup>Apart from example (22), cf. NT Matthew 27.1 (συμβούλιον ἔλαβον *syμβούλιον élabon* = *consilium inierunt*) and NT Matthew 27.7 (συμβούλιον λαβόντες *syμβούλιον labóntes* = *consilio inito*).

- (20) Τότε πορευθέντες οἱ Φαρισαῖοι συμβούλιον ἔλαβον ὅπως αὐτὸν  
*tóte poreuthéntes hoi Pharisaíoi symboúlion élabon hópos autòn*  
 then go the Pharisees counsel receive how him  
*tunc abuentes Pharisaei consilium inierunt ut*  
 παγιδεύσωσιν ἐν λόγῳ  
*pagideúsōsin en lógōi*  
 lay a snare in word  
*caperent eum in sermone*

‘Then the Pharisees went and plotted how to entangle him in his words.’

(NT Matthew 22.15)

It is worth commenting briefly on this variety of seemingly synonymous SVCs with the same noun, both in the original Greek and the Latin translation.

(i) In the case of the Greek SVCs with συμβούλιον *symboúlion* (Jiménez López 2017), as in fact in that of any other collocation, our starting point is Mark, as he is the earliest gospel writer and reveals a higher degree of external influence in the use of SVCs, undoubtedly reflecting his comparatively lower proficiency in Greek.

Indeed, the SVC συμβούλιον διδόναι *symboúlion didónai* in Mark, see (20), is foreign to ancient Greek and, as mentioned above (Section 3), is often considered a Hebraism or Aramaism. Here it does not mean ‘to advise, counsel’ (for which Greek regularly uses the verb συμβουλεύειν *symbouleúein* in the active voice) but rather ‘to form a plan, deliberate, consult’. Perhaps for this reason Matthew, who has Mark’s text in (18) at hand, corrects this unusual collocation by selecting a clearer Greek expression for the same passage, συμβούλιον λαμβάνειν *symboúlion lambánein*. This, in turn, is a Latin loan from *consilium capere*, the prototypical SVC for expressing the predicate ‘to form a plan, decide’ in classical Latin (Baños 2014), namely, at the time when the Greek Gospels were written.

(ii) In the context of the Vulgate, there is a clear attempt to avoid a literal translation of example (20) in Mark (συμβούλιον διδόναι *symboúlion didónai* = *consilium dare*), since the Latin SVC conveys a different meaning (‘to counsel’)<sup>20</sup> than the one expressed by the original Greek (‘to deliberate’). Mark’s text is thus translated as *consilium facere*, an SVC which is also employed as a literal translation of συμβούλιον ποιεῖν *symboúlion poieîn* (NT Mark 15.1), συμβούλιον λαμβάνειν *symboúlion lambánein*, see (21), and συμβουλεύεσθαι *symbouleúesthai* (NT Matthew 26.4) to express in all three cases the predicate ‘to deliberate’.

<sup>20</sup>In NT John 18.14, *consilium dare* is used precisely to translate συμβουλεύειν *symbouleúein*.

Nevertheless, from a Latin perspective, the use of *consilium facere* is striking, as it is uncommon in classical Latin,<sup>21</sup> compared to the more frequent *consilium capere* and *consilium inire*. Indeed, one would have expected συμβούλιον λαμβάνειν *symboúlion lambánein* to be translated as *consilium capere*, an SVC which is nevertheless found nowhere in the Bible. This paradox ultimately reflects the extent to which there might have been a diachronic renewal in the use of these collocations over the three centuries that had elapsed between the original Greek text and the Latin translation of the Vulgate.

In the 1st century AD, Matthew employed συμβούλιον λαμβάνειν *symboúlion lambánein* under the influence of the classical Latin SVC *consilium capere*. However, when the Greek text was translated into Latin three centuries later, *consilium inire* had already displaced *consilium capere*<sup>22</sup> as the prototypical expression of the analytic predicate ‘to form a plan, to take a decision’ and was therefore given preference over the latter in the Gospel of Matthew (NT Matthew 22.15, NT Matthew 27.1, NT Matthew 27.7).

In the meantime, a new SVC, *consilium facere*, had emerged in biblical Latin as a literal translation of συμβούλιον ποιεῖν *symboúlion poieîn* (NT Mark 15.1),<sup>23</sup> but it also ended up being used to translate συμβούλιον διδόναι *symboúlion didónai*, see (18), συμβούλιον λαμβάνειν *symboúlion lambánein*, see (19), and even συμβουλευέσθαι *symbouleúesthai* ‘to deliberate’ in a context, such as (21) similar to that of (18–20):

- (21) καὶ συνεβουλευσάντο ἵνα τὸν Ἰησοῦν δόλω κρατήσωσιν  
*kai synebouleúsanto hína tòn Iēsoûn dólōi kratēsōsin*  
 and deliberate in order that the Jesus ploy conquer  
*et consilium fecerunt ut Iesum dolo tenerent*

<sup>21</sup>According to the data from DiCoLat (as of 30/11/2023), which includes the SVCs attested in the textual corpus of the *Packard Humanities Institute* (PHI), there are two occurrences of *consilium facere* in classical Latin: the first one (Quintus Claudius Quadrigarius (2nd-1st c. BC), *Historiae* fr 5) is fragmentary; and the second (Livy, *Ab urbe condita* 35.42.8), with a non-personal subject (*fortuna vel ingenium*), does not convey the same meaning as the biblical examples.

<sup>22</sup>Indeed, according to the data from DiCoLat, despite the prevalence of *capere* over *inire* in classical Latin (129 vs 71 instances), both are used with a similar frequency in post-classical Latin (28/25), until *inire* took precedence over *capere* in late Latin, to the point that the latter is entirely absent from the Vulgate (Old and New Testaments).

<sup>23</sup>Burton (2000: 126–127) also mentions *consilium capere* ‘instead of the standard VNCs [verb-noun collocations] *consilium capere* and *consilium inire*, as a literal translation of συμβούλιον ποιέω [*symboúlion poiéō*]’. The SVC *consilium facere* had already appeared in earlier versions of the *Vetus Latina*, thus introducing an SVC which was foreign to Latin but was eventually generalised in the Vulgate.

καὶ ἀποκτείνωσιν

*kaī apokteïnōsin*

and kill

*et occiderent*

‘and plotted together in order to arrest Jesus by stealth and kill him.’

(NT Matthew 26.4)

#### 4.2.2 The translations of *χρείαν ἔχειν* (*chreían échein*)

Equally interesting are the examples of *χρείαν ἔχειν chreían échein* which, along with other translation possibilities already discussed – *supra* (15) to (17) –, are also rendered with three SVCs in the Vulgate: *necessitatem habere* in (22a), the most literal translation, which however gives rise to an SVC unknown to classical Latin, as also happens with *opus habere*, see (22b), and its classical counterpart *opus esse*, see (22c):

- (22) a. οὐδέποτε ἀνέγνωτε τί ἐποίησεν Δαυὶδ ὅτε **χρείαν**  
*oudépotē anégnōte tí epoiēsen Dauid hōte chreían*  
 never read what do David when need  
*numquam legistis quid fecerit David quando **necessitatem***  
**ἔσχεν** καὶ ἐπείνασεν αὐτὸς καὶ οἱ μετ’ αὐτοῦ;  
*éschen kaī epéinasen autōs kaī hoi met’ autoū*  
 have and be hungry himself and the with him  
***habuit et esuriit ipse et qui cum eo***

‘Have you never read what David did, when he was in need and was hungry, he and those who were with him?’

(NT Mark 2.25)

- b. Ὁ κύριος αὐτῶν **χρείαν ἔχει**  
*ho kýrios autōn chreían échei*  
 the Lord them need have  
*Dominus his **opus habet***

‘The Lord needs them.’

(NT Matthew 21.3).

[Compare with *necessarium esse* in (17a) and *necessarium habere* in (17b) for the same passage in the other synoptic Gospels].

- c. Οὐ **χρείαν ἔχουσιν** οἱ ἰσχύοντες ἰατροῦ ἀλλ’ οἱ κακῶς  
*ou chreían échousin hoi ischýontes iatroū all’ hoi kakōs*  
 not need have the be strong physician but the badly  
***Non est opus valentibus medico, sed male***

ἔχοντες  
*échontes*  
 have/be  
*habentibus*

‘Those who are well have no need of a physician, but those who are sick.’

(NT Matthew 9.12)

[Compare with *necesse habere* in (16a) for the same passage].

The SVC *χρεῖαν ἔχειν chreían échein* illustrates the three possible ways of translating a Greek SVC into Latin discussed in the preceding pages: through various simplex verbs, as seen in the examples in (15); through an analytic predicate of the type verb + adverb, see (16a), or verb + adjective, see (17a) and (17b); and through the three SVCs cited in (22). In sum, *χρεῖαν ἔχειν chreían échein* is rendered through 10 different translations in the Gospels: *desiderare* in (15a), *egere* in (15b), *debere* in (15c), *indigere* in (15d), *necesse habere* in (16), *necessarium esse* in (17a), *necessarium habere* in (17b), *necessitatem habere* in (22a), *opus habere* in (22b), and *opus esse* in (22c).

Although it would be worthwhile to analyse each of these translations individually<sup>24</sup>, the existence of so many diverse translations for the same Greek SVC, especially considering the almost inviolable principle (in 96% of the cases) that every Greek SVC should be translated with a corresponding Latin SVC, clearly suggests, in our view, that there was no uniform approach to translating this SVC in the Gospels, and that St. Jerome’s subsequent revision in this respect was either superficial or nonexistent.

This is particularly evident in those passages of the synoptic Gospels which reproduce Jesus’ exact words – words which are repeated in practically identical form in the original Greek versions. One would expect that, as sacred words, these would be faithfully replicated in their respective Latin versions. Nevertheless, the Vulgate does not strictly adhere to the principle of literal translation. Each Gospel seems to be the work of a different translator, who attempts to stay

<sup>24</sup>We will dedicate a specific study to the analysis of the various Latin translations. It is worth bearing in mind in this respect that *χρεῖαν chreían* can be constructed absolutely (for instance, in the only example in which it is translated as *necessitatem habere*, see 22a) or, more commonly, with an adnominal complement: either a noun in the genitive or, less frequently, an infinitive or a subordinate with ἵνα *hína*. In addition, it will be necessary to determine, among other aspects, whether this variety of translations reflects a possible polysemy of the predicate in Greek, and analyse, from the point of view of Latin, the classicism of each possible translation, considering also translations previously attested in various versions of the *Vetus Latina*.

faithful to Jesus' words, yet achieves different results which St Jerome respects and preserves.

Let us focus on the three most representative passages. In the first one, responding to the Pharisees' muttering about him and his disciples eating at the house of the tax collector Levi, Jesus replies in an almost identical manner ('it is not the healthy who need a physician, but those who are sick') in all three Greek Gospels (NT Mark 2.17 and NT Matthew 9.12: Οὐ χρείαν ἔχουσιν οἱ ἰσχύοντες ἰατροῦ *Ou chreían échousin hoi ischýontes iatroû*; NT Luke 5.31: Οὐ χρείαν ἔχουσιν οἱ ὑγιαίνοντες ἰατροῦ *Ou chreían échousin hoi hygiáinontes iatroû*). However, the Latin translation of Jesus' words is different: *non **necesse habent** sani medicum* (Mark), *non **est opus** valentibus medico* (Matthew), and *non **egent** qui sani sunt medico* (Luke).

In the second passage, just before his triumphant entry into Jerusalem, Jesus sends two disciples to a village to bring him a donkey tied to a colt. He instructs them that should anyone question them, they should simply reply, 'The Lord needs it/them'. The wording in Greek is the same in all three Gospels (repeated twice in Luke), with a slight variation in number: Ὁ κύριος αὐτοῦ χρείαν ἔχει *Ho kýrios autoû chreían échei* (NT Mark 11.3, NT Luke 19.31, NT Luke 19.34) / Ὁ κύριος αὐτῶν χρείαν ἔχει *Ho kýrios autôn chreían échei* (NT Matthew 21.3). However, in the Vulgate, four different translations are provided: *Domino **necessarius est*** (Mark), *Dominus his **opus habet*** (Matthew), *Dominus operam eius **desiderat*** (NT Luke 19.31), and *Dominus eum **necessarium habet*** (NT Luke 19.34).

Finally, when Jesus is arrested and brought to the house of the high priest Caiaphas, the latter asks him whether he truly is the Messiah, the Son of God, to which Jesus responds, 'You have said it'. Caiaphas exclaims in shock: 'What need do we have of any more witnesses?' Once again, Caiaphas' words in Greek are almost the same in all three gospel writers (Τί ἔτι χρείαν ἔχομεν μαρτύρων; *Tí éti chreían échomen martýrôn*? in NT Mark 14.63 and NT Matthew 26.65; Τί ἔτι ἔχομεν μαρτυρίας χρείαν; *Tí éti échomen martyρίας chreían*? in NT Luke 22.71). However, their Latin translations in the Vulgate differ: *quid adhuc **desideramus** testes?* (Mark), *quid adhuc **egemus** testibus?* (Matthew) and *quid adhuc **desideramus** testimonium?* (Luke).

In our opinion, these examples suggest that there is a different Latin translator behind each Gospel, a perception that seems to be confirmed when considering all the translation variants of χρείαν ἔχειν *chreían échein* and their frequency in each gospel writer, as demonstrated in Table 6.

As can be observed, each Gospel translation has its own distinctive characteristics. The translator of Mark employs two exclusive SVCs for χρείαν ἔχειν *chreían*

#### 4 Support-verb constructions in the Gospels

Table 6: Different translation options of  $\chi\rho\epsilon\acute{\iota}\alpha\nu\ \epsilon\tilde{\chi}\epsilon\iota\nu\ chre\acute{i}\alpha\nu\ \acute{e}chein$  in the Gospels

$\chi\rho\epsilon\acute{\iota}\alpha\nu\ \epsilon\tilde{\chi}\epsilon\iota\nu\ chre\acute{i}\alpha\nu\ \acute{e}chein$	Mark	Matthew	Luke	John
<i>opus esse</i>		6.8, 9.12		2.25, 13.29, 16.30
<i>necessitatem habere</i>	2.25			
<i>opus habere</i>		21.3		
<i>nesesse habere</i>	2.17	14.16		
<i>necessarium esse</i>	11.3			
<i>necessarium habere</i>			19.34	
<i>desiderare</i>	14.63		19.31, 22.71	
<i>debere</i>		3.14		
<i>egere</i>		26.65	5.31	
<i>indigere</i>			9.11, 15.7	13.10

*échein*, *necessitatem habere* in (13a) and *necessarium esse* in (17a), both of which are not attested in the other Gospels. The former, a result of extreme literalness, is also unfamiliar in Latin.

The translator of the Gospel of Matthew also provides two unique translation alternatives: *opus habere* in (22b), an SVC attested only in late Latin and, more specifically, in Christian Latin, and the verb *debere* in (15c), a surprising choice for a collocation like  $\chi\rho\epsilon\acute{\iota}\alpha\nu\ \epsilon\tilde{\chi}\epsilon\iota\nu\ chre\acute{i}\alpha\nu\ \acute{e}chein$ , which always expresses necessity in Greek. However, in this specific context (when Jesus presents himself to John to be baptised) the Latin translator imbues it with an additional sense of obligation.

On the other hand, the translator of Luke is the only one who avoids using a parallel Latin SVC in all six instances in which  $\chi\rho\epsilon\acute{\iota}\alpha\nu\ \epsilon\tilde{\chi}\epsilon\iota\nu\ chre\acute{i}\alpha\nu\ \acute{e}chein$  appears. Only once does he use the analytic predicate *necessarium habere*, see (17b), a choice that is also unique to this Gospel. In the remaining five examples, he consistently employs synthetic predicates: *desiderare*, *egere*, and *indigere*.

Finally, the translator of John takes a radically different approach from that of Luke. Except for one instance in which the verb *indigere* is used, see (15d), in the rest of the cases he uses *opus esse*, which must have been the most natural translation of  $\chi\rho\epsilon\acute{\iota}\alpha\nu\ \epsilon\tilde{\chi}\epsilon\iota\nu\ chre\acute{i}\alpha\nu\ \acute{e}chein$  from the perspective of classical Latin, had a uniform translation criterion been applied to this Greek SVC.

Ultimately, we have four Gospels and four distinct translation principles. Faced with the differences of these early translations (for all of them are found in manuscripts of the *Vetus Latina*), St. Jerome did not opt for a unifying criterion in his revision. This holds true, at least, for the three passages in the synoptic

Gospels just discussed, in which Jesus' exact words are reproduced. Interestingly, his words remain the same across the various synoptic Gospels in Greek but vary in the Vulgate version of each Gospel.

## 5 Conclusions and prospects

By way of conclusion, the general data we have discussed regarding the use of SVCs in the Gospels, both in the original Greek version and the Latin translation of the Vulgate, allow us to draw some important conclusions and, at the same time, lay out new avenues for research which we hope to address in future studies.

The frequent occurrence of collocative verbs in the original Greek text, such as ποιεῖν *poieîn* 'to do', γίγνεσθαι *gígnesthai* 'to happen', εἶναι *eînai* 'to be', διδόναι *didónai* 'to give', ἔχειν *échein* 'to have', or λαμβάνειν *lambánein* 'to take', is partially due to the fact that they complement each other and enrich the collocational pattern of many predicative nouns by expressing the same event from perspectives which are different from those of the corresponding synthetic predicates.

Although our analysis of Greek SVCs has primarily been based on a synchronic approach, we have also noted the need for a diachronic focus. From a synchronic perspective, we have highlighted some significant quantitative and qualitative differences among the four gospel writers in the use of SVCs. John, for example, not only shows the highest frequency of SVCs but also the highest number of unique SVCs, while the exact opposite situation is observed in Matthew. These and other differences reveal, on the one hand, the idiosyncratic nature of this type of collocations, and, on the other hand, the level and quality of Greek employed by each writer. SVCs, situated halfway between lexicon and syntax due to their degree of fixation, ultimately pose a challenge for second-language users, such as the authors of the Gospels.<sup>25</sup> Their study, therefore, can help shed light on the level of linguistic competence of each Gospel writer.

To accomplish this, it is also important to adopt a diachronic perspective and differentiate between those SVCs that are remnants of classical Greek, e.g. πορεύειν *poréiein* 'to go, to walk' or δεήσειν *deéseîn* 'to pray, to make a prayer', and those that represent innovations. The

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<sup>25</sup>Most of the New Testament authors were L2 (second-language) Greek users, except perhaps Luke, who may have been an L1 (first-language) user (Moulton et al. 1906/1976: vol. IV, Porter 2014).

latter either reflect the renewal of these complex predicates in koine Greek (for example, the use of the active voice of the support verb ποιεῖν *poieîn* instead of the middle, as in φόνον ποιεῖν *phónon poieîn* ‘to murder, to commit murder’ or κρίσιν ποιεῖν *krísin poieîn* ‘to judge, to make a judgement’) or result from linguistic influences from other languages, such as Hebrew and Aramaic (e.g. τὴν ἀνομίαν ἐργάζεσθαι *tên anomían ergázesthai* ‘to commit iniquity, to act lawlessly’ or συμβούλιον διδόναι *symboúlion didónai* ‘to deliberate, to form a plan’) or Latin: συμβούλιον λαμβάνειν *symboúlion lambánein* ~ *consilium capere* ‘to form a plan, deliberate’, κῆνσον διδόναι *kênsón didónai* ~ *censum dare* ‘to tax, to pay tax’, or ἐργασίαν διδόναι *ergasían didónai* ~ *operam dare* ‘to make an effort, to give attention to’ are noteworthy in this regard. This diachronic perspective and the linguistic influences on specific SVCs constitute areas that still require further research.

Moreover, the analysis of the Latin text of the Vulgate has allowed us to compare the use of these constructions in both languages and consider the translation principles at play. It became clear in this respect that there is a tension between the desire for a literal translation (when a Greek SVC finds a parallel translation in Latin) and the need for linguistic naturalness in Latin (when a Latin SVC corresponds to a synthetic predicate in Greek).

The quest for a literal translation of the original Greek text explains the limited use of these complex predicates in the Vulgate compared to the whole body of Latin literature, a phenomenon which is ultimately related to the lower frequency of the SVCs in Greek than in Latin.

This principle of literal translation can clearly be seen in the way in which Greek SVCs are almost always translated into Latin in a parallel fashion, occasionally creating combinations (συμβούλιον ποιεῖν *symboúlion poieîn* = *consilium facere*, χρεῖαν ἔχειν *chreían échein* = *neccesitatem habere, opus habere*) which are uncharacteristic of classical Latin. The few exceptions in which the Greek SVCs are not translated literally in the Vulgate are therefore particularly significant. The two most interesting cases in this regard are the SVCs with συμβούλιον *symboúlion* and χρεῖαν *chreían*. Their varied translations into Latin, apart from highlighting linguistic influences, reveal the existence of different translation criteria in each Gospel – an aspect that merits further exploration. The study of the Latin SVCs that correspond to synthetic predicates in Greek, with their multiple variants and possibilities,<sup>26</sup> can throw ample light on this matter. This will be the focus of a future study.

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<sup>26</sup>Cf. note 16.

## Abbreviations

NT New Testament

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## **Part III**

# **Between context and co-text: The syntax-pragmatics interface**



## Chapter 5

# χράομαι *khraomai* as a support verb in the medical jargon of the Hippocratic Corpus

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This paper analyzes syntagms constituted by a potentially referential noun and the verb χράομαι *khraomai* ('to use') in the Hippocratic writings of the 5th-4th c. BC, testing their potential inclusion among support-verb constructions. The survey starts with syntagms including deverbal nouns, which express both a therapeutic practice and the medical device it involves, and then extends to nouns of foods and drinks, which combine with χράομαι *khraomai* to express the actions of 'eating' and 'drinking'. The data suggest the inclusion among support-verb constructions of syntagms with referential nouns if they refer to a class of objects typically involved in the action expressed by verbs which act both transitively and intransitively. The choice of χράομαι *khraomai* is explained both semantically and diaphasically.

Il contributo analizza i sintagmi costituiti da un nome potenzialmente referenziale e il verbo χράομαι *khraomai* ('usare') negli scritti ippocratici del V-IV sec. a.C., testandone la possibile inclusione fra le strutture a verbo supporto. La ricerca inizia analizzando i sintagmi contenenti nomi deverbali, che esprimono sia una pratica terapeutica, sia il presidio medico che vi è coinvolto, e si estende ai nomi di cibi e bevande, che si combinano con χράομαι *khraomai* per esprimere le azioni di "mangiare" e "bere". I dati suggeriscono l'inclusione fra le strutture a verbo supporto dei sintagmi con nomi referenziali, se essi fanno riferimento a una classe di oggetti tipicamente coinvolti in azioni espresse da verbi che possono essere sia transitivi sia intransitivi. La scelta di χράομαι *khraomai* è spiegata semanticamente e dal punto di vista diafasico.



## 1 Support verb constructions as complex predicates

Traditionally<sup>1</sup> the definition of “support verb construction” (SVC henceforth) is applied to those structures in which a predicative noun expresses a state, an event or a process thanks to its combination with a verb, which only supplies such grammatical information as tense, voice and person. The event is however only identified by the noun, which also activates and assigns the argument positions.<sup>2</sup>

According to this definition, SVCs could only involve nouns which refer to an action rather than an object. These are often labelled as “predicative nouns” (from the French definition of “noms” or “substantifs prédicatifs”, see Gross 1981 and Gross 1989). Lyons (1977), however, speaks of “first order entities” for names of objects and “second order entities” for names of situations, while Simone (2003) proposes “noms de procès” and Grimshaw (1990: 49–54) labels nouns which are also argument-assigning as “complex event nominals”.

The traditional definition of SVC also entails that the semantic meaning of the verb involved in the structure should have no influence on the meaning of the structure. This is why such verbs are called “light verbs”.<sup>3</sup>

In recent years, however, studies have come to a more flexible definition of SVCs. It has been observed that a single noun can combine with different support verbs (SV henceforth), whose meaning can be more or less “light”. The substitution of the verb which typically occurs in combination with a predicative noun may cause a shift in the aspect (Gross 2004b: 349–353) of the expressed action, but may also give particular nuances to the event, process or state expressed by the noun. Ježek (2004a) refers to such SV as “extensions de verbe support”. She compares such expressions as the Italian “dare una risposta” (‘give an answer’), in which ‘dare’ is a standard SV, and “azzardare una risposta” (lit. ‘hazard an

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<sup>1</sup>The dataset is accessible here: <http://dx.doi.org/10.5287/ora-n652gamyj>. Hippocratic texts are quoted by mentioning the numbering, the page and the line in which they appear in the following critical editions: *Affections*: Potter (1988a); *Diseases I*: Potter (1988a); *Diseases II*: Jouanna (1983); *Diseases III*: Potter (1980); *Diseases of Women I and II*: Potter (2018); *Epidemics II*: Smith (1994); *Epidemics V*: Jouanna & Grmek (2000); *Fractures*: Jouanna et al. (2022); *Internal Affections*: Potter (1988b); *Nature of Man*: Jouanna (2002); *Nature of Women*: Bourbon (2008); *Places in Man*: Joly (1978); *Regimen in Acute diseases*: Joly (1972); *Regimen in Acute diseases (Appendix)*: Joly (1972); *Sight*: Joly (1978); *Ulcers*: Duminil (1998); *Wounds in the Head*: Hanson (1999) The number of the volume, page, and line of the traditional edition from Littré (1839/1861) are also added in round brackets. Unless otherwise stated, all translations have been proposed on the basis of those present in the Loeb collection. Some minor changes have been made in order to better highlight the syntactic structure which is the focus of this chapter.

<sup>2</sup>See among many others Gross (1981); Gross (1989); Gross (2004a); Gross (2017); Ježek (2004a); Langer (2005).

<sup>3</sup>The definition of “light verb” is first found in Jespersen (1942: 117).

answer'), in which 'azzardare' is an extension of the support verb. In English a similar opposition can be found between "to give an answer" and "to shoot an answer".

It can therefore be argued that the semantic value of the verb involved in an SVC is not always completely bleached and cooperates with the noun in order to achieve a well-defined meaning.<sup>4</sup>

The exclusively predicative nature of the noun has been challenged as well, by noticing that not all nouns involved in SVCs are strictly predicative and argument-assigning, but that they become predicative once included in such structures (Bowerman 2008: 168–171). In SVCs such as 'have a shower' and 'take a picture' 'shower' and 'picture' express an action, but they can also refer to concrete objects ("I bought a new shower for my bathroom"; "They taped a picture of their cat on the door").<sup>5</sup> This does not mean that nouns cannot be predicative by themselves, outside of an SVC, but that – according to the aforementioned view – some nouns are forced into predication when used in SVCs.

This is why SVCs have lately been included in the broader category of "complex predicates": multi-headed predicates, in which predication is shared by more than one element.<sup>6</sup> However, this redefinition of SVCs makes it harder to posit a clear limit between them and simple collocations.<sup>7</sup> Some scholars consider a solid proof for identifying an SVC its potential equivalence with a synthetic verb ('to have a shower' / 'to shower') (Langer 2004: 169–170; Pompei & Mereu (2019: xxvi)). However, it must be borne in mind that accepting this co-existence on the synchronic, diastatic and diaphasic levels would entail the acceptance of redundancy in language, something that is often excluded by linguistics.<sup>8</sup> Nevertheless,

<sup>4</sup>Pompei (2017: 115–117), for instance, relies on this fact when stating that verbs involved in SVCs are not completely empty with respect to their predicative force, but can bring more or less semantic information to the structure, along with the noun.

<sup>5</sup>On the possibility that nouns which are neither deverbal nor predicative could hold some predicative force, see Simone & Pompei (2007) and *infra* § 7.

<sup>6</sup>On the definition of "complex predicates", see Alsina et al. (1997: 1); Bowerman (2008: 165); Butt (2010: 49). On the inclusion of SVCs among complex predicates, see Bowerman (2008); Butt (2010); Pompei & Mereu (2019: xxiii–xxix).

<sup>7</sup>Ježek (2004b: 186) defines SVCs as "un sous-type de collocation et plus précisément une collocation débalancée – du point de vue sémantique – vers le Nom" and proposes a continuum which goes from traditional SVCs to collocations, through SVCs with an extension of the SV. On the relationship between SVCs and collocations, see also Ježek (2011: 195–198).

<sup>8</sup>On the problem, see Jiménez López (2011); Fendel (2020: 18). Pompei (2017: 120) observes that not all SVCs have a correspondent synthetic verb to which they are formally related. On the fact that the lack of a synthetic verb form cannot be considered proof for discarding the interpretation of an SVC as such, see also Marini (2010: 155).

studies as the one conducted by Marini (2010: 159–164) on the use of SVC with ποιέομαι *poieomai* in Aristotle, showed that this author often used both forms in the same work, sometimes within a short distance of each other. Jiménez López (2011), who ran the same study on Lysias, proposed that the choice to employ an SVC rather than a synthetic verb could be justified by the fact that SVCs are more prone to modification and restriction, since the predicative noun can easily be combined with a modifier. As far as the corpus under scrutiny here is concerned, it can be stated, along with Marini (2010), that both structures (i.e. the support-verb construction and the simplex verb derived from the same root as the predicative noun in the support-verb construction) can be found in the same work (see examples 5, 7 and 8) and that the predicative nouns in SVCs are not always combined with a modifier (see examples 16, 17 and 21).

## 2 Corpus

The first steps that have been made in the study of SVCs in Classical Greek (CG henceforth) focus on a small range of potential light verbs, mostly ποιέω *poieō* ('do', 'make') and ἔχω *ekhō* ('have').<sup>9</sup> This paper aims at extending the investigation to the role that the verb χράομαι *khraomai* ('use') may play in such constructions, even if it is not a typical light verb. In order to do so, a corpus study has been conducted on the medical writings of the *Hippocratic corpus* (HC henceforth).

The HC is a group of around sixty medical works of different length, subject and dating.<sup>10</sup> Some are more rhetorical<sup>11</sup>, but many have a technical purpose. They discuss pathologies and injuries, and the way of healing them by different preparations and by a particular diet and lifestyle. This paper will take into account the more ancient ones, dated between the second half of the 5th and the second half of the 4th c. BC. It has been claimed that complex predicates and, among them, SVCs, may be created in specific areas of language and then analogically extended to other uses (Bown 2008). This research may therefore also be read in parallel with other studies of this same structure in other areas of CG (see Madrigal Acero in this volume), to evaluate whether there has truly been influence from one to another area and, if so, in what direction.

The works which compose the HC are also those in which the first efforts made by ancient physicians to create their own jargon may be identified. For doing so,

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<sup>9</sup>On ποιέω *poieō*, see Marini (2010); Jiménez López (2011, 2012, 2016). On ἔχω *ekhō*, see Vansénveren (1995); Tronci (2017). See also Jiménez López (1980) on γίγνομαι *gignomai*.

<sup>10</sup>For an overview of the content and the dating of the treatises here analysed, see Craik (2015); Jouanna (2017: 529–590).

<sup>11</sup>On the text of the HC that were supposed to be pronounced orally, see Jouanna (1984)

they created new words, but, most of the time, they just re-employed existing and common words, to refer to a more specific and sectorial meaning.<sup>12</sup> This specialisation of meaning often concerned verbs (Squeri 2023), from which many deverbal nouns were also created. CG deverbal nouns are inherently predicative, since they are derived from a verb expressing an action, but can, at the same time, refer either to the concrete product of that action, or to one of the referential<sup>13</sup> elements that are involved in that action. Briefly, deverbal nouns can refer both to an action (1) and to one of its arguments (2).<sup>14</sup>

- (1) Ἡ δέ γε φιλοσοφία κτῆσις  
*hē de ge philosophia ktēsis*  
 ART.NOM.SG PRT PRT philosophy.NOM.SG acquiring.NOM.SG  
 ἐπιστήμης.  
*epistēmēs.*  
 knowledge.GEN.SG  
 ‘Philosophy is an acquiring of knowledge.’  
 (Plato, *Euthydemus* 288d (philosophy, dialogue))

- (2) οἱ δείξειας [...] κτήσιν ἐμῆν  
*hoi deixeias [...] ktēsin emēn*  
 he.DAT.SG show.AOR.OPT.2SG [...] possession.ACC.SG my.ACC.SG  
 δμῶας τε καὶ ὑψηροφῆς μέγα  
*dmōas te kai hypserephes mega*  
 slaves.ACC.PL and and high.roofed.ACC.SG great.ACC.SG  
 δῶμα.  
*dōma*  
 house.ACC.SG  
 ‘Show him [...] my possessions, my slaves, and my great high-roofed house.’  
 (Homer, *Iliad* 19.333 (epic, poetry))

<sup>12</sup>On the creation of the ancient medical jargon, see Benveniste (1965); Irigoien (1980a,b); Skoda (2004); Schironi (2013)

<sup>13</sup>The adjective “referential” is used in this contribution for nouns which refer to a concrete and existing object, in the sense of Givón (1978: 293): «referentiality is a semantic property of nominals. It involves, roughly, the speaker’s intent to ‘refer to’ or ‘mean’ a nominal expression to have non-empty references – i.e. to ‘exist’ – within a particular universe of discourse».

<sup>14</sup>On the possibility of deverbal nouns to refer to either an activity or an argument, see Comrie & Thompson (2006) For CG, see Civilleri (2012: 31–34). Chantraine (1933) did not make any general statement on the subject, but some considerations which go along these lines may be found in the chapters about deverbatives with the suffixes -μα *-ma* (Chantraine 1933: 183) and -σις *-sis* (Chantraine 1933: 287–288).

This does not entail that CG only has SVCs with deverbal nouns, but that they are a good starting point to address the fact that some of the nouns involved in SVCs can refer to an object and, at the same time, act as predicative once supported by a verb.<sup>15</sup> The next three sections take into account the combination of χράομαι (*khraomai*) with four nouns that are derived from three verbs that Hippocratic medicine draws from common language and adapts to the expression of therapeutic practices: κατάπλασμα *kataplasma* (‘plaster’), κλυσμός *klysmos* (‘lavage’, ‘douche’) and κλύσμα *klyσμα* (‘lavage’, ‘douche’), and πρόσθετον *prostheton* (‘vaginal suppository’).

### 3 καταπλάσσω *kataplassō* and κατάπλασμα *kataplasma*

καταπλάσσω *kataplassō* expresses the therapeutic action of plastering a part of the body with a curative substance. The common form is πλάσσω *plassō*, whereas καταπλάσσω *kataplassō* seems to have been created in the HC itself, since in the 5th c. BC the verb is attested only four times outside the HC: Herodotus, *Histories*, IV 75 (historiography, prose); Aristophanes, *Plutus* 721 and 724 (comedy, drama); Aristophanes, *Assemblywomen* 878 (comedy, drama). The first three, however, are used in reference to body and health care. In the HC the plastered substance may be expressed both in the accusative (3) and the dative case (4). The verb is however often employed with intransitive value, with the meaning of ‘treat with plasters’ (5), a feature that it acquires as a consequence of its medical specialisation, which was not available for the simple form πλάσσω *plassō*. More precisely, when employed with the meaning of ‘treat with plasters’, the verb acts as an “unergative”, i.e. as an intransitive verb whose subject is the agent that initiates the action, and not the patient, as happens in such other intransitives as “Jack fell”, normally called “unaccusatives”.<sup>16</sup>

- (3) ἐπὶ δὲ ὑποχόνδρια                      λίνου                      σπέρμα  
*Epi de hypokhondria                      linou                      sperma*  
 to PRT hypochondrium.ACC.PL linen.GEN.SG seed.ACC.SG

<sup>15</sup>On the involvement of CG deverbal nouns in SVCs, see Marini (2010: 160–164) and Jiménez López (2011).

<sup>16</sup>On the classification of intransitive verbs into unergatives and unaccusatives and their respective definition, see Perlmutter (1978) and Levin & Rappaport Hovav (1995), especially Ch. 1.

5 χράομαι *khraomai* as a support verb in the Hippocratic Corpus

καταπλάσσειν ἕως μαζῶν.  
*kataplassein heōs mazōn.*  
 apply.as.plaster.PRS.INF up.to breasts.GEN.PL

‘Apply linseed plasters to the hypochondrium up as far as the breasts.’  
 (HC *Regimen in Acute Diseases (Appendix)* 33. 1, p. 84, 21-22 Joly (2, 464, 5 L.))

- (4) ἤν καταπλάσης γῆ (Foes : τῆ ΘΜ) κεραμίτιδι ἦ  
*ēn kataplasēs gē (Foes : τῆ ΘΜ) keramitidi ē*  
 if plaster.PRS.SBJV.2SG earth.DAT.SG (Foes : τῆ ΘΜ) for.pottery.DAT.SG or  
 ἄλλω τῷ τοιούτῳ...  
*allō tō toioutō.*  
 other.DAT.SG ART.DAT.SG as.such.DAT.SG

‘If you plaster the patient over with potter’s earth or some other such material...’

(HC *Diseases I* 17, p. 138, 2-3 P. (6, 170, 20-21 L.))

- (5) χρῆ δὲ οὐδὲ τὰ ἐν τῷ  
*chrē de oude ta en tō*  
 should.PRS.IND.IMPERS PRT not ART.ACC.PL in ART.DAT.SG  
 μετώπῳ διὰ παντὸς τοῦ χρόνου  
*metōpō dia pantos tou khronou*  
 forehead.DAT.SG through all.GEN.SG ART.GEN.SG time.GEN.SG  
 καταπλάσσειν καὶ ἐπιδεῖν.  
*kataplassein kai epidein.*  
 treat.with.plasters.PRS.INF and bandage.PRS.INF

‘But even wounds on the forehead you should not treat with plasters and bandages continuously.’

(HC *Wounds in the Head* 13, p. 78, 21-22 Hanson (3, 230, 7-8 L.))

It is certainly not by chance that κατάπλασμα *kataplasma* is also attested as a sort of cognate dative object of καταπλάσσω *kataplassō*.<sup>17</sup> According to Hale & Keyser (1987), Hale & Keyser (1993) cognate objects (CO henceforth) of unergative verbs are part of the logical structure of the action expressed by these verbs,

<sup>17</sup>The relationship between κατάπλασμα *kataplasma* and καταπλάσσω *kataplassō* is opposite to that which typically exists between a verb and a cognate object, which is normally the nominal base of a denominal verb. On the use of -μα *-ma* derivatives as COs in CG, see Horrocks & Stavrou (2010: 287). This is however unsurprising, since πλάσσω *plassō* is not originally a denominal verb as it is not originally unergative, but acquires this event frame only as a consequence of its medical specialization.

since they represent the class of entities that must be involved in the action so that it can be referred to by that verb.<sup>18</sup> In combination with the right SVs they can therefore evoke the same action of which they are a constitutive element, see (6).

- (6) καταπλάσσειν τῶν καταπλασμάτων ὃ τι  
*kataplassein tōn kataplasmatōn ho ti*  
 apply.as.plaster.PRS.INF ART.GEN.PL plaster.GEN.PL REL.SG.N INDF.ACC.N  
 ἄν σοι δοκῆ συμφέρειν.  
*an soi dokē sympherein.*  
 PRT YOU.DAT.SG seem.PRS.SBJV.3SG help.PRS.INF  
 ‘Apply plasters that you think may be beneficial.’  
 (HC *Sight* 9. 2, p. 171, 22-23 Joly (9, 160, 10-11 L.))

The fact that *κατόπλασμα kataplasma* is the name of a class of objects that must be involved in a typical action ensures that, if combined as a predicative phrase with the dative object of *χράομαι khraomai*, it can define the action in which the dative object is involved. Examples (7) and (8) show the equivalence between the structure with *καταπλάσσω kataplassō* and *τῆ μάζῃ tē mazē* as a dative object, and the structure with *χράομαι khraomai* combined with *τῆ μάζῃ tē mazē* as a dative object and *καταπλάσματι kataplasmati* as a predicative phrase.<sup>19</sup>

- (7) τὸ ἔλκος [...] καταπλάσας τῆ  
*To helkos [...] kataplasas tē*  
 ART.ACC.SG wound.ACC.SG [...] plaster.AOR.PTCP.NOM.SG ART.DAT.SG  
 μάζῃ ἐπιδήσαι.  
*mazē epidēsai.*  
 barley.meal.DAT.SG bandage.AOR.INF  
 ‘Having applied a barley-meal as a plaster, bandage the wound.’  
 (HC *Wounds in the Head* 14, p. 82, 16-17 Hanson (3, 240, 2-3 L.))

<sup>18</sup>The logical structure of an action such as ‘John laughs’ should therefore be [John do LAUGH] (Hale & Keyser 1987: 48–50; Hale & Keyser 1993: § 1). For cognate objects as the name of the prototypical product of an action, see also Massam (1990), who however argues against this analysis of the logical structure of unergatives. For the equivalence of structures with CO and SVCs, see Mirto et al. (2007), for English, and Horrocks & Stavrou (2010: 288–289): 288–289 for AG.

<sup>19</sup>On the possibility of the nominal parts of SVCs acting as predicative phrases, see Pompei (2017: 122–123 and 127–128).

5 χράομαι *khraomai* as a support verb in the Hippocratic Corpus

- (8) μοτώσαντα δὲ χρῆ καταπλάσματι  
*Motōsanta de khre kataplasmati*  
 pack.AOR.PTCP.ACC.SG PRT should.PRS.IND.IMPERS plaster.DAT.SG  
 χρῆσθαι, ὅσον ἄν περ χρόνον καὶ τῷ  
*khresthai, hoson an per khronon kai to*  
 use.PRS.INF as.much.ACC.SG PRT PRT time.ACC.SG and ART.DAT.SG  
 μοτῷ, μάζη.  
*motō, maze.*  
 bandage.DAT.SG barley.meal.DAT.SG

‘After packing (sc. the wound) you must use as a plaster, for as long a time as the packing, a barley-cake.’

(HC *Wounds in the Head* 14, p. 80, 20-22 Hanson (3, 236, 3-4 L.))

κατάπλασμα *kataplasma* can therefore act both as a predicative noun and as the noun of a concrete medical device, as in the recipe in (9), which describes plasters for lesions made of different herbal ingredients.<sup>20</sup>

- (9) Καταπλάσματα οίδημάτων καὶ φλεγμοσίνης [...]·  
*Kataplasmata oidematōn kai phlegmasiēs [...]·*  
 plaster.ACC.PL swelling.GEN.PL and inflammation.GEN.SG [...]:  
 ἡ ἐφθῆ φλόμος καὶ τῆς τριφύλλου  
*hē hephthē phlomos kai tēs trifyllou*  
 ART.NOM.SG boiled.NOM.SG mullein.NOM.SG and ART.GEN.SG clover.GEN.SG  
 τὰ φύλλα ὠμά καὶ τοῦ ἐπιπέτρου  
*ta fylla ōma kai tou epipetrou*  
 ART.NOM.PL leaf.NOM.PL raw.NOM.PL and ART.GEN.SG rock.plant.GEN.SG  
 τὰ φύλλα ἐφθά καὶ τὸ πόλιον.  
*ta fylla hephtha kai to polion.*  
 ART.NOM.PL leaf.NOM.PL boiled.NOM.PL and ART.NOM.SG hulkwort.NOM.SG

‘Plasters for swellings and for inflammation [...]: boiled mullein, raw leaves of clover, boiled leaves of rock-plant, hulkwort.’

(HC *Ulcers* 11. 1, p. 58, 16-19 Duminil (6, 410, 5-7 L.))

There is only one occurrence of χράομαι *khraomai* with κατάπλασμα *kataplasma* in the HC, but this structure is inherited by the medical tradition. For instance, this structure recurs 16 times in Galen. Interesting equivalences may

<sup>20</sup>On the fact that -μα *-ma* deverbatives may refer to a referential object or an instrument of an action, see Civillieri (2012: 159–168).

be found between the prescriptions formulated with καταπλάσσω *kataplassō* in the HC and those formulated with καταπλάσματι χράομαι *kataplasmati khraomai* by later authors. The recipes proposed for fluxes in the gynecological writings of the HC and in the gynecological writings of Soranus (2nd c. AD) may thus be compared. In the HC the use of myrtle as a plaster is prescribed by using μυρσίνης φύλλα *myrsinēs fylla* as the object of καταπλάσσω *kataplassō*, see (10), while in Soranus the use of the same ingredient in a plaster is specified by a prepositional phrase dependent upon καταπλάσμασι *kataplasmasi*, the dative object of χρῆσθαι *chrēsthai*, see (11).

- (10) ἀκτῆς καὶ μυρσίνης φύλλα κατάπλασσε.  
*aktēs kai myrsinēs fylla kataplasse.*  
 elder.GEN.SG and myrtle.GEN.SG leaf.ACC.PL apply.as.plaster.PRS.IMP.2SG  
 ‘Apply plasters of elder and myrtle leaves.’  
 (HC *Diseases of Women II* 193 (3), p. 414, 4 Potter (8, 374, 16 L.))

- (11) τοῖς διὰ φοινίκων καὶ κυδωνίων καὶ μυρσίνης  
*tois dia phoinikōn kai kydōniōn kai myrsinēs*  
 ART.DAT.PL with date.GEN.PL and quince.GEN.PL and myrtle.GEN.SG  
 καταπλάσμασι καὶ κηρωταῖς χρῆσθαι.  
*kataplasmasi kai kērōtais chrēsthai.*  
 plaster.DAT.PL and cerate.DAT.PL use.PRS.INF  
 ‘One should use plasters as well as cerates made of dates, quinces, and myrtle.’

(Soranus *Gynaecology III* 46, 1)

#### 4 κλύζω *klyzō*, κλυσμός *klysmos* and κλύσμα *klyσμα*

The verb κλύζω *klyzō* and its deverbal derivatives κλύσμα *klyσμα* and κλυσμός *klysmos* show similar behavior. κλύζω *klyzō* is used in the Homeric epic to express the motion of “crashing” waves and, like most verbs of motion, is used intransitively, as an unaccusative.<sup>21</sup> Hippocratic medicine rationalizes the power of water movement and starts using the verb to refer to the therapeutic practice of purging with an enema, a lavage, or a douche (Squeri 2023: ch. 5). In the HC, κλύζω *klyzō* is therefore used transitively with what is to be cleaned as a direct

<sup>21</sup>Homer, *Iliad* 14.392-393 (epic, poetry): ἐκλύσθη δὲ θάλασσα ποτὶ κλισίας τε νέας τε / Ἀργείων *eklysthē de thalassa poti klisias te neas te* crash.AOR.IND.PASS.3SG PRT sea.NOM.SG towards hut.ACC.PL and ship.ACC.PL and Argives.GEN.PL ‘The sea crashed towards the huts and ships of the Argives’.

object and the purging liquid which is set in motion as a dative of instrument, see (12).

- (12) κλύζειν                      τὰ                      ὄτα                      οἴνω                      γλυκεῖ.  
*klyzein                      ta                      ōta                      oinō                      glykei.*  
 make.a.lavage.PRS.INF ART.ACC.PL ear.ACC.PL wine.DAT.SG sweet.DAT.SG  
 ‘Make a lavage to the ears with sweet wine.’  
 (HC *Diseases III* 2, p. 72, 1-2 Potter (7, 120, 9-10 L.))

However, as was the case with *καταπλάσσω kataplassō*, in the HC κλύζω *klyzō* may also be found in intransitive structures, with unergative value and the meaning of ‘make a lavage’, ‘make an enema’, see (13).

- (13) Τῷ                      Παρμενίσκου                      παιδι                      κωφότης.  
*Tō                      Parmeniskou                      paidi                      kōphotēs.*  
 ART.DAT.SG Parmeniscus.GEN.SG child.DAT.SG deafness.NOM.SG  
 Ξυνήνεγκε                      μὴ κλύζειν,                      διακαθαίρειν δὲ  
*Xynēnenke                      mē klyzein,                      diakathairein de*  
 help.AOR.IND.3SG not make.a.lavage.PRS.INF clean.PRS.INF PRT  
 εἰρίῳ                      μούνον.  
*eiriō                      mounon.*  
 wool.DAT.SG only.ADV  
 ‘Parmeniscus’ child, deafness. It was helpful not to make any lavage, and only clean with wool instead.’  
 (HC *Epidemics V* 66. 1-2, p. 30, 8-10 Jouanna–Grmek (5, 244, 4-5 L.))

This standardized activity can also be referred to by the deverbal nouns κλυσμός *klysmos*<sup>22</sup> and κλύσμα *klyσμα*, which can be used as nouns referring to actions, see (14).

- (14) κλυσμῶν                      ἀπηλλάχθαι                      πάντων,                      πλὴν                      οἴνου                      καὶ  
*klysmōn                      apēllakthai                      pantōn,                      plēn                      oinou                      kai*  
 douche.GEN.PL abstain.PRF.INF all.GEN.PL except wine.GEN.SG and  
 ὕδατος.  
*udatos.*  
 water.GEN.SG  
 ‘Abstain from any douche except of wine and water.’  
 (HC *Diseases of Women II* 115, p. 280, 9-10 Potter (8, 250, 14-15 L.))

<sup>22</sup>Chantraine (1933: 146–147) states that the suffix -μός -mos tends to be employed for creating nouns referring to actions, rather than referring to objects. Civilleri (2012: 152) observes however that «il tipo di processo denotato dai nomi in -μός -mos è più definito e ciò ne favorisce la lessicalizzazione come nomi concreti».

The predicative nature of these nouns makes it possible to insert them in an SVC, and, again, the chosen verb is χράομαι *khraomai*. Other than the equivalence with a synthetic verb, a typical test to prove that a structure is in fact an SVC is the possibility of the noun acting as a predicate by activating an argument structure which can codify the same information as that of the synthetic verb (Gross 2004a: 345–346; Langer 2004: 181–182; Jiménez López 2011, 2012). As observed by Jiménez López (2012), when the synthetic verb is transitive, the equivalent SVC tends to codify the direct object as an objective genitive. This is exactly what happens between (15) and (16).<sup>23</sup>

- (15) τὴν κοιλίην κλύζειν χυλῶ  
*tēn koiliēn klyzein khulō*  
 ART.ACC.SG cavity.ACC.SG make.an.enema.PRS.INF juice.DAT.SG  
 πτισάνης ἢ μέλιτι.  
*ptisanēs ē meliti.*  
 barley.gruel.GEN.SG or honey.DAT.SG  
 ‘Make an enema to her cavity with barley gruel or honey.’  
 (HC *Diseases of Women I* 26, p. 72, 24-25 Potter (8, 70, 16 L.))

- (16) Τοῖσι δὲ ἐμέτοισι χρῆ καὶ τοῖσι  
*Toisi de emetoisi khre kai toisi*  
 ART.DAT.PL PRT emetic.DAT.PL should.PRS.IND.IMPERS and ART.DAT.PL  
 κατακλύσμασι τῆς κοιλίης ὧδε χρῆσθαι.  
*kataklysmasi tēs koiliēs hōde khresthai.*  
 enema.DAT.PL ART.GEN.SG cavity.GEN.SG thus.ADV use.PRS.INF  
 ‘Emetics and enemas for the cavity should be thus used.’  
 (HC *Nature of Man* 20, p. 212, 1-2 Jouanna (= *Salubr.* 5; 6, 78, 3-4 L.))

However, example (17) shows a different structure, with κοιλίη *koiliē* inserted in a prepositional phrase. Langer (2004) argues that a misalignment between the argument structure of the synthetic verb and that of the SVC may be evidence in favour of a slight difference in meaning between the two. Marini (2010: 174–175) analyses the coding of the “indirect object” in a prepositional phrase as the result of the process of intransitivization which, according to her, is undergone by SVCs with ποιέομαι *poiéomai*, as opposed to similar constructions with ποιέω *poieō*. In this case, however, it must be borne in mind that κλύζω *klyzō* is subject

<sup>23</sup>The form κατάκλυσμα *kataklyσμα* is very rare. It is only employed in passage (16) of *Nature of man*, in subsequent commentaries on this passage by Galen and in two passages of Oribasius (4th c. AD) and Stephanus (6th/7th c. AD).

to a locative alternation<sup>24</sup>, since, while in the HC the target of the motion of the liquid substance is codified as a direct object, in Homer (but see also Euripides, *Hippolitus*, 653-654 [tragedy, drama]), it is originally inserted into a prepositional phrase (see note 26).<sup>25</sup>

Moreover, the statement of Marini (2010) is not relevant with reference to SVCs with χράομαι *khraomai*, which does not have an active counterpart as ποιέομαι *poieomai* does.

- (17) κλυσμῶ           κατὰ κοιλίην           χρηῆσθαι           διὰ           τρίτης  
*klysmō*           *kata koiliēn*           *chrēsthai*           *dia*           *tritēs*  
 enema.DAT.SG   to           cavity.ACC.SG   use.PRS.INF   through   third.GEN.SG  
 ἡμέρης.  
*hēmerēs.*  
 day.GEN.SG

‘Make an enema for the cavity every other day.’

(HC *Regimen in Acute Diseases (Appendix) 2. III 1*, p. 69, 17 Joly (2, 398, 12 L.))

κλυσμός *klysmos* is however also employed to refer more concretely to the liquid used in the therapy expressed by κλύζειν *klyzein*, which thus becomes a κλυσμός *klysmos*. In (18) the predicative force is held by κλύζειν *klyzein* itself, and κλυσμός *klysmos*, while acting as a sort of dative CO, refers to a well quantified liquid substance.

- (18) Κλύζειν                           δέ, ἢν δέη,  
*klyzein*                           *de, ēn deē,*  
 make.a.douche.PRS.INF PRT, if   be.necessary.PRS.SBJV.IMPERS,  
 κλυσμῶ           πλέον ἢ   δυσὶ           κοτύλαις.  
*klysmō*           *pleon ē dysi kotylais.*  
 douche.DAT.SG more.ADV than two.DAT.PL cotyle.DAT.PL

‘Make a douche, if it is required, with a douche of more than two cotyles.’

(HC *Nature of Women 33. 29*, p. 46, 8-9 Bourbon (7, 370, 11-12 L.))

<sup>24</sup>On locative alternations in general, see Levin (1993: 350–351). For Archaic and Classical Greek, see de la Villa (2017: 540–541).

<sup>25</sup>Note that the compound form διακλύζω *diaklyzō* is also used in the HC with the substance injected as a lavage (the Theme) rather than with the part of the body which must be “cleaned” (the Target) as a direct object, showing the alternating nature of the verb: HC *Epidemics V* (67, p. 30, 14 Jouanna–Grmek (5, 244, 8 L.): Καστόριον καὶ πέπερι διακλυζομένη ὠφελίτω *Kastorion kai peperi diakluzomenē ōphelito*; castorium.ACC.SG and pepper.ACC.SG inject.PRS.PTCP.MID.NOM.SG help.IMP.F.IND.IMPERS ‘She got help when she injected castorium and pepper (*scil.* in her mouth)’.

κλυσμός *klysmos* and κλύσμα *klyσμα* may be considered two COs of κλύζω *klyzō* in its medical sense: they refer to the whole class of objects that must be involved in the therapeutic action expressed by the verb. Once a liquid substance is employed in an action expressed by κλύζω *klyzō*, it becomes a κλυσμός *klysmos* or a κλύσμα *klyσμα*. This is why one may posit an equivalence between the combination of the verb with a nominalized adjective in the dative case, see (19), and the combination of χράομαι *khraomai* and κλυσμός *klysmos* in the dative, combined with the same modifier, see (20).

- (19) Ἦν ἐλκωθέωσι σφοδρῶς, αἷμα καὶ  
*Ēn helkōtheōsi sphodrōs, aimā kai*  
 if ulcerate.AOR.SBJV.PASS.3PL vehemently.ADV blood.ACC.SG and  
 πῦον καθαίρεται [...] κλύζειν  
*puon kathaireitai [...] klyzein*  
 pus.ACC.SG clean.PRS.IND.PASS.3SG [...] make.a.douche.PRS.INF  
 δριμέσι καὶ μαλθακοῖσι καὶ στρυφνοῖσιν ...  
*drimesi kai malthakoisi kai stryphnoisin ...*  
 acrid.DAT.PL and emollient.DAT.PL and astringents.DAT.PL  
 ‘If (sc. the uterus) becomes very ulcerated, blood and pus will be discharged  
 [...] make a douche with acrid, emollient, astringent douches...’  
 (HC *Diseases of Women I* 65, p. 138, 22-28 Potter (8, 134, 9-14 L.))

- (20) κλύσματι δὲ μαλθακῶ χρησαμένῳ  
*klysmati de malthakō khresamenō*  
 enema.DAT.SG PRT emollient.DAT.SG use.AOR.PTCP.DAT.SG  
 ἔληξεν ἡ ὀδύνη.  
*elēxen hē odynē.*  
 stop.AOR.IND.3SG ART.NOM.SG pain.NOM.SG  
 ‘His pain was relieved when he used an emollient enema.’  
 (HC *Epidemics V* 73. 5, p. 33, 12-13 Jouanna–Grmek (5, 246, 19-20 L.))

It must however be noted that it is not mandatory for the noun in the SVC to be combined with a modifier: κλύσματι χρῆσθαι *klysmati khresthai* can be used with the same meaning shown by κλύζειν *klyzein* in its intransitive use, as shown in (21).

- (21) ἦν δὲ ἡ γαστήρ μὴ ὑποχωρήη,  
*ēn de hē gastēr mē hypokhōrēē,*  
 if PRT ART.NOM.SG cavity.NOM.SG not withdraw.PRS.SBJV.3SG

κλύσματι χρῆσθαι ἢ βαλάνφ.  
*klysmati khresthai ē balanō.*  
 enema.DAT.SG use.PRS.INF OR suppository.DAT.SG

‘If the belly does not pass anything, use an enema or a suppository.’  
 (HC *Affections* 14, p. 24, 11-12 Potter (6, 222, 2-3 L.))

## 5 προστίθημι *prostithēmi* and πρόσθετον *prostheton*

In the area of gynecology προστίθημι *prostithēmi* develops the special meaning of ‘applying vaginal suppositories’, which are consequently referred to as πρόσθετα *prostheta*.<sup>26</sup> As happened with καταπλάσσω *kataplassō* and κλύζω *klyzō*, προστίθημι *prostithēmi* may be used intransitively with this special sense.<sup>27</sup> To deal with a flux some fumigations and the application of suppositories are prescribed in (22).<sup>28</sup> This second action is, however, expressed by προστίθημι *prostithēmi* alone.

(22) Ἦν ρόος ἐγγένηται [...] ὑποθυμῆν  
*Ēn rhoos eggenētai [...] hypothymiēn*  
 if flux.NOM.SG develop.AOR.SBJV.3SG [...] fumigate.PRS.INF  
 ὀκόσα ξηραίνει καὶ  
*hokosa xērainei kai*  
 REL.INDF.NOM.PL dry.PRS.IND.3SG and  
 προστιθέναι.  
*prostithenai.*  
 apply.suppositories.in.the.vagina.PRS.INF

‘If a flux occurs [...] Fumigate from below with drying agents and apply vaginal suppositories.’

(HC *Nature of Women* 90. 1, p. 78, 12-14 Bourbon (7, 408, 18-20 L.))

<sup>26</sup>The word is found both with proparoxytone and oxytone accentuation. I use the proparoxytone form, while reproducing the accentuation chosen by the editor in direct quotations from the Hippocratic text.

<sup>27</sup>Note that this kind of process, which I called ‘semantic specialisation’ in Squeri (2023), also involved the SVC προσέχω τὸν νοῦν *prosekhō ton noun* (‘pay attention’), which, in the evolution from Classical to Modern Greek, became so standardised that now προσέχω *prosekhō* alone can express this meaning.

<sup>28</sup>The link of προστιθέναι *prostithenai* with ὀκόσα ξηραίνει *hokosa xērainei* as an anaphoric object (on which, see Luraghi 2003) is very unlikely since in the whole corpus of the gynecological treatises a prescription for drying suppositories is never found. Suppositories were mostly used for purging, irritating, and emollient purposes.

This happens because, when used in gynecology, this verb has a predefined object in the logical structure of the action it expresses, a suppository, which is therefore called πρόσθετον *prostheton* and acts as a sort of CO. This is why, exactly as has been observed for κλυσμός *klysmos* and κλύσμα *klyσμα* in the previous section, the direct combination of the verb with any form of nominalized modifier is equivalent to the use of the same modifier with πρόσθετον *prostheton*. Examples (23) and (24) are parallels of the same clinical case in two gynecological writings.<sup>29</sup> In the first one προσθεῖναι *prostheinai* is combined with the relative clause ἃ μὴ δήξεται *ha mē dēxetai*, which apparently acts as an argument relative clause<sup>30</sup>, but, since the action has the class of suppositories as a predefined object, it actually narrows the type of suppositories to be applied to non-irritating ones.

- (23) ἔπειτα πυριήσας τὰς ὑτέρας οἴνω  
*epeita pyriēsas tas hysteras oinō*  
 after.ADV foment.AOR.PTCP.NOM.SG ART.ACC.PL uterus.ACC.PL wine.DAT.SG  
 [...] προσθεῖναι ἃ μὴ δήξεται.  
 [...] *prostheinai ha mē dēxetai*.  
 [...] apply.AOR.INF REL.PL.N not bite.FUT.IND.3SG  
 ‘After fomenting the uterus with wine [...] apply non-irritating suppositories.’

(HC *Nature of Women* 14. 3, p. 18, 6-7 Bourbon (7, 332, 10-11 L.))

- (24) ἔπειτα πυριῆσαι καὶ καταιονᾶν τὰς  
*epeita pyriēsai kai kataionan tas*  
 after.ADV foment.PRS.INF and moisten.with.liquid.PRS.INF ART.ACC.PL  
 ὑτέρας τῷ σὺν τῇ δάφνῃ, καὶ προστιθέναι  
*hysteras tō syn tē daphnē, kai prostithenai*  
 uterus.ACC.PL ART.DAT.SG with ART.DAT.SG laurel.DAT.SG and apply.PRS.INF  
 προσθετὸν καθαρτήριον ὃ μὴ  
*prostheton kathartērion ho mē*  
 vaginal.suppository.ACC.SG cleaning.DAT.SG REL.NOM.SG not  
 δήξεται.  
*dēxetai*.  
 bite.FUT.IND.3SG

‘Then foment and moisten the uterus with a preparation of laurel, and

<sup>29</sup>On the presence of parallels between the writings *Nature of Women* and *Diseases of Women*, see Bourbon (2008: xii–xvi).

<sup>30</sup>On the classification of relative clauses in Ancient Greek, see Crespo, Conti & Maquieira (2003: 378–379).

apply a cleaning, non-irritating vaginal suppository.’

(*HC Diseases of Women II* 131, p. 312, 2-4 Potter (8, 278, 22-280, 1 L.))

Being the predefined object involved in a certain action, πρόσθετον *prostheton* has thus both a referential and a predicative meaning, even though it never refers to the action itself, as κλυσμός *klysmos* did in (14).<sup>31</sup> This is why, when combined as a predicative phrase with χράομαι *khraomai* and its dative object, πρόσθετον *prostheton* is the element that defines the action to be realised, see (25).

- (25) θερμῶ ὕδατι αἰονᾶν, καὶ φαρμάκοισι  
*thermō hydati aionan, kai pharmakoisi*  
 hot.DAT.SG water.DAT.SG foment.PRS.INF and medication.DAT.PL  
 θερμαίνουσι χρῆσθαι προσθετοῖσι.  
*thermainousi khrēsthai prosthetoisi.*  
 warm.PRS.PTCP.DAT.PL use.PRS.INF vaginal.suppository.DAT.PL

‘Foment with hot water, and use warming medications as vaginal applications (or ‘as vaginal suppositories’).’

(*HC Places in Man* 47. 7, p. 78, 23-24 Joly (6, 346, 16-17 L.))

In (26) προσθέτοισι δριμέσι *prosthetoisi drimesi* refers to the sharp suppositories as concrete therapeutic objects, but, in combination with χράομαι *khraomai*, the syntagm expresses the same action that, in parallel to this same passage in *Nature of Women* in (27), is conveyed by the verb προστίθημι *prostithēmi* in combination with τὰ δριμέα *ta drimea* as a nominal adjective.

- (26) Ἦν δὲ ὑγρότερον ἦ τὸ στόμα  
*Ēn de hygrotēron ē to stoma*  
 if PRT moist.COMP.NOM.SG be.PRS.SBJV.3SG ART.NOM.SG mouth.NOM.SG  
 τῶν ὑστερέων [...] προσθέτοισι δὲ  
*tōn hystereōn [...] prosthetoisi de*  
 ART.GEN.PL uterus.GEN.PL [...] vaginal.suppository.DAT.PL PRT  
 δριμέσι χρῆσθαι.  
*drimesi khrēsthai.*  
 sharp.DAT.PL use.PRS.INF

‘If the mouth of a woman’s uterus is too moist [...] employ sharp suppositories.’

(*HC Diseases of Women I* 18, p. 60, 7-9 Potter (8, 58, 3-4 L.))

<sup>31</sup>Greek deverbal nouns in -τον *-ton* normally refer to concrete arguments of the action and not to the action itself (Civilleri 2012: 180–181).

- (27) Ἦν ὑγρότερον τοῦ καιροῦ τὸ  
*Ēn hygroteron tou kairou to*  
 if moist.COMP.NOM.SG ART.GEN.SG due.measure.GEN.SG ART.NOM.SG  
 στόμα τῶν ὑστερέων ἦ, προστιθέναι  
*stoma tōn hystereōn ē, prostithenai*  
 mouth.NOM.SG ART.GEN.PL uterus.GEN.PL be.PRS.SBJV.3SG apply.PRS.INF  
 τὰ δριμέα.  
*ta drimea.*  
 ART.ACC.PL sharp.ACC.PL

‘If the mouth of a woman’s uterus is moister than it should be, apply sharp substances as a suppository (= apply sharp suppositories).’

(HC *Nature of Women* 24. 1, p. 25, 5-6 Bourbon (7, 342, 6-7 L.))

## 6 Preliminary conclusions

In the HC χράομαι *khraomai* combines with deverbal nouns, which can sometimes refer to a therapeutic activity, but mostly refer to the type of medical device involved in that activity. The structure seems to be equivalent to the use of the verbs from which the nouns are derived, both in their intransitive, see (22), and in their transitive uses. In this second case, the argument structure of the synthetic verb may appear with the noun, see (15), (16), (17), but, most of the time, the noun simply combines with those modifiers that are otherwise combined with the verb as neuter adjectives or as relative clauses with argument value. If one considers the entities signified by these nouns a predefined argument of the action expressed by the specialised sense of the verb from which they are derived, any restriction applied to this class of entities, which recur as COs or as the nominal part of an SVC, equals a restriction on the action expressed by the verb. The modification of a CO or of the predicative noun in an SVCs is normally equivalent to the adverbial modification of the action signified by the synthetic verb.<sup>32</sup>

The syntagms in which χράομαι *khraomai* is combined with κατάπλασμα *kataplasmā*, κλυσμός *klusmos* and κλύσμα *klusma*, and πρόσθετον *prostheton*, however, do not involve abstract predicative nouns, which refer to actions that can be thought of as modified adverbially, but mostly concern concrete objects included

<sup>32</sup>For COs, see Huddleston & Pullum (2002: 305) for English, Horrocks & Stavrou (2010: 287) and Bruno (2011: 103) for AG. For predicative nouns in SVCs, see, among many others, Langer (2004: 181–182), for modern languages, Marini (2010: 156) and Jiménez López (2016: 197–198) for AG.

in specific actions. Therefore, the equivalence is not between the adjectival modification of the CO or of the nominal part of the SVC and the adverbial modification of the synthetic verb, but between the adjectival restriction of the class represented by the CO or by the nominal part of the SVC and the combination of the verb with the same nominalized adjective. In this latter case, the restriction still applies to the class of objects whose involvement in the action expressed by the verb is mandatory.

Another question to be answered is that of the role that *χράομαι khraomai* plays in the structure. Is it correct to consider it an SV or does it have its full meaning, by which it prescribes the ‘use of an instrument’? It is indeed true that, since these nouns refer to concrete medical devices, the verb could simply prescribe their use in medical practice. If one applies to example (11) the so-called ‘zeugma test’<sup>33</sup>, according to which a verb cannot be used with both light and full value when linked to two coordinated arguments, only one of which is predicative, a predicative value must be either given to *κηρωταῖς kērōtais* or denied to *καταπλάσμασι kataplassasi*.

Considering the objects referred to by these nouns instruments would also be in line with the fact that, as far as *καταπλάσσω kataplassō* and *κλύζω klyzō* are concerned, the substance that must be employed in the therapeutic action is often codified in the dative. However, this does not apply to *προστίθημι prostithēmi* and to some uses of *καταπλάσσω kataplassō*. Moreover, it must be noted that the medical devices referred to by these deverbal nouns become an instrument, but their use in the action requires their change of state, which takes place in the way prescribed by the verbal stem from which they are derived: *καταπλάσματα kataplassmata* must be ‘spread over’ the body, *κλυσμοί klysmoi* and *κλύσματα klysmata* must be ‘injected’, and *πρόσθετα prostheta* must be ‘applied’. This is not canonical for dative objects, whose coding in the dative has the exact purpose of underlining how the object takes part in the action without undergoing any change of state (Luraghi 2010: 66–67). It can therefore be provisionally noted that *χράομαι khraomai* is not involved in this structure with its full meaning, which, however, is not completely bleached either. *χράομαι khraomai* can therefore be considered an SV only by accepting the more flexible definition presented in Section 1, which assumes that SVCs are characterized by the sharing of the predicative power between the SV and the noun.

Further and stronger evidence in favour of the interpretation of *χράομαι khraomai* as an SV will be given in the next section.

<sup>33</sup>Langer (2004: 179): \*‘‘he gives a lecture and a lot of money’’.

## 7 Foods and drinks

Hippocratic medicine considered diet and lifestyle an important factor to prevent and to cure certain diseases. The following of a diet is often expressed by the dative διαίτη *diaitē* combined with χράομαι *khraomai*. CG also has the synthetic verb διαιτάω *diaitaō*, mostly used in the middle-passive form, to express the same action expressed by διαίτη χράομαι *diaitē khraomai*, see (28) and (29).

- (28) ἡσυχάζειν διαίτη μαλθακῆ χρώμενον  
*hēsukhazein diaitē malthakē khrōmenon*  
 rest.PRS.INF diet.DAT.SG emollient.DAT.SG use.PRS.PTCP.ACC.SG  
 (Cornarius : -ος ΘΜ).  
 (Cornarius : -ος ΘΜ).  
 (Cornarius : -ος ΘΜ)

‘Have him rest and employ<sup>34</sup> an emollient diet.’

(*HC Diseases III* 2, p. 72, 7-8 Potter (7, 120, 15-16 L.))

- (29) Σκόπρα [...] φλαύρωσ διαιτηθέντι  
*Skopra [...] phlaurōs diaitēthēnti*  
 Scopas.DAT.SG [...] badly.ADV follow.a.diet.AOR.PTCP.PASS.DAT.SG  
 ἡ κοιλίη ἀπελήφθη.  
*hē koiliē apēlēphthē.*  
 ART.NOM.SG cavity.NOM.SG block.AOR.IND.PASS.3SG

‘Scopas [...] from the following of a poor diet his bowels were seized.’

(*HC Epidemics II* 3, 11, p. 56, 12-14 Smith (5, 112, 9-10 L.))

δίαιτα *diaita* is a noun referring to a process and is not referential. However, in order to be on a certain diet one needs to eat certain foods and drink certain drinks, see (30). This assumption can justify, at least from the semantic point of view, the extension of the structure with χράομαι *khraomai* to nonpredicative nouns such as ποτόν *poton* (‘drink’) and σίτος *sitos* (‘food’). Such structures make more evident the role of χράομαι *khraomai* as an SV, since the action thus expressed does not entail the “use” of its dative object, which is however a concrete element which could ideally be involved in such an action (see *infra* example 42).

<sup>34</sup>In this example, as well as in examples (30), (37) and (39), I decided to follow the choice made by the translators in the Loeb collection of translating χράομαι *khraomai* as ‘employ’, since it renders transparently the meaning of the verb.

- (30) τοῖσι ποτοῖσι καὶ σίτοισι χρήσθω  
*toisi potoisi kai sitoisi khresthō*  
 ART.DAT.PL drink.DAT.PL and food.DAT.PL use.PRS.IMP.3SG  
 μαλθακοῖσι.  
*malthakoisi.*  
 emollient.DAT.PL

‘She should employ emollient drinks and food.’

(*HC Nature of Women* 25. 1, pp. 25, 17-26, 18 Bourbon (7, 342, 16 L.))

Here one can see a first step towards the use of the structure with *χράομαι khraomai* as an SV in combination with nouns that do not predicate an event or a process in any way. *ποτόν poton* is a deverbal form from *πίνω pinō* and retains some predicative force, but this does not apply to *σίτος sitos*. It is also clear that the action expressed by the SVC does not involve the employment of these substances as tools, but implies their change of state or, more precisely, their consumption.

However, both *ποτόν poton* and *σίτος sitos* can be considered nouns referring to a ‘class’ or to a ‘genus’ of substances: drinks and foods. Therefore, they are not fully referential either (Givón 1978: 293–295).

*ποτόν poton* is not the only deverbal noun referring to drinks used in this structure. Another noun frequently combined with *χράομαι khraomai* is *ρόφημα rrophēma*, which refers to a particular type of liquid gruel that was to be sipped by the patient. This is why it is derived from the verb *ρόφέω rrophēō* (‘sip’). It thus refers to an argument of the action expressed by *ρόφέω rrophēō*, while maintaining some predicative force.

In (31) *ρόφημα rrophēma* constitutes the nominal part of *ρόφήμασι χρεέσθω rrophēmasi khreesthō*, used to place the action of administering the gruel in a temporally ordered sequence, in which it precedes that of giving food. The same temporal collocation in a sequence can be observed in (32), which, instead of the structure with *χράομαι khraomai*, shows the use of the synthetic form *ρόφέω rrophēō*, employed as an unergative.

- (31) τοῖσι ῥοφήμασι πρόσθεν χρεέσθω τοῦ  
*toisi rrophēmasi prosthen khreesthō tou*  
 ART.DAT.PL gruel.DAT.PL before use.PRS.IMP.3SG ART.GEN.SG  
 σίτου.  
*sitou.*  
 food.GEN.SG

‘Let him use gruels before food.’

(*HC Internal Affections* 9, p. 100, 3-4 Potter (7, 188, 5 L.))

- (32) μηδὲ ροφεῖν      μηδὲ πίνειν      ταχὺ      μετὰ τὸ  
*mēde rhophein      mēde pinein      takhy      meta to*  
 nor sip.PRS.INF    nor drink.PRS.INF    right.ADV    after    ART.ACC.SG  
 λουτρόν.  
*loutron.*  
 bath.ACC.SG

‘Gruels or drinks must not be taken soon after a bath.’

(*HC Regimen in Acute Diseases* 18. LXV. 3, p. 66, 2-3 Joly (2, 368, 2-3 L.))

Since they refer to a category of objects on which the action encoded in their own name must be performed, ποτόν *poton* and ρόφημα *rhophēma* can also be used as predicative phrases, in connection with fully referential nouns which constitute the dative object of χράομαι *khraomai*. In example (33), this structure is used to express the fact that the sipping of a πτισάνη *ptisanē* (‘barley infusion’) may result in excessive fullness: ροφήματι *rhophēmati* defines the type of action in which the barley infusion is involved. In example (34), the exact same action is expressed by the synthetic verb ροφεέτω *rhopheetō*.

- (33) Εἰ μέντοι ροφήματι χρέοιτο      πτισάνη      [...]  
*Ei mentoi rhophēmati khreoito      ptisanē      [...]*  
 if however gruel.DAT.SG use.PRS.OPT.3SG barley.infusion.DAT.SG [...]  
 ἄγαν      πλησμονῶδες ἂν εἶη.  
*agan      plēsmonōdes an eīē.*  
 too.much.ADV filling.NOM.SG PRT be.PRS.OPT.3SG

‘If, however, he uses a barley infusion as a gruel [...] it will cause fullness.’

(*HC Regimen in Acute Diseases* 15. LVI. 3, p. 60, 22-23 Joly (2, 346, 6-7 L.))

- (34) μετὰ τὴν      κάθαρσιν      πτισάνης      δύο τρυβλία  
*meta tēn      katharsin      ptisanēs      duo tryblia*  
 after ART.ACC.SG cleaning.ACC.SG barley.infusion.GEN.SG two bowl.ACC.PL  
 ροφεέτω.  
*rhopheetō.*  
 sip.PRS.IMP.3SG

‘After the cleaning, let him sip two bowls of barley infusion.’

(*HC Internal Affections* 13, p. 116, 13-14 Potter (7, 200, 13-14 L.))

The same happens with ποτόν *poton*. Example (35) prescribes the use of water as the drink for recovering from a fracture, and the avoidance of wine. This information is conveyed with χράομαι *khraomai*, ὕδατι *hydati* and οἴνω *oinō* as dative

objects, and ποτῶ *potō* as a predicative phrase. The same action is expressed in (36) by the simple πίνω *pinō*, with οἶνον *oinon* and ὕδωρ *hydōr* as direct objects.

- (35) ποτῶ δὲ χρῆσθαι ὕδατι, καὶ μὴ οἶνω.  
*potō de khresthai hydati, kai mē oinō.*  
 drink.DAT.SG PRT use.PRS.INF water.DAT.SG, and not wine.DAT.SG  
 ‘For drink use water and not wine.’  
 (HC *Fractures* 11, p. 21, 4 Jouanna–Anastassiou–Roselli (3, 458, 8-9 L.))

- (36) μηδ’ οἶνον πινέτω ἀλλὰ μάλιστα μὲν ὕδωρ.  
*mēd’ oinon pinetō alla malista mēn hydōr.*  
 not wine.ACC.SG drink.PRS.IMP.3SG but mostly.ADV PRT water.ACC.SG  
 ‘He should not drink wine, but preferably water.’  
 (HC *Diseases II* 72. 2, p. 212, 7-8 Jouanna (7, 110, 10-11 L.))

σίτος *sitos* can be found in the exact same function. In example (37), for instance, a diet based on barley cakes is prescribed by a structure with χράομαι *khraomai*, μάζῃ *mazē* as a dative object and σίτω *sitō* as a predicative phrase.

- (37) σίτω δὲ χρῆσθω μάζῃ μαλθακῇ  
*sitō de khresthō mazē malthakē*  
 food.DAT.SG PRT use.PRS.IMP.3SG barley.cake.DAT.SG soft.DAT.SG  
 ἀτρίπτω.  
*atriptō.*  
 unkneaded.DAT.SG  
 ‘As food let him employ soft unkneaded barley-cake.’  
 (HC *Internal Affections* 51, p. 244, 9-10 Potter (7, 294, 10-11 L.))

Unlike ποτόν *poton* and ρόφημα *rophēma*, however, σίτος *sitos* is not deverbal. Nevertheless – and this is a crucial point – it still refers to a category into which referential objects may fall on the basis of their involvement in a typical action: that of being eaten.<sup>35</sup> According to Hale & Keyser (1987), Hale & Keyser (1993), verbs like ‘eat’, which can be used either as unergatives (“John ate”) or transitively (“John ate the bread”) have a form of “internal” predefined object. This is why, if the action is mentioned without the need to better specify the type of food

<sup>35</sup>The importance of the semantic traits which give information about the typical action into which an object is involved or typically used has been underlined by Pustejovsky (1995: 76–81), who labelled them as part of the ‘telic quale’, one of the four main “sections” (the “qualia”) in which semantic traits that are involved in generative transformations of meaning can be divided.

eaten, the verb can be used intransitively: if taken as a whole, the involvement of the class of ‘food’, that could recur as an argument, is already fully identified by the meaning of the verb. This may be the reason why, if used as a predicative phrase in an SVC with *χράομαι khraomai*, a noun such as *σίτος sitos* identifies the action of eating, as *ἐσθίω* does in (38): it refers to the class of objects that is part of the logical structure of this action.

- (38) Τὸ δὲ λοιπὸν τοῦ χρόνου  
*To de loipon tou khronou*  
 ART.ACC.SG PRT remaining.ACC.SG ART.GEN.SG time.GEN.SG  
 διαιτάσθω μᾶζαν καὶ ἄρτον  
*diaitasthō mazan kai arton*  
 follow.a.diet.PRS.IMP.3SG barley.cake.ACC.SG and bread.ACC.SG  
 ἐσθίων ἀμφότερα.  
*esthiōn amphotera.*  
 eat.PRS.PTCP.NOM.SG both.ACC.PL

‘From then on, let the regimen include eating both barley-cakes and bread.’  
 (HC *Internal Affections* 12, p. 114, 6-7 Potter (7, 198, 14 L.))

Example (31) already proves that *σίτος sitos* holds some predicative power: it contains a prescription for the use of gruels ‘before food’ – *πρόσθεν τοῦ σίτου prosthen tou sitou* – where the category of ‘food’ is used with a temporal value to refer to the action of eating. “Before food” stands for “before eating” and temporality is one of the characteristics that is taken into account to test the predicative force of a noun (Simone & Pompei 2007: 48–50).

The HC, however, contains some passages in which *χράομαι khraomai* refers to the action of eating and drinking in combination with fully referential nouns, which refer to concrete foods and drinks, without *σίτος sitos* and *ποτόν poton* – of which they are hyponyms – as predicative phrases.

- (39) οἴνω δὲ μέλανι χρήσθω, τοῖσι κρέασιν  
*oinō de melani khresthō, toisi kreasin*  
 wine.DAT.SG PRT black.DAT.SG use.PRS.IMP.3SG, ART.DAT.SG meat.DAT.PL  
 ὀπτοῖσι μᾶλλον ἢ ἐφθοῖσι.  
*optoisi mallon ē hephthoisi.*  
 roasted.DAT.PL more than boiled.DAT.PL

‘She should employ dark wine, roasted meats in preference to boiled ones.’  
 (HC *Diseases of Women I* 11, p. 48, 23-24 Potter (8, 48, 5-7 L.))

Even if they are not predicative nouns, οἶνω *oinō* and κρέασιν *kreasin* are still the fundamental element for identifying the action expressed. Even though referential, they are part of superordinate classes of objects, as those of drinks and food. Being part of the logical structure of a certain action, this superordinate class still identifies the typical action in which its hyponyms are involved. Since the entities represented by these nouns are more specific than the whole class, however, were this action to be expressed by a synthetic verb, they should recur as arguments of the verb in a transitive structure, see (40).

- (40) κρέας δὲ ἐσθιέτω ἀλέκτορος ὀπτὸν  
*kreas de esthietō alektoros opton*  
 meat.ACC.SG PRT eat.PRS.IMP.3SG cock.GEN.SG roasted.ACC.SG  
 ἄναλτον, ἢ αἰγὸς ἐφθόν.  
*analtōn, ē aigos hephthon.*  
 not.salted.ACC.SG or goat.GEN.SG boiled.ACC.SG

‘He should eat roasted fowl meat without salt, or boiled goat meat.’

(*HC Internal Affections* 1, p. 72, 26-74, 1 Potter (7, 168, 8-9 L.))

The fact that a referential noun such as οἶνος *oinos* can produce a predicative structure if combined with *χράομαι khraomai* can also be proved by a ‘zeugma test’ (see supra). In (41) *χράομαι khraomai* is linked to the predicative noun λουτροῖσι *loutroisi*, ‘baths’, with which it prescribes a therapy with baths, and to οἶνοισι γλυκέσιν *oinoisi glykesin*. οἶνοισι *oinoisi* must therefore hold the same predicative value as λουτροῖσι *loutroisi*.

- (41) Θεραπεύειν δὲ χρῆ τὰς πλευρίτιδας  
*Therapeuein de khre tas pleuritidas*  
 cure.PRS.INF PRT should.PRS.IND.IMPERS ART.ACC.PL pleurisy.ACC.PL  
 ὧδε [...] λουτροῖσί τε χρῆσθαι θερμοῖσι καὶ οἶνοισι  
*hōde [...] loutroisi te khresthai thermoisi kai oinoisi*  
 thus.ADV [...] bath.DAT.PL and use.PRS.INF hot.DAT.PL and wine.DAT.PL  
 γλυκέσιν.  
*glykesin.*  
 sweet.DAT.PL

‘You must treat pleurisies as follows [...] you must use warm baths and sweet wines.’

(*HC Diseases III* 16, p. 90, 9-11 Potter (7, 146, 13-15 L.))

## 8 Conclusions

χράομαι *khraomai* is often linked with a dative object which holds the predicative force of the verb phrase, being the element that identifies the type of action to be realised. The nouns that occur in that position are more or less close to the traditional definition of predicative noun. The closer ones are κατάπλασμα *kataplasma*, κλυσμός *klysmos* and κλύσμα *klyσμα*, which refer both to the action expressed by the verb from which they are derived and to one of the arguments that takes part in that action. πρόσθετον *prostheton*, ποτόν *poton* and ρόφημα *rhophēma* are still deverbal nouns, but they only refer to one of the arguments of the action expressed by the verb from which they are derived. The action in which they are involved is however still inscribed in their own meaning, and this explains why they hold some predicative force.

Moving further from the core of predicative nouns one finds σῖτος *sitos*, which is not deverbal, but refers to a category which can be understood as semantically involved in the logical structure of the action of ‘eating’. This action is thus the one recalled by its combination with χράομαι *khraomai*. Finally, this structure can also involve fully referential nouns, whose predicative force lies in the fact that they are hyponyms of a superordinate class of objects involved in the logical structure of a precise action, like those of ‘eating’ and ‘drinking’.

The further one moves from deverbal and predicative nouns, the more χράομαι *khraomai* deviates from its full value, since it does not express the action of ‘using as an instrument’ the concrete referents of referential nouns, which would indeed be suitable for such an interpretation. If the verb maintained its full value in combination with nouns such as οἶνος *oinos*, it would express the action of using wine as a tool, as it happens with water in example (42), which recommends the use of water while changing the dressing of a wound.

- (42) Ἐν δὲ ἐκάστη τῶν ἐπιλυσιῶν ὕδατι  
*En de hekastē tōn epilysiōn hydati*  
 at PRT each.DAT.SG ART.GEN.PL change.of.dressing.GEN.PL water.DAT.SG  
 πολλῶ θερμῶ χρέεσθαι.  
*pollō thermō khreesthai.*  
 plenty.DAT.SG warm.DAT.SG use.PRS.INF

‘At each change of dressing use plenty of warm water.’

(HC *Fractures* 10, p. 17, 21-18,1 Jouanna–Anastassiou–Roselli (3, 452, 4-5 L.))

The meaning of the expression ὕδατι...χρέεσθαι *hydati...khreesthai* is far different from that activated by χράομαι *khraomai* in examples such as (39), in which it prescribes the ‘drinking’ of wine and not its use for other purposes.

In the HC *χράομαι khraomai* combines with deverbal nouns that refer to objects which can be conceived as therapeutic tools as far as they are involved in the change of state prescribed by the verb from which they are derived. This link of *χράομαι khraomai* with objects whose function as an instrument involves their change of state is then extended to other non-deverbal nouns, which refer either to a class of objects or to a member of such a class. This class is the one which typically undergoes a change of state in the logical structure of the action expressed by the synthetic verb which is equivalent to the SVC. The potential referentiality of these nouns rules out the use of ποιέω *poieō*, which would take its full meaning, prescribing the ‘production’ of the object signified by the noun. *χράομαι khraomai* is thus employed to express the interaction with these objects, realised by acting on them as is typical for the class to which they belong.

It must also be noted that the choice of *χράομαι khraomai* may also be in line with the medical purpose of underlining that these objects are functional to the healing of the patient as much as the employment of a therapeutic tool. The use of this verb as an SV seems indeed to be far more frequent in the HC than in other writings (see also *supra* ex. (41): λουτροῖσί... χρῆσθαι, *loutroisi ... khrēsthai*, ‘take baths’). Jiménez López (2011), for instance, registers as standard the SVC δίαιταν ποιέομαι *diaitan poieomai*, while the HC counts only two potential occurrences of this structure, compared to 25 occurrences of διαίτη χράομαι *diaitē khraomai*.<sup>36</sup> While dealing with regimen, Hippocratic writings show a special tendency to express everyday practices, such as walking, with predicative nouns in combination with *χράομαι khraomai*. Expressions such as περιπάτοις χράομαι *peripatois khraomai* (‘take walks’) appear 20 times in the HC, while being almost absent from other writings of the Classical Period.<sup>37</sup> This shift is certainly very interesting for studies focusing on changes induced on SVCs by register variation, but goes beyond the scope of this paper, whose focus is on Hippocratic SVCs involving nouns with a potentially referential meaning.

## Abbreviations

CO	Cognate object
COMP	comparative (of adjectives)
HC	Hippocratic corpus

<sup>36</sup>HC *Regimen* 68, 198, 26-27 Joly (6, 602, 1-2 L.); HC *Diseases of Women* I 11, p. 48, 17 Potter (8, 46, 24-48, 1 L.).

<sup>37</sup>Only two occurrences of περιπάτω χράομαι *peripatō khraomai* can be found in Xenophon, *Oeconomicus* 11 [Socratic dialogue, prose]

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## Chapter 6

# Support-verb constructions and other periphrases in Aristotle's *Rhetoric* (books 1 and 2)

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This chapter discusses empirically periphrastic constructions from books 1 and 2 of Aristotle's *Rhetoric*, treated holistically as a multilayered corpus. Some, e.g., ποιῆσθαι λόγον *poieisthai logon*, reflect the canonical features of support-verb constructions. The chapter illustrates the relationship between these constructions and the rhetorical strategies of alternating between brevity and expansion. Furthermore, the stylistic diversity of phrases and issues with their terminological conception are addressed. The chapter considers the concepts developed in Graeco-Roman rhetorical theory, such as *periphrasis*, *makrologia*, *brakhulogia*, and their alignment with modern views, and hypothesises that the term 'periphrasis', elaborated in ancient rhetoric, is descriptively adequate for a range of multi-word constructions. It also classifies phraseological material based on verb semantic role and introversion and extraversion categories, reinterpreting theories of valency change.

Šiame skyriuje aptariamos empiriškai atrinktos perifrastinės konstrukcijos iš Aristotelio *Retorikos* I ir II knygų, traktuojamų holistiškai kaip daugiasluoksnis korpusas. Kai kurios, pavyzdžiui, ποιῆσθαι λόγον *poieisthai logon*, atspindi kanoninius leksinių analitinių konstrukcijų bruožus. Čia siekiama parodyti šių konstrukcijų ryšį su retorinėmis suglaudimo ir išplėtojimo kaitaliojimo strategijomis, nagrinėjama stilistinė frazių įvairovė, jų terminologinės sampratos klausimai, aptariamos graikų-romėnų retorikos teorijoje išplėtos sąvokos, tokios kaip *periphrasis*, *makrologia*, *brakhulogia*, jų atitikimas šiuolaikiniam požiūriui, taip pat keliami hipotezė, kad senovės retorikoje išplėta sąvoka "perifrazė" tinkama apibūdinti įvairioms daugiažodėms konstrukcijoms. Skyriuje klasifikuojama frazeologinė medžiaga, remiantis veiksmažodžio semantine role ir introversijos bei ekstraversijos kategorijomis, naujai interpretuojant valentingumo kaitos teorijas.



## 1 Introduction

Aristotle's *Rhetoric*<sup>1</sup>, like any ancient literary monument, is a 'repository' of expressions which contains a sizable collection of compound words and phrases,<sup>2</sup> some rather challenging to detect and translate into another language. This chapter reflects a significant effort to evaluate and classify the verb and complement constructions of an Ancient Greek text being translated into another language, with a focus on Ancient Greek rhetorical terminology. However, cross-linguistic parallels (such as Greek "ποιεῖσθαι λόγον" *poieĩsthai lógon* (lit. "make a speech") and its English or Lithuanian equivalents), as part of the greater phenomenon of translation issues, will not be treated here. Instead, this chapter focuses only on the nature and classification of single-language (Ancient Greek) constructions. Particular attention in this chapter is paid to the identification of verbal constructions, termed light-verb constructions (LVCs henceforth) or support-verb constructions (SVCs henceforth),<sup>3</sup> which are treated as part of a larger phenomenon—linguistic, rhetorical, or poetic variation.

Aimed at a synthesis of empirical research, the chapter combines two major theoretical approaches: the classical theory of style with its basic 'idea that a thought can be formulated in several ways with different effects'<sup>4</sup> and the modern theories and insights of verb valency, transitivity, and non-causal-causal alternations.<sup>5</sup> Two thirds of Aristotle's *Rhetoric*, Books 1 and 2, dealing with so-called rhetorical invention, form the basis of the empirical study. This choice of the corpus of limited scope was due, *inter alia*, to the large amount of heterogeneous material obtained over the course of the research.

Even though the results' breadth may appear constrained, they may nonetheless contribute to a perceptual testing of the methodology: once the phraseological principles of these two books are established, the third book can be evaluated in a similar framework. This study is distinguished by its limited use of automated processes: many of the word combinations were found in the corpus by

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<sup>1</sup>The dataset is accessible here: <http://dx.doi.org/10.5287/ora-n652gamyj>.

<sup>2</sup>For the purposes of this article, we use the term *phrases* to refer to all the lexical expressions longer than one word and not forming a sentence. For a similar use of the corresponding term in Lithuanian phraseology, see Marcinkevičienė (2010: 121–122).

<sup>3</sup>The synonymy of these terms is not questioned here on the basis of the terminology available to us in the research materials, such as Langer (2004), Kovalevskaitė et al. (2020), Fotopoulou et al. (2021). In this article, preference will be given to the term SVC, while LVC may appear sporadically in commenting on the literature where there is a preference for the latter term.

<sup>4</sup>de Jonge (2014: 326)

<sup>5</sup>E.g. Lavidas (2009), Arkadiev & Pakerys (2015), Haspelmath (2016), Grossman & Witzlack-Makarevich (2019).

way of a close reading and manual extraction. On this basis, a number of constructions pertinent to the study were then selected.

The content of the chapter is divided into the following sections: 1) introductory reflections on the text under discussion (Section 2); 2) observations on the linkage of verb formations from the perspectives of modern linguistics and of the notions known from ancient Greek rhetorical and linguistic theory (Section 3); 3) key points of empirical research and the classification of phraseological material (with a focus on verbal semantics) (Section 4); 4) an overview of recent findings on SVCs and other periphrastic constructions in Aristotle's treatise (Sections 5 and 6); 5) a brief outline of the stylistic functions of verb-based periphrases found in the course of the study (Section 7).

## 2 Aristotle's *Rhetoric* as a source of Greek phraseology

Τέχνη ῥητορική *Tékhñē rhētorikḗ* (as some manuscripts title it<sup>6</sup>), or simply *Rhetoric*, a theoretical work on the art of persuasive speech, which, in Aristotle's view, shares many similarities with dialectics, ethics, politics, and poetics,<sup>7</sup> discusses the nature and components of this art, the means of persuasion, the arguments relevant to the three types of speech (deliberative, epideictic, and juridical), and describes ethical, emotional and stylistic factors of a persuasive speech. The content of the treatise is roughly divided into three unequal parts: the first two of the three books, which form the core of the author's original vision, deal with rhetorical invention and theory of proofs, while the third book covers more practical issues of style and composition.

The *Rhetoric* is an integral part of the *Corpus Aristotelicum* and contains references to other works by this author, such as treatises on logical reasoning and dialectics, Ἀναλυτικά Πρότερα *Analytikà Prōtera*, Κατηγορίαι *Katēgoríai*, and Τοπικά *Topiká*. This study therefore can contribute to our understanding of Aristotle's phraseology and, to some degree, to that of the textual aspects of the treatise in question (e.g. differences across copies), as well as intertextual ones (such as quotations and paraphrasing of other texts, both oral and written).

As a multi-layered text, Aristotle's *Rhetoric*, on the one hand, captures the rich and literarily charged phraseology of Greek spoken in the 4<sup>th</sup> century BC, of which most modern readers, being non-native speakers, can only have a vague idea. This phraseology is essentially the phraseology of the Attic dialect of the

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<sup>6</sup>See Kassel (1976: 3) (in app. crit.)

<sup>7</sup>On the relation of rhetoric to dialectics, ethics, and politics, cf. Aristotle, *Rhetoric* 1.2.7 1356a25-27, and on the relationship between rhetoric and poetics, see Kirby (1991) with references.

4<sup>th</sup> century BC, strongly influenced by literary genres dominant in contemporary Athens, such as Attic drama (apart from the choral parts), rhetorical, philosophical, and historiographical prose, and used in colloquial form not only in Attica but also in interstate communication (including the Macedonian court, with which Aristotle was closely associated). It is uncertain how much this basic dialectal layer of the treatise was influenced by lexical and phrasal variation from other dialects (cf. Aristotle's habit of exemplifying his stylistic points from Herodotus and Homer, the representatives of the literary Ionic and an epic dialectal mixture respectively<sup>8</sup>), but the impact of the stylistic features of Attic drama and oratory is undoubted.<sup>9</sup> This naturally prompts us to focus principally on the Attic dialect.

On the other hand, to quote Aristotle's translator, 'our knowledge of what Aristotle wrote is based on manuscripts copied by scribes from older manuscripts, which were in turn copied from still earlier ones, going back to Aristotle's personal copy, with opportunity for mistakes at every stage in the transmission. The earliest existing evidence for the text dates from over a thousand years after Aristotle died' (Kennedy 2007: xii). Understanding the textual tradition prompts a nuanced interpretation of Aristotle's phrasing. The decision to use a manuscript version that uses single-word formations and, *inter alia*, compound words rather than two-word combinations, or vice versa, can influence the way in which we perceive the author on the whole – either as a producer of periphrastic formulations or of compound words.<sup>10</sup> As fascinating as this aspect of the study is, we will not delve into the details here because of constraints of time and space. Instead, we will just acknowledge that the material used in this study is based on one of the most widely used Greek editions, that of Ross (Ross 1959), but it also takes one of the most thorough critical editions, that of Kassel (1976), into account.

We are thus dealing with a largely literary version of Greek that shares (*cum variatione*) the characteristics of every document of the ancient tradition which has undergone a change over the course of written transmission. This linguistic form deserves an approach that finds parallels not only with the terms and linguistic phenomena of our time, but also with the terminology and descriptions of poetic and literary phenomena of the period in which the texts under study were

<sup>8</sup>Morpurgo Davies (2002: 168)

<sup>9</sup>Aristotle's treatise on rhetoric is particularly rich in quotations from classical Athenian tragedy and from the speeches of the orators of Aristotle's time (esp. Isocrates and his students).

<sup>10</sup>So e.g. in Aristotle, *Rhetoric* 1.7.26, 1364b31, one version has ἀβειαιοτέρων *abebaiotérōn*, another μη βειαιοτέρων *mē bebaiotérōn*, in Aristotle, *Rhetoric* 2.23.11, 1398b11, we find either βλάσφημον ὄντα *blásp̄hēmon ónta* or βλάσφημήσαντα *blasphēmésanta*, in 1.12.4, 1372a20, we find either φίλοι ὄσι *phíloi ósi* or φιλωσιν *philōsin*, in 2.4.26, 1381b28, either τοὺς φιλεῖν ἀγαθοὺς *toùs phileîn agathoùs* or φιλαγάθους *philagáthous*. For these and other examples see app. crit. ad loc. in Kassel (1976).

written. In other words, in addition to the complex typology of different expressions developed by modern linguistics, it is worth recalling the discoveries and insights of ancient thinkers and stylists, and combining their terminology with the terms we use today, such as Multi-word Expressions (MWEs henceforth), SVCs, LVCs, Function-Verb Constructions (FVCs henceforth)<sup>11</sup> or V-PCs (V-PP-Cs),<sup>12</sup> etc. This chapter does not focus on this issue in detail, but offers some insights.

### 3 Reflections on verbal constructions: Between the modern concept of support-verb constructions and ancient rhetorical tradition

The concepts just mentioned, especially multi-word expressions (MWEs henceforth) (i.e. phrasal units of great variety and certain 'semantic opaqueness' and a universal phenomenon inherent to a variety of language sources)<sup>13</sup> and SVCs (i.e. verb + noun combinations acting as predicates of a sentence)<sup>14</sup>, are central to this discussion, which focuses on their forms and functions within Aristotle's *Rhetoric*. In addition to that, it is also worth considering the issue of the relevance of concepts employed in modern linguistics and their compatibility with the old ones, as well as that of the commensurability of phenomena covered by the two families of concepts.

When it comes to multi-word phenomena, we believe that some ancient concepts could be used more widely both in modern linguistics and in the study of ancient languages. One of these is *περίφρασις* *periphrasis* (from late Greek *περιφράζομαι* *peri-phrázomai*, 'to express in a roundabout manner') with its Latin equivalent *circumlocutio* (cf. Quintilian, *Institutio Oratoria* 8.6.61; Servius, *Commentary on Vergil's Aeneid* 1.65: 17-19) coined by the Graeco-Roman rhetoricians and grammarians. As attested in ancient literary critics, beginning with Dionysius of Halicarnassus (cf. v. *περίφρασις* *periphrasis* in Liddell & Scott 1996), it denotes the use of a longer phrase instead of a possible shorter form (e.g. a combination of words instead of one word). Despite the ramified use of the term in our time, it often retains a fairly universal meaning, applying to phenomena of various linguistic and stylistic categories (cf. Haspelmath 2000). Even when discussing a specific linguistic phenomenon, such as verbal periphrasis, a hint of

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<sup>11</sup>Or FVG (for *Funktionsverbgefüge*) in German literature, e.g. Schutzzeichel (2014).

<sup>12</sup>On verb-preposition constructions cf. Farrell (2005), Keizer (2009), cf. Langer (2004: 8).

<sup>13</sup>For this kind of definition, cf. Rayson et al. (2010) and a set of facts about MWEs available on the PARSEME network website (<https://typo.uni-konstanz.de/parseme/index.php/the-action>).

<sup>14</sup>Fendel (2022: 382)

that broad meaning is retained (cf. Bentein's examples of synthetic vs analytic forms with the latter being called both multi-word and 'periphrastic' ones).<sup>15</sup>

The breadth of the import of the term periphrasis parallels that of the term MWE, both of which are sometimes explicitly linked and have similar definitions (cf. the definition of MWE as 'linguistic objects consisting of two or more words' and 'a highly varied set of objects (from idioms to collocations, from formulae to expressions)', Masini 2019). In the context of such juxtapositions, for texts written in an ancient language, it is natural to favour the terms originating from that language. On the other hand, given the complexity of the concept of MWE, it is useful to have an alternative short and inclusive synonym, as is the case with periphrasis.

Regarding SVCs, their connection to the concept of periphrasis has been noticed (cf. Jiménez López 2016: 183), but it has yet to be thoroughly investigated. Given the relative abundance of studies on periphrasis, such an enterprise would be valuable.

Although linguists have noted that the concept periphrasis can be employed at various degrees of strictness,<sup>16</sup> a theoretical framework has also been developed to identify characteristics of a 'canonical periphrastic construction' (e.g. the expression of the grammatical meaning, lexical applicability, regularity, recognizable syntactic relations, and head of a construction).<sup>17</sup> Compared to rhetorical periphrasis, linguistic periphrasis has been more intensively studied in several forms. Perhaps the best known of these are nominal (or 'inflectional', filling of a cell of the inflectional paradigm; cf. Chumakina 2011, Chumakina & Corbett 2012) and verbal (or 'participial') periphrasis, the latter extensively studied in Bentein (2016). However, there is still a lack of clarity concerning the applicability of this concept to other constructions, including SVCs. One of the reasons for this may be that linguistic research pays little attention to the rhetorical (persuasion-targeted) and poetic (creation-targeted) background of periphrasis. Therefore, we have to offer several considerations on this issue.

Periphrasis (a multi-word substitution of a single-word lexical unit) is a tool employed for pragmatic or stylistically motivated objectives rather than merely a lexical and grammatical category referring to the usage of a combination of words in place of the appropriate lexical meaning and morphological form. Its essence is well reflected in Lausberg's definition based on various references to

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<sup>15</sup>Bentein (2016: 2)

<sup>16</sup>See e.g. Haspelmath (2000: 654–655), where periphrasis has 3 main definitions: 'the use of longer, multi-word expressions in place of single words', 'one of the canonical literary rhetorical figures', and 'a situation in which a multi-word expression is used in place of a single word in an inflectional paradigm'.

<sup>17</sup>Cf. Chumakina (2011: 249–250); Brown et al. (2012: 244).

it in the Graeco-Roman rhetorical tradition: periphrasis is 'paraphrasing of one word by several words' (Lausberg 1998: §590). This definition refers to a wide variety of quantitative (several instead of one) and qualitative (different degrees of semantic equivalence) substitution, some of which are explicitly illustrated in examples of the late manuals of rhetoric.

Thus, for example, Alexander Numenius, a rhetorician of the 2<sup>nd</sup> century AD, gives examples to show that periphrasis, originally a poetic (creation-targeted) device, has become a stylistic flourish in prose as well (Spengel 1853: 32). Here, beside nominal expressions, such as βίη Ἡρακληεῖη *bíē Hēraklēēīē* (lit. 'strength of Heracles') and μένος Ἀλκινόοιο *ménos Alkinóoio* (lit. 'might of Alcinous') standing for nouns (Ἡρακλῆς *Hēraklēs* and Ἀλκίνοος *Alkínoos*), we see Thucydides' phrase τὴν μάθησιν ἐποιεῖσθε' *tēn máthēsin epoieīsthe*, 'you were doing learning' with the rhetorician's remark: 'instead of ἐμανθάνετε *emanthánete*', which corresponds to the well-known type of SVCs with the verb ποιεῖσθαι *poieīsthai*.<sup>18</sup> This and other support verbs appear in similar constructions in many classical Greek literary texts, but even a single multi-layered text like Aristotle's *Rhetoric*, which combines the author's own expressions with those borrowed for paraphrasing or quotation, shows that such a phenomenon exists in both spoken and literary Greek. Two examples will suffice here, see (1) and (2):

- (1) διὸ εἶρηται ἄθυμὸς δὲ μέγας ἐστὶ  
*diò eírētai áthymòs dè mégas estì*  
 therefore say.PRF.3SG wrath.NOM.SG but big.PRED-ADJ be.PRS.3SG  
 διοτρεφέων βασιλῆων' καὶ ἄλλά τε καὶ μετόπισθεν  
*dioitrephéōn basiléōn' kai allá te kai metópi sthen*  
 Zeus-nurtured.GEN king.GEN.PL and yet PRT even afterwards  
 ἔχει κότον' ἀγανακτοῦσι γὰρ διὰ  
*ékhei kóton;' aganaktoῦsi gár dià*  
 have.PRS.3SG grudge.ACC.SG feel.irritation.PRS.3PL for/since by.reason.of  
 τὴν ὑπεροχὴν  
*tēn hyperokhén*  
 ART.ACC supremacy.ACC.SG

'Wherefore it has been said: 'Great is the wrath of kings cherished by Zeus,' (Homer, *Iliad* 2.196) and 'Yet it may be that even afterwards he cherishes his resentment,' (Homer, *Iliad* 1.82) for kings are resentful in consideration of their superior rank.'

(Aristotle, *Rhetoric* 2.2.7, 1379a3-7, translated by J. H. Freese).

<sup>18</sup>On this popular type of analytic predicate (ποιεῖμαι *poieūmai* + event noun), see e.g. Jiménez López and Baños and Pompeio, Pompeio, and Ricci in this volume.

- (2) καὶ τὸ Πολυεύκτου εἰς ἀποπληκτικόν τινα  
*kai tò Polueúktou eis apoplēktikón tina*  
 and that.[saying] Polyeuctus.GEN.SG in/towards apoplectic.ACC.SG some  
 Σπεύσιππον, τὸ μὴ δύνασθαι ἡσυχίαν  
*Speúsippon tò mē dúnasthai hēsukhían*  
 Speusippus.ACC.SG ART NEG be.able.INF stillness.ACC.SG  
 ἄγειν ὑπὸ τῆς τύχης ἐν πεντεσυρίγγῳ  
*ágein hupò tēs túkhēs en pentesuríngōi*  
 keep/observe.PRS.INF by ART.GEN fortune.GEN in five.holed.DAT  
 νόσῳ δεδεμένον  
*nósōi dedeménon*  
 disease.DAT.SG bind.PRF.PTCP.PASS.ACC.SG

‘And the saying of Polyeuctus upon a certain paralytic named Speusippus, that he could not **keep quiet**, although Fortune had bound him in a five-holed pillory of disease.’

(Aristotle, *Rhetoric* 3.10.7, 1411a21-23, translated by J. H. Freese)

The phrase ἔχει κότον *ékhei kóton* ‘holds wrath’, ‘cherishes resentment’ in example (1), as quoted from the Iliad, in Book 2 (Aristotle, *Rhetoric* 2.2.7), for the sake of brevity, could be replaced by the epic verb κοτέει *kotéei*,<sup>19</sup> while another one, ἡσυχίαν ἄγειν *hēsukhían ágein* (example 2), paraphrased in Book 3 from an unknown speech by Polyeuctus, stands for ἡσυχάζειν *hēsukházein*, which is quite a common verb for Aristotle himself and his contemporary writers.<sup>20</sup> Both examples conform with Alexander’s definition of periphrasis, both are rather verbose or ‘macrological’ than the reverse, and both resemble a typical SVC definition (desemanticised verb of frequent use acting as the syntactic operator + verbal noun, functioning together as one predicate).

Although περίφρασις *períphrasis* is absent from the extant rhetorical τέχναι *tékhnai* of Aristotle’s time, some discussion of the phenomenon could be found in Aristotle’s *Rhetoric* too, especially in his discussion of style in Book 3.<sup>21</sup> Here, in the context of the treatment of so-called virtues of style, clarity, correctness (τὸ ἐλληνίζειν *tò hellēnízein*), and propriety (τὸ πρέπον *tò prēpon*), we read a statement that must have been dear to Aristotle, both as a writer and as a teacher of a rhetorical doctrine:

<sup>19</sup>Only other forms are attested in Homer, but cf. famous dictum in Hes. *Op.* 25.

<sup>20</sup>As becomes clear from the entry for ἡσυχάζω *hēsukházo* in Liddell & Scott (1996) and a simple search for this verb in the *Thesaurus Linguae Graecae*.

<sup>21</sup>The greater part of this book of *Rhetoric* (chapters 1–12) is devoted to the rhetorical aspect of λέξις *léxis*, and the remainder (13–19) to that of τάξις *táxis*.

- (3) ὄλως δὲ δεῖ εὐανάγνωστον εἶναι τὸ  
*hólōs dè deī euanágnōston eīnai tò*  
 generally PRT it.is.necessary easy.to.read be.INF the.ACC  
 γεγραμμένον καὶ εὐφραστον: ἔστιν δὲ τὸ  
*gegramménōn kai eúphrastōn: éstin dè tò*  
 write.PRF.PTCP.PASS.ACC and easy.to.utter be.PRS.3SG PRT the.NOM  
 αὐτό  
*autó*  
 same.NOM

‘Generally speaking, that which is written should be easy to read or easy to utter, which is the same thing.’

(Aristotle, *Rhetoric* 3.5.6, 1407b11-12, translated by John H. Freese).

An anonymous scholion on this passage interprets the identity of the terms εὐανάγνωστον *euanágnōston* and εὐφραστον *eúphrastōn* as a measure of the text's clarity. Despite Freese's translation 'easy to utter', *eúphrastos*, according to the meaning of the synonym εὐφραδής *euphradēs* in Liddell-Scott-Jones' *Greek-English Lexicon* (Liddell & Scott 1996), and the etymology of the root -φραδ-*phrad*-<sup>22</sup> of the verb φράζειν *phrázein*, the two terms mean rather 'easy to understand', 'easy to express', or 'well expressed', 'well explained'. Of course, there is not yet the term of periphrasis here, to be coined by later rhetoricians, but this already implies a search for terms that refer to different linguistic strategies of expressing thoughts.

In fact, there were at least two such strategies in Aristotle's time with appropriate, albeit not well-established, terms for each: συντομία *suntomía* 'brevity', as used by Plato and Aristotle, or βραχυλογία *brakhulogía*, as in the *Rhetoric to Alexander* (Aristotle, *Rhetoric to Alexander* 6.3; cf. 22.5), and possibly (though not surely)<sup>23</sup> and μακρολογία *makrología*, called ὄγκος *ónkos* by Aristotle, *Rhetoric* 3.6.1, 1407b.

βραχυλογία *brakhulogía* and μακρολογία *makrología* are not systematically discussed in ancient theories of style and their meanings are usually reduced to asyndeton (Quintilian, *Institutio Oratoria* 9.3.50) and redundancy (Quintilian, *Institutio Oratoria* 8.3.53). In fact, the compounds βραχυλογεῖν *brakhulogeîn*,

<sup>22</sup>The verb φράζειν *phrázein* (according to Aristarchus, cf. Liddell & Scott 1996 s.v.) was not used by Homer in the sense 'to say, tell'.

<sup>23</sup>It should be noted that in the texts of Aristotle's contemporaries, where the words μακρολογεῖν *makrologeîn* μακρολογία *makrología* are used, they do not have a strictly technical meaning of a linguistic nature (choice of words, expansion of the text by longer lexical-syntactic units); rather, they are used in a more general sense in terms of genre (rhetorical speech vs. dialogue) and content (richness vs. scarcity of the elements of some topic).

μακρολογεῖν *makrologeîn*, and their derivatives in Aristotle's time also referred to a stylistic tactic of linguistic communication: βραχυλογία *brakhulogía* was the principle of naming things concisely, μακρολογία *makrología* was the opposite. The former was associated with the pointed questions and straight answers of dialectics, the latter with rhetorical speeches.<sup>24</sup>

It is not impossible in this context that Aristotle distinguished between the tactics of style not only as a theorist but also as a practitioner, language user (writer, imitator, creator, teacher).<sup>25</sup> The frequent presence of both elliptical and amplificatory expressions in the text of his Τέχνη *Tékhnē* reinforces this assumption. Example (4) shows a typical syntax of rather unpolished text which nevertheless shows signs of professional stylistic skills even in a text of esoteric nature.<sup>26</sup>

- (4) ἔτι ὑφ' ὧν                      τις                      οἶεται                      εὖ πάσχειν  
*éti huph' hōn                      tis                      oíetai                      eũ páskhein*  
 yet from whom.GEN.PL someone thinks.PRS.3SG well suffer.PRS.INF  
 δεῖν·                                      οὗτοι                      δ' εἰσὶν                      οὓς εὖ πεποίηκεν  
*deîn;                                      hoũtoi                      d' eisin                      hoũs eũ pepoíēken*  
 there.is.need.PRS.INF these.NOM.PL and be.PRS.3PL whom well do.PRF.3SG  
 ἢ ποιεῖ,                      αὐτὸς ἢ δι'                      αὐτόν                      τις                      ἢ τῶν  
*è poieĩ,                      autòs è di'                      autón                      tis                      è tōn*  
 or do.PRS.3SG himself or by.aid.of he.ACC.SG someone or those.GEN.PL  
 αὐτοῦ                      τις,                      ἢ βούλεται                      ἢ ἐβουλήθη.  
*autoũ                      tis,                      è bouletai                      è eboulēthē*  
 he.GEN.SG someone or wishes/desires.PRS.3SG or wish.AOR.3SG

‘Further, [men are angry at slights from those]<sup>27</sup> by whom they think they have a right to expect to be well treated; such are those on whom they have conferred or are conferring benefits, either themselves, or someone else for them, or one of their friends; and all those whom they desire, or did desire, to benefit’

(Aristotle, *Rhetoric* 2.2.8, 1379a6-8, translated by J. H. Freese).

<sup>24</sup>These principles are well expressed by Plato, especially in the dialogues devoted to sophistic topics, see Plato, *Protagoras* 335b8, Plato, *Gorgias* 449c4-d6, Plato, *Sophist* 268b1-9 etc. Aristotle himself mentions μακρολογία *makrología* in Aristotle, *Rhetoric* 3.17.16, 1418b25, referring more to a naturally occurring practice in which the speaker exaggerates his self-presentation than to a cleverly balanced or consciously extended rhetorical strategy.

<sup>25</sup>On Aristotle's careful construction of sentences and the application of the rhetorical figure *hyperbaton* in a particular passage of the *Rhetoric*, see Martin (2001), and on Aristotle's experimental attitude to language and important inventions, see Allan (2004).

<sup>26</sup>On the esotericism of the Aristotelian Corpus and the ‘quite rough prose’ of the *Rhetoric*, cf. Poster (1997) and Kennedy (2007: 3).

<sup>27</sup>Here we use square brackets to mark the ellipsis.

Here, ἔτι *éti*, which is used in the same way as in the previous sentence, precedes the implied governing phrase προσήκειν οἶεται πολυωρεῖσθαι *proskékein oietai poluōreísthai* 'he thinks it is proper for him to be highly esteemed', which is omitted, as is the genitive of the omitted phrase ὑπὸ τούτων *hypò toutōn* 'by these'. Extended speech is indicated by the following additional factors: the separation of subject and predicate by the particle ἢ *é*, the use of εὖ πάσχειν *eũ páskhein* instead of something like one-word εὐπαθεῖν *eupatheîn* or εὐπραγεῖν *euprageîn*,<sup>28</sup> and the use of the passive construction (ὕφ' ὧν *huph' hōn...*) rather than the active.

All this shows that the lexical and syntactic material of Aristotle's *Rhetoric* can be seen as the result of the interplay of 'brachylogical' and 'macrological' strategies and that the MWEs ('linguistic objects consisting of two or more words') can be hypothetically associated with the latter.

Since SVCs, like periphrases, imply the use of more than one word and, in some cases, the substitution of a single word (a lexical verb whose meaning is echoed by a noun of verbal derivation, the constituent of an SVC) by a longer phrase, as if transforming the meaning of that word in the combination of two, albeit of unequal semantic weight, it is conceivable to think of these terms as synonyms by virtue of this similarity: SVCs as a type of periphrasis (verbal or predicative), and periphrasis itself as a general name for multi-word combinations of a similar category in which the substitution of a shorter lexical unit by a longer expression is discernible.

In this way, the tripartite typology of word combinations (e.g. Van der Meer 1998, also in Marcinkevičienė 2010) could be merged with the typology of periphrases, so that periphrases could also include collocations, idioms, and other word combinations (e.g. compositional phrases, CPs henceforth). If it is possible to name a sequence of word combinations according to the looseness of their syntactic, lexical, and semantic relationships (free combinations – collocations – idioms; cf. Marcinkevičienė 2010: 88), some periphrases can be classified as freely formed, others as collocations, since they are already characterised by the suspension of word meaning and their frequent use (which does not, however, prohibit their formation in the form of paraphrases, especially in poetry), and the others as idioms – word combinations characterised by the greatest suspension of meaning.

<sup>28</sup>εὐπαθεῖν *eupatheîn* is attested in Plato (esp. Plato, *Phaedrus* 247d4, Plato, *Republic* 347c7), and εὐπραγεῖν *euprageîn* in Aristotle (e.g. Aristotle, *Rhetoric* 2.9.7, 2.9.9)

## 4 In search of support-verb constructions in Aristotle's *Rhetoric*: Key points of empirical research on multi-word expressions

What follows below is a brief description of the stages of empirical work of the author of the present chapter. This work roughly happened in three interwoven stages: 1) empirical collection of the material, 2) search for theoretical models to classify the results, and 3) counting and sorting the material. In the first stage, about 900 two-plus-word phrases were collected, of which 350 items were most similar either to verb-based collocations, or SVCs. To achieve this, some sort of sifting and exclusion was necessary: the so-called free word combinations were excluded, while collocation-like expressions and combinations of verb derivatives (participles, adjectives) with nouns were accepted. Not only verb + noun formations were taken into consideration, but, as our concern is with various periphrases, also verb combinations with other complements (esp. adjectives and adverbs).<sup>29</sup>

The second stage, which dealt with terminological questions of naming and classifying expressions, was by no means easier. There are still many ambiguities in this area (how many different types of word combinations and periphrases there are in general, how they differ from each other, whether periphrasis is morphologically primary (cf. Chumakina & Corbett 2012: 5) or not, whether it belonging to an inflectional paradigm and having multiple exponents is a necessary prerequisite of periphrasis, etc.), but this does not prevent us from sticking to the favoured term (periphrasis): it is quite flexible and can serve as a general term for different constructs, including SVCs.

On the other hand, the variety of SVCs and expressions similar to them need further clarification and subdivision (as is not the case currently), since even the examples of the periphrases given by the above-mentioned rhetorician Alexander Numenius (2nd c. AD), are of at least two different types, one with the same subject (τὴν μάθησιν ἐποιεῖσθε *tēn máthēsin epoiēisthe* = ἐμανθάνετε *emanthánete*, the subject being ὑμεῖς *humeîs*, 'you' (pl.), in both cases), and another with a change in the subject of the sentence (ἔννοιά ποθ' ἡμῖν ἐγένετο *énnoiá poth' hēmīn egéneto* = ἐνενοήσαμεν *enenoēsamen*). In this study, we would like to highlight that, while a noun may have a greater significance as the semantic head in the typology of SVCs, a particular verb's semantic import may also play a role.

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<sup>29</sup>Adjectives of neuter gender can frequently express the meaning of a noun (and so, in fact, substitute nouns), whereas the more common combinations of verbs and adverbs (in fact collocations) are found in grammars under the name of periphrases (cf. Smyth 1920: §1438 on adverbs with ἔχειν *ékhein* or διακεῖσθαι *diakēisthai*).

## 5 On verbs forming periphrastic constructions: The idea of extra- and introversive verbs

While the definitions of SVCs emphasise the reduction of the semantic role of the verb, our intuition is that some of the verbs' fundamental morpho-semantic aspects or features can be retained, leading to different verb-noun combinations with the same noun.

One such primary retainable aspect relates to the valency properties of the verb, i.e. the ability or inability to handle one or more complements. This intuition is in line with several theoretical frameworks, first of all, with the grammatical theory of valency, based on verb centrality (verbs structure sentences by binding the specific elements (complements and actants) in the same way as atoms of chemical elements do), with Lucien Tesnière's theory of actants (agents or persons accompanying a verb in the form of the nominative, the accusative, and the dative cases respectively)<sup>30</sup> and verbal node with its theatrical metaphor ('like a drama, it obligatorily involves a process and most often actors and circumstances', Tesnière 2015: 97). Notably, even when not acting in their full lexical meaning, verbs that form SVCs retain their bivalence (+nominative, +accusative), and in combination with the complement they can also become/seem to become trivalent (cf. ἔχω *ékhō* + accusative > χάριν ἔχω *khárin ékhō* + dative).

The observations on the verbal node as a metaphorical drama (or verb-governor in dependency grammar) and research on verbal derivations and valency change (variety of cross-linguistic morpho-syntactic strategies in transitivity alternations) reflect a general paradigm comparable, from our point of view, with Aristotle's rhetorical model of persuasion, consisting of a triad of factors in the process of rhetorical action (also full of alternating stylistic strategies): the speaker's ἦθος *ēthos* (moral nature), the hearer's πάθος *páthos* (emotional condition), and the λόγος *lógos* (rational basis, logical validity) of the speech.

Aristotle's scheme, most explicitly stated in Aristotle, *Rhetoric* 1.2.3, parallels the semantic and syntactic relations between the participants (or actors) of the sentence in their connection to verbs of different valencies.<sup>31</sup> The speaker, the messenger, as if the agent of the sentence, is the initiating actor who, through his self-presentation and speech (or act of predication comparable to the function of a verb in a sentence), affects one or more 'actors', one of whom is the product

<sup>30</sup>See further Tesnière (2015: 100–109).

<sup>31</sup>In rhetoric, the activity of verbs is probably paralleled by the ὑπόκρισις *hypókrisis*, which, depending on the characteristics of each situation and the characters of the actors, can be different, both highly static and dynamic.

of the logical material, the λόγος *lógos*, the meaningful text (parallel to the object of the sentence, which represents the great variety of things), and another, the listener (or group of listeners) is the reactive agent, the recipient of the affection or message (like the secondary objects of the sentence).

However, every text (oral or written) is not just a collection of identical sentences with identical verb properties. Variation, or variability, is important for rhetorical success, and the possibilities of word derivation help to achieve it. In Greek, the possibilities of derivation, both synthetic and analytic, are rather vast.<sup>32</sup> From some studies on word derivation we have important terms coined that describe variations in verb valency: extraversion and introversion. According to Lehmann and Verhoeven, extraversion is the process by which an intransitive (or monovalent) verb becomes a transitive (or bivalent) verb, and the reverse process is called introversion (Lehmann & Verhoeven 2006: 468–469).

A simplified example of derivational extraversion would be to change the intransitive exhortation ‘let’s gamble’ (cf. Lith. *loškime*, and Gr. κυβεύωμεν *kubeúōmen*) into a sentence where the same verb becomes transitive: ‘I gambled away all my money’ (cf. Lith. *aš pralošiau visus savo pinigus*, and Gr. κατεκύβευσα ἅπαν τὸ ἀργύριον *katekúbeusa hápan τὸ argúrion*<sup>33</sup>). This example of extraversion shows the ability of language to derive a transitive verb from an intransitive verb by adding certain analytical adjuncts. The phenomenon is well attested across languages and the term ‘ambi-transitive’ or ‘labile’ is applied to such verbs (Arkadiev & Pakerys 2015: 57, Lavidas 2009: 68, Haspelmath 2016: 38, etc.). This is a situational and context-dependent change, i.e. situational extraversion.

It is important to note, though, that Aristotle’s *Rhetoric* exhibits both situational valency (cf. the transitive πράττειν *práttein* in πράττειν τὰ καλὰ *práttein tà kalá* in Aristotle, *Rhetoric* 1.7.38, 2.12.12, and the intransitive one κακῶς / εὖ πράττειν *kakῶs / eũ práttein* in Aristotle, *Rhetoric* 2.9.2, 2.9.4), which is dependent on the production process of the phrases, and the internal valency, the latter innate to each verb. The premise of this observation is that most transitive verbs fall into two categories depending on their underlying meaning: introversive and extraversive.

This intuition is based on the assumption that transitive verbs can be used to express the direction of an action in one of two ways: either inwards, i.e. towards the area that is closer to the main performer of the action, or outwards, i.e. towards a more open area that does not belong to the performer or is distant from

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<sup>32</sup>For a significant account of the possibilities of derivation and compounding, or word formation in general, in ancient Greek and Aristotle’s contribution to the conceptualization of these processes, see e.g. Wouters et al. (2014) and Vaahtera (2014).

<sup>33</sup>Cf. Lysias, *In Alcibiadem I* 27: κατακυβέυσας τὰ ὄντα *katakubeúsas tà ónta*.

him/her. When we say 'he/she gives, sells, carries, strikes, draws', if we do not add the reflexive form, we refer to actions that are distant from the performer, and we focus on the exterior object, a component of the world that does not belong to the performer ('gives, sells', thus 'takes away from himself', 'carries, strikes', thus 'uses his strength instead of replenishing it', 'draws', thus 'puts the idea on display to be seen by others'). When we say 'takes, buys, owns, feels, sees', we are focusing on the performer's inner world. In a way, this classification of verbs is reminiscent of semantic classes such as action verbs and stative verbs, except that it primarily concerns the categorisation of transitive verbs.

Thus, based on these considerations, extraversive verbs are those transitive and ambi-transitive verbs which imply a transfer in attention to an external object ('I make, give, send, say' etc.), while introversive verbs suggest a change in emphasis from an exterior object and/or subject to the main subject ('I feel, receive, get, hear'). This difference in verbs might also be a prerequisite for the ramification of the semantic or syntactic roles of the respective phrases and for the nuances of their translation.<sup>34</sup>

## 6 Most frequent 'support verbs' and potential support-verb-construction-type periphrases in Aristotle

Among the 350 constructions,<sup>35</sup> selected from around 900 phrasal combinations, we identified the following most frequent extraversive verbs: **διδόναι** *didónai* 'to give', **λέγειν** *légein* 'to say', **ποιεῖν** *poieîn* 'to make' and **ποιεῖσθαι** *poieîsthai* 'to make (for oneself)', **τιθέναι** *tithénai* 'to put', and **φέρειν** *phérein* 'to bring', 'carry'.

Most of them correspond to English light verbs. They typically direct the action towards the object (*accusativus rei*) and/or the recipient of the benefit or harm, expressed by the dative case or its syntactic equivalents (*πρὸς τινα* *prós tina*, *εἰς τινα* *eís tina* etc.). Versions with prefixes, such as **ἀποδιδόναι** *apodidónai*, **ἐπιλέγειν** *epilégein*, **ἐμποιεῖν** *empoieîn*, **διατιθέναι** / **διατιθεσθαι** *diatithénai* / *diatithesthai*, **κατασκευάζειν** *kataskeuázein*, and **παρασκευάζειν** *paraskeuázein*, were also included in the analysis. However, verbs with objects in the dative and genitive cases (such as **χρῆσθαι** *khre̓sthai* + dative or **τυγχάνειν** *tunkhánein* +

<sup>34</sup>For example, the extraverted phrase may be 'exert pressure' and the introverted one 'feel pressure' or the extraverted phrase could be 'tell the truth', and the introverted one 'know the truth'. So perhaps **ἔχω χάριν** *ékhō khárin* = **χαρίζομαι** *kharízomai* 'I feel grateful', **χάριν διδῶμι** *khárin didōmi* = **χαρίζω** *kharízō* 'I express/share my gratitude'?

<sup>35</sup>This figure can be verified by summing up the number of constructions given in Table 1, Table 12, and the table provided as the dataset for this chapter, see n. 1.

genitive) were not thoroughly examined at this stage of the research, so they are not covered in the present discussion.

Of all the verbs mentioned, 104 tokens (constructions with direct objects) were found in the analysed corpus (76 different types). The count includes formations with the suppletive forms and verbal derivatives (e.g. *adiectiva verbalia*) as well. Table 1 shows a simplified characterisation of periphrases with extraversive verbs. Table 1 serves as a numeric overview, relevant examples are provided in Table 2 to Table 11. For the sake of simplicity, all the morphological variations are counted as though they are reducible to a single phrasal formula (infinitive + accusative of the object), including verb tenses, verbal adjectives, participles, singular and plural forms of nominals. The individual columns indicate the number of repeated

Table 1: Overview

	tokens/types	repeated*	unrepeated*	types SO <sup>†</sup>	types with CO <sup>†</sup>
διδόναι, ἀποδιδόναι, ἀνταποδιδόναι ( <i>didónai, apodidónai,</i> <i>antapodidónai</i> ) + Acc.	14 / 9	3 (3+0)	6 (5+1)	8 (3+5)	1 (0+1)
λέγειν, εἰπεῖν ( <i>légein,</i> <i>eipeîn</i> ) + Acc.	29 / 19	4 (3+1)	15 (11+4)	14 (3+11)	5 (1+4)
ποιεῖν, ποιῆσαι, ἐμποιεῖν ( <i>poieîn,</i> <i>poiēsai, empoieîn</i> ) + Acc.	29 / 26	2 (1+1)	24 (9+15)	10 (1+9)	16 (1+15)
κατασκευάζειν ( <i>kataskeuázēin</i> ) + Acc.	3 / 3	0	3 (0+3)	0	3 (0+3)
παρασκευάζειν ( <i>paraskeuázēin</i> ) + Acc.	2 / 2	0	2 (0+2)	0	2
ποιεῖσθαι ( <i>poieîsthai</i> ) + Acc.	9 / 8	1 (1+0)	7 (3+4)	4 (1+3)	4 (0+4)
πράττειν ( <i>práttein</i> ) + Acc.	5 / 4	1 (1+0)	3 (1+2)	2 (1+1)	2 (0+2)
τιθέναι, θεῖναι ( <i>tithénai,</i> <i>theînai</i> ) + Acc.	3 / 1	1	0	1 (1+0)	0
φέρειν, ἐνεγκεῖν ( <i>phérein, enenkeîn</i> ) + Acc.	10 / 4	3 (3+0)	1 (1+0)	4 (3+1)	0
<b>Total</b>	<b>104 / 76</b>	<b>15</b>	<b>61</b>	<b>43</b>	<b>33</b>

\* In the brackets, the first number indicates the amount of verb-controlled single objects, and the second number refers to complex objects and objects with attributes.

† These brackets show the data from the second and third columns.

and non-repeated expressions, and for each verb (or group of verbs) two categories of objects are distinguished: a single object (SO henceforth), and a complex object (CO henceforth), where verb constructions with an SO are labelled with the abbreviation V + SO and constructions with a CO are labelled V + CO. When CO is an accusative duplex, the direct object (DO henceforth) is marked in bold.

Of all the verb + object (V+O) combinations, the most important feature that brings such a combination closer to the concept of an SVC (a periphrasis of the direct lexical verb) is when the verb has only a single object (V+SO). But the presence of variants with a complex object, CO (noun + adjective or pronoun, noun + noun joined with a conjunction, or accusative duplex), especially the repeated ones, such as (τὰ) ἔξω τοῦ πράγματος λέγειν / (tā) éxō toū prágmatos légein and τοὺς λόγους ἠθικοὺς ποιεῖν / toús lógous ēthikoús poieîn, encourages us to distinguish another category next to the SVC category, more 'macrologic' an expression than the SVC category.

It should be noted that some polysemous verbs, such as ποιεῖν *poieîn*, have synonyms (verbs with closely related meanings and similar causative functions) that can form analogous periphrases, or rather patterns of periphrasis, with some variability. For example, the expression '(by one's own speech) to make a judge of a certain state of mind' occurs several times in Aristotle's treatise (cf. ὅπως τὸν κριτὴν ποιόν τινα ποιήσωσιν / hópōs tòn kritēn poión tina poiēsōsin (Aristotle, *Rhetoric* 1.1.9), κατασκευάζειν τῷ λόγῳ [τοὺς κριτὰς] τοιοῦτους / *kataskeuázēin tōi lógōi [toús kritàs] toioútous* (Aristotle, *Rhetoric* 2.2.27), ἐὰν τοὺς τε κριτὰς τοιοῦτους παρασκευάσῃ ὁ λόγος / *eàn toús te kritàs toioútous paraskeuásēi ho lógos* (Aristotle, *Rhetoric* 2.9.16)), and always with some difference: the verbs vary (ποιεῖν, κατασκευάζειν, παρασκευάζειν *poieîn, kataskeuázēin, paraskeuázēin*), as does the way the verb's object is inflected (singular, plural, or naturally omitted), and the predicative object is also inflected differently (either the accusative of τοιοῦτος *toioútōs* or a combination of pronouns denoting indefiniteness, ποιός τις *poiós tis*).

The following tables also show the variability of the grammatical tense categories and the suppletive forms of the verbs involved in the periphrases (cf. λέγειν *légein* and εἰπεῖν *eipeîn*, φέρειν *phérein* and ἐνεγκεῖν *enenkeîn*, etc.), and thus the irregularity that prevents the conclusion of a fixed rule for certain word combinations.

The data in the tables are purposefully grouped by the repetition of words and the complexity of their complements: in addition to the low semantic weight of the verb, SVCs/LVCs are usually identified by the single non-composite complement (SO) and the repetitive use of the whole phrase (cf. column 'Repeated

Table 2: δίδοναι, ἀποδίδοναι, ἀνταποδίδοναι (*didónai, apodidónai, antapodidónai*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<p><b>V+SO:</b></p> <p>1) χάριν δίδοναι / ἀνταποδίδοναι / ἀποδίδοναι (<i>khárin didónai / antapodidónai / apodidónai</i>) (thrice in total: Aristotle, <i>Rhetoric</i> 1.1.10, 2.2.17, 2.2.23);</p> <p>2) δοῦναι δίκην <i>doūnai díkēn</i> (twice: Aristotle, <i>Rhetoric</i> 1.12.1, 1.12.3);</p> <p>3) δίδοναι / δοῦναι φυλακῆν (<i>didónai / doūnai phulakḗn</i>) (twice: Aristotle, <i>Rhetoric</i> 2.20.5 (<i>bis</i>))</p>	<p><b>SO:</b></p> <p>1) τὰς κρίσεις <i>tàs kríseis</i> (Aristotle, <i>Rhetoric</i> 1.2.5),</p> <p>2) τὰ δίκαια <i>tà díkaia</i> (Aristotle, <i>Rhetoric</i> 2.23.12),</p> <p>3) [ὄρκους] [<i>hórkous</i>] (omitted Acc.) (Aristotle, <i>Rhetoric</i> 1.15.2),</p> <p>4) τὴν πρόθεσιν <i>tēn próthesin</i> (Aristotle, <i>Rhetoric</i> 2.18.5),</p> <p>5) αἴρεσιν <i>haíresin</i> (Aristotle, <i>Rhetoric</i> 2.24.9).</p> <p><b>CO:</b></p> <p>1) τὸ δίκαιον καὶ τὸ συμφέρον <i>tò díkaion kai tò sumphéron</i> (Aristotle, <i>Rhetoric</i> 1.1.7)</p>

types' in each table). In this way, phrases such as: χάριν δίδοναι, *khárin didónai*, δοῦναι δίκην, *doūnai díkēn*, δίδοναι φυλακῆν, *didónai phulakḗn*, ποιῆσθαι τὸν λόγον, *poiēisthai tòn lógon*, λέγειν τὴν αἰτίαν, *légein tēn aitían*, ἐνθυμήματα λέγειν, *enthumémata légein*, νόμον θεῖναι, *nómon theĩnai* seemingly fall within this category.

Of course, some may be disqualified due to high variability<sup>36</sup> (such as the phrase λέγειν τὴν αἰτίαν *légein tēn aitían*, which attests the variants τὴν αἰτίαν ἐρεῖν, *tēn aitían ereĩn*, διὰ τὰς εἰρημένας αἰτίας, *dià tàs eirēménas aitías*, λεχθέντος τοῦ αἰτίου, *lekhthéntos toũ aitíou*), while other phrases, although occurring only once, can be considered SVCs because they are quite frequent in other texts or can be created by analogy (e.g. various phrases with the verbs ποιεῖν *poiēin*, ποιῆσθαι *poiēisthai*, and λέγειν *légein*) and serve as analytic counterparts for the corresponding simplex or compound words (cf. τὰ ψευδῆ λέγειν *tà pseudḗ légein* 'to speak/tell lies' = ψευδολογεῖν *pseudologeĩn* 'to speak falsely' (cf. LSJ s.v.), τὰς γνώμας λέγειν *tàs gnōmas légein* 'to say maxims' ≈ γνωμολογεῖν *gnōmologeĩn* 'to speak in maxims', ποιεῖν ἡδύ *poiēin hēdú* 'to make pleasant/sweet' = ἡδύνειν

<sup>36</sup>This creates an irregularity factor, and the phrase begins to resemble a free word combination, arbitrarily created by the speaker/writer for the occasion rather than taken from common usage. If one sees a full realisation of the lexical meaning of the verb rather than a partial one, disqualification is inevitable.

Table 3: λέγειν, εἰπεῖν (*légein, eipeîn*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<p><b>V+SO:</b></p> <p>1) λέγειν / ἐπιλέγειν τὴν αἰτίαν / τὰς αἰτίας / τὸ αἴτιον (<i>légein / epilégein tēn aitían / tās aitías / tò aítion</i>) (five times in total: Aristotle, <i>Rhetoric</i> 1.2.11 (ἐρεῖν <i>ereîn</i>), Aristotle, <i>Rhetoric</i> 2.9.5 (τὰς εἰρημένους αἰτίας <i>tās eirēménous aitías</i>), Aristotle, <i>Rhetoric</i> 2.23.24 (twice: λέγειν τὴν αἰτίαν <i>légein tēn aitían</i> and λεχθέντος τοῦ αἰτίου <i>lekhthéntos toũ aitíou</i>), Aristotle, <i>Rhetoric</i> 2.21.14 (ἐπιλέγειν <i>epilégein</i>)</p> <p>2) (τὰ) ἐνθυμήματα λέγειν / ἐνθύμημα εἰπεῖν ((<i>tà enthumémata légein / enthúmēma eipeîn</i>) (four times in total: Aristotle, <i>Rhetoric</i> 1.2.8, 1.2.14, 1.15.19, 1.2.21),</p> <p>3) τάληθῆ <i>talēthē</i> (twice: Aristotle, <i>Rhetoric</i> 1.15.26 (<i>bis</i>)) V+CO: 1) (τὰ) ἔξω τοῦ πράγματος λέγειν / τεχνολογεῖν (<i>tà éxō toũ prágmatos légein / tekhnologeîn</i>) (thrice in total: Aristotle, <i>Rhetoric</i> 1.1.5, 1.1.9, 1.1.10)</p>	<p><b>SO:</b></p> <p>1) οὐδέν <i>oudén</i> (Aristotle, <i>Rhetoric</i> 1.1.3),</p> <p>2) παραδείγματα <i>paradeigmata</i> (Aristotle, <i>Rhetoric</i> 1.2.8),</p> <p>3) ὑποθήκας <i>hupothēkas</i> (Aristotle, <i>Rhetoric</i> 1.9.36),</p> <p>4) τὰ ψευδῆ <i>tà pseudē</i> (Aristotle, <i>Rhetoric</i> 1.15.26),</p> <p>5) παράδοξον <i>paradoxon</i> (Aristotle, <i>Rhetoric</i> 2.21.4),</p> <p>6) τὰς γνώμας <i>tās gnōmas</i> (Aristotle, <i>Rhetoric</i> 2.21.13),</p> <p>7) φανερά <i>phanerá</i> (Aristotle, <i>Rhetoric</i> 2.22.3),</p> <p>8) τὰ δίκαια <i>tà díkaia</i> (Aristotle, <i>Rhetoric</i> 2.23.15),</p> <p>9) τὰ ἄδिका <i>tà ádika</i> (Aristotle, <i>Rhetoric</i> 2.23.15)</p> <p>10) λόγον λόγον (Aristotle, <i>Rhetoric</i> 2.20.5 (εἰπεῖν <i>eipeîn</i>)),</p> <p>11) τάναντία <i>tanantía</i> (Aristotle, <i>Rhetoric</i> 2.23.12);</p> <p><b>CO:</b></p> <p>1) [τοὺς ἐπαίνους καὶ τοὺς ψόγους <i>toὺς epáinous kai toὺς psógous</i>] (ex pass. οἱ ἔπαινοι καὶ οἱ ψόγοι λέγονται <i>hoi épainoi kai hoi psógoi légontai</i>) (Aristotle, <i>Rhetoric</i> 1.9.41),</p> <p>2) τὰ κοινὰ καὶ καθόλου <i>tà koinà kai kathólou</i> (Aristotle, <i>Rhetoric</i> 2.22.3),</p> <p>3) [τὰ] ἔξ ὧν ἴσασι καὶ τὰ ἐγγύς [<i>tà</i>] ex hōn <i>ísasi kai tà engús</i> (Aristotle, <i>Rhetoric</i> 2.22.3),</p> <p>4) δόξαν τινά <i>dóxan tiná</i> (Aristotle, <i>Rhetoric</i> 2.26.4)</p>

Table 4: ποιεῖν, ποιῆσαι, ἐμποιεῖν (*poieîn, poiēsai, empoieîn*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<b>V+SO:</b> 1) τὰυτὸ / τὰυτὰ ποιεῖν ( <i>tautò / tautà poieîn</i> ) (twice in total: Aristotle, <i>Rhetoric</i> 2.2.9; 2.2.16); <b>V+CO:</b> 1) τοὺς λόγους ἠθικοὺς ποιεῖν ( <i>toûs lógous êthikouôs poieîn</i> ) (thrice in total with variations in word order: Aristotle, <i>Rhetoric</i> 2.18.1; 2.18.2; 2.21.16)	<b>SO:</b> 1) μεγάλα <i>megála</i> (Aristotle, <i>Rhetoric</i> 1.7.32), 2) ἡδύ <i>hēdú</i> (Aristotle, <i>Rhetoric</i> 1.11.4), 3) ὑπερβολήν <i>hyperbolēn</i> (Aristotle, <i>Rhetoric</i> 1.11.20), 4) [ἀγαθά] [ <i>agathá</i> ] (Aristotle, <i>Rhetoric</i> 1.13.18: ἀγαθῶν ὧν ἐποίησεν > [ποιῆσαι ἀγαθά] <i>agathōn hōn epoiēsen</i> > [poiēsai <i>agathá</i> ]), 5) τάναντία <i>tanantía</i> (Aristotle, <i>Rhetoric</i> 2.2.17), 6) τὸν ἔλεον <i>tòn éleon</i> (Aristotle, <i>Rhetoric</i> 2.8.16), 7) τὴν συκοφαντίαν <i>tēn sukophantían</i> (Aristotle, <i>Rhetoric</i> 2.24.10), 8) τὴν ὀργὴν <i>tēn orgēn</i> (Aristotle, <i>Rhetoric</i> 2.1.9), 9) ἡδονήν <i>hēdonēn</i> (Aristotle, <i>Rhetoric</i> 2.2.2);

*hēdúnein* ‘to sweeten’, τὴν ὀργὴν ἐμποιεῖν *tēn orgēn empoieîn* ‘to produce/cause anger’ = ὀργίζειν *orgízein* ‘to make angry’, ‘to irritate’, etc.).

Some phrases with the same verbs, although used repeatedly, e.g. τὰυτὸ ποιεῖν *tautò poieîn* ‘to do the same thing’ or πράττειν τὰ καλὰ *práttein tà kalá* ‘to do/practice good [deeds]’, are on the edge of SVCs because they have a non-noun complement. The bivalent/trivalent verbs ποιεῖν *poieîn* ‘to make/cause’, κατασκευάζειν *kataskeuázein* ‘to furnish’, ‘to make/render’, and παρασκευάζειν *paraskeuázein* ‘to furnish’, ‘to make/render’, which govern the accusative duplex and in which a predicate adjective together with the verb can replace the causative verb, are also reminiscent of the SVC-like periphrases, esp. e.g. ποιεῖν στρεβλόν *poieîn streblón* ‘to make crooked/distorted’ = στρεβλοῦν *strebloûn* ‘to crook’, ‘to distort’, ποιεῖν σεμνότερον *poieîn semnóteron* ‘to make more solemn’ ≈ σεμνοῦν *semnoûn* ‘to make solemn’, ‘to magnify’, etc.

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Table 5: ποιεῖν, ποιῆσαι, ἐμποιεῖν (*poieîn, poiēsai, empoieîn*) + Acc. (continued from previous table)

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
None	<p>CO:</p> <p>1) τὸν <b>κανόνα</b> στρεβλόν <i>tòn kanóna<sup>a</sup> streblón</i> (Aristotle, <i>Rhetoric</i> 1.1.5),</p> <p>2) ὡς ἐλαχίστων κύριον τὸν <b>κριτήν</b> <i>hōs elakhístōn kúrion tòn kritēn</i> (Aristotle, <i>Rhetoric</i> 1.1.8),</p> <p>3) τὸν <b>κριτήν</b> ποιόν τινα <i>tòn kritēn poíōn tina</i> (Aristotle, <i>Rhetoric</i> 1.1.9),</p> <p>4) ἀξιόπιστον τὸν <b>λέγοντα</b> <i>axiópiston tòn légonta</i> (Aristotle, <i>Rhetoric</i> 1.2.4),</p> <p>5) τὸν <b>λέγοντα</b> ἔμφρονα <i>tòn légonta émphrona</i> (Aristotle, <i>Rhetoric</i> 1.2.21),</p> <p>6) μὴ βραδυτέρας <b>τάς</b> κινήσεις <i>mē bradutéras tās kinēseis</i> (Aristotle, <i>Rhetoric</i> 1.5.13),</p> <p>7) πιστάς ἢ ἀπίστους [<b>τάς</b> συνθήκας] <i>pistàs ē apístous [tās sunthēkas]</i> (Aristotle, <i>Rhetoric</i> 1.15.20),</p> <p>8) τὸν νόμον κύριον <i>tòn nómon kúrion</i> (Aristotle, <i>Rhetoric</i> 1.15.21),</p> <p>9) βουλευτικούς [sc. <b>τοὺς</b> ἀνθρώπους] <i>bouleutikóus [sc. toús anthrōpous]</i> (Aristotle, <i>Rhetoric</i> 2.5.14),</p> <p>10) πρὸ ὀμμάτων [<b>τὰ</b> κακά] <i>prò ommátōn [tā kaká]</i> (Aristotle, <i>Rhetoric</i> 2.8.13),</p> <p>11) μὴ ἐλεεινὰ <b>ἅπαντα</b> <i>mē eleeinà hápanta</i> (Aristotle, <i>Rhetoric</i> 2.9.5),</p> <p>12) δίκαια <b>πολλά</b> <i>dikaia pollá</i> 13) [<b>τοὺς</b> δυναμένους] <i>semnotérous [toús dunaménous]</i> <i>semnotérous</i> (Ross) : ἐμφανεστέρους <i>emphanestérous</i> (Kassel) (Aristotle, <i>Rhetoric</i> 2.17.4), (opp. ἀδικεῖν ἔνια <i>adikeîn énia</i>) (Aristotle, <i>Rhetoric</i> 1.12.31), 14) τὸν ἦττω λόγον κρείττω <i>tòn hēttō lógon kreíttō</i> (Aristotle, <i>Rhetoric</i> 2.24.11), 15) [<b>λόγους</b>] ὥσπερ καὶ παραβολάς [<i>lógous</i>] <i>hōsper kai parabolás</i> (Aristotle, <i>Rhetoric</i> 2.20.7)</p>

<sup>a</sup>The direct object (DO) is highlighted in a bolder font.

Table 6: κατασκευάζειν (*kataskeuázein*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
None	<p>CO:</p> <p>1) καὶ αὐτὸν ποιόν τινα καὶ τὸν κριτήν <i>kai hautòn poiòn tina kai tòn kritèn</i> [sc. ποιόν τινα / ποιόν τινα] (Aristotle, <i>Rhetoric</i> 2.1.2),</p> <p>2) ἑαυτὸν τοιοῦτον <i>heautòn toioûton</i> (Aristotle, <i>Rhetoric</i> 2.1.7),</p> <p>3) [τοὺς ἀκροατὰς <i>toùs akroatàs</i>] τοιοῦτους <i>toioútous</i> (Aristotle, <i>Rhetoric</i> 2.2.27)</p>

Table 7: παρασκευάζειν (*paraskeuázein*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
None	<p>CO:</p> <p>1) αὐτοὺς τοιοῦτους <i>hautoús toioútous</i> (Aristotle, <i>Rhetoric</i> 2.3.17),</p> <p>2) τοὺς κριτὰς τοιοῦτους <i>toùs kritàs toioútous</i> (Aristotle, <i>Rhetoric</i> 2.9.16)</p>

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Table 8: ποιῆσθαι (*poieisthai*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<p><b>V+SO:</b>                      1) ποιῆσθαι τὸν λόγον ποιῆσθαι τὸν λόγον (twice in total with variation in word order: Aristotle, <i>Rhetoric</i> 1.5.18, 2.18.1)</p>	<p><b>SO:</b>                      1) τὰς πίστεις τὰς πίστεις (Aristotle, <i>Rhetoric</i> 1.2.8),                      2) τὴν κρίσιν τὴν κρίσιν (Aristotle, <i>Rhetoric</i> 2.1.4),                      3) τοὺς συλλογισμοὺς τοὺς συλλογισμοὺς (Aristotle, <i>Rhetoric</i> 1.10.1)</p> <p><b>CO:</b>                      1) τὰς πίστεις καὶ τοὺς λόγους τὰς πίστεις καὶ τοὺς λόγους (Aristotle, <i>Rhetoric</i> 1.1.12),                      2) φίλον γέροντα φίλον γέροντα (Aristotle, <i>Rhetoric</i> 1.15.14),                      3) πολίτας τοὺς μισθοφόρους πολίτας τοὺς μισθοφόρους (Aristotle, <i>Rhetoric</i> 2.23.17),                      4) φυγάδας τοὺς [...] διαπεπραγμένους φυγάδας τοὺς [...] διαπεπραγμένους (Aristotle, <i>Rhetoric</i> 2.23.17)</p>

Table 9: πράττειν (*prattein*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<p><b>V+SO:</b>                      1) πράττειν τὰ καλὰ πράττειν τὰ καλὰ (twice: Aristotle, <i>Rhetoric</i> 1.7.38, 2.12.12)</p>	<p><b>SO:</b>                      1) τὰ συμφέροντα τὰ συμφέροντα (Aristotle, <i>Rhetoric</i> 2.12.12). CO: 1) τὰ συμφέροντα ἢ βλαβερὰ τὰ συμφέροντα ἢ βλαβερὰ (Aristotle, <i>Rhetoric</i> 1.3.6), 2) πολλὰ δίκαια πολλὰ δίκαια (Aristotle, <i>Rhetoric</i> 1.12.31).</p>

Table 10: τιθέναι, θεῖναι (*tithénai, theînai*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<p><b>V+SO:</b>  <b>1)</b> [νόμον θεῖναι (τεθηκέναι)] [<i>nómon theînai (tethēkénai)</i>] (thrice: Aristotle, <i>Rhetoric</i> 1.1.7, 1.14.4, 1.15.11, always in passive construction; hence the periphrasis is only reconstructed)</p>	<p>None</p>

Table 11: φέρειν, ἐνεγκεῖν (*phérein, enenkeîn*) + Acc.

Repeated types (with morphological variations), and list of V+SO and V+CO	Unrepeated types (occurring only once), and list of SO and CO
<p><b>V+SO:</b>  <b>1)</b> πίστει φέρειν <i>písteis phérein</i> (twice: Aristotle, <i>Rhetoric</i> 1.7.40, 2.18.2),  <b>2)</b> φέρειν τὰ ἐνθυμήματα (ἐνθυμήματα φέρειν) <i>phérein tà enthumēmata (enthumēmata phérein)</i> (twice in total: Aristotle, <i>Rhetoric</i> 2.22.16, 2.26.3),  <b>3)</b> ἔνστασιν (ἐνστάσεις) φέρειν (ἐνεγκεῖν) / <i>énstasin (enstáseis) phérein (enenkeîn)</i> (five times in total: Aristotle, <i>Rhetoric</i> 2.25.1, 2.25.3, 2.25.5, 2.25.8, 2.26.3)</p>	<p><b>SO:</b>  <b>1)</b> τεκμήριον <i>tekmeríaon</i> (Aristotle, <i>Rhetoric</i> 1.2.17)</p>

## 6 Support-verb constructions and other periphrases in Aristotle's Rhetoric

Among the introversive verbs, the following components of periphrases were found most frequently in Aristotle's treatise: ἔχειν *ékhein* 'to have', 'to have the potential', λαμβάνειν *lambánein* 'to take', 'to accept', 'to admit' etc., πάσχειν *páskhein* 'to be treated', 'to suffer', 'to experience', and πράττειν *práttein* 'to experience certain fortunes', 'to fare'.

These verbs frequently direct the action towards the object (*accusativus rei*) and/or maintain the recipient of the profit or harm, expressed in the nominative case, although sometimes they can also be related to the subject-giver (ἐκ τινος *ék tinos*, παρά τινος *pará tinos*, ὑπό τινος *hupó tinos*). There are 64 different constructions (types) with these verbs + DOs, which occur 83 times in the text under consideration. Their brief characteristics are shown in Table 12. Table 12 serves as a numeric overview, relevant examples are provided in Table 13 to Table 18.

Table 12: Periphrases with introversive verbs

	tokens/types	repeated*	unrepeated*	types SO <sup>†</sup>	types with CO <sup>†</sup>
ἔχειν ( <i>ékhein</i> ) + Acc.	49 / 35	9 (9+0)	26 (18+8)	27 (9+18)	8 (0+8)
λαμβάνειν, λαβεῖν ( <i>lambánein, labeîn</i> ) + Acc.	27 / 23	3 (3+0)	20 (6+14)	9 (3+6)	14 (0+14)
πάσχειν, παθεῖν, πεπονθέναι ( <i>páskhein, patheîn, peponthénai</i> ) + Acc.	6 / 5	1 (1+0)	4 (4+0)	5	0
πράττειν <i>práttein</i> * + Acc.	1 / 1	0	1	1	0
<b>total</b>	<b>83 / 64</b>	<b>13</b>	<b>51</b>	<b>42</b>	<b>22</b>

\* In the brackets, the first number indicates the amount of verb-controlled single objects, and the second number refers to complex objects and objects with attributes.

† These brackets show the data from the second and third columns.

Tables 1 and 12 show an equal number of recurrent V+CO phrases (see column 3), but the table on introversive verbs does not contain any recurrent V+CO phrases, and on the whole only 2 out of 4 (50%) of the introversive verbs have a one-time phrase of the latter type, while among the extraversive verbs, as many as 7 out of 9 (~78%) do.

Some of the verbs mentioned of both kinds, but especially the introversive ones (those listed in Table 12), form adverbial, prepositional, and parenthetical constructions. The text under study has a total of 163 of such constructions (on this see the dataset, see n. 1), with the number of non-repeated constructions

being 73; the leading type here is ἔχειν *ékhein* + adverb, called explicitly a periphrasis by Smyth<sup>37</sup> (73 occurrences of 22 different phrases).

Table 13: ἔχειν (*ékhein*) + Acc.

Repeated types	Unrepeated types (occurring only once), and list of SO and CO
<p><b>SO:</b></p> <p>1) ἔχειν διαφοράς <i>ékhein diaphorás</i> / διαφορὰν ἔχειν <i>diaphoràn ékhein</i> (twice in total: Aristotle, <i>Rhetoric</i> 1.1.11, 2.25.13),</p> <p>2) ἔχειν ἀγαθόν <i>ékhein agathón</i> (twice: Aristotle, <i>Rhetoric</i> 1.2.10, 2.20.7),</p> <p>3) ἔχειν (τάς) προτάσεις <i>ékhein (tàs) protáseis</i> (thrice: Aristotle, <i>Rhetoric</i> 1.3.7, 1.3.8, 1.4.13),</p> <p>4) ἔχειν μέγεθος <i>ékhein mégethos</i> / μέγεθος ἔχειν <i>mégethos ékhein</i> (twice: Aristotle, <i>Rhetoric</i> 1.7.32, 2.8.8),</p> <p>5) χάριν ἔχειν <i>khárin ékhein</i> (thrice: Aristotle, <i>Rhetoric</i> 1.13.12, 2.7.1, 2.7.2),</p> <p>6) συγγνώμην ἔχειν <i>sungnómēn ékhein</i> (twice: Aristotle, <i>Rhetoric</i> 1.13.16, 2.25.7),</p> <p>7) δύναμιν ἔχειν <i>dúnamin ékhein</i> / ἔχειν δύναμιν <i>ékhein dúnamin</i> (four times in total: Aristotle, <i>Rhetoric</i> 2.5.4, 2.5.5, 2.5.8, 2.5.17),</p> <p>8) λόγον ἔχειν (τινός) <i>lógon ékhein (tinòs)</i> (twice: Aristotle, <i>Rhetoric</i> 2.6.14, 2.6.15),</p> <p>9) ἔχειν τὰ ἦθη <i>ékhein tà êthē</i> / ἦθος ἔχειν <i>êthos ékhein</i> (thrice: Aristotle, <i>Rhetoric</i> 12.17.1, 2.17.5, 2.21.16).</p>	<p><b>SO:</b></p> <p>1) ἐπιστήμην <i>epistēmēn</i> (Aristotle, <i>Rhetoric</i> 1.1.12),</p> <p>2) τὸ πιστόν <i>tò pistón</i> (Aristotle, <i>Rhetoric</i> 1.15.26),</p> <p>3) τέχνας <i>tékhnas</i> (Aristotle, <i>Rhetoric</i> 1.2.12),</p> <p>4) τὰς ἀρχάς <i>tàs arkhás (tinòs)</i> (Aristotle, <i>Rhetoric</i> 1.2.21),</p> <p>5) μοχθηρίαν <i>mokhthērián</i> (Aristotle, <i>Rhetoric</i> 1.10.4),</p> <p>6) κακόν <i>kakón</i> (Aristotle, <i>Rhetoric</i> 1.11.8),</p> <p>7) ἐπιθυμίαν <i>epithumían</i> (Aristotle, <i>Rhetoric</i> 1.11.14),</p> <p>8) ἀπολογίαν <i>apologían</i> (Aristotle, <i>Rhetoric</i> 1.12.7),</p> <p>9) πρόφασιν <i>próphasin</i> (Aristotle, <i>Rhetoric</i> 1.12.23), 10) κότον <i>kóton</i> (Aristotle, <i>Rhetoric</i> 2.2.7),</p> <p>11) τιμὴν <i>timēn</i> (Aristotle, <i>Rhetoric</i> 2.2.6),</p> <p>12) τὴν ὑπουργίαν <i>tēn hupourgían</i> (Aristotle, <i>Rhetoric</i> 2.7.4),</p> <p>13) βοήθειαν <i>boētheian</i> (Aristotle, <i>Rhetoric</i> 2.21.15),</p> <p>14) δόξας <i>dóxas</i> (Aristotle, <i>Rhetoric</i> 2.21.15),</p> <p>15) ὠφέλειαν <i>ōphéleian</i> (Aristotle, <i>Rhetoric</i> 2.21.16),</p> <p>16) δίκην <i>dikēn</i> (Aristotle, <i>Rhetoric</i> 2.3.5),</p> <p>17) τὴν αἰτίαν <i>tēn aitían</i> (Aristotle, <i>Rhetoric</i> 2.24.4),</p> <p>18) ἔνστασιν <i>énstasin</i> (Aristotle, <i>Rhetoric</i> 2.25.10).</p>

<sup>37</sup>Smyth (1920: §1438): “An adverb with ἔχειν [*ékhein*] or διακειῖσθαι [*diakeĩsthai*] is often used as a periphrasis for an adjective with εἶναι [*eĩnai*] or for a verb.”

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Table 14: ἔχειν (*ékhein*) + Acc. (continued from previous table)

Repeated types	Unrepeated types (occurring only once), and list of SO and CO
none	<p>CO:</p> <ol style="list-style-type: none"> <li>1) οὐδέν, ὃ τι λέγωσιν (ἄν) <i>oudén, hó ti légōsin (án)</i> (Aristotle, <i>Rhetoric</i> 1.1.4),</li> <li>2) ὃ τι ἀπολέσει <i>hó ti apolései</i> (Aristotle, <i>Rhetoric</i> 1.12.8),</li> <li>3) κυριωτάτην πίστιν <i>kuriōtátēn pístin</i> (Aristotle, <i>Rhetoric</i> 1.2.4),</li> <li>4) κοινὸν εἶδος <i>koinòn eidos</i> (Aristotle, <i>Rhetoric</i> 1.9.35),</li> <li>5) τὸ ἡδὺ καὶ τὸ καλόν <i>tò hēdù kai tò kalón</i> (Aristotle, <i>Rhetoric</i> 1.12.27),</li> <li>6) δύναμιν μεγάλην <i>dúnamin megálēn</i> (Aristotle, <i>Rhetoric</i> 2.5.2),</li> <li>7) μίαν χρῆσιν <i>mían khrēsín</i> (Aristotle, <i>Rhetoric</i> 2.21.16),</li> <li>8) πλείω τῶν ὑπαρχόντων <i>pleiō tōn huparkhóntōn</i> (Aristotle, <i>Rhetoric</i> 2.22.11)</li> </ol>

Table 15: λαμβάνειν, λαβεῖν (*lambánein, labeîn*) + Acc.

Repeated types	Unrepeated types (occurring only once), and list of SO and CO
<p>SO:</p> <ol style="list-style-type: none"> <li>1) λαμβάνειν/λαβεῖν πίστεις <i>lambánein/labeîn písteis</i> (thrice in total: Aristotle, <i>Rhetoric</i> 1.2.7 (aor.), Aristotle, <i>Rhetoric</i> 1.6.30 (adj.verb.), Aristotle, <i>Rhetoric</i> 1.8.7),</li> <li>2) λαβεῖν / λαμβάνειν προτάσεις <i>labeîn/lambánein protáseis</i> (twice: Aristotle, <i>Rhetoric</i> 1.3.9 (aor.), Aristotle, <i>Rhetoric</i> 1.9.2 (adj.verb.)),</li> <li>3) λαμβάνειν / εἰληφέναι τιμωρίαν <i>lambánein/ eilēphénai timōrían</i> (twice: Aristotle, <i>Rhetoric</i> 2.3.13 (aor. pass.: ληφθεῖσα τιμωρία <i>lēphtheísa timōría</i>), Aristotle, <i>Rhetoric</i> 2.3.14 (pf.)).<sup>a</sup></li> </ol>	<p>SO:</p> <ol style="list-style-type: none"> <li>1) δίκην <i>díkēn</i> (Aristotle, <i>Rhetoric</i> 1.14.2),</li> <li>2) [ὄρκους <i>hórkous</i>] (omitted Acc.) (Aristotle, <i>Rhetoric</i> 1.15.27),</li> <li>3) τὰς ἀυξήσεις <i>tàs auxéseis</i> (Aristotle, <i>Rhetoric</i> 2.19.26),</li> <li>4) συμφορὰς <i>sumphorás</i> (Aristotle, <i>Rhetoric</i> 2.23.20),</li> <li>5) [δόξας <i>dóxas</i>] (restored Acc. from pass. <i>eilēmménai dóxai</i>) (Aristotle, <i>Rhetoric</i> 2.18.2),</li> <li>6) [τοὺς τόπους <i>tous tóπους</i>] (from pass. <i>eilēmménoi ... hoi tópoi</i>) (Aristotle, <i>Rhetoric</i> 2.22.16).</li> </ol>

<sup>a</sup>As can be seen, there is some modification rather than a precise replication of the construction.

Table 16: λαμβάνειν, λαβεῖν (*lambánein, labeîn*) + Acc. (continued from previous table)

Repeated types	Unrepeated types (occurring only once), and list of SO and CO
CO:	
	1) τὰ στοιχεῖα καὶ τὰς προτάσεις <i>tà stoikheia kai tàs protáseis</i> (Aristotle, <i>Rhetoric</i> 1.2.22),
	2) τὰ στοιχεῖα περὶ ἀγαθοῦ καὶ συμφέροντος ἄπλῶς <i>tà stoikheia perì agathoû kai sumphérontos haplōs</i> (Aristotle, <i>Rhetoric</i> 1.6.1),
	3) νοῦν καὶ φρόνησιν νοῦν <i>kai phrónēsin</i> (Aristotle, <i>Rhetoric</i> 1.7.3),
	4) <i>toúnoma toûto</i> (Aristotle, <i>Rhetoric</i> 1.8.4),
	5) τὰ ὑπάρχοντα ἢ δοκοῦντα ὑπάρχειν <i>tà hupárkhonta è dokoûnta hupárkhein</i> (Aristotle, <i>Rhetoric</i> 2.22.8),
	6) τὸ τί ἐστὶ <i>tò tí esti</i> (2.23.20),
	7) <i>tò kathólou</i> (Aristotle, <i>Rhetoric</i> 2.25.8),
	8) ψεῦδος τι <i>pseûdós ti</i> (Aristotle, <i>Rhetoric</i> 2.26.4),
	9) τὰ σύνεγγυς τοῖς ὑπάρχουσιν ὡς ταῦτὰ ὄντα <i>tà súnengus toîs hupárkhousin hōs tautà ónta</i> (Aristotle, <i>Rhetoric</i> 1.9.28),
	10) τὰ ἀπὸ τύχης <i>tà apò túkhēs</i> (Aristotle, <i>Rhetoric</i> 1.9.32),
	11) τὰ συμφέροντα καὶ τὰ ἰδέα <i>tà sumphéronta kai tà hēdéa</i> (Aristotle, <i>Rhetoric</i> 1.10.19),
	12) πόσα καὶ ποῖα <i>pósa kai poîa</i> (Aristotle, <i>Rhetoric</i> 1.10.19),
	13) τὸ μετὰ τοῦτο ὡς διὰ τοῦτο <i>tò metà toûto hōs dià toûto</i> (Aristotle, <i>Rhetoric</i> 2.24.8),
	14) τὴν Δημοσθένους πολιτείαν ... κακῶν αἰτίαν <i>tēn Dēmōsthénous politeían ... kakōn aitían</i> (Aristotle, <i>Rhetoric</i> 2.24.8)

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Table 17: *πάσχειν, παθεῖν, πεπονθέναι (páskhein, patheîn, pepon-thénai) + Acc.*

Repeated types	Unrepeated types (occurring only once), and list of SO and CO
<b>SO:</b> 1) <i>πάσχειν κακά / κακόν páskhein kaká / kakón</i> (twice in total: Aristotle, <i>Rhetoric</i> 1.13.18, 2.3.14)	<b>SO:</b> 1) <i>ἀγαθὰ agathá</i> (Aristotle, <i>Rhetoric</i> 1.13.18), 2) <i>τὸ ἔσχατον τὸ éskhaton</i> (Aristotle, <i>Rhetoric</i> 2.3.16), 3) <i>ανάξια</i> (Aristotle, <i>Rhetoric</i> 2.12.15), 4) <i>τὸ αὐτό τὸ autó</i> (Aristotle, <i>Rhetoric</i> 2.20.5)

Table 18: *πράττειν práttein* \*

Repeated types	Unrepeated types (occurring only once), and list of SO and CO
None	<b>SO:</b> <i>μεγάλα πράττειν megála práttein</i> (Aristotle, <i>Rhetoric</i> 2.10.2) (“experience great things (great fortunes)”)

However, the general weakening of the semantic function of the verb and the closeness of the syntactic-semantic link between the verb and the adverb are important features that suggest parallels between verb + adverb phrases and SVCs (e.g. between phrases such as *εὖ ἔχειν eũ ékhein* and *χάριον ἔχειν khárimon ékhein*). Since some of these constructions undergo a semantic change in the properties of the verb (the meaning is or seems to be non-literal) and the overall meaning of the expression is perceived only in the light of some non-literal interpretation. Periphrases of this kind resemble idioms.<sup>38</sup>

Combining the data in the two tables, the following 23 phrases fall more or less into the category of SVC-type periphrases (in alphabetical order of the verbs). As can be seen from this list, a large proportion of these have lexical verbs that correspond to them in their core meaning (only verbs that are rare or absent in Aristotle's texts and in Attic dialect texts close to his time are marked with a question mark; to be sure, the significant details of these correspondences still need to be checked):

<sup>38</sup>Idioms not *in sensu lato*, as one finds in Mastrorarde (2013) (passim, see esp. examples with *ἔχω ékhō* and *πράττω práttō* and adverbs on pp. 103–104), but in a stricter sense as described in Everaert (2010) and Bruening (2020).

1. χάριν διδόναι (ἀποδιδόναι, ἀνταποδιδόναι) *khárin didónai (apodidónai, antapodidónai)* (1+1+1=3) ‘to give/return favour’ = χαρίζειν *kharízein*, χαρίζεσθαι *kharízesthai*;
2. δοῦναι δίκην *doûnai díkēn* (3) ‘to give right satisfaction’, ‘to suffer punishment’ = ζημιοῦσθαι *zēmioũsthai* (cf. Aristotle, *Rhetoric* 1.9.15);
3. ἔχειν διαφοράν *ékhein diaphorán (diaphorás)* (2) ‘to have difference(s)’ = διαφέρειν *diaphérein*;
4. ἔχειν δύναμιν *ékhein dúnamin* (5) ‘to have power’ = δύνασθαι *dúnasthai*; ἔχειν ἐπιστήμην *ékhein epistémēn* (1) ‘to have knowledge’ = ἐπίστασθαι *epístasthai*;
5. ἔχειν μέγεθος *ékhein mégethos* (2) ‘to have size, importance’ = μεγαθοῦσθαι *megethoũsthai* (?);
6. ἔχειν συγγνώμην *ékhein sungnómēn* (2) ‘to have compassion/forgiveness’ = συγγιγνώσκειν *sungignóskein*;
7. χάριν ἔχειν *khárin ékhein* (3) ‘to have gratitude’ = χαρίζεσθαι *kharízesthai*;
8. λαμβάνειν τιμωρίαν *lambánein timōrían* (2) ‘to obtain retaliation’ = τιμωρεῖσθαι *timōreĩsthai*;
9. λέγειν (εἰπεῖν) ἐνθυμήματα *légein (eipeĩn) enthumémata* (4) ‘to speak up enthymemes/pieces of reasoning’ = ἐνθυμεῖσθαι *enthumeĩsthai*;
10. λέγειν ἔπαινον *légein érainon* (1) ‘to say a word of praise’ = ἐπαινεῖν *epaineĩn*;
11. λέγειν ἀλήθειαν *légein talēthē* (1) ‘to speak the truth’ = ἀληθεύειν *alētheúein*;
12. λέγειν τὰ ψευδῆ *légein tà pseudē* (1) ‘to tell lies’ = ψευδολογεῖν *pseudologeĩn*;
13. λέγειν τὰς γνώμας *légein tàs gnōmas* (1) ‘to say maxims’ = γνωμολογεῖν *gnōmologeĩn*;
14. λέγειν ὑποθήκας *légein hypothékas* (1) ‘to tell advice’ = ὑποτιθέναι *hypotithénai* / ὑποτίθεσθαι *hypotíthesthai*;

15. λέγειν ψόγον *légein psógon* (1) 'to say a word of blame' = ψέγειν *pségein*;
16. ποιεῖσθαι τὰς πίστεις *poieïsthai tàs pisteis* (2) 'to produce proofs/means of persuasion' = πιστοῦν *pistoûn* (?);
17. ποιεῖσθαι τὴν κρίσιν *poieïsthai tèn krísin* (1) 'to make a judgement' = κρίνειν *krínein*;
18. ποιεῖσθαι τὸν λόγον (λόγους) *poieïsthai tòn lógon (lógous)* (2+1=3) 'to make/give a speech' = λέγειν *légein*;
19. ποιεῖσθαι τοὺς συλλογισμοὺς *poieïsthai toùs sullogismóus* (1) 'to make syllogisms' = συλλογίζεσθαι *sullogízesthai*;
20. φέρειν ἐνθυμήματα *phérein enthumémata* (2) 'to provide enthymemes / pieces of reasoning' = ἐνθυμεῖσθαι *enthumeïsthai*;
21. φέρειν ἔνστασιν *phérein éntasin* (5) 'to bring (forward) an objection' = ἐνιστασθαι *enístasthai*;
22. φέρειν πίστεις *phérein pisteis* (2) 'to provide proof/means of persuasion' = πιστοῦν *pistoûn* (?).

So far, two or three criteria have been used to distinguish these expressions: (1) in most of these, the verb has a more or less<sup>39</sup> reduced semantic role and acts as a syntactic operator to convey the basic concept referred to by the noun, while (2) the latter, with few exceptions (cf. δοῦναι δίκην *doûnai díkēn*), retains its basic meaning; (3) the above list contains provisional one-word equivalents of the phrases, implying that they are possible periphrases, or phraseological alternations, of individual verbs.

In addition, many of these expressions seem to be transformable into nominal phrases without changing the noun's core meaning<sup>40</sup> (e.g. ἀδικία δύνάμιν ἔχουσα *adikía dúnamin ékhousa* (Aristotle, *Rhetoric* 2.5.4), 'injustice that has power' > \*ἀδικίας δύναμις *adikías dúnamis*, 'the power of injustice'), but in reality it is very rare to find in the texts of Aristotle and his contemporaries the nominalisations equivalent to the phrases at hand. So there is still more to discover here,

<sup>39</sup>ἔχειν *ékhein* and ποιεῖσθαι *poieïsthai*, for example, are less specific because they do not imply a clear instrument and situation for the action, whereas λέγειν *légein* and φέρειν *phérein* hint either at the mental/linguistic/rhetorical world and the organs and instruments involved in the action, or at a dramatic change of situation.

<sup>40</sup>On this important criterion for the identification of SVCs/LVCs, see e.g. Jiménez López (2016: 190–191) and Kovalevskaitė et al. (2020: 8).

and the number of SVC-type periphrases may change after additional categorisation.

A broader intertextual investigation is also needed to reveal whether there is any regularity, in that different verbs are used with the base noun for similar meanings (e.g. χάριν διδόναι *khárin didónai* ‘to give/express favour’ and χάριν ἔχειν *khárin ékhein* ‘to have gratitude’, ποιεῖσθαι τὰς πίστεις *poieîsthai tàs písteis* ‘to produce proofs’ and φέρειν πίστεις *phéreîn písteis* ‘to bring/provide proofs’). Similarly, the reason why the author prefers the periphrases ἔχειν συγγνώμην *ekhein sungnómēn* and λέγειν ἔπαινον *légeîn épainon* to the forms with ποιεῖσθαι *poieîsthai* recorded in other contemporary writings remains to be clarified.<sup>41</sup>

The material under study contains the following most common nouns in SVC-type periphrases: ἐνθύμημα *enthúmēma* (6) ‘enthymeme’, ‘piece of reasoning’, δύναμις *dúnamis* (5) ‘power’, ἔνστασις *énstasis* (5) ‘objection’, πίστις *pístis* (4) ‘proof’, λόγος *lógos* (3) ‘speech’, χάρις *kháris* (3) ‘favour’, ‘gratitude’. These are abstract nouns, and given the Aristotelian concept of rhetoric, which assigns specific weight to various forms of persuasion and psychological effect, some of them could be classified as part of his rhetorical ‘technolect’. Their verbal partners may vary (e.g. ἐνθύμημα *enthúmēma* goes with λέγειν *légeîn* and φέρειν *phéreîn*, χάρις *kháris* with διδόναι *didónai* and ἔχειν *ékhein*). Common objects include the neuter adjectives κακόν *kakón* and ἀγαθόν *agathón* representing either nouns or adverbs (i.e. typical derivatives of abstract adjectives). However, adverbial periphrases are more common here, the four following constructions being the most frequent: οὕτως ἔχειν *houútōs ékhein* (26), πῶς ἔχειν *pōs ékhein* (17), εὖ ποιεῖν *eũ poieîn* (12) and εὖ πάσχειν *eũ páskhein* (9) (40% of the 163 adverbial and adverbial-like constructions and over 18% of the 350 verbal phrases selected from the currently analysed portion of Aristotle’s text).

## 7 On the stylistic function of the support-verb-construction-type periphrases

As already mentioned (see the discussion above of stylistic tactics of brachylogy and macrology), periphrases can be classified according to their stylistic function. They indicate the author’s taste and intentions (aesthetic or pragmatic):

<sup>41</sup>Cf. Herodotus, *Histories* 2.110: Δαρεῖον ... λέγουσι ... συγγνώμην ποιήσασθαι *Dareîon ... légousi ... sungnómēn poieîsasthai*; Lysias, *Pro milite* 22: ὑπὲρ τῶν περιφανῶν ἀδικημάτων συγγνώμην ποιεῖσθε... *hypèr tōn periphanoñ adikēmátōn sungnómēn poieîsthe...*; Plato, *Politicus*. 286c5-7: χρῆ δὴ μεμνημένους ἐμὲ καὶ σὲ τῶν νῦν εἰρημένων τόν τε ψόγον ἐκάστοτε καὶ ἔπαινον ποιεῖσθαι *khre̅ dè memnēménous emè kai sè tōn nūn eirēménōn tón te psógon hekástote kai épainon poieîsthai*.

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either he/she aims at artistic effect (*ornatus*<sup>42</sup>) or seeks to improve comprehensibility, maintain *decorum* (e.g. avoiding *verba obscena*), or put a spontaneously caught thought into words. Thus, the expressions we encounter have their different occasion-related backgrounds: some are easy to grasp, others unclear due to an irregular sentence structure; some are often repeated, others are rare, occasional, and experimental.

A noteworthy stylistic phenomenon is the switching back and forth between MWEs and their shorter equivalents, the mutual substitution of words and phrases to avoid monotony and tautology. A good example of this alternation or variation (μεταβολή *metabolē* or ἐναλλαγή *enallagē* in Greek rhetorical terms)<sup>43</sup> is in Aristotle, *Rhetoric* 2.19, see (5), which deals with the topic of the possible and the impossible. Here the expression δυνατός ἐστι *dunatós esti* alternates with the verb δύναται *dúnatai* or with its own semantic head, the adjective δυνατός *dunatós*, omitting the copula:

- (5) ἄν δὲ τὸ ἐναντίον ἢ δυνατόν  
 àn dè tò enantíon ēi dunatón  
 if but ART.NOM contrary.thing.NOM COP.PRS.SBJV.3SG possible.NOM  
 ἢ εἶναι ἢ γενέσθαι, καὶ τὸ ἐναντίον  
 ē eînai ē genésthai, kai tò enantíon  
 either be.PRS.INF or become.AOR.INF and ART.NOM contrary.thing.NOM  
 δόξειεν ἄν εἶναι δυνατόν, οἷον εἰ  
 dóxeien àn eînai dunatón, hoïon ei  
 seem.AOR.OPT.3SG PRT COP.INF possible.NOM for.instance if  
 δυνατόν ἄνθρωπον ὑγιασθῆναι, καὶ νοσῆσαι.  
 dunatón ánthrōpon hugiasthēnai, kai nosēsai.  
 possible.NOM.SG.N man.ACC.SG cure.AOR.INF.PASS and fall.ill.AOR.INF.ACT  
 καὶ εἰ τὸ ὅμοιον δυνατόν, καὶ τὸ  
 kai ei tò hómoion dunatón, kai tò  
 and if ART.NOM similar.thing.NOM possible.NOM so.and ART.NOM  
 ὅμοιον [...] καὶ οὐ ἢ ἀρχὴ  
 hómoion [...] kai hoũ hē arkhē  
 similar.thing.NOM [...] and REL.GEN ART.NOM beginning.NOM

<sup>42</sup>On the functions of the periphrasis (esp. according to Quintilian's theory), see Lausberg (1998: §592, 269–270).

<sup>43</sup>Lausberg (1998: §509, 236): other names for 'grammatical changes', but actually more complex inversions: ἐναλλαγή, ἑτεροίωσις, ἀλλοίωσις, ὑπαλλαγή *exallagē*, *heteroïōsis*, *alloïōsis*, *hupalagē*, *mutatio*.

**δύναται**                      **γενέσθαι**,              και      τὸ              τέλος· οὐδὲν  
*dúnatai*                      *genésthai*,              *kai*      *tò*              *télos*; [...]

be.possible.PRS.IND.3SG become.AOR.INF so.and ART.NOM end.NOM [...]

γὰρ γίγνεται οὐδ' ἄρχεται γίγνεσθαι τῶν ἀδυνάτων  
*kai hoũ tò télos, kai hē arkhē*

and REL.GEN ART.NOM end.NOM so.and ART.NOM beginning.NOM

[...]              καὶ οὗ τὸ τέλος, καὶ ἡ ἀρχὴ **δυνατή**  
*dunaté*

possible.NOM

'If of two contrary things it is possible that one should exist or come into existence, then it would seem that the other is equally possible; for instance, if a man can be cured, he can also be ill; [...] Similarly, if of two like things the one is possible, so also is the other. [...] Again, if the beginning is possible, so also is the end; [...] And when the end is possible, so also is the beginning'

(Aristotle, *Rhetoric* 2.19.1-2, 1392a8-12; Aristotle, *Rhetoric* 2.19.5, 1392a15-19, translation by J. H. Freese).

Some further examples of the alternation of periphrases (boldfaced) and their one-word equivalents can be found in (6).

(6) Periphrases and their one-word alternatives

- a. **συγγνώμην ἔχειν** vs συγγινώσκειν  
***sungnómēn ékhein*** vs *sunginóskein*

ἐφ' οἷς τε γὰρ δεῖ **συγγνώμην ἔχειν**, ἐπιεικῆ ταῦτα, καὶ τὸ τὰ ἀμαρτήματα καὶ τὰ ἀδικήματα μὴ τοῦ ἴσου ἀξιοῦν, μηδὲ τὰ ἀμαρτήματα καὶ τὰ ἀτυχήματα· [...] καὶ τὸ τοῖς ἀνθρώπινος συγγινώσκειν ἐπιεικές.

*eph' hoĩs te gàr deĩ sungnómēn ékhein, epieikē taũta, kai tò tà hamartémata kai tà adikémata mē toũ ísou axioũn, mēdē tà hamartémata kai tà atukhémata; [...] kai tò toĩs anthrōpinois sunginóskein epieikés.* (Aristotle, *Rhetoric*. 1.13.15-16, 1374b4-11)

- b. **εὖ ποιεῖν** vs (ἀντ)ευποιεῖν  
***eũ poieĩn*** vs *(ant)euipoieĩn*

τὸ χάριν ἔχειν τῷ **ποιήσαντι εὖ** καὶ ἀντευποιεῖν τὸν **εὖ ποιήσαντα**  
*tò khárin ékhein toĩ poíēsanti eũ kai anteuipoieĩn tòn eũ poíēsanta*

(Aristotle, *Rhetoric* 1.13.12, 1374a23-24)

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- c. συμφέρειν vs βλαβερὸν εἶναι  
*sumphérein* vs *blaberòn eînai*

οὐδὲν γὰρ κωλύει ἐνίοτε ταυτὸ συμφέρειν τοῖς ἐναντίοις· ὅθεν λέγεται ὡς τὰ κακὰ συνάγει τοὺς ἀνθρώπους, ὅταν ἢ ταυτὸ βλαβερὸν ἀμφοῖν  
*oudèn gàr kōlúei eníote tautò sumphérein toῖs enantíois; hóthen légetai hōs tà kakà sunágei toùs anthrṓpous, hótan ēi tautò blaberòn amphoîn.* (Aristotle, *Rhetoric* 1.6.20, 1362b37-1363a1)

- d. ἀδικεῖν vs δίκαια πράττειν/ποιεῖν  
*adikeîn* vs *dikaia práttein/poieîn*

καὶ οὓς ἀδικήσαντες δυνήσονται πολλὰ δίκαια πράττειν, ὡς ῥαδίως ἰασόμενοι, ὥσπερ ἔφη Ἰάσων ὁ Θετταλὸς δεῖν ἀδικεῖν ἔνια, ὅπως δύνηται καὶ δίκαια πολλὰ ποιεῖν  
*kai hoùs adikésantes dunḗsontai pollà dikaia práttein, hōs rhadíōs iasómenoi, hōsper éphē Iásōn ho Thettalòs deîn adikeîn énia, hópōs dúnētai kai dikaia pollà poieîn.* (Aristotle, *Rhetoric* 1.12.31, 1373a24-27)

- e. πράττειν κακῶς vs κακοπραγεῖν  
*práttein kakōs* vs *kakoprageîn*

δεῖ γὰρ ἐπὶ μὲν τοῖς ἀναξίως πράττουσι κακῶς συνάχθεσθαι καὶ ἐλεεῖν, τοῖς δὲ εὖ νεμεσᾶν.[...] ὁ μὲν γὰρ λυπούμενος ἐπὶ τοῖς ἀναξίως κακοπραγοῦσιν ἡσθήσεται ἢ ἄλυπος ἔσται ἐπὶ τοῖς ἐναντίως κακοπραγοῦσιν, οἷον τοὺς πατραλοίας καὶ μαιφόνους, ὅταν τύχῃσι τιμωρίας, οὐδεὶς ἂν λυπηθεῖη χρηστός  
*deī gàr epì mèn toῖs anaxiōs práttousi kakōs sunákthesthai kai eleeîn, toῖs δὲ eū nemesān;[...] ho mèn gàr lupóumenos epì toῖs anaxiōs kakopragoûsin hēsthésetai ē álupos éstai epì toῖs enantíois kakopragoûsin, hoïon toùs patroloías kai miaiphónous, hótan túkhōsi timōrias, oudeis àn lupētheiē khrēstós* (Aristotle, *Rhetoric* 2.9.2-4, 1386b12-29)

In examples (6a)–(6e), the interchange is rather veiled, e.g. the periphrasis συγγνώμην ἔχειν *sungnōmēn ékhein* in (6a) is replaced by the verb συγγινώσκειν *sunginōskein* only in the next sentence; the compound verb ἀντ-ευποιεῖν *ant-eupoieîn* in (6b) echoes the phrase εὖ ποιήσαντα *eū poiésanta* (the prefix hides the equivalent of the periphrasis); the verb συμφέρειν *sumphérein* in (6c) corresponds to the nominal phrase βλαβερὸν εἶναι *blaberòn eînai* of opposite meaning,

which is interchangeable with the verb βλάπτειν *bláptein* (antonym to συμφέρειν *sumphéreîn*); similarly, the verb ἀδικεῖν *adikeîn* (with complement ἔνια *énia*) in (6d) parallels the opposite phrase δίκαια πολλὰ ποιεῖν *dikaia pollà poieîn*, while κακοπραγεῖν *kakoprageîn* mirrors πράττειν κακῶς *práttein kakōs* in (6e). All this shows that Aristotle actively employed not only analytic but also synthetic constructions, i.e., he alternated the tactics of macrology and brachylogy.

Periphrases with other verbs (less frequent or with non-accusative objects) were not considered, but some possible candidates for SVC-type and Verb-Prepositional Phrase Construction (V-PC)-type periphrases were noted. A few examples can be seen in Table 19.

The variety of periphrases is of course not limited to the verbal periphrases mentioned in this chapter. At least three other types of periphrasis can be identified in the present text: 1) the verbal periphrasis *sensu stricto*,<sup>44</sup> with disputed terminological purity, most thoroughly studied by Klaas Bentein (Bentein 2016);<sup>45</sup> 2) a certain kind of elaborated periphrasis which replaces parts of the sentence and makes use of articular infinitives<sup>46</sup> with complements, and 3) combinations of verbal adjectives in -τός (-*tós*), -τή (-*tḗ*), -τόν (-*tón*), or -τικός (-*tikós*), -τική (-*tikḗ*), -τικόν (-*tikón*) with copular verbs.<sup>47</sup>

<sup>44</sup>Of the type γεγονώς εἰμι *gegonós eimi* or γεγενημένοι ἦσαν *gegenēménoi êsan*.

<sup>45</sup>A couple of examples of such periphrases in Aristotle's *Rhetoric* include: ἔστι δ' ἀπὸ τύχης μὲν τὰ τοιαῦτα **γιγνόμενα** *ésti d' apò túkhēs mèn tà toiaûta gignómēna* (Aristotle, *Rhetoric* 1.10.12, 1369a32; cf. Bentein 2016: 92) and καὶ ἐὰν μείζον κακὸν **πεπονθότες** ὦσιν *kai êân meîzon kakòn peponthótes ôsin*, (Aristotle, *Rhetoric* 2.3.14, 1380b14; cf. Bentein 2016: 128 n.87).

<sup>46</sup>On articular infinitives see Smyth (1920: §§2025–2037). Aristotle's *Rhetoric* has no shortage of such periphrases, ranging from 2 to 10 words. A couple of examples of longer periphrases include: τὸ παρὰ μικρὸν σώζεσθαι ἐκ τῶν κινδύνων *tò parà mikròn sózesthai ek tōn kindúnōn* (Aristotle, *Rhetoric* 1.11.24, 1371b10–11), τὸ τὰ ἁμαρτήματα καὶ τὰ ἀδικήματα μὴ τοῦ ἴσου ἀξιοῦν' *tò tà hamartēmata kai tà adikēmata mē tou isou axiōūn* (Aristotle, *Rhetoric* 1.13.16, 1374b4–5), τὸ ἢ μηδὲν γεγενῆσθαι ἀγαθὸν ἢ γενομένων μὴ εἶναι ἀπόλαυσιν *tò ê mēdēn gegenēsthai agathōn ê genoménōn mē eînai apólausin* (Aristotle, *Rhetoric* 2.8.11, 1386a15–16).

<sup>47</sup>The latter type, not examined by us at present, would be considered a 'true periphrasis' in Lausberg's rhetorical terminology, as it avoids the mention of the *verbum proprium*. The following is one example of such a periphrasis in Aristotle, *Rhetoric* 2.12.3, 1389a3–5: οἱ μὲν οὖν νέοι τὰ ἦθη εἰσὶν ἐπιθυμητικοί [...] καὶ τῶν περὶ τὸ σῶμα ἐπιθυμιῶν μάλιστα ἀκολουθητικοί εἰσι τῇ περὶ τὰ ἀφροδίσια *hoi mèn oûn néoi tà êthē eisín epithumētikoi [...] kai tōn perì tò sōma epithumiōn málista akolouthētikoi eisi tē perì tà aphrodísia* 'In terms of their character, the young are prone to desires [...]. Of the desires of the body they are most inclined to pursue that relating to sex' (translation by G. A. Kennedy).

Table 19: Further SVC candidates

SVC-type periphrasis	V-PC-type periphrasis
<p>οὐχ ἑνὸς σώματος ἀγαπᾶν ἀπόλαυσιν <i>oukh henōs sōmatos agarān arólousin</i><sup>48</sup> (Aristotle, <i>Rhetoric</i> 2.23.8, 1398a23) &gt; ἀγαπᾶν ἀπόλαυσιν <i>agarān arólousin</i> 'to be fond of enjoyment' [= ἀπολαύειν <i>apolaúein</i>?]</p> <p>τοῖς κακὰ ἀγγέλλουσιν <i>tois kakà angéllousin</i> (Aristotle, <i>Rhetoric</i> 2.2.20, 1379b20) &gt; ἀγγέλλειν κακὰ <i>angéllein kaká</i> 'to report bad news' [= καταγγελεῖν <i>kakangeleîn</i><sup>50</sup>?]</p>	<p>πρὸς ἀλήθειαν ... τείνει ταῦτα <i>prōs alētheian ... teinei taūta</i> (Aristotle, <i>Rhetoric</i> 1.7.40, 1365b15) &gt; τείνειν πρὸς ἀλήθειαν <i>teinein prōs alētheian</i><sup>49</sup> ('to point to the truth')</p> <p>πίπτειν, πεσεῖν, ἐμπίπτειν + εἰς + Acc./ <i>πίπτειν, pesein, emπίπτειν + eis + Acc.</i></p> <p>πίπτει ... ἡ αὐξήσις εἰς τοὺς ἐπαίνους / <i>πίπτει ... hē aúxēsis eis tous epainous</i> (Aristotle, <i>Rhetoric</i> 1.9.39, 1368a23) &gt; πίπτειν εἰς τοὺς ἐπαίνους / <i>πίπτειν eis tous epainous</i> 'to fall among forms of praise' [= προσκεῖσθαι / προσεῖναι τοῖς ἐπαίνοις? / <i>proskeisthai / proseinai tois epainois?</i>]</p> <p>οὐδὲ τοῖς κακῶς δεδρακόσιν ἀκουσίως δίκαιον εἰς ὀργὴν πεσεῖν / <i>oudè tois kakōs dedrakōsin akousiōs dikaion eis orgēn pesein</i><sup>51</sup> (Aristotle, <i>Rhetoric</i> 2.23.1, 1397a13-14, quoted from unknown drama) 'it is unjust to fall into anger at those who have unwillingly done wrong' &gt; εἰς ὀργὴν πίπτειν (πεσεῖν) / <i>eis orgēn píptein(pesein)</i> [= ὀργίζεσθαι, ἐξαγριοῦσθαι / <i>orgízesthai, exagri-ousthai</i>]</p> <p>εἰς τὴν ἔλλειψιν ἐμπίπτει / <i>eis tēn élleipsin emπίπτει</i> (Aristotle, <i>Rhetoric</i> 2.24.7, 1401b29) 'it... falls under the [the fallacy of] omission' &gt; εἰς τὴν ἔλλειψιν ἐμπίπτειν / <i>eis tēn élleipsin emπίπτειν</i></p>
<p>προσηκόν εἶναι τῷ δὲ ὀφείλεσθαι χάριν <i>prosekon einai tōid' ophēilesthai khárin</i> (Aristotle, <i>Rhetoric</i> 2.23.1, 1397a16, from an unknown drama) &gt; χάρις ὀφείλεται <i>kháris ophēiletai</i> (pass. pro act.) &gt; χάριν ὀφείλειν <i>khárin ophēilein</i> 'owe gratitude'</p>	

<sup>48</sup>The phrase is intertextually connected with Isocrates, *Speech* 1.27: ἀγάπα τῶν ὑπαρχόντων ἀγαθῶν μὴ τὴν ὑπερβάλλουσαν κτήσιν ἀλλὰ τὴν μετρίαν ἀπόλαυσιν *agápa tōn hyparkhōntōn agathōn mē tēn tēn hyperballousan ktēsīn allà tēn metriān arólousin* 'value not the excessive acquisition of the goods that accrue to you, but the moderate enjoyment of them'. Cf. also Aristotle's paraphrase recorded in another treatise: διὸ καὶ τὸν βίον ἀγαπᾶσι τὸν ἀπολαυστικόν *diò kai tòn bion agarōsi tòn apolaustikón* (Aristotle, *Nicomachean Ethics* 1095b17 Bekker) 'therefore they value (are fond of) the life based on enjoyment'.

<sup>49</sup>In various texts of Aristotle's contemporaries, only the combination of the verb and preposition πρὸς *prōs* is repeated (cf. Plato, *Symposium* 188d2-3, Plato, *Republic* 526d9-e1 et al.), sometimes with a prefix (συν-τείνειν *sun-teinein*, 'direct earnestly (to)', 'tend/contribute (towards)'), while the combination with ἀλήθειαν *alētheian* is very rare (used by Aristotle himself only in the quoted passage and in Aristotle, *Topica* 104b1-2, and never by his contemporaries).

<sup>50</sup>The verb καταγγελεῖν *kakangeleîn* 'bring evil tidings' is attested once with Demosthenes, cf. Demosthenes, *De Corona* 267, as a quotation from an unidentified tragedy.

<sup>51</sup>Cf. Euripides, *Orestes* 696: ὅταν γὰρ ἦβᾷ δῆμος εἰς ὀργὴν πεσῶν *hótan gár hēbā dēmos eis orgēn*

## 8 Conclusions

Aristotle's *Rhetoric*, the source of the phraseology of the fourth-century BC Attic dialect studied in this chapter, is a complex, multi-layered text in which the language of Athens at the height of Athenian drama and oratory is intertwined with Aristotle's scholarly vocabulary and rhetorical 'technolect', and with the phraseology of various dialectal varieties and genres of text, presented as quotations.

An empirical examination of two thirds of this source (Books 1 and 2, covering over 32,500 words) showed that it contains no less than 350 verb-based phrases with popular accusative-taking verbs, of which 23 are of the SVC type. The most important criteria for identifying this type of expressions are the role of the verb as a syntactic operator with a reduced meaning, the semantic dominance of the abstract noun or noun-like adjective, the existence of a one-word equivalent (of the type ποιῆσθαι τὸν λόγον *poiēsthai tòn lógon* = λέγειν *légein*), and the repetitiveness of the phrase. Other criteria are more difficult to verify due to the lack of textual evidence.

The set of 350 verb-based phrases also includes up to more than 150 verb-noun combinations with the same semantically flexible verbs, and more than 160 combinations with adverbs and complex complements. This contributes to the discussion on the concept of SVC, as it is hypothesised that a support verb can also be a seemingly lexically complete causative verb (such as ποιεῖν *poiēin* 'to do, make') with an accusative duplex, or a subject-oriented transitive verb (such as ἔχειν *ékhein* 'to have'), that drastically changes meaning when used in combinations with adverbs.

Theoretical reflection on the terms and their corresponding phenomena has shown that the linguistic terms MWE, SVC, and others, which are applied universally to phraseological phenomena in various languages, can in principle also account for Ancient Greek phenomena. At the same time, concepts invented by users of Ancient Greek themselves, such as 'periphrasis', or epithets designating stylistic strategies ('macrological', 'brachylogical'), etc., also prove to be descriptively adequate.

Periphrasis is a term that has survived from Graeco-Roman rhetoric into modern linguistics to describe the substitution of a short lexical unit (a word) by a

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*pesôn* 'when the people youthfully rave, drowning in anger'. Cf. also: *Tragicorum Graecorum Fragmenta* 80, v.1-2 (Nauck 1889):

εἴπερ γὰρ οὐδὲ τοῖς κακῶς δεδρακόσιν

ἀκουσίως δίκαιον εἰς ὀργήν πεσεῖν

*eíper gàr oudè tois kakōs dedrakósin*

*akousiōs dikaion eis orgēn pesein* 'if it is not right to be angry with those who have done wrong involuntarily'.

longer one (a combination of two or more words). The description of the periphrasis by the second-century-AD rhetorician Alexander Numenius, with appropriate examples, matches well in its content with what is nowadays labeled SVC. Since the term 'periphrasis', defined more strictly in linguistic contexts with emphasis on its grammatical function (as a cell-filler for a grammatical paradigm) does not stand in contradiction with the original meaning of the concept, the substitution of one word by two or more words, it may be the key to a possible solution for the terminological problem of reconciling the MWEs and the various phraseological units: the use of the term periphrasis as a synonym for the MWE, provided that both indicate substitution or alternation.

The idea of the dichotomy between the change of valency and the inherent meaning of verbs, inspired by the theories of valency and transitivity change and their possible parallel in Aristotle's conception of the conditions of the effective speech (ἦθος, πάθος, λόγος *ēthos, páthos, lógos*), supports a simplified dichotomous classification of transitive verbs into introversive and extraversive ones, which in turn may help in the future to better assess the nuances of the semantic contribution of verbs in periphrases (or MWEs) to the overall meaning of a phrase.

The author's personal style, scientific interests, aesthetic and occasional preferences (represented by the 'macrological' and 'brachylogical' alternatives) undoubtedly affected the variety and alternation of phrases contained in Aristotle's *Rhetoric*. This stylistic flexibility demonstrates the expressive capability of the Greek language, as well as each author's creative contribution to the overall phraseological 'bank' of the language.

## Abbreviations

AM	Agent marker	LVC	Light-verb construction
AS	Agent-role subject	MWE	Multi-word expression
CO	Complex object	SO	Single object
CP	Compositional phrase	V+CO	Verb with a complex object
DO	Direct object	V+SO	Verb with a single object
FVC	Function-verb construction		

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## Chapter 7

# Support-verb constructions as level-of-speech markers in a corpus of hagiographical literature

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This contribution traces the diachronic development of a specific type of verbo-nominal collocations in a post-classical Greek corpus limited to prototypical support-verb constructions with ποιέω *poieō* + eventive noun. For this purpose, the chapter draws on an extensive corpus of Byzantine saints' lives and adopts an eclectic methodology, which benefits from the developments in corpus linguistics, sociolinguistics, and Byzantine studies. In addition to stylistic and register variation, it delves into the lexical and syntactic properties of some of these collocations and pinpoints reasons for their development and renewal. The study focusses on a wide selection of texts of the hagiographic genre, covering a wide timespan (4th–14th centuries). It contributes to the better understanding of the procedures of formal renewal and variation of support-verb constructions and constructions with support-verb extensions in diachrony.

Esta contribución rastrea el desarrollo diacrónico de un tipo específico de colocaciones verbo-nominales en un corpus griego postclásico limitado a construcciones prototípicas de verbo soporte con ποιέω *poieō* + sustantivo eventivo. Para ello, he compilado un extenso corpus de vidas de santos bizantinos y he adoptado una metodología ecléctica, que se beneficia de los desarrollos de la lingüística de corpus, la sociolingüística y la bizantinística. Además de la variación estilística y de registro, profundizo en las propiedades léxicas y sintácticas de algunas de estas colocaciones y voy a dar cuenta de su desarrollo y renovación formal. El estudio se centrará en una amplia selección de textos del género hagiográfico, abarcando un amplio espectro temporal (siglos IV–XIV). Con ello se espera obtener una mejor caracterización de los procedimientos de renovación y variación formales de las construcciones con verbo soporte y de las construcciones con extensión del verbo soporte en diacronía.



## 1 Introduction

In the present chapter, I deal with ancient Greek support-verb constructions (SVCs henceforth) in diachrony, focusing specifically on an extensive corpus of hagiographical literature.<sup>1</sup> In the case of verbo-nominal collocations, a basic distinction is generally accepted between functional collocations (also called SVCs) and lexical collocations (Koike 2001: 78, Baños 2014: 5). In the former type of collocation (e.g. *take a walk*), the nominal base of the collocation is an abstract noun that usually nominalises an event and therefore has its own argument structure; in the latter (e.g. *play the piano*), although the verb also has a figurative sense (*to play* here means *to perform with the piano*), the base is a concrete noun.

With a few recent exceptions (Fendel 2021, 2023a,b, Vives Cuesta & Madrigal Acero 2022) the diachronic examination of Ancient Greek SVCs remains a rather unexplored field of study (Baños et al. 2022). What I consider innovative in my approach to the topic is the incorporation of historical sociolinguistics, something I consider of paramount importance in the linguistic approach to the study of post-classical Greek and Byzantine learned literature.

To understand the synchronic and diachronic variability of SVCs inherent in the development of Greek during the Byzantine millennium, we must start from the sociolinguistic situation of *diglossia* (Toufexis 2008). In dealing with it, most authors tend to speak of levels of *style*, following Ševčenko (1981)'s seminal article. However, there are reasons to believe that the rewriting goes beyond a question of style and again involves changes in *levels of speech* (Hinterberger 2010, 2021). It is therefore closer to the definition of sociolinguistic terms, such as sociolect or diastratic variant.<sup>2</sup>

A key issue that highlights the issues with defining levels of speech in diachrony concerns linguistic variation (Bentein 2017). In the study of the social mechanisms that govern linguistic change, studies applied to oral variants have been remarkably predominant. However, based on the work of Romaine (1982: 122) it can be argued that the socio-historical approach she develops is applicable to written texts such as those under study here and, and on the other hand,

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<sup>1</sup>The dataset is accessible here: <http://dx.doi.org/10.5287/ora-n652gamyj>.

<sup>2</sup>Other authors, such as Markopoulos (2009), prefer to use the concept of register, which I believe does not do justice to the largely mimetic situation, resulting from a process of rewriting, which our texts present. As in Vives Cuesta & Madrigal Acero (2022), I have opted for the term *levels of speech*, knowing that it competes with other terms such as *register*, *style* or even *variation*. Style tends to refer to literary or rhetorical variation, while variation is too vague a term to comprehend the linguistic reality I deal with. However, the strictly linguistic characterisation of many phenomena invites us to opt for this terminology.

they are reference texts for understanding the development of many linguistic changes in Postclassical Greek, as Klaas Bentein has shown in several studies (Bentein 2017, 2019, 2020).

The concept of levels of speech is used in the field of Byzantine studies to distinguish linguistic variants that occur for sociolinguistic reasons. At the heart of any study of post-classical Greek is the question of which variants were in use and which were borrowed from the learned language. Two or three levels can be distinguished in scholarly Greek, depending on various variables. These levels are not airtight and were used creatively by Byzantine authors (Hinterberger 2014b). To these levels of the learned language, we must add the vernacular, which undoubtedly has a greater influence on the lower registers of cultivated Greek. The identification of these different levels, which interact with each other, is complex. The situation is further complicated by the lack of a common terminology to define them.

Here, I make a distinction between ‘low’ and ‘high’ (*koine*) levels and reserve the term Atticism for cases where there is direct continuity with syntactic usages attested in Classical Greek (CG henceforth) or New Testament Greek (NTG henceforth). Recognising this general trend in the description of the New-Testament (NT henceforth) language does not necessarily imply that all NT authors adopt the Atticist style in all its aspects. There are factors such as free stylistic choices and bilingual interference due to the multilingual context in the writings of the Gospels that should be considered in the study of each collocation (Baños 2015, Baños & Jiménez López 2017).<sup>3</sup>

Attempts to characterise sociolinguistic variation in hagiographic texts have been rare. The few that are available have focused on the comparison of different versions of the same *Vita* and on stylistic rather than linguistic aspects (Zilliaccus 1938, Schiffer 1992, 1999, Franco 2009). To date, with the sole exception of Churik (2019), we have not found a reference that relates the functioning of SVCs to different levels of speech in Byzantine Greek.

The kind of variation in diachrony which we are talking about has an important linguistic exponent in the use of SVCs in contrastive contexts, such as those

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<sup>3</sup>In a forthcoming paper, Baños and Jiménez López demonstrate the variability in the selection of SVCs when translating different collocations from the language of the *Septuagint* version involving the noun καρπός *karpos* (καρπὸν φέρω *karpon p<sup>h</sup>ero* ‘to bear fruit’, δίδωμι *didomi* ‘to give’ or ποιέομαι *poieomai* ‘to make’). The selection shows, on the one hand, the idiosyncratic character of this type of complex predicate and, on the other hand, how the literal translation of sacred texts becomes a means of creating new collocations in Greek, as well as semitisms that find continuity in the Gospels and form the basis for the lexical creation of new collocations through literary *imitatio* operating in the genre of hagiography.

presented in passages like (1), where there is an alternation between the synthetic (ἔρχεσθαι πυκνά *erk<sup>h</sup>est<sup>h</sup>ai pykna* ‘to go frequently’) and analytic forms (ποιεῖσθαι τὰς προσευλεύσεις πυκνάς *poieist<sup>h</sup>ai tas proseleuseis* ‘to make frequent visits’).

- (1) a. καὶ ἀπολύ-σας                      τοὺς γον-εῖς                      αὐτ-οῦ    μετὰ  
*kai apoly-sas*                      *t-us gon-eis*                      *aut-u*    *meta*  
 and dismiss-PTCP-NOM.SG the    parents-ACC.PL he-GEN.SG with  
 εὐλογι-ῶν                      παρ-ή-γγειλ-εν                      μὴ    πυκνὰ ἔρχ-εσθαι  
*eulogi-on*                      *par-e-ngeil-en*                      *me pykn-a erk<sup>h</sup>-est<sup>h</sup>ai*  
 blessing-GEN.PL next-PST.exhort.-AOR-3SG NEG often    come-INF  
 πρὸς αὐτ-όν  
*pros aut-on*  
 to    he-ACC.SG

‘And, bidding the parents farewell and blessing them, he asked them not to visit him often’

(*Vita antiquior Sancti Danielis Stylitae* 5.16)

- b. ἐντειλά-μενος δὲ τ-οῖς    αὐτ-οῦ    πατρ-άσιν    ὁ  
*enteila-menos de t-ois*    *aut-u*    *patr-asin*    *ho*  
 command.PTCP PRT the.DAT he-GEN.SG parents-DAT.PL The.NOM.SG  
 τ-ῆς                      μον-ῆς                      προεστ-ῶς                      μὴ    πυκνάς  
*t-es*                      *mon-es*                      *proest-os*                      *me pykn-as*  
 the-GEN.SG monastery-GEN.SG abbot-PTCP-NOM NEG frequent-ACC.PL  
 ποιεῖσθαι πρὸς τ-ὸν παῖδ-α                      τ-ὰς                      προσελεύσ-εις,  
*poiei-st<sup>h</sup>ai pros t-on paid-a*                      *t-as*                      *proseleus-eis*,  
 make-INF to    the child-ACC.SG the.ACC.PL visit-ACC.PL  
 χαίρ-οντας                      ἐκπέμπ-ει                      γον-εῖς                      τὸ  
*k<sup>h</sup>air-ontas*                      *ekpemp-ei*                      *gon-eis*                      *to*  
 rejoice-PTCP-ACC.PL send-PRES-3SG-ACT parent-ACC.PL the  
 καινό-τατον                      υἱοῦ                      στερο-μένους  
*kaino-taton*                      *hyi-u*                      *stero-menus*  
 new-SPRL.NOM.SG son-GEN.SG leave-PTCP-ACC.PL

‘The abbot of the monastery, asking the parents not to make frequent visits to the child, bids the parents, who are happy in most strange a way, since they were losing a son’

(*Vita sancti Symeonis Stylitae* 5.23)

In what follows, I first present my own definition of the concept of SVC (Section 2), which follows that of the Spanish research projects led by Baños

and Jiménez López respectively (*DiCoLat* & *DiCoGra*).<sup>4</sup> I then provide a brief overview of the corpus compiled for my survey (Section 3), the methodology used for the analysis (Section 4), several types of SVCs with motion nouns (Section 5.1), an overview of support-verb-extension constructions (SVECs henceforth) (Section 5.2), and edge cases represented by verbs of realisation (Section 5.3). Finally, I summarise my conclusions (Section 6).

## 2 Definition of support-verb constructions

SVCs are considered a special kind of verbo-nominal collocations that are situated at the interface between syntax and semantics.<sup>5</sup> Lexically, they are considered verbal multi-word expressions, since support verbs are form-identical with the lexical form of a verb when lexical and auxiliary forms coexist (Bentein 2013a). Lexical features of the components of the construction are its discontinuity, variability (Booij 2014), and ambiguity (Herzig Sheinfux et al. 2019: 50). SVs are limited in their combinations and variability. Concrete examples of SVCs show their untranslatable and language-specific character. For example, the same activity of ‘giving a lecture’ is expressed with different SVs in different languages: *Elle fait une présentation* (French), *Sie hält eine Vorlesung* (German) or *está dando una conferencia* (Spanish).

Syntactically, SVCs are complex predicates that typically (but not exclusively) take the form of combinations of a verb and a predicative noun that fill the predicative frame of an SV as ποιέω *poieō* ‘to make’ or δίδωμι *didōmi* ‘to give’, see (2a–2b), both of which are exemplified here with the polysemous and high-frequency noun λόγος *logos* ‘word’ (Vives Cuesta 2021).<sup>6</sup>

<sup>4</sup>I am honoured to be involved in this Spanish project (*Interacción del léxico y la sintaxis en griego antiguo y latín 2: Diccionario de Colocaciones Latinas. DiCoLat y Diccionario de Colocaciones del Griego Antiguo. DiCoGra*) which has developed extensive databases on Latin (<https://dicolat.iatext.ulpgc.es/>) and Greek collocations (<https://dicogra.iatext.ulpgc.es/>).

<sup>5</sup>The use of the term *light verb* instead of *support verb* continues to dominate the literature (Pompei et al. 2023a). It focusses on the loss of semantic weight of the verb. The term *light-verb construction* is widely used in language-contact studies (Myers-Scotton 2002, Fendel 2021, 2023a). This paper uses the term *support verb*. We believe that this term has important theoretical advantages in semantic terms, but syntactically it may be too restrictive, as it reduces the descriptive scope to verbo-nominal collocations with the noun base as the direct object. Kälviäinen (2013) carries out a statistical study in which he demonstrates the tendency for syntactic constructions to become increasingly complex in an irregular manner over the course of the Byzantine millennium.

<sup>6</sup>Synchronically, the syntactic status of collocations is ambiguous and may allow for a double analysis, according to whether the dependency is on the SV nucleus or on the predicative noun.

- (2) a. ὁ δὲ Σιτάλκ-ης πρὸς τε τ-ὸν Περδίκκ-αν  
<sup>h</sup>o de Sitalk-es pros te t-on Perdikk-an  
 the PRT Sitalces.NOM.SG to and the Perdikkas-ACC.SG  
 λόγους ἐποιεῖ-το  
 log-us e-poiēi-to  
 words-ACC.PL PST.made.IMP.3G.MID  
 ‘Sitalces spoke to Perdiccas’  
 (Thucydides, *Histories* 2.101.2)
- b. τοῦτο δὲ ἀκού-σαντ-ες οἱ Ἕλληγν-ες  
 tuto de aku-sant-es <sup>h</sup>oi <sup>h</sup>ellen-es  
 this PRT Hearing-PTCPL-NOM.PL the-NOM.PL Greeks-NOM.PL  
 λόγ-ον σφί-σι αὐτ-οῖσι ἐδίδο-σαν  
 log-on sphi-si aut-oisi edido-san  
 word-ACC.SG to.the-DAT.PL to.them-DAT.PL PST-gave-3PL.ACT  
 ‘Upon hearing this, the Greeks exchanged their arguments among  
 themselves’  
 (Herodotus, *Histories* 8.9.1)

The definition of SVCs is fraught with theoretical problems. Within the batteries of tests used to identify SVCs (Langer 2004), one that stands out is the co-referentiality between the subject of the SV and the first argument of the predicative noun, which always tends towards *monoclausality* (Butt 2010). In this respect, the application of criteria commonly used to describe SVCs cross-linguistically has also proved relevant in the analysis of Ancient Greek SVCs (Jiménez López 2016): (a) the equivalence with a simplex verb; (b) the reduction of SVCs to noun phrases; (c) the co-referentiality of the subject of the verb and the first argument of the SVC noun; (d) noun variability, etc. From a sociolinguistic perspective, principle (a) should not be considered applicable, since the simple and multi-word constructions can in no case incur the redundancy of being considered pure synonyms. It is more accurate to think in terms of *reallocation* or *nuancing* from a diachronic and variationist perspective.

To my knowledge, the most comprehensive theoretical introductions to the treatment of SVCs applied to classical languages are Baños et al. (2022) and Pompei et al. (2023b), which provide an exhaustive state of the art. After the first seminal approach by Jespersen (1942), the first solid definition was given by von Polenz (1963), who defined the verbs in question as *Funktionsverben*. In all these treatments of the problem, the distinction between SVCs and other periphrastic constructions dominates. In the context of the *Lexique-Grammaire* theory and

the *Laboratoire d'Automatique Documentaire et Linguistique* (LADL), Gross (1989, 1996, 2004) developed an automated database model that makes it possible to describe the syntactic properties of SVCs. According to all these perspectives, the verb of an SVC only actualises the predicative noun. On the other hand, the Meaning-Text Theory and its formalisation resource, i.e., Lexical Functions (Mel'čuk 2004, Alonso Ramos 2004), present a type of analysis based on the collocational pattern and the selection of collocations which consist of a predicative noun (the base) selecting a semantically empty verb (collocative).

As far as our *DiCoGra* research project is concerned, the proposal I apply to the corpus is theoretically eclectic, although it is mainly dominated by the postulates of the *Lexique-Grammaire* and *Lexical-Functional Grammar* (LFG henceforth) theories (Baños et al. 2022).

In light of these theoretical developments, I propose the following definition of SVCs:

A semi-compositional construction formed by a predicative noun dependent on a semantically bleached verb, which is joined to the construction to form a multi-word phrase. It is sometimes equivalent to a simplex verb.

This definition corresponds to the function of these verbs, which act as an auxiliary or syntactic support for the noun with which they are constructed, forming a specific type of collocation. The verb has a very light semantic content and expresses the time, manner, and aspect of the event as a whole; the noun, which lexically selects the verb and is usually presented as its direct object (DO henceforth), provides the arguments (predicative frame) of the construction.

In addition to these functional SVCs with a genuine SV (ποιέομαι *poieōmai*, ἔχω *ekho*, γίγνομαι *gignomai*, δίδωμι *didomi*, τίθημι *tithēmi* etc.), languages have several heavier verbs called support-verb extensions (SVEs henceforth) that convey an aspectual or diathetic meaning (Vivès 1984, Gross 1989, Baños 2014, Baños & Jiménez López 2018). The range of SVs is language-specific, so that the mere existence of such SVECs shows the diffuse character of the consideration of an SV as a concept.

From CG onwards, some verbs that preserve much of their lexical content can metaphorically express diathetic (δέχομαι *dekhoμαι* 'to accept') or aspectual (ἅπτομαι *haptomai* 'to touch') content, see (3).

- (3) a. τ-ὸν            μὲν τ-ῶν            χρημάτ-ων            λόγ-ον            παρὰ  
*t-on*            *men t-on*            *k<sup>h</sup>remat-on*            *log-on*            *para*  
 the-ACC.SG PRT    the-GEN.PL    money-GEN.PL    account-ACC.SG    from

τούτ-ων λαμβάν-ειν  
tut-on lamban-ein  
them-GEN.PL take-INF

‘You must **demand** from your paymasters **an account** of their money’  
(Demosthenes, *Speech* 8.47)

b. καὶ ἅμα λόγ-οι πρὸς Λακεδαιμονί-ους περὶ  
kai <sup>h</sup>ama log-oi pros Lakedaimoni-us peri  
and together words-NOM.PL to Lacedaemonians-ACC.PL about  
τ-ῆς εἰρήν-ης ἐ-γίγνο-ντο  
t-es eiren-es e-gigno-nto  
the-GEN.SG peace-GEN.SG PST.be-IMP-3PL-MID

‘And **negotiations** for peace **happened** at once with the  
Lacedaemonians’

(Lysias, *Speech* 13.5) (Jiménez López 2021: 231)

Linguistic change is expected to create semantic mechanisms of lexical innovation (conceptual metaphors and metonymies) in the domain of SVECs.

### 3 Description of the dataset

As for the quantitative data of our corpus, we have also worked with the aim of studying the chronological evolution of a broad literary genre – Byzantine hagiography – and the inherent variations between versions of the same hagiographical text in its diachronic evolution. Byzantine hagiography covers an entire literary spectrum. This makes it a testing ground for the study of all kinds of diachronic variability (Bentein & Janse 2021).

According to Bentein (2013b), in terms of level of speech, Byzantine hagiographical literature is composed in a wide variety of registers, but always with the avoidance of the most Attic styles. However, this statement must be qualified to some extent, since the hagiographic texts of this period (4th to 14th centuries AD) and especially during the 9th century can be classified as belonging to the high style (Ševčenko 1981). Through linguistic analysis of the texts, we have been able to establish a clear picture of the sociolinguistic development of the linguistic style of Byzantine hagiography. There is an early period in which simpler, low-level hagiographical texts were written alongside more rhetorically elaborate ones. In the middle and even late Byzantine period, this would give way to a much larger proportion of high-level *Vitae*, often the product of rewriting, technically called *metaphrases* (Hinterberger 2010, 2014a).

As far as the chronology is concerned, because it is such a long period of time, I have divided the corpus into four sub-periods which are related to the lifespan of hagiographical literature in the Byzantine world:

- (i) *New Testament Greek* (1<sup>st</sup> century AD). According to Rico (2010: 61), the NT is representative of a low koine (vernacular) language that was in contact with Semitic languages (Aramaic and Hebrew). However, traces of Atticism can also be found in the language of the NT.
- (ii) *Proto- and Mesobyzantine Greek* (4<sup>th</sup>-9<sup>th</sup> centuries AD). The hagiographic texts of this period (at least those of the first half) tend to be more classicising than the metaphrastic corpus, although we can also find some texts of a simpler style.
- (iii) *Metaphrastic hagiography* (10<sup>th</sup>-11<sup>th</sup> centuries AD): Under the label *metaphrastic hagiography* there is room for a rewriting of texts to be understood as a synchronic intralingual translation (μετάφρασις *metaph<sup>h</sup>ra-sis*) of the ancient versions of the same *Vita*. Symeon Metaphrastes' rewriting technique consists essentially of making lexical and syntactic changes to introduce modifications at the level of language with respect to the older versions of the *Vitae* and to establish a canonical text of reference for these works (Høgel 2002, 2021). Precisely, for this special literary status, the five *Vitae* of the *metaphrastic* period play a special role with regard to the variation of SVCs as markers of levels of speech.
- (iv) *Greek of the Comnene and Late Byzantine periods* (12th-14th centuries AD). Although the style of the hagiography of the Palaeologan period already shows certain demotic tendencies, it maintains the same high stylistic standards that characterise the canonisation of the work of the Metaphrastes (Hinterberger 2014b, 2021).

In accordance with this periodisation, all the works that have been collected in our representative selection of the corpus are shown in table 1.<sup>7</sup>

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<sup>7</sup>With slight modifications, this is the corpus of a Masters that I supervised (Madrigal Acero 2022), and it also largely coincides with that of previous work (Vives Cuesta & Madrigal Acero 2022: 318–321). Not all the data are at the same descriptive level. In our dataset, we make a distinction between the main corpus and the control or reference corpus. In each of the selected periods, the texts are not necessarily grouped in chronological order. Links to other versions that rewrite earlier versions of the texts have conditioned the selection.

Table 1: Corpus and abbreviations

New Testament	<i>Evangelium secundum Matthaeum</i>
	<i>Evangelium secundum Lucam</i>
	<i>Epistula Pauli ad Corinthios i</i>
	<i>Epistula Pauli ad Corinthios ii</i>
	<i>Epistula Pauli ad Hebraeos</i>
Proto- and Meso-byzantine hagiography	<i>Vita antiquior Sancti Danielis Stylitae (BHG 489)</i>
	<i>Vita et martyrium sancti Anastasii Persae (BHG 84)</i>
	<i>Martyrium antiquior sanctae Euphemiae (BHG 619)</i>
	<i>Vita Stephani Iunioris (BHG 1666)</i>
	<i>Vita Symeonis Stylitae senioris (BHG 1683)</i>
Metaphrastic hagiography	<i>Passio sancti Anastasii Persae (BHG 85)</i>
	<i>Passio sanctae Euphemiae (BHG 620)</i>
	<i>Vita tertia Sancti Danielis Stylitae (BHG 490)</i>
	<i>Vita Stephani Iunioris (BHG 1667)</i>
	<i>Vita sancti Symeonis Stylitae (BHG 1686)</i>
Comnene and Late Byzantine hagiography	<i>Vita sancti Zotici (BHG 2480)</i>
	<i>Vita Leontii Patriarchae Hierosolymorum (BHG 985)</i>
	<i>Vita sancti Bartolomaei conditoris monasterii sancti Salvatoris Messanae (BHG 235)</i>
	<i>Miracula sancti apostoli Marci (BHG 1036m)</i>
	<i>Vita sancti Lazari (BHG 980)</i>

## 4 Methodology

My practical methodology is the identification of the most frequent predicative nouns (*collocative pattern*) of ποιέω/ποιέομαι *poieo/poieomai* ‘to make’ in the corpus. The selection has been restricted to this verb precisely (a) because of its prototypical character in this type of construction; (b) because of its very high frequency of use in our corpus, which means that it offers a sufficiently representative and comprehensive amount of data for our analysis; and (c) because of its syntactic variability, represented by a wide range of constructions that show diachronic variation and that do not occur with other support verbs.

In the selection, the nominal base is given priority, since in SVCs the meaning of a general verb is specified by the meaning of the noun with which it interacts at the syntagmatic level (Ježek 2011: 29). In the analysis of our data, we have chosen to include a broad notion of predicative noun, which includes all types of predicative nouns that function as DO of ποιέω *poieō*, and not only the *nomina actionis* traditionally considered (Garzón Fontalvo & Tur 2022). The SVCs already inventoried in previous studies of the NT (Baños & Jiménez López 2017) are considered to be more sensitive to the type of semantic or syntactic variation that this construction involves in the corpus, since many of the Saints’ lives reproduce traditional NT linguistic forms as their main intertextual source.

For CG, some authors (Jiménez López 2016, Fendel 2023a) have proposed, with almost the same conclusions, an inventory of the most statistically frequent SVs.<sup>8</sup> In the dataset, I present the collocational patterns of ποιέω *poieo* formed by all the predicative nouns with which it is combined to form SVCs, as well as quantitative information.

In total, I analysed 614 examples of ποιέω/ποιέομαι *poieo/poieomai* + DO in the main corpus. Of these, 211 (34.36 %) used ποιέω/ποιέομαι *poieo/poieomai* as a candidate SV. The high distributional frequency of ποιέω/ποιέομαι *poieo/poieomai* in the corpus as the main support verb is a key factor in considering the SVCs we analyse. One of the effects of the high combinatorial frequency of two different lexical items is the tendency for them to form sub-groups. The combinatorial freedom of items is traditionally translated into the notion of “collocational frequency” (Fendel 2023b). This phenomenon has consequences at the cognitive

<sup>8</sup>Fendel (2023a), for literary classical Attic, offers the most comprehensive set of verbs available, including the following verbs, some of which have already been the subject of monographs: ἄγω *ago* ‘to pass / spend’, δέχομαι *dek<sup>h</sup>omai* ‘to receive’, δίδωμι *didomi* ‘to give’, ἔχω *ek<sup>h</sup>o* ‘to have’, κομίζω *komidzo* ‘to give / receive’, κτάομαι *ktaomai* ‘to gain’, λαμβάνω *lambano* ‘to take / receive’, παρέχω *parek<sup>h</sup>o* ‘to give’, πάσχω *pask<sup>h</sup>o* ‘to suffer’, ποιέομαι *poieomai* ‘to make’, τίθημι *tith<sup>h</sup>emi* ‘to put’, τυγχάνω *tynk<sup>h</sup>ano* ‘to get’, φέρω *p<sup>h</sup>ero* ‘to bring’, χράομαι *k<sup>h</sup>raomai* ‘to use’. We add γίγνομαι *gignomai* ‘to become’ (Jiménez López 2021).



‘And he passed through cities and villages teaching and **travelling** towards Jerusalem’

(*Evangelium secundum Lucam* 13.22)

- b. ἀποστέλλ-ει      αὐτ-οὺς      πρὸς τ-ὸν...      ἀρχιεπιμέν-α  
*apostell-ei*      *aut-us*      *pros t-on*      *ark<sup>h</sup>ipoimen-a*  
 send-PRES-3SG-ACT they-ACC.PL to      the-ACC.SG patriarch-ACC.SG  
 τ-οῦ      σὺν αὐτ-οῖς      ποιῆ-σαι αὐτ-ὸν      τ-ῆν  
*t-u*      *syn aut-ois*      *poie-sai*      *aut-on*      *t-en*  
 the-GEN.SG with they-DAT.PL make-INF he-ACC.SG the-ACC.SG  
 πορεύ-αν      πρὸς τὸ...      μοναστήρι-ον  
*porei-an*      *pros to*      *monasteri-on*  
 way-ACC.SG to      the-ACC.SG monastery-ACC.SG

‘He sends them to... the patriarch, so that he would **make** with them **the journey** to the monastery’

(*Vita Stephani Iunioris* 42.12)

First, there is a diachronic continuity in their structure. SVCs with motion nouns already show a prototypical character in CG, which is confirmed in our corpus.<sup>10</sup> SVCs with motion nouns present a range of meanings and functions, among which stylistic variation and the expression of connotative meanings stand out (De Pasquale 2023). Connotative meanings tend to be associated with a high level of speech, as they imply a reconceptualisation of the predicative noun, precisely because they are part of an SVC.

However, as can be seen in (5b–5c), we observe the innovation of a type of construction that occurs only very sporadically in CG.<sup>11</sup> One of the reasons for this syntactic variation in post-classical Greek is that, from the stage represented by NT texts onwards, the progressive semantic bleaching and gradual decline of the middle voice has affected the voice distinction between ποιέω/ποιέομαι *poieo/poieōmai* in many SVCs, see (5a–5c).

- (5) a. ἀλλ’ ὁ      ποι-ῶν      τὸ      θέλη-μα τ-οῦ  
*all’ <sup>h</sup>o*      *poi-on*      *to*      *t<sup>h</sup>ele-ma t-u*  
 but the-NOM make-PTCP.NOM the.ACC will.ACC the.GEN.SG

<sup>10</sup>The motion nouns involved in SVCs expressing movement are derived from different verb classes that encode the main conceptual components of movement: basic motion verbs, caused motion verbs, manner verbs and Path + Manner verbs (De Pasquale 2023).

<sup>11</sup>For some motion nouns, such as ὁδός *<sup>h</sup>odos* ‘way’ in ποιέω ὁδόν *poieo <sup>h</sup>odon* ‘marching’ (Herodotus, *Histories* 1.211.1), the loss of the diathetic distinction can be traced back to the beginning of the classical period (Marini 2010).

πατρ-ός μου τοῦ ἐν τ-οῖς οὐραν-οῖς  
*patr-os m-u t-u en t-ois uran-ois*  
 father-GEN my-GEN.SG the.GEN.SG in the.DAT.PL heavens.DAT.PL

‘But the one who **does the will** of my Father, who is in Heaven’

(*Evangelium secundum Matthaeum* 7.21)

b. μήτηρ μου καὶ ἀδελφ-οί μου οὗτ-οί  
*meter m-u kai adelph<sup>h</sup>-oi m-u <sup>h</sup>ut-oi*  
 mother my-GEN.SG and brothers-NOM.PL my-GEN.SG these-NOM.PL

εἰ-σιν οἱ τ-ὸν λόγ-ον τ-οῦ  
*ei-sin <sup>h</sup>oi t-on log-on t-u*  
 are-3SG-ATC the.NOM.PL the.ACC.SG word-ACC.SG the.GEN.SG

θε-οῦ ἀκούοντ-ες καὶ ποιοῦντ-ες  
*t<sup>h</sup>e-u akuont-es kai poiunt-es*  
 God-GEN.SG hearing-PTCP-NOM.PL and doing-PTCP-NOM.PL

‘My mother and my brothers are those who hear and **do God’s word**’

(*Evangelium secundum Lucam* 8.21)

c. τί λέγ-εις; ποι-εῖς τ-ὴν κέλευσ-ιν  
*ti leg-eis; poi-eis t-en keleus-in*  
 what say-2SG-ACT make-2SG-ACT the.ACC.SG command-ACC.SG

τ-οῦ βασιλ-έως ἢ ἐπιμέν-εις τ-οῖς αὐτ-οῖς;  
*t-u basil-eos e epimen-eis t-ois aut-ois*  
 the-GEN.SG king-GEN.SG or stay-2SG-ACT the.DAT.PL they-DAT.PL

‘What do you say? Do you **do** the emperor’s **command** or do you stay with them?’

(*Vita et martyrium sancti Anastasii Persa* 37.2)

One can hardly observe a semantic contrast between the use of the active and middle voices, when commenting on phrases such as ποιέω ἔκβασιν *poieo ekbasin* ‘to escape’ (*Epistula Pauli ad Corinthios* 1 10.13), ποιέω γάμους *poieo gamus* ‘to make a wedding feast’ (*Evangelium secundum Matthaeum*. 22.2) or ποιέω δεῖπνον *poieo deipnon* ‘to make supper’ (*Evangelium secundum. Lucam* 14.16).

The distinction between the uses of ποιέω *poieo* as a verb of realisation and its prototypical uses as a light verb are minimal or difficult to establish. In my opinion, the general tendency towards analytic constructions throughout the post-classical period may have contributed to the remarkable increase in the use of SVCs (Horrocks 2014, Holton & Manolesou 2010).<sup>12</sup> This kind of choice, involving

<sup>12</sup>It is possible that the evolution of certain SVECs expressing aspectual or diathetic values fol-

the selection of constructions appropriate to a learned register in post-classical texts, is reminiscent of the stylistic tendency that Horrocks (2020) calls the “creative use of syntax”, and which we find especially in high-register Byzantine Greek. In fact, high-register Byzantine Greek was a living language, used creatively by its practitioners, developing its own idiosyncrasies and internal conventions in the process. It would not be inappropriate to compare it, for example, with the highly specialised literary language of the early Greek Homeric tradition, which retained many archaisms but allowed its authentic usage to evolve alongside the constant incorporation of linguistic innovations inherent in the native variants of each period.

Semi-lexicalised constructions, such as SVCs, are linguistic material in which these evolutionary tendencies of the language can be observed most clearly. The progressive blurring of the middle voice and the emergence of SVCs with ποιέω *poieo* ‘to make’, as I have discussed, are likely to have been additional factors to consider.

## 5.2 Edge cases: verbs of realisation

In this section, I discuss some collocations with active ποιέω *poieo* which, although sometimes disregarded as not proper SVCs (Alonso Ramos 2004: 113–115), have the syntactic behaviour of an SV but, unlike prototypical SVs, are semantically complete.

As with SVECs, they have certain combinatorial limitations. To some extent, the verbs of realisation project constructions that are midway between prototypical SVCs and SVECs. However, whereas an SV simply reports the existence of the action denoted by the noun, a verb of realisation indicates that the purpose for which the action exists has been achieved (Alonso Ramos 2004: 113–115).<sup>13</sup>

Unlike support verbs, which are semantically empty, realisation verbs are full: roughly speaking, they mean ‘to fulfil the requirement of something’ and, like support verbs, they produce collocations with their nominal bases. In their syntactic-semantic behaviour they are quite close to some of the SVECs with diathetic or aspectual functions (Mel’čuk 2022). In my opinion, this semantic

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lows a path partially parallel to that of certain auxiliary verbs that are constructed periphrastically such as θέλω, *t<sup>h</sup>elo* ‘to want’, ἔχω, *ek<sup>h</sup>o* ‘to have’, etc. in post-classical Greek (Markopoulos 2009). However, we do not have enough data to speak in canonical terms of grammaticalisation (Butt 2010).

<sup>13</sup>There is a real terminological issue with this type of verb. In addition to the more common term “verbs of realisation”, the term can also be found in the literature as “verbs of fulfillment” (Mel’čuk 2004).

restriction is partly aspectual, since the verb element implies a phase of the action after that of the SV and the noun must therefore refer to a telic action (Gross 1998). The absence of grammaticalisation of these constructions (Butt 2010) also explains why not all the criteria for the formation of an SVEC are necessarily met, e.g. the non-strict co-referentiality between noun and verb in (5).

We have identified borderline contexts that can lead to confusion as to whether the verb is a true SVC, or a verb of realisation, or even a causative verb. The canonical SVC with the collocative ποιέομαι *poieomai* + predicative noun is largely preserved and reconstructed in the corpus of texts belonging to a high-level of speech, which, not by chance, largely coincides with the metaphrastic versions of the *Menologion* of Symeon Metaphrastes and other late *Vitae* of the Palaeologian era shown in (6).<sup>14</sup>

- (6) a. ... μηδέν-α            λόγ-ον            ποιού-μεν-ος            τ-οῦ  
*meden-a*            *log-on*            *poiou-men-os*            *t-u*  
 nobody-ACC.SG word-ACC.SG make-PTCP-NOM.SG the-GEN.SG  
 ταύτ-ας            ἀπωθεῖ-σθαι            τολμῶ-ντ-ος            αἵρεσιάρχ-ου  
*taut-as*            *apoth<sup>h</sup>ei-st<sup>h</sup>ai*            *tolmo-nt-os*            *hairesiarc<sup>h</sup>-u*  
 these-ACC.PL repel-INF            dare-PTCP-GEN.SG heresiarch-GEN.SG  
 βασιλ-έως  
*basil-eos*  
 king-GEN.SG  
 ‘... without paying attention to the Emperor who dares to refuse them’  
 (Vita Stephani Iunioris 30.26)
- b. τ-ὸν δὲ κεκαρωμέν-ην            ..., ἔχ-οντ-α            τ-ῆν  
*t-on de kekaromen-en*            *ekh<sup>h</sup>onta*            *t-en*  
 the. PRT stupefied-PTCP-NOM.SG            have-PTCP-ACC the-ACC.SG  
 διάνοι-αν, λόγ-ον            μὲν μηδέν-α            τ-ῶν  
*dianoi-an, log-on*            *men meden-a*            *t-on*  
 thought-ACC reason-ACC.SG PART no-one-ACC.SG the-GEN.PL  
 ἐκείν-ου λόγ-ων            ποιή-σα-σθαι  
*ekein-u log-on*            *poie-sa-st<sup>h</sup>ai*  
 his-GEN.SG reason-ACC.SG do-AOR-INF.MID  
 ‘He who falls into a deep stupor, ... even if he is mentally lucid, makes no sense of any of his discourses’  
 (Vita sancti Lazari 603.2.38)

<sup>14</sup>In situations of language contact, the metalanguage of cross-linguistic translation is expected to serve as a trigger for the creation of new SVCs (Fendel 2021, Baños & Jiménez López 2018).

In this section, we have seen that when considering an SVC, there are borderline cases that mean that it needs to be defined in very vague terms.

### 5.3 Support-verb-extension constructions and conceptual metaphors

Several explanations have been proposed for the motives underlying the lexical features that characterise collocations. These explanations are generally based on the idea that there is some semantic compatibility between the nominal base and the collocational verb, although this compatibility has been understood in different ways.

One of the most typical and universal ways of creating and explaining the formal renewal of SVCs is the conceptual metaphor (Lakoff & Johnson 1980). SVCs represent a lexical domain in which many of their uses can be captured (Salas Jiménez 2022, 2024). Indeed, some verbo-nominal collocations develop aspectual, see (7), or diathetic, see (8), values, expressing different ranges of fixation and compositionality. The persistence of these values in the development of post-classical Greek proves that any noun that can be reconceptualised as eventive can be metaphorically extended by this kind of SVEC (Fedriani 2016, Tur 2020).

In this sense, the metaphor by which initiating an action is conceptualised as making contact with an object, see (7a–7b), acquires an inchoative aspectual sense:

- (7) a. ὥστε πολέμ-ου μὲν μηδ-ὲν ἔτι ἄψα-σθαι μηδε-τέρ-ους  
*h*oste polem-u men med-en eti *h*apsa-st<sup>h</sup>ai mede-ter-us  
 so.that war-GEN PRT nothing-ACC yet touch-INF no.one-DU-ACC  
 ‘So that neither the one nor the other **made war** [lit. touched war]’  
 (Thucydides, *Histories* 5.14.1)
- b. πρὸς λέοντ-α δορκ-ᾶς ἤ-πτ-ετο μάχ-ης  
*pros leont-a dork-as h*e-pt-eto mach-es  
 against lion-ACC.SG Gazelle.NOM.SG PST-touch-3SG battle-GEN-SG  
 ‘A gazelle **engaged in battle** against a lion’  
 (*Vita et martyrium sancti Anastasii Persa* 5 17.15)

Conversely, the SVECs in (8) correspond to the conceptual pattern by which an object falling (ἐπίπτω *empipto* ‘to fall’) would serve to figuratively encode an inagentive or anticausative event:

- (8) a. ὄψε δέ ποτε βιασ-θεῖς ὑπὸ τ-ῶν πραγμάτ-ων  
*opse de pote biast<sup>h</sup>eis ἕγγο t-on pragmat-on*  
 look PRT ever force-PTCP.PASS by the circumstances  
 ἐν-ε-έπεσ-εν εἰς τ-ὸν νῦν δε-δηλωμέν-ον  
*en-e-pesen eis t-on nyn de-delomen-on*  
 in-PAST-fell-AOR-3SG into the-ACC.SG now PRF-referred-ACC.SG  
 πόλεμ-ον  
*polem-on*  
 war-ACC.SG

‘But later, forced by circumstances, he entered the war [fell into the war] referred to’

(Polybius, *Histories* 14.12.4)

- b. πολλ-ῆ δὲ προθυμί-α περὶ τὴν ὁδοιπορί-αν  
*poll-e<sup>i</sup> de prot<sup>h</sup>ymi-a<sup>i</sup> peri t-en ἠoidopori-an*  
 much-DAT.SG PRT courage-DAT.SG about the.ACC.SG way-ACC.SG  
 χρωμέν-η εἰς νόσ-ον ἐν-έ-πεσ-ε μεταξὺ  
*k<sup>h</sup>romen-e eis nos-on en-e-pes-e metaxy*  
 useing-NOM.SG into illness-ACC.SG in-PST-fell-3SG-ACT while  
 πορευομέν-η  
*poreuomen-e*  
 walking-PTCP-OM.SG

‘She fell ill while walking, having shown great eagerness while walking’

(*Vita et Miracula Sancti Artemii* 2.4.12)

The examples (7–8) show the variability and discontinuity of SVCs in post-classical Greek in terms of discourse levels. From a sociohistorical perspective, the linguistic innovations involved in the survival or creation of new SVCs and SVECs through conceptual metaphors in written texts obey the logic of lexical change. The semantic innovation induced by these metaphors confirms that the behaviour of support verbs forms a distinct linguistic category that helps to represent the structure of the (sub-)event. By observing the functioning of these metaphors, we can conclude that the formation of these predicates can be detected through a formal renewal in the lexicon, thus rejecting, as Butt (2010) demonstrates, the possibility of explaining the changes on the grounds of the strict rules associated with the canonical processes of grammaticalisation (Hopper & Traugott 2003). The existence of SVCs that end up being realised in compounds by univerbation of the type λογοποιέω *logopoieō* ‘to write speeches’

(λόγον *logon* + ποιέω *poieō*) or νομοθετέω *nomot<sup>h</sup>eteo* ‘to make laws’ (νόμον *nomon* + τίθημι *tithēmi*) in post-classical Greek seems to be indicative of the dissolution of compositionality (Pompei 2006). This is consistent with the nature of lexical change that affects any kind of multi-word construction.<sup>15</sup>

In all the cases studied above, we find the survival of SVCs introduced by ποιέομαι *poieomai* and other verbs (δίδωμι *didomi*, λαμβάνω *lambano*, γίγνομαι *gignomai*, etc.), combined with the same predicative nouns as these terms combined with in CG. The frequency of the presence of these elements is significantly higher in our so-called ‘metaphrastic’ period. None of this can be a coincidence. Among other possible explanations, we should not ignore the possibility that their survival is the result of the actualisation of a practice of intralinguistic translation as recently put forward by Lavidas (2022: 94):

Intralingual translation, which is directly related to the diachrony of a language, describes the transfer of a text within one language due to the fact that the development of this language can be divided into two or more periods, for instance, ancient and modern, and can function as evidence of grammatical change.

However, from the understanding of metaphrasis as a kind of intralingual translation, we must be very careful in drawing conclusions. Lavidas is arguing in favour of a ‘translation’ into a modernised form of language. Strictly speaking, it cannot be claimed that these are the kind of metaphrastic transpositions of the 10th century.

In fact, such transpositions are adaptations of a more recent understanding and literary aesthetic that can be called “modern”, but in their formal expression Symeon Metaphrastes chose a more conservative register than the authors of his model texts. It is only by considering this limitation of the scope of the concept of “intralingual translation” that we can make generalisations about the functioning of syntactic or lexical variation in this process of rewriting, in which the most avant-garde literary tendencies recover linguistic uses of learned Greek. In this respect, it is striking that the generic term for the Byzantine activity of rewriting (μετάφρασις *metap<sup>h</sup>rasis*) has among its basic meanings that of inter- and intralingual translation (Signes Codoñer 2014). It is not surprising, therefore,

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<sup>15</sup>In this volume, Pompei & Ricci give an account of the multiple phenomena that affect some of the collocations that undergo univerbation, configuring a typical case of nominal incorporation (Vives Cuesta 2012). In any case, we do not believe that these forms should be understood as authentic morphological compounds, since they do not meet the requirements of idiomaticity and lexicalisation that this type of nominal formation presupposes (Tribulato 2015: 30–33).

that the main SVCs that were in common use in earlier periods predominate in the periods when metaphrastic activity was more widely cultivated by hagiographers.

## 6 Conclusions

The SVCs form a heterogeneous group of productive multi-word expressions in classical and post-classical Greek. Regarding this kind of constructions in the corpus studied (Byzantine hagiography), I have detected a general evolution of the literary genre from a popular (low) koine to a more learned (high) koine, which may have had some direct or indirect influence on the higher frequency of occurrence and type of these collocations as devices of intralingual translation which built new collocations.

However, this partial conclusion needs to be nuanced by the case studies of specific predicative nouns, as we have previously done with εὐχή *euche* and synonyms (Vives Cuesta & Madrigal Acero 2022). The data analysed allow us to verify trends in the general behaviour of these constructions which are compatible with the rewriting procedures detected in Greek literature of the post-classical period, especially in the texts called ‘metaphrastic’, which tend to recover classical linguistic forms that were already fixed in earlier periods of the history of the language and from which a certain variation in the distribution of the constructions can be explained. The analysed data enables verification of trends in the general behaviour of these constructions, which are compatible with the rewriting procedures detected in Greek literature of the post-classical period. This is particularly evident in the texts referred to as ‘metaphrastic’, which aim to recover classical linguistic forms that were already established in earlier periods of the language’s history, and from which a certain variation in the distribution of certain constructions can be explained.

Some SVCs existing in CG remain stable from a formal and syntactic point of view in hagiographic texts of the high level of speech, as can be seen in the case of motion nouns such as πορείαν/ἔκβασιν ποιέω *poreian/ekbasin poieo* (Section 5.1), and partially in the borderline cases of the so-called verbs of realisation θέλημα/λόγον/κέλευσιν ποιέω *t<sup>h</sup> elema/logon/keleusin poieo* (Section 5.2), and even in SVECs conceptualised by means of metaphors with verbs such as ἄπτομαι <sup>h</sup>*aptomai* or ἐπίπτω *emripto* (Section 5.3). Within the corpus, the emergence of new verbo-nominal collocations (SVCs or SVECs) is particularly noticeable in the metaphrastic reworking of older *Lives*.

In short, there is a convergence of sociolinguistic and purely linguistic factors in the life cycle of SVCs in post-classical Greek. In future research, the scope of

these general statements can be refined by studying the diachronic evolution of particular SVCs from CG to the end of the Byzantine period.

## Abbreviations

DO	Direct Object	SVE	support-verb extension
NT	New Testament	SVEC	support-verb-extension construction
NTG	New Testament Greek		

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## **Part IV**

# **Between analytic and synthetic: The syntax-lexicon interface**



## Chapter 8

# Support the sinner not the sin: support-verb constructions and New Testament ethical frameworks

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In this chapter, I consider the development of support-verb constructions in New Testament Greek and the potential exegetical impact of philological developments. I investigate to what extent ἁμαρτάνω *hamartánō* ‘to sin’ and the construction ποιῶ ἁμαρτίαν *poiō hamartían* ‘I commit a sin’ may be considered synonymous and explore how the use of a support-verb construction may have an exegetical impact of distancing sin from sinner. The noun becomes more frequently used, but remains less frequent than the verb. In the New Testament, however, the ratio is 4:1. This increase in the use of the noun over the verb makes sin into a substantive, rather than a process. In doing this, sin can be separated from sinner, made into something which can be removed from them and is not necessarily part of their identity. This move to a support-verb construction with a noun is also evident with the related noun ἁμάρτημα *hamártēma* ‘sin’.

En el presente artículo, se examina el desarrollo de las construcciones con verbo de apoyo en el Nuevo Testamento y el potencial impacto exegético de nuevos avances filológicos. Se estudia el grado en que se puede considerar ἁμαρτάνω *hamartánō* ‘pecar’ y la construcción ποιῶ ἁμαρτίαν *poiō hamartían* ‘cometer un pecado’ como sinónimos, y se analiza cómo del uso de una construcción con verbo de apoyo puede tener el impacto exegético de separar el pecado del pecador. El uso del sustantivo gana frecuencia, pero sin superar al verbo. En el Nuevo Testamento, sin embargo, la proporción es de 4:1. Este aumento en el uso del nombre sobre el verbo hace que se trate el pecado como un sustantivo, más que como un proceso. De esta manera, el pecado puede separarse del pecador, como algo extraíble que no tiene que formar parte de su identidad. Esta tendencia a favor de las construcciones con verbo de apoyo y el sustantivo se aprecia también con el sustantivo relacionado ἁμάρτημα *hamártēma* ‘pecado’.



## 1 Introduction

In this chapter<sup>1</sup>, I consider the development of support-verb constructions in New Testament Greek and the potential exegetical impact of philological developments. My key case study verb is ποιῶ *poiō* ‘to make, do’. In 1 John, for example, both the verb ἁμαρτάνω *hamartánō* ‘to sin’ and the construction ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’ are used. I investigate to what extent these may be considered synonymous, and explore how the use of a support-verb construction may have an exegetical impact in terms of distancing sin from sinner. Support-verb constructions divorce the semantic and morphological roles of the verb used, and therefore allow for a different relationship between agent and action. This allows for the construction of Christian personhood distinguishing between agent and action, sinner and sin, which has significant moral implications. There may also be a diachronic difference in how the gospels portray Jesus differentiating between the two, how epistles reflect on this, and how Christian ethics beyond the New Testament deal with the topic more broadly. In blending philological and theological approaches to the same material, I therefore consider the potential exegetical impact of improving our philological understanding of the New Testament. Relatively little work has so far been done on support verb constructions in the New Testament, and this chapter therefore aims to add to both the philological discussion, and its application to New Testament exegesis.<sup>2</sup>

## 2 Definition

For the purpose of this chapter, I start with the simplicity of Salkoff’s definition of support-verb constructions (SVCs henceforth): “The principal feature of the support verb construction is that the verbal slot in the sentence is occupied by the combination of a verb,  $V_{sup}$ , plus a noun,  $N_{sup}$ ” (Salkoff 1990: 244). Nagy et al. (2013: 329) describe them as light verbs in multi-word expressions, where the verb functions as the syntactic head while the semantic head is the noun (see also Kamber 2008 for the German background to the concept). This splits process and product, a distinction which will be important to this chapter. Stefan Langer (2005) makes this distinction clear in his work on a general definition for SVCs which includes demonstrating the semantic emptiness, potential interchangeability, and removability of the verb. Gross (1984: 275) encourages us to consider

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<sup>1</sup>The dataset is accessible here: <http://dx.doi.org/10.5287/ora-dqjeo65n5>.

<sup>2</sup>Jiménez López has done some work in this area, but it does not deal with sin specifically (my focus here) and in part deals with the Latin translation of the New Testament, with which I deal with further in Ryan (2025). See Jiménez López (2017, 2018), Baños & Jiménez López (2022).

phrasal lexical entries, that is nouns in their verbal contexts, and not just individual words. In this chapter, I examine the ramifications of choosing an SVC over a simplex verb for the exegetical impact of the text. Stroik (2001: 363) argues that light verbs (his term for what I am calling support verbs) have stronger phonetic and semantic justification than many SVC definitions allow, at least in English; I aim to demonstrate that with regards to sin in Judaeo-Christian thought, there is a relationship between morphology / syntax and theology which is predicated on the light verb enabling a particular more pragmatic relationship between agent and action, rather than necessarily a phonetic or semantic one.

I am working with a model of a periphrastic construction involving a semantically empty verb with a deverbal noun carrying the semantic weight, set against semantically equivalent verbs. My one modification would be that I will also consider combinations where the  $N_{\text{sup}}$  is replaced by an adjective functioning substantively; this is particularly relevant with the adjectives *κακός* *kakos* ‘bad’ and *καλός* *kalos* ‘fine / beautiful’. It is beyond the scope of this chapter to explore the use of adjectives as substantives in the New Testament more generally, but it is a frequent feature of New Testament Greek.<sup>3</sup> In addition to the definition of an SVC, for the purpose of this article there also needs to be a verb which could be semantically equivalent, but potentially not pragmatically equivalent. This chapter will consider what some of the pragmatic differences are, a topic well-discussed by Cappelle & Travassos (2022: 74).

### 3 My corpus and its limitations

This chapter is confined to the use of SVCs in the New Testament. Depending on the edition and means of counting, there are 138,162 words in the Greek New Testament. This comprises 5,437 different words, only 319 of which occur more than 50 times, and account for around 80% of the total word count. 3,465 are New Testament *hapax legomena*, and 8 are full corpus *hapax legomena*.<sup>4</sup> Given

<sup>3</sup>For the standard introduction to this given to many beginners, see Duff & Wenham (2008), chapter 5.

<sup>4</sup>In this chapter, my data are mainly drawn from the *Thesaurus Linguae Graecae*. For the basic information about total word counts, however, I have used the standard Greek editions as made available in the *Logos Bible software*. The *Thesaurus Linguae Graecae* gives a total word count for the Greek New Testament of 137,938, including 6,432 lemmata, which is significantly different to the usual figures quoted in New Testament studies. This is in part due to the texts used in the *Thesaurus Linguae Graecae*, and the way in which it distinguishes and counts words. Of the 8 *hapax legomena*, six are names, and only two are true New Testament *hapax legomena*: οἰκουργός, -ὸν *oikourgós*, -όν ‘homemaker’ and πραῦπαθία, -ας, ἡ *prau̓pathía*, -as, *hē* ‘gentleness of temper’. Despite its prolific word-building, very few of the words in the Greek New Testament remain unquoted elsewhere.

how relatively few frequently used words there are in the New Testament, that 138,162-word corpus is large enough to analyse in terms of patterns, with some caveats.

Any analysis of the New Testament must accept its significant limitations as a corpus. It is an arbitrary collection of texts not formally canonised until the councils of Hippo (AD 393) and Carthage (AD 397). It is constructed on theological grounds rather than linguistic ones, and is written largely by authors whose first language was not Greek (Luke is the major exception, with Luke-Acts accounting for roughly 25% of the whole corpus). The Greek may broadly reflect the versions of contemporary vernaculars, but this is still an awkward collection of texts with which to work on linguistic grounds. New Testament linguistics faces many challenges when trying to extrapolate general points about Greek from this relatively small and disparate sample. The geographical, temporal, and linguistic backgrounds of the writers are sufficiently diverse as to make it in many ways an unrepresentative corpus on linguistic terms.<sup>5</sup>

As a simple example, the future tense is noticeably infrequent in the New Testament, and therefore often not well-taught. One would not, however, want to consider Greek a language without a way to express the future, or the New Testament as a text wherein eschatology is unimportant.<sup>6</sup> The future is talked about in different ways, including periphrastic phrases which, being multi-word phrases themselves, begin to lead us into the territory of SVCs.

Although the corpus may be limited and awkward, both in size and nature, it does demonstrate some trends, and once it became canonised as a closed corpus of religiously significant texts, the language in which it was written underpinned the development of a new religion and new forms of religious expression. By fossilising the New Testament to preserve the text's religious importance, therefore, the techniques with which it expresses some topics become significant in new ways. It is this relationship between the development of the expressions and their theological impact which I investigate in this chapter.

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<sup>5</sup>For a general introduction to New Testament Koine as conceived in a great Greek context, see Georgakopoulou & Silk (2009). Horrocks (2010: 147–152) deals in particular with New Testament Koine; see pp. 147 and 149 for his discussion of it as a standard language under the Roman administration in particular. I challenge some of the standardisation of New Testament Koine as a form in Ryan (2024). Tronci (2018: 243) reiterates the point that many relevant linguistic analyses are synchronic, and the New Testament needs special attention as a corpus of linguistically disparate texts.

<sup>6</sup>See Ryan (2024) on the teaching of the future tense and the ideological impact of textbook design. In terms of the lack of frequency, there are, for example, only twelve future participles and five future infinitives in the New Testament.

## 4 Support-verb constructions in the New Testament

Sometimes it is possible to see clear idiolectal differences between New Testament authors, even in matters as simple as Mark's use of *καί* *kai* 'and' and John's use of *οὖν* *oun* 'so, therefore'. In the case of SVCs, however, the spread appears to be broader, governed by contextual criteria beyond individual authorship. I demonstrate how these criteria include the use of linguistic structures to sculpt a new theological framework. This involves considering differences in the locus of agency between various kinds of verbs, and support-verb constructions.

Of the 571 total uses of *ποιῶ* *poiō* 'to make, do' in the New Testament, 50 meet my criteria for being interpreted as SVCs. These are a mix of active and middle verbs, predominantly active (16 middle). They are found in all four gospels and a further fourteen texts. A further 42 could be interpreted as SVCs if the substantive use of adjectives is included, including 20 related to doing good or bad. These lead to 9–12% of uses of *ποιῶ* *poiō* 'to make, do' in the New Testament functioning as a support verb, according to my definition. This is a considerable proportion of the uses of *ποιῶ* *poiō* 'to make, do' in the New Testament, which is sufficiently significant to be worthy of further investigation.

### 4.1 Choosing examples

When searching for collocations, I considered only examples where the verb was within five words of the noun. This allows for particles, articles or other modifiers, whilst acknowledging that, in order to be an SVC, the noun and verb needed to be in close proximity. I then checked each example manually, to ensure that these were phrases and not merely words in proximity but, for example, across sentence barriers.

My key phrase in this article pertains to sin, but I also consider other related terms and phrases, and ways in which the verb *ποιῶ* *poiō* 'to make, do' might be used in an SVC. I do not, however, count examples such as 'bearing fruit' (*ποιῶ* *καρπὸν* *poiō* *karpon* 'to bear fruit') as an SVC, as, although there is a verb (cf. *καρποφορεῖ* *karphorei* at NT Matthew 13:2), both the verb and the SVC are only used eight times each in the New Testament, which would be too few on which to base any argument. I outline the relevant numbers and examples further below.

### 4.2 The Septuagint as scene-setting

*ποιῶ* *poiō* 'to make, do' is used along with *ἁμαρτία* *hamartia* 'sin' in order to form a multi-word verb in the Septuagint. Written around 300 years before the New

Testament, it uses an older form of Greek, which is itself Atticising, and therefore occasionally archaic. The New Testament quotes the Septuagint directly, paraphrases it, and remodels ideas from it, as well as being generally influenced by it and the Jewish cultural language underlying it. Elements of New Testament Greek can therefore display archaising tendencies in keeping with the Septuagint, rather than being reflective of their own linguistic context.

Multi-word verbs do have a role in the Hebrew of the Old Testament. One might, therefore, consider that support verbs in the New Testament grow in part from the Hebrew influence on the Septuagint, but this does not seem to be the case. Most distinctive is the number of relative clauses using ποιῶ *poiō* ‘to make, do’ to refer back to ἁμαρτία *hamartia* ‘sin’, in some senses a ‘split’ SVC: OT Numbers 5:3, OT Deuteronomy 9:21, OT 3 Kings 16:19, OT 4 Kings 17:22, OT Psalms 8:13, OT Ezekiel 18:14, and OT Susanna 52:6. While there are lots of periphrastic phrases, particularly regarding the formulaic language of sacrificing cows / burnt offerings, they are not SVCs. Only OT Tobit 12:10, in the *Codex Sinaiticus*, fulfils my criteria for an SVC (see 1).

- (1) οἱ ποιοῦντες ἁμαρτίαν καὶ ἀδικίαν πολέμοι  
*hoi poiouñtes hamartían kai adikían polémioi*  
 the.NOM do.PRS.PTCP.NOM sin.ACC and injustice.ACC enemies.NOM  
 εἰσιν τῆς ἐαυτῶν ψυχῆς  
*eisin tēs heautōn psukhēs*  
 be.PRS.3PL theGEN.SG their.GEN.PL souls.GEN.SG

‘Those committing sin and injustice are enemies of their souls.’

(OT Tobit 12:10)

This pre-empts the similar relationship drawn between ἁμαρτία *hamartia* ‘sin’ and ἀδικία *adikía* ‘unrighteousness’ discussed below, with particular reference to NT 1 John. It also follows the other conventions seen in New Testament SVCs in this context, that is, substantive participle of the light verb followed by the relevant noun. A textual variation replaces οἱ ποιοῦντες ἁμαρτίαν *hoi poiouñtes hamartían* ‘those committing a sin’ with οἱ δὲ ἁμαρτάνοντες *hoi dè hamartánontes* ‘those sinning’, demonstrating the closeness of the relationship between the SVC and the simplex verb in the minds of those copying out this text.

Verbs other than ποιῶ *poiō* ‘to make, do’ are also available for rendering description of sin in the Septuagint. There are 25 examples where the verb ἁμαρτάνω *hamartánō* ‘to sin’ and the noun ἁμαρτία *hamartia* ‘sin’ are used within the same phrase. 22 of these, however, are in subordinate clauses where the verb refers back to the noun in fairly formulaic phrases, and 12/22 examples are in Leviticus (see (2)), further limiting the construction to particular contexts.

- (2) ὁ ἱερεὺς περὶ τῆς ἁμαρτίας αὐτοῦ, ἧς  
*ho hiereüs peri tēs hamartías autoũ, hēs*  
 the.NOM priest.NOM about the.GEN sin.GEN he.GEN REL.GEN  
 ἥμαρτεν  
*hēmarten*  
 sin.AOR.IND.3SG

‘The priest... about his sin, sin which he had sinned.’

(OT Leviticus 5:10=5:13)

Indeed, 17/25 are from the Pentateuch, which very much suggests a specific linguistic and theological context for the phrasing, linked both to the Greek of those specific books, and to their significance within Judaism. Only three are used (see (3) to (5)) in any sense which could be called inflecting the topic (unnecessarily repeating multiple forms of a lexical root):

- (3) Ὑμεῖς ἥμαρτήκατε ἁμαρτίαν μεγάλην  
*Humeis hēmartēkate hamartían megálēn*  
 you.NOM sin.PRF.IND.2PL sin.ACC great.ACC

‘You have sinned a great sin’

(OT Exodus 32:30)

- (4) ἡμάρτηκεν ὁ λαὸς οὗτος ἁμαρτίαν μεγάλην  
*hēmártēken ho laòs hoũtos hamartían megálēn*  
 sin.PRF.IND.3SG the.NOM people.NOM this.NOM sin.ACC great.ACC

‘This people have sinned a great sin’

(OT Exodus 32:31)

- (5) Ἄμαρτίαν ἥμαρτεν Ἱερουσαλημ  
*Hamartían hēmarten Ierousalēm*  
 sin.ACC sin.AOR.IND.3SG Jerusalem.NOM

‘Jerusalem sinned a sin’

(OT Lamentations 8:1)

Both Exodus examples use verbs in the perfect tense, delineating the participants as sinners as much as the sin being committed. Both also use the adjective ‘big’, which may mean that the repetition is as much about contributing to the sense of importance and enormity, not as a linguistic trope. The example from Lamentations is again atypical, being poetic, and anthropomorphising a town, Jerusalem. It does not seem, therefore, as though this verb plus noun repetition is a standard feature of the Septuagint, so much as being available for specific uses, namely relative clauses and emphasis within the Pentateuch.

### 4.3 Voice

Jiménez López (2016) argues that SVCs use the middle voice of ποιῶ ποιῶ ‘to make, do’. In the New Testament, this is true, on my criteria, in only 16/50 examples. The middle voice examples deal with memory, prayer, nouns derived from βάλλω βάλλω ‘to throw’, causing an increase, or making a journey. The examples are spread across authors (11/27 texts), but are restricted to specific contexts. Eight are in the first chapter of a text, and seven of those eight within the first four verses, in phrases which seem to suggest formulaic idioms rather than free linguistic choice (see (6)).<sup>7</sup>

- (6) Τὸν μὲν πρῶτον λόγον ἐποιησάμην περὶ πάντων  
 Tòn mèn prōton lōgon epoiēsámēn perì pántōn  
 the.ACC PRT first.ACC account.ACC do.AOR.IND.1PL about everything.GEN

‘I made the first account about everything...’

(NT Acts of the Apostles 1:1)

This example does not have an obvious corresponding verb apart from λέγω λέγῳ ‘to speak, say, recount, tell’, which does not cover quite the same remit. While it therefore meets my definition of an SVC in terms of using ποιῶ ποιῶ ‘to make, do’ as a semantically light verb along with a relevant noun, it is missing the equivalent verb for this context. Given the novelty and status Luke is trying to create for himself in this introduction, however, the ease with which the phrase can be understood, and the clearly “light” use of ποιῶ ποιῶ ‘to make, do’, I would count it as an SVC, but an example which demonstrates that there is a spectrum of usage in the New Testament, and not a clear polarisation between SVCs and other constructions.

More clearly under the category of SVCs with middle verbs are 1 Timothy 2:1 and Romans 1:9 (see (7) and (8) respectively).

- (7) Παρακαλῶ οὖν πρῶτον πάντων ποιεῖσθαι δεήσεις,  
 Parakalō̄ oūn prōton pántōn poieísthai deēseis,  
 urge.PRS.IND.1SG PRT first.ADV all.GEN do.PRS.INF.MID prayers.ACC

<sup>7</sup>The full list is NT Acts of the Apostles 1:1, NT Ephesians 1:16, NT Philippians 1:4, NT 1 Timothy 2:1, NT 1 Thessalonians 1:2, NT 2 Peter 1:10, NT 2 Peter 1:15. Throughout this chapter I put the relevant verb form in bold with underline, and underline any nouns joined with it, so that readers less familiar with Greek can identify constructions. All translations from the New Testament in this chapter are my own. They are intended to support understanding of the Greek, not as elegant translations in their own right.

προσευχάς, ἐντεύξεις, εὐχαριστίας  
*proseukhás, enteúxeis, eukharistías*  
 entreaties.ACC petitions.ACC thanks.ACC

‘So I urge you first of all to make prayers, entreaties, and petitions, and give thanks...’

(NT 1 Timothy 2:1)

(8) ὡς ἀδιαλείπτως μνηΐαν ὑμῶν ποιῶμαι  
*hōs adialeíptōs mnēian humōn poiōmai*  
 how unceasing.ADV remembrance.ACC YOU.GEN do.PRS.IND.1SG

‘...how I unceasingly make a remembrance of you...’

(NT Romans 1:9)

At first glance, therefore, it seems as though ποιῶ ποιῶ ‘to make, do’ is used in typical SVCs, in the middle voice, as we might expect, but infrequently, with some variation. Voice in the New Testament is a contested topic, remaining one of the key issues for debate among those dealing with New Testament linguistics (see e.g. Tronci 2018, Black & Merkle 2020). ποιῶ ποιῶ ‘to make, do’ used in the active voice as a support verb becomes more usual as we move into later Greek, however, and its New Testament use in this form is therefore not unexpected.<sup>8</sup> Given that ἀμαρτάνω *hamartánō* ‘to sin’ is only used in the active voice in the New Testament, it also makes sense for the replacement SVC to be expressed in the active voice, not least given the necessarily transitive status of an SVC, and the potentially more intransitive nature of the middle voice.<sup>9</sup> I explore some potential ramifications of voice differences later in this chapter, but at this point, it is enough to say that I do count active uses of ποιῶ ποιῶ ‘to make, do’ in the New Testament as eligible for forming SVCs, albeit demonstrating a difference in the range of uses available in the active to the middle voice.<sup>10</sup> This means that,

<sup>8</sup>See Cock, Alwies (1981) on voice choice with ποιῶ ποιῶ ‘to make, do’. This is also linked to the phenomenon of aorist middle endings falling out of use / merging with aorist passive endings noted by Horrocks (2010: 103) and Tronci (2018: 251–252). Further work on this area can also be found in Vives Cuesta & Madrigal Acero (2022).

<sup>9</sup>See Tronci (2018: 245) on ἀμαρτάνω *hamartánō* ‘to sin’ as active only, and p. 249 on transitivity.

<sup>10</sup>Jiménez López (2021) also writes about γίγνομαι *gígnomai* as the lexical passive of ποιῶ ποιῶ ‘to make, do’ in support-verb constructions. There is only one example in the New Testament where γί(γ)νομαι *gí(g)nomai* ‘to become’ could be said to be taking this role with regard to sin, however, which is NT Romans 7:13. This is not a clear case, given the more predicative nature of the statement. In terms of committing sin, a passive expression using γί(γ)νομαι *gí(g)nomai* ‘to become’ is not found. This means that there remains an agent of sin throughout the language around ἀμαρτία *hamartia* ‘sin’ in the New Testament, but, I suggest, this agent is also held at a

for the purposes of this chapter, ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’ is considered an SVC. My specific context is that of committing a sin, and the exegetical and ethical impact of using ποιῶ *poiō* ‘to make, do’ in this way.

#### 4.4 Putting ποιῶ *poiō* ‘to make, do’ as part of a support-verb construction in context

Before turning to sin, however, I further define some of the aspects of ποιῶ *poiō* ‘to make, do’ and related terms as SVCs and similar in the New Testament, notably word order, negation, and the potential for plural head nouns. Word order is relatively consistent in SVCs using ποιῶ *poiō* ‘to make, do’ in the New Testament. In only four examples does the verb occur before the noun. Three of those are in the formula πᾶς ὁ ποιῶν τὴν ἁμαρτίαν *pās ho poiōn tēn hamartían* ‘everyone who commits a sin’ in John / NT 1 John, where πᾶς *pās* ‘everyone’ + article + participle is such a stylistic pattern that this formula seems to override the SVC’s internal syntax.<sup>11</sup> The other use is NT 1 Timothy 2:1, quoted above, where the verb governs a short catalogue of nouns, which follow neatly in order. In all other examples, the verb directly follows the noun; the only words which might intervene are descriptions of the noun (e.g. possessive pronouns, prepositional phrases, and adjectives), or negations of the verb.<sup>12</sup> In each of the negative cases (NT 1 John 3:9, NT 1 Peter 2:22, NT Romans 13:14, the verb is negated with the adverb (two veridical, one non-veridical), and not any of the more complex syntactical elements described by Fendel (2023: 7–8) in her work on negating support verb constructions. This strengthens the sense of the verbal phrase, with the noun syntactically subordinated to the verb in the SVC, rather than the noun being negated. None of these patterns are specific to the voice of the verb, however, suggesting that the active and middle do work similarly in support-verb constructions in the New Testament.

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distance from the sin by the very form of the support-verb construction. The de-agentivisation talked about by Jiménez López is not needed, because the agency has already been reduced by the use of a support-verb construction.

<sup>11</sup>Examples include: NT 1 John 2:29 πᾶς ὁ ποιῶν τὴν δικαιοσύνην *pās ho poiōn tēn dikaiosúnēn* ‘everyone who acts justly’ – an SVC), NT 1 John 3:4 Πᾶς ὁ ποιῶν τὴν ἁμαρτίαν καὶ τὴν ἀνομίαν ποιεῖ *Pās ho poiōn tēn hamartían kai tēn anomían poiei* ‘Everyone who commits a sin also commits lawlessness’, NT 1 John 4:7 καὶ πᾶς ὁ ἀγαπῶν ἐκ τοῦ θεοῦ γεγέννηται *kai pās ho agapōn ek tou theou gegennētai* ‘Everyone who loves has been begotten from God’, and NT 1 John 5:1 Πᾶς ὁ πιστεύων ὅτι Ἰησοῦς ἐστὶν ὁ Χριστὸς *Pās ho pisteuōn hōti Iēsoūs estin ho Khristòs* ‘Everyone who believes that Jesus is Christ’, to give a representative sample from 1 John.

<sup>12</sup>See Fendel (2023: 4) on this discontinuous aspect of SVCs.

Only three of the New Testament SVCs with ποιῶ *poiō* ‘to make, do’ feature plural head nouns (NT 1 Timothy 2:1, NT James 5:15, NT Luke 5:33).<sup>13</sup> One of these refers to sin, the other two to prayers. Prayer is also referred to singularly (NT Philippians 1:4), but in general, plural prayers standing as a collective concept is not peculiar (‘our thoughts and prayers are with you’). Of the 18 uses of δέησις *dēēsis* ‘prayer’ in the New Testament, 8 are plural, and the only example of δεήσεις *dēēseis* ‘prayers’ not in an SVC is the NT Letter to the Hebrews 5:7, following on from a Septuagint quotation and so glossing archaising Greek rather than reflecting natural New Testament Koine.

The plural in James 5:15 may seem awkward (see (9)).

- (9) κἂν ἁμαρτίας ἦ πεποιηκώς, ἀφεθήσεται  
*kān hamartías ē pepoiēkōs aphetēsetai*  
 even.if sins.ACC be.PRS.SBJV.3SG do.PRF.PTCP.NOM forgive.FUT.PASS.3SG  
 αὐτῷ  
*autō*  
 he.DAT

‘Even if he has committed sins, he will be forgiven’

(NT James 5:15)

The majority (111/173) of examples of ἁμαρτία *hamartia* ‘sin’ in the New Testament are plural. The question might in fact be why all the rest of the examples in SVCs are singular, accounting for 7/27, or nearly a quarter of all the uses of ἁμαρτίαν *hamartían* ‘sin’ in the accusative singular.<sup>14</sup> There may be something formulaic about the phraseology of committing a sin developing in the New Testament, particularly as three of these phrases occur within one chapter of one letter (NT 1 John 3). In addition, the use of the singular makes sin specific, allowing for a clear example of an individual instance of sin being committed by an individual person, rather than as a general way of life. This begins to build a picture of a distinctive sinner committing distinctive sin, and not of general ethical sweeps. Within the parameters of permissible variation outlined by Fendel, however, there is very little relevant in New Testament SVCs. The sample may be small compared with the size of the corpus, but the construction seems to be relatively formulaic and context specific (Fendel 2023: 4–5). How, therefore, is it used with reference to sin?

<sup>13</sup>On pluralising head nouns as a feature of SVCs, see Fendel (2023: 4).

<sup>14</sup>The other references are: NT John 8:34, NT 2 Corinthians 5:21 (x2), NT 1 Peter 2:22, NT 1 John 3:4, NT 1 John 3:8, NT 1 John 3:9.

## 5 Committing Sin

The verb ἁμαρτάνω *hamartánō* ‘to sin’ is attested 26,518 times in the *Thesaurus Linguae Graecae* corpus. It initially refers to a physical missing of a mark with a bow and arrow, but by Christian times it refers to the process of sinning. The meaning changes from literal mistake to metaphorical error to moral fault. In the standard lexicon of Classical Greek, *Liddell-Scott-Jones*, we find ‘miss the mark... fail of one’s purpose... go wrong... do wrong... err... sin’ (Liddell et al. 1996). In Muraoko’s lexicon of the Septuagint, this becomes ‘act sinfully... commit a sin... fail to be available’, which already emphasises both the moral quality of the term and its potential periphrastic expression (Muraoka 2009). In the standard New Testament lexicon, *A Greek-English lexicon of the New Testament and other early Christian literature* (BDAG), we find ‘to commit wrong, to sin’, and only further down the entry any downgraded reference to its earlier physical meaning (Arndt et al. 2000). As a physical term, its remit is very limited and so, unsurprisingly, we find it used relatively infrequently. As it becomes more metaphorical, its usage increases.<sup>15</sup>

The distribution of the verb begins to form more of a pattern when considered in the light of its related nouns. The noun ἁμαρτία *hamartia* ‘sin’ has a very different distribution. There are 44,868 examples attested in the *Thesaurus Linguae Graecae* corpus. The highest frequencies by author and text are again all Christian contexts, notably John Chrysostom and the catena to the New Testament. Overall, it is used 1.68 times for every use of the verb.

In what follows, I aim to demonstrate why the SVC formulation provides a morpho-syntactic framework to carry a theological point demarcating Christian ethics as different to other ethical systems, in distinguishing the product of an action from its producer.

Homer does not use the noun at all. In all other pre-Christian authors I have evaluated, the verb is more common than the noun. A few examples are given in Table 1.

I chose these authors as representative of genres where wrongdoing is discussed (drama, forensic oratory, philosophy). In the case of Lucian and Plutarch,

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<sup>15</sup>It is most commonly used by John Chrysostom, the fourth-century Early Church Father. That is true, however, of most of the lemmata in this lexical group, and further work is needed to remove disproportionately over-represented authors such as Chrysostom from samples, not least because his much later date also means that his language represents a different phase in the development of Greek. I discuss the diachronic lexical development of the Greek terms used in this chapter further in my forthcoming monograph (Ryan 2025), but further discussion of lexical aspects is largely beyond the scope of this chapter.

Table 1: Ratio of uses of the noun ἁμαρτία *hamartia* ‘sin’ to the verb ἁμαρτάνω *hamartánō* ‘to sin’ in 10 Greek authors

Author	Century	Genre	Noun : verb
Aeschylus	5th BC	Tragedy	0.31:1
Sophocles	5th BC	Tragedy	0.18:1
Euripides	5th BC	Tragedy	0.33:1
Plato	5th - 4th BC	Philosophy	0.16:1
Lysias	5th - 4th BC	Forensic oratory	0.07:1
Isocrates	5th - 4th BC	Forensic oratory	0.08:1
Demosthenes	4th BC	Forensic oratory	0.1:1
Aristotle	4th BC	Philosophy	0.49:1
Plutarch	1st AD	Various but contemporary	0.26:1
Lucian	1st AD	Various but contemporary	0.07:1

they are roughly contemporaneous with the gospel writers, reflecting other varieties of Koine used at the time.<sup>16</sup> In addition, the older texts represent examples of the Atticising style which both the Septuagint and New Testament sometimes emulate. While there is variation in the distribution, the verb remains more common, and there is broad consistency between genres.

The distribution only inverts once we look at a Judaeo-Christian context. In the New Testament, the noun is four times as common as the verb, which reverses all the figures above, and is significantly different from the whole corpus ratio of 1:1.68.<sup>17</sup> There is a clear shift in emphasis from verb to noun.

I suggest that the increase in the use of the noun over the verb makes sin into a thing, not a process. In so doing, sin can be separated from sinner, made into something which can be removed from the agent. This means the sin is not necessarily part of the sinner’s identity, which allows for a human personhood that is not inherently sinful so much as capable of committing sins. This leaves people as ultimately good (God-created), but flawed, and so capable of sinning but of being forgiven and redeemed. It also allows for Jesus to be human and yet sinless, as sin is not inherently tied to human nature, but to human action.

This may also partly inform the voice of the support verb. Given the potential self-involvement of the middle voice, it may cast a self-referentiality into sinning

<sup>16</sup>See Horrocks (2010) for a broad categorisation of types of Koine.

<sup>17</sup>For reference, our top contributor John Chrysostom, uses ἁμαρτία *hamartia* ‘sin’ 1.46 times for every use of ἁμαρτάνω *hamartánō*, so below the corpus average, but before the pre-Christian average.

which would be at odds with the distinction between sin and sinner. The balance of focus between sinner, sin, and anyone sinned against is already obvious in the use of objects with the different verbs. ἀμαρτάνω *hamartánō* ‘to sin’ can be directed towards a recipient; people can be sinned against. About 1/5 uses in the New Testament take a prepositional phrase, with seven examples of εἰς *eis* ‘into’, one of ἐπί *epí* ‘upon’, and two of πρὸς *prós* ‘towards’.<sup>18</sup>

ποιῶ ἀμαρτίαν *poiō hamartían* ‘to commit a sin’, on the other hand, never includes a person sinned against. This is partly due to the fact that the verb already has a direct object (ἀμαρτίαν *hamartían* ‘sin’), but a prepositional phrase could still have been used. The focus is on the fact that someone is sinning, not that sin might be causing a problem (e.g. see (10 to (12))).

- (10) Πᾶς ὁ ποιῶν τὴν ἁμαρτίαν καὶ τὴν  
*Pās ho poiōn tēn hamartían kai tēn*  
 every.NOM the.NOM do.PRS.PTCP.NOM the.ACC sin.ACC and the.ACC  
 ἀνομίαν ποιεῖ  
*anomían poieĩ*  
 lawlessness.ACC do.PRS.IND.3SG

‘Everyone who commits a sin also commits lawlessness’

(NT 1 John 3:4)

- (11) ὁ ποιῶν τὴν ἁμαρτίαν ἐκ τοῦ διαβόλου  
*ho poiōn tēn hamartían ek toũ diabolou*  
 the.NOM do.PRS.PTCP.NOM the.ACC sin.ACC from the.GEN devil.GEN  
 ἐστίν  
*estín*  
 be.PRS.IND.3SG

‘The one who commits a sin comes from the devil’

(NT 1 John 3:8)

- (12) Πᾶς ὁ γεγεννημένος ἐκ τοῦ θεοῦ  
*Pās ho gegennēmenos ek toũ theoũ*  
 every.NOM the.NOM bear.PRF.PTCP.PASS.NOM from the.GEN god.GEN  
 ἁμαρτίαν οὐ ποιεῖ  
*hamartían ou poieĩ*  
 sin.ACC NEG do.PRS.IND.3SG

‘Everyone born of God does not commit sin’

(NT 1 John 3:9)

<sup>18</sup>Note that πρὸς *prós* ‘towards’ only describes the difference between mortal and venial sin, in NT 1 John 5:16, rather than sin against an individual.

The transitivity of sinning is less marked in the SVC. As a move away from the verb ἁμαρτάνω *hamartánō* ‘to sin’ and any object, it may also reflect aspects of God’s omnipresence in the New Testament. Just as miracles are often expressed in the passive with no agent (the so-called divine passive, where God is the assumed agent)<sup>19</sup>, so sin requires no expressed recipient as it is ultimately always God against whom we are sinning. The production of sin is the problem, not the consequence of the sin against any one person, but against God in general. The construction ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’ appears to be used specifically to focus attention on production, but not necessarily agency. Where there is a third party affected by sin, the simplex verb is used. The SVC is only used where the affected party is not referred to. This makes what in Christian terms is a fundamentally relational process, sinning against someone (certainly in Luke, where ¾ uses are followed by εἰς *eis* ‘into’), into an individualised one. It allows for reflection on the space between causation and impact.

My reading of this distinction between SVC and simplex verb can be demonstrated with some specific examples. Only 8 of the 173 uses of ἁμαρτία *hamartía* are within a five-word proximity of the verb ποιῶ *poiō* ‘to make, do’ to create a meaningful phrase. Three of these are in the NT 1 John 3 examples given above, a text where the act of sinning is a running theme, echoing the use at NT John 8:34. 10/43 uses of the verb ἁμαρτάνω *hamartánō* ‘to sin’ are also used in 1 John, and four of these ten are in chapter 3, making 1 John the densest use of sin language in the New Testament. In just the first ten verses, there are six examples of πᾶς ὁ *pās ho* ‘the one who’ + participle, and another three with just the article and participle. There is a rhythm, fluency, syllogistic undertone, potentially formulaic shape, and clear stylistic unity to this passage, which focusses in on the process of sin in relationship to God.

The ease with which Greek moves between lexically related items, however, potentially undercuts my argument about the distinction between sin and sinner. In NT 1 John 3:7, we read: ὁ ποιῶν τὴν δικαιοσύνην δίκαιός ἐστιν, καθὼς ἐκεῖνος δίκαιός ἐστιν. *ho poiōn tēn dikaiosúnēn díkaiós estin, kathōs ekeĩnos díkaiós estin*; ‘The one who does something just is just, just as that one is just’. Here, action and character are directly linked. A verse earlier, however, and sin has been described in very different terms: πᾶς ὁ ἐν αὐτῷ μένων οὐχ ἁμαρτάνει· πᾶς ὁ ἁμαρτάνων οὐχ ἑώρακεν αὐτὸν οὐδὲ ἔγνωκεν αὐτόν. *hamartánei; pās ho hamartánōn oukh heōraken autōn oudè égnōken autón* ‘Everyone who remains in him does not sin; everyone who sins has neither seen him nor come to know him’, NT 1 John 3:6. Here, the verb ἁμαρτάνω *hamartánō* ‘to sin’ is used and

<sup>19</sup>For example, NT Galatians 5:18, and NT Ephesians 3:19.

not the SVC, and there is no equation with the character of the person, but with what else the person has or has not done (remained / seen / known). The relationship between the two verses points to a difference between sin and other actions, but also to the lack of availability of the SVC in the context where there is the potential for the action to be equated with the character of the agent.

Differentiating New Testament ethics from its classical precursors also resulted in significant vocabulary coinage and repurposing. I now turn to consider my hypothesis about the impact of the increasing use of the noun ἁμαρτία *hamartia* ‘sin’ in the context of other words and phrases.

### 5.1 το ἁμάρτημα *to hamártēma* ‘sin’

The -μα *-ma* suffix creates a noun representing the product of the verb.<sup>20</sup> Again, the word becomes steadily moralised as it develops. In *Liddell-Scott-Jones*, we find ‘failure, fault’, in Muroako ‘sinful act...failure to achieve an aim...penalty incurred for committing a sin...slaughtered animal offered to atone’, and in *A Greek-English lexicon of the New Testament and other early Christian literature* (BDAG) ‘sin, transgression’ (Liddell et al. 1996, Muraoka 2009, Arndt et al. 2000). In terms of Christian sin, therefore, this noun has two key uses. It differentiates Christian ethics from the language of Aristotle, where ἁμαρτία *hamartia* ‘sin’ has a very specific Greek cultural remit, and it firmly represents sin as the consequence of action, divorcing the action from the agent, and potentially from the process.

There are, however, only four examples of ἁμάρτημα *hamártēma* ‘sin’ in the New Testament (out of 14,727 attested in the *Thesaurus Linguae Graecae*), only one of which is used with ποιῶ *poiō* ‘to make, do’ (see (13)).

- (13) πᾶν ἁμάρτημα ὃ ἐὰν ποιήσῃ ἄνθρωπος ἐκτὸς  
*pān hamártēma hō eàn poiēsē anthrōpos ektòs*  
 every.NOM sin.NOM REL.ACC if do.AOR.SBJV.3SG man.NOM outside.of  
 τοῦ σώματός ἐστιν· ὃ δὲ  
*toũ sōmatós estin; hō dè*  
 the.GEN body.GEN be.PRS.IND.3SG the.NOM PRT  
 πορνεύων εἰς τὸ ἴδιον σῶμα  
*porneúōn eis tò ídion sōma*  
 be.sexually.immorally.PRS.PTCP.NOM against the.ACC own.ACC body.ACC

<sup>20</sup>See Long (1968) on this process in Sophocles for a particularly strong discussion of the phenomenon.

ἁμαρτάνει

*hamartáneĩ*

sin.PRS.IND.3SG

‘Every sin which a man might commit is outside his body; but the one who is sexually immoral sins against his own body’

(NT 1 Corinthians 6:18)

The verb ποιῶ *poiō* ‘to make, do’ is only used in the relative clause to refer back to the noun, rather than independently, and is counterbalanced by the verb ἁμαρτάνω *hamartánō* ‘to sin’ in the second phrase. There seems to be some kind of interchangeability between the two here, but we do not have enough examples to be sure of the usage pattern.<sup>21</sup> The relative lack of ἁμάρτημα *hamártēma* ‘sin’ may also be explained by the existence of an SVC; an SVC achieves morpho-syntactically what ἁμάρτημα *hamártēma* ‘sin’ achieves lexically when compared with ἁμαρτία *hamartia* ‘sin’; within the whole corpus, there are under 100 examples of ποιῶ ἁμάρτημα *poiō hamártēma* ‘to commit a sin’ as an SVC, depending on definition, making it not an unusual construction, but not one the New Testament needs to use to achieve its theological goals.

Similar to -μα *-ma* nouns acting as products of verbs, -σις *-sis* nouns give the process of the verb in action.<sup>22</sup> A further way to consider and contextualise the use of SVCs in differentiating product from process is to look at the relative distribution of ἁμάρτησις *hamártēsis* ‘sin’ and verbs used with it. Of the 238 attested uses of ἁμάρτησις *hamártēsis* ‘sin’ found in the *Thesaurus Linguae Graecae*, only nine predate the Christian era; it is sufficiently uncommon not even to appear in *Liddell-Scott-Jones*. There is only one example in the New Testament (NT Matthew 18:21), after which it grows in popularity. Almost none are used with ποιῶ *poiō* ‘to make, do’; while other -σις *-sis* nouns are used in SVCs post-classically, ἁμάρτησις *hamártēsis* ‘sin’ is not, except in later commentaries on Ecclesiastes, and Theophanes Continuatus.<sup>23</sup> This suggests, at first reading, that it is a thoroughly Christian (rather than biblical) way of expressing moral wrongdoing, which sits at odds with the rest of the argument I am making in divorcing product from process. It may be, however, that the crucial link is not between product and process, but between agent and action. It may also demonstrate the

<sup>21</sup>The greatest frequency of ἁμάρτημα *hamártēma* ‘sin’ is again in John Chrysostom, with other Christian literature providing the next most frequent sources.

<sup>22</sup>Again, see Long (1968) for a thorough discussion of Sophocles’ manipulation of this form.

<sup>23</sup>Olympiodorus Diaconus Scr. Eccl. Commentarii in Ecclesiasten vol.93 pg.569 line 21; Maximus Confessor Theol. Scholia in Ecclesiasten (in catenis: catena trium patrum) 7:111; and Theophanes Continuatus Chronogr. et Hist. Chronographia (lib. 1–6) pg.27 line 17.

development of Christian thought in progress, from a biblical concept where sin and sinner need to be divorced, with morphology providing the mechanism, to later works where the lexicon supplies an alternative route.

Adding weight to my argument that the agency behind sin is not located in the sinner (but perhaps in the devil), the agent noun ἀμαρτητής *hamartētēs* ‘sinner’ does not appear in the New Testament at all; indeed, it is only used twice, both in Georgius Gemistus, suggesting that this conflation between sin and sinner is very much not a Greek concept, let alone a New Testament one.<sup>24</sup> This distinction between agent and action has significant consequences for the concept of personhood developed in the New Testament. This links into the use of adjectives as substantives, reducing people to their characteristics (e.g. NT Luke 14:13, κάλει πτωχοὺς, ἀναπίρους, χωλοὺς, τυφλοὺς *kálei ptōkhous, anapeirus, khōloús, tūphloús* ‘call the beggars, cripples, hungry and blind people’, and NT Luke 14:21 for the list remodelled). Where this link between characteristic and person is made in the case of disability, it is not made in the case of ethical action.<sup>25</sup> What we do find, however, are compound verbs which express ethical concepts akin to sin in different but related words, using adjectives with ποιῶ *poiō* ‘to make, do’, and it is to these that I finally turn.

## 5.2 ἀγαθοποιῶ *agathopoiō* ‘to do good’ and κακοποιῶ *kakopoiō* ‘to do bad’

There are ten examples of ἀγαθοποιῶ *agathopoiō* ‘to do good’ in the New Testament, a synthetic verb which may be read as counterbalancing sin. Four are in Luke, five in 1 Peter, and one in 3 John.<sup>26</sup> The use of the verb, however, is syntactically notable. Only 2/10 uses are in finite forms; 6/10 are in participial phrases, echoing e.g. ποιῶν ἀμαρτίαν *poiōn hamartían* ‘committing a sin’ in NT 1 John. There are only three examples of the negative equivalent, κακοποιῶ *kakopoiō* ‘to do bad’, in Mark, Luke, and 1 Peter, that is, in very similar contexts.<sup>27</sup> In Luke and 1 Peter they are in the same phrase as ἀγαθοποιῶ *agathopoiō* ‘to do good’ and in NT Mark 3:4 it is set against the periphrastic or, I would argue, active SVC ἀγαθὸν ποιῆσαι *agathòn poiēsai* ‘to do good’. In addition, the phrases all pertain to suffering and death, and seem to have a particular semantic context which is distinctive from the other contexts I am considering.

<sup>24</sup>Neither does the related term κακότης *kakótēs* ‘wrongdoer’ – 765 full corpus uses) appear in the New Testament.

<sup>25</sup>See particularly the work of Isaac Soon (2021, 2023) on disability in the New Testament.

<sup>26</sup>NT Luke 6:9, NT Luke 6:33 (x2), NT Luke 6:35, NT 1 Peter 2:14, NT 1 Peter 2:15, NT 1 Peter 2:20, NT 1 Peter 3:6, NT 1 Peter 3:17, NT 3 John 1:11

<sup>27</sup>NT Mark 3:4, NT Luke 6:9, NT 1 Peter 3:17.

There are, therefore, alternatives to the SVC ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’ available to New Testament authors, but they mainly do not use them. Although some uses of ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’ are formulaic, it also clearly functions as a phrase in its own right, distinct from the verb ἁμαρτάνω *hamartánō* ‘to sin’.

## 6 Conclusion

In this chapter, I have traced the shift in the language of sin and error to become more substantive as it becomes more ethically laden. This relationship between philology and theology demonstrates one of the ways in which the linguistic and cultural contexts of the New Testament had a profound effect on the development of Christian thought.<sup>28</sup> This work, as I take it further, has the potential to explain differences in Christian approaches to sin and forgiveness in general. Forgiving the sinner is a lot easier when the sin is a separate entity from them, the product of a process carried out by a person, that is, two stages removed from the person. This construction of a New Testament personhood in which people are fundamentally linked to but distinct from their actions and attributes may be important in a range of other contexts. Similarly, exposing the development of some branches of Christianity (notably Catholicism) away from a biblical way of expressing things leads to the chance to explore more thoroughly what the impact of *ad fontes* and *sola scriptura* meant in the Reformation.<sup>29</sup> The language of the New Testament may not be a consistent dialect, but it does reflect shifts in forms of expression which are as much theologically as either culturally or linguistically driven. There may not be a consensus among those working in linguistics about precisely what constitutes an SVC, and whether any definition is replicable between languages, but there is a clear and consistent pattern of change within Greek. A shift from a predominantly one-word expression of sin (ἁμαρτάνω *hamartánō* ‘to sin’) to a multi-word phrase which is not significantly modified (ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’) is clearly discernible. Alternatives to ποιῶ ἁμαρτίαν *poiō hamartían* ‘to commit a sin’ do not perform the same function, but the SVC holds a unique place in the New Testament in laying out a framework wherein a sinner is not inherently identified with their sin, either morphologically, or semantically. A semantically light verb has allowed for a new form of ethical precision.

<sup>28</sup>See, for example, Atkinson (1944), Wallace (1996), Hart (2017) on the relationship between theology and philology, and Conybeare & Goldhill (2021) for a view on the other way around.

<sup>29</sup>I explore this relationship between theology, philology, pedagogy, translation, and the development of Reformation thought further in Ryan (2025).

## Abbreviations

NT New Testament

OT Old Testament

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## Chapter 9

# Analytical and synthetic verbs: The lightness degree of ποιέω *poiéō*

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This chapter focuses on the alternation between analytic constructions (e.g., παῖδας ποιοῦμαι *paídas poiômai* ‘to beget children’) and equivalent synthetic verbs (e.g., παιδοποιέω *paidopoiéō* ‘to beget children’). The synthetic forms are considered here as noun incorporations in synchrony, as the second element of the compound is a verb that can also occur as a free form. The analysis of data (from the 5th c. BC to the beginning of the 2nd c. AD) shows that the selection of either analytic or synthetic forms is made for (i) semantic reasons, i.e., the specificity of the noun, and (ii) textual reasons, i.e., the establishment of the referent in the discourse, closely related to the information structure. Moreover, the overlapping between support-verb constructions and incorporations only concerns so-called simple-event nominals, whereas complex-event nominals, which are fully predicative, cannot be incorporated. Analytic constructions equivalent to non-eventive noun incorporations are usually not support-verb constructions.

Questo capitolo è incentrato sull’alternanza tra costruzioni analitiche, come παῖδας ποιοῦμαι *paídas poiômai* ‘generare figli’, e forme sintetiche equivalenti, come παιδοποιέω *paidopoiéō* ‘generare figli’. Le forme sintetiche sono qui considerate incorporazioni del nome in sincronia, in quanto il secondo elemento del composto è un verbo che può occorrere anche in forma libera. L’analisi dei dati (dal sec. V a.C. all’inizio del II d. C.) mostra che l’alternanza tra forme analitiche e sintetiche è determinata i) da ragioni semantiche, ossia dalla specificità del nome, nonché ii) da ragioni testuali di instaurazione del referente nel discorso, strettamente legate alla distribuzione dell’informazione. L’area di sovrapposizione tra costruzioni a verbo supporto e incorporazioni, inoltre, riguarda solo i cosiddetti simple-event nominals, mentre i complex-event nominals, pienamente eventivi, non risultano mai incorporati. Le costruzioni analitiche che equivalgono a incorporazioni di nomi non eventivi non sono, invece, costruzioni a verbo supporto.



## 1 Introduction: analytical constructions, support verbs, and incorporations

This chapter examines the reasons for selecting either analytical verbal constructions (e.g., παῖδας ποιοῦμαι *paídas poiômai* ‘to beget children’, as in (1)) or synthetic verbs, such as instances of noun incorporation (e.g., παιδοποιέω *paidopoiéō* ‘to beget children’, as in (2)) in Ancient Greek.<sup>1</sup>

- (1) Φαίνεται τοίνυν οὐχ ὁ ἐμὸς πατήρ  
*pháinetai toínun oukh ho emòs patèr*  
 be.plain.MID/PASS.3SG NOW NEG ART.NOM.M POSS.NOM.M father.NOM.M  
 πρῶτος ὃ ἄνδρες Ἀθηναῖοι, λαβῶν  
*prôtos ô ándres Athēnaíoi labōn*  
 first.NOM.M oh man.VOC.M.PL Athenian.VOC.M.PL take.AOR.PTCP.NOM.M  
 τὴν ἐμὴν μητέρα, ἀλλ’ ὁ Πρωτόμαχος,  
*tēn emēn mētéra all’ ho Prōtómakhos*  
 ART.ACC.F POSS.ACC.F mother.ACC.F but ART.NOM.M Protomachus.NOM.M  
 καὶ παῖδας ποιησάμενος καὶ θυγατέρ’  
*kai paídas poiēsámenos kai thugatér’*  
 and son.ACC.M.PL make.AOR.PTCP.MID.NOM.M and daughter.ACC.F  
 ἐκδούς·  
*ekdoús*  
 give.AOR.PTCP.NOM.M

‘Now it is plain, men, that it was not my father who first received my mother in marriage. No; it was Protomachus, and he had by her a son, and a daughter whom he gave in marriage’

(Demosthenes, *Speech* 57.43)

<sup>1</sup>The Greek texts considered in this article cover the period from the 5<sup>th</sup> c. BC to the beginning of the 2<sup>nd</sup> c. AD (Plutarch). They are quoted according to the editions in the *Thesaurus Linguae Graecae* (henceforth *TLG*) electronic corpus (<https://stephanus.tlg.uci.edu>); texts classified in the *TLG* as *Fragmenta* were excluded from the corpus. For the case study presented in Section 2, a sub-corpus has been considered (Section 2.1). English translations are based on the *Loeb Classical Library*. For the sake of readability, glosses are limited to basic morphological information (singular number not indicated for nouns, adjectives, participles, and articles; active voice, indicative mood, and present tense not indicated for verbs).

- (2) Οὐκοῦν οὕτω γε οὐ δεῖ παιδοποιεῖσθαι;  
*oukoûn hoútō ge ou deî paidopoieîsthai*  
 then in.that.case PRT NEG need.3SG child.make.INF.MID/PASS

‘In that case then, they ought not to have children?’

(Xenophon, *Memorabilia* 4.4.23)

The specific aim of this chapter is twofold: (a) to identify the reasons for selecting either analytic constructions or synthetic verbs (Section 2); (b) to verify whether analytic predicates are always support-verb constructions (SVCs henceforth) or not, and, in the latter case, to highlight the consequences in terms of their possible equivalence with synthetic verbs (Section 3).

By SVCs we mean a type of complex predicate, a notion that originates in syntactic approaches such as *Lexical-Functional Grammar* (Bresnan 1982, 2001) and *Relational Grammar* (Perlmutter & Postal 1974). In the framework of the former, complex predicates are multi-headed predicates, i.e., they are “composed of more than one grammatical element [...], each of which contributes part of the information ordinarily associated with a head” (Alsina et al. 1997: 1). This is, for instance, the position of Butt (2010: 49): she considers support verbs (SVs henceforth) complex predicates, and argues that “the term complex predicate designates a construction that involves two or more predicational elements (e.g., nouns, verbs and adjectives) which predicate as a single unit”. From this perspective, SVs are not completely empty elements with respect to the dense meaning spectrum of the equivalent lexically full verb (e.g., SV *give someone a kiss* vs. *give him a ball*; cf. Butt & Geuder 2001: 326; 339–340). From the perspective of *Relational Grammar*, different predicates may exist in a single clause (clause union) as long as they are placed in successive strata (rather than in the same stratum) in a multi-stratal structure (La Fauci & Mirto 2003: 45–59 on Italian, *inter alia*).<sup>2</sup>

These perspectives are significantly different from earlier approaches to SVs, which do not allow for two predicates in a clause (Gross 1996: 55), as the predication is conceived as unique and completely noun-dependent (Gross 2004: 167). For instance, Jespersen (1942: 117) considers the verb in Verb + Noun (V + N henceforth) constructions, such as *to have a swim*, *to take a walk*, and *to give a*

<sup>2</sup>The multi-stratal approach of *Relational Grammar* involves the positing of grammatical relations at various levels or strata. In particular, the predicative noun is considered the initiator-predicate of the construct in the lowest stratum (La Fauci & Mirto 2003: 45–59). In order to license the subject of a proposition, it needs the aid of a non-initiator-predicate (e.g., the Italian support verb *fare* ‘to do’ in *fare un peccato* lit. ‘to do a sin’ > ‘to commit a sin’): it is located in the successive stratum and makes the subject pertain to the whole SVC (La Fauci & Mirto 2003: 46).

*sigh* in English, as a “light verb”, i.e., “an insignificant verb, to which the marks of person and tense are attached, before the really important idea” conveyed by a deverbal noun that usually expresses ‘the action or an isolated instance of the action’. Such an idea of verb lightness highlights the semantic bleaching of the verb.

In a similar way, in the French definition of *verbe support* the morpho-syntactic function of the verb is indicated exclusively. Indeed, the verb is considered as mere support, encoding only grammatical categories such as Tense-Aspect-Mood and agreement features, but it does not predicate: it only “actualises” the predicative noun (*prédicat nominal*)—in which the whole predication stands—thus having the same function as verb endings (Gross 2004: 167).<sup>3</sup> Overall, we find ourselves in opposition to this narrow binary division between a predicative noun and an empty verb, as will be discussed in detail below (Section 3).

Synthetic verbs such as παιδοποιεῖσθαι *paidopoieîsthai* ‘to beget children’ in (2) can be considered instances of incorporation (Pompei 2006, Pompei & Grandi 2012), namely, a compounding process between a verb and another part of speech that yields a new verb (Baker 1988). In particular, in (2) there is an instance of noun incorporation, i.e., a process of composition of a noun and a verb, which outputs a new verb form ([N+V]<sub>V</sub>) (Sapir 1911: 257, *passim*; Mithun 1984, 1986, 1997). As is well known, this is a very productive process in polysynthetic languages, particularly in compositional ones (Mattissen 2023):

- (3) a. *Pet wa<sup>ʔ</sup>-ha-htu-<sup>ʔ</sup>t-a<sup>ʔ</sup>                      ne<sup>ʔ</sup> o-hwist-a<sup>ʔ</sup>*  
 Pat past-3ms/3N-lost-caus-asp the pre-money-suf  
 (Onondaga, Iroquoian)  
 ‘Pat lost the money’  
 (Baker 1988: 76–77)
- b. *Pet wa<sup>ʔ</sup>-ha-hwist-a-htu-<sup>ʔ</sup>t-a<sup>ʔ</sup>* (Onondaga, Iroquoian)  
 Pat past-3ms-money-ep-lost-caus-asp  
 ‘Pat lost money’  
 (Baker 1988: 76–77)

There is an analytical form in (3a), i.e., a verbal phrase made up of a verb form followed by a noun phrase that is its direct object; on the other hand, the synthetic verb form in (3b) is the result of the incorporation of the noun into the verb (in this case with the interposition of an epenthetic vowel). It is worth noting that the incorporated noun is a bare one, as in this case both the prefix

<sup>3</sup>See Pompei et al. (2023: 1–6) for a review of different theoretical perspectives on the notion of SV.

—which is a gender marker—and the suffix—which marks the lexical category—are missing, as well as the article marking definiteness.

Despite its wide productivity in polysynthetic languages, incorporation is not an exclusive phenomenon of this morphological type.<sup>4</sup> As far as Ancient Greek is concerned, there are formations—such as παιδοποιέω *paídopoiéō* ‘to beget children’, σιτομετρέω *sitometrēō* ‘to measure the wheat/provisions’, καρπολογέω *karpologéō* ‘to gather fruit’, λογογραφέω *logographéō* ‘to write speeches’—which show the same features as incorporation in polysynthetic languages from the morpho-phonological, semantic, and pragmatic points of view (Pompei 2006). Diachronically, these formations have usually been considered as formed by conversion from both nominal compounds (e.g. λογογράφω *logographō* ‘to write speeches’ < λογογράφος *logográphos* ‘speech writer’) and adjective ones (e.g. καρπολογέω *karpologéō* ‘to gather fruit’ < καρπολόγος *karpológos* ‘gathering fruit’; cf. Meissner & Tribulato 2002: 301).

Synchronically, some of these formations can be considered instances of effective noun incorporation, i.e., instances of composition (cf. Pompei & Grandi 2012, from a *Construction Grammar* perspective). In particular, this is true in cases in which the second element is a verb that can also occur as a free form, as the comparison between (1) and (2) clearly shows with regard to ποιέω ποιῶ ‘to do, make’. For this reason, our comparison between analytical and incorporated constructions will focus on this verb.<sup>5</sup>

## 2 First research question: selecting analytical constructions or incorporations

We will consider the selection of the constructions παιῖδας ποιούμαι *paídas poiômai* ‘to beget children’ and the equivalent incorporation as a case study to answer our first research question, i.e., what are the reasons for selecting either analytic constructions or synthetic verbs, like noun incorporations. In this section we are

<sup>4</sup>Incorporation can also occur in agglutinative languages, such as Japanese (e.g., Grimshaw & Mester 1988: 229), and even in isolating ones, such as Chinese (Luo 2022, *inter alia*). As far as fusional languages are concerned, the equivalence between Latin synthetic and analytical verbs, such as *belligero* ~ *bellum gero* ‘to wage war’ and *ludifico* ~ *ludos facere* ‘to make an object of sport, trifle with’, have been studied by Baños (2013, 2012).

<sup>5</sup>In this chapter we do not consider instances like σιτομετρέω *sitometrēō* < σίτον μετρέω *síton metrēō* ‘to measure the wheat/provisions’, as these are examples of collocations in which the verb retains its lexically full meaning. On the other hand, according to Ježek (2016: 205), SVCs are “noun-oriented collocations” on the noun, i.e., preferential combinations of a verb with a general meaning and a noun with a predicative value.

not specifically interested in the nature of the analytical constructions in question—i.e., whether they are SVCs or not—since the degree of predicativeness of the noun in the SVCs will be discussed below (Section 3.2). However, some preliminary considerations can be made.

A battery of tests has been developed to recognise SVCs (Langer 2004, *inter alia*). Of these, (i) the possibility of the SVC being replaced by a synthetic verb, see (4), and (ii) the so-called “reduction test”, see (5) (Gross 1981: 39–43; Giry-Schneider 1987: 28), within a traditional perspective, are considered particularly significant in revealing the predicativeness of the noun, on the one hand, and the consequent emptiness of the SV, on the other:

- (4) a. *to give a slap ~ to slap*  
b. *to take a walk ~ to walk*
- (5) a. *John gave a slap to Mary → The slap that John gave to Mary → John’s slap to Mary*  
b. *John took a walk → The walk that John took → John’s walk*

The criterion of the substitution of an SVC by a synthetic verb, see (4), is used to distinguish SVCs from other types of lexical combinations (e.g., “normal” collocations in which the verb retains its full lexical meaning). Indeed, it shows that the concept analytically conveyed is equivalent to that expressed through a single verbal form, usually in cases in which the synthetic verb and the noun are morphologically linked, as either the noun is deverbal (*walk*) or the verb is denominal (*slap*).<sup>6</sup> On the other hand, (5) shows that the meaning of the noun does not seem to be affected by the deletion of the verb in SVCs. As for *παῖδας ποιοῦμαι* *paídas poioûmai* ‘to beget children’—with reference to its occurrence in (1)—we can observe that if Protomachus had children by the mother of Euxiteus, those children would actually be ‘Protomachus’ children’.<sup>7</sup>

<sup>6</sup>However, not all the unitary concepts present both forms of expression—analytical and synthetic—in all the languages (Ježek 2004: 192). In English, for example, a synthetic form for *to beget children* might be *to procreate*, which is morphologically unrelated, or perhaps *father*, which is related lexically, whereas in Italian *fare figli* ‘to beget children’ corresponds to the denominal verb *figliare*, although this is mainly used in reference to animals (similar to the English *to lamb* relating to sheep, *to pup* to dogs, and so on).

<sup>7</sup>Nevertheless, in this case it is not easy to establish if the reduction test actually applies, namely, if ‘Protomachus’ children’ derives a) from the sequence ‘the children that Protomachus begot’ ← ‘Protomachus begot children’, or b) from the sequence ‘the children that Protomachus has’ ← ‘Protomachus has children’, in addition to the possibility that c) the government of the argument ‘Protomachus’ by ‘children’ is simply due to the relational nature of kinship nouns. Note that the translation of *παῖδας* *paídas* ‘children’ as ‘son’ in (1)—which is commented upon here— is how the item is rendered in the Loeb edition, even if the noun is plural in Greek.

## 2.1 Sub-corpus

The corpus for the case study on παῖδας ποιούμαι *paídas poiômai* ‘to beget children’ and παιδοποιέω *paidopoiéō* ‘to beget children’ concerns the Classical period.<sup>8</sup> There are 10 occurrences of the analytic construction (Table 1), whilst there are 31 occurrences of incorporation (Table 2):

Table 1: Occurrences of παῖδας ποιούμαι *paídas poiômai* ‘to beget children’

Isocrates	Xenophon	Plato	Demosthenes	Aristotle	Total
2	1	4	2	1	10

Table 2: Occurrences of παιδοποιέω *paidopoiéō* ‘to beget children’

Euripides	Sophocles	Isocrates	Aristophanes	Andocides	Xenophon
2	1	1	1	1	9
Plato	Hippocrates	Demosthenes	Aeschines	Total	
5	1	6	4	31	

It is worth noting that all 10 occurrences of the analytical construction are in the middle-passive voice, and that the noun is always in the plural; only in one case does παῖδας *paídas* co-occur with the article, see (11) below.<sup>9</sup> The most frequent form is the infinitive (7 out of 10 occurrences; 70%). On the other hand, out of 31 instances of incorporation, 26 (83.87%) are in the middle-passive voice; 9 forms are participles (29.03%), while 12 are infinitives (38.70%).

<sup>8</sup>The corpus was created by (Ricci 2016) from the online edition of the *Thesaurus Linguae Graecae* and it comprises all the authors from the Archaic period to the 4<sup>th</sup> c. BC. However, no occurrences were found prior to the Classical period. The only possible exception is in Septem Sapientes, *Apophthegmata* 5.7 = Stobaeus, *Flor.* LXVIII.34, but since this instance is only documented by the indirect tradition in a fragment of Stobaeus, it was deemed more prudent to exclude it. Examples (1) and (2) are part of this corpus.

<sup>9</sup>In fact, the noun is singular in Homer, *Iliad* 9.495 although it is not an object so much as a predicative of the object. It has therefore not been included in the sample. The noun in the analytical form is always in the accusative, with the exception of one passage (Isocrates, *Speech* 4.42), where the infinitive ποιήσασθαι *poiêsasthai* ‘to make’ actually governs the pronominal forms τοὺς μὲν... τοὺς δ’ *toùs mèn... toùs d’* ‘some... others’, followed by the partitive τῶν παίδων *tôn paidōn* ‘of the children’. On the preponderance of middle-passive forms in SVCs, see Marini (2010) and Jiménez López (2011).

## 2.2 Semantic reasons

The findings of our sub-corpus show that the first reason for the selection of analytical constructions is semantic in nature. For instance, in (1) Euxiteus observes that his mother, before marrying his father, was married to Protomachus, who begot children with her, one of whom he gave in marriage. These children are thus Euxiteus' siblings and he is aware of their existence; hence, they are specific people. By specificity we mean the use of a Noun Phrase when the speaker knows which individual he is referring to (Hawkins 1978; Lehmann 1984: 259–261; von Heusinger 2002: 10; von Heusinger & Kaiser 2003: 45; Vester 1989: 335–336 on Latin).

Therefore, in (1) the signifier *παίδας paídas* 'children' has a non-empty reference. Indeed, the logical value of existence in a possible world is linked to the notion of referentiality, which is equivalent to specificity from a semantic point of view (Givón 1978: 293). By contrast, if a nominal is generic, the speaker does not have any commitment to the existence of its referent in a possible world. Instances of genericness are the cases of *παιδο-* *paído-* as the first element of the incorporation *παιδοποιέω paídopoiéō* 'to beget children', in (2) and in all the other 30 occurrences in Table 2.

In fact, incorporated nouns are devoid not only of any determiner but also of the information conveyed by endings (i.e., number, grammatical gender, case), being downgraded to the root plus a readjustment vowel (Pompei 2006): features such as gender, number, and definiteness are referential parameters (von Heusinger & Kaiser 2003). This lack of semantic referentiality—i.e., of specificity—in incorporated nouns is consistent with the main function of incorporation according to Mithun (1984), namely, to create “labels” to denote states of affairs that are conceptually unitary and worthy of being indicated by means of a single word. Therefore, the incorporated noun only serves to specify the meaning of the verb, i.e., to “qualify” the verb rather than to “refer” (Mithun 1984: 866); it is not marked for referentiality/specificity (Mithun 1984: 859).

However, in our corpus for this case study, the feature of specificity explains the selection of the analytical form in only two of the 10 occurrences (18%), viz., the extract in (1), and in (6):

- (6) [...] *τά*                      *τε ἄλλα*                      *καὶ παίδας*                      *ἐν αὐτῇ*  
*tá*                              *te álla*                              *kai paídas*                      *en autêi*  
 ART.ACC.N.PL and other.ACC.N.PL and child.ACC.M.PL in DEM.DAT.F

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ἐποιήσω,                      ὡς ἀρεσκούσης      σοι      τῆς      πόλεως.  
*epoieō*                      *hōs areskouēsē*      *soi*      *tēs*      *polēōs*  
 make.AOR.MID.2SG as.if please.PTCP.GEN.F 2SG.DAT ART.GEN.F city.GEN.F

‘[so you certainly preferred us and agreed to live in accordance with us;]  
 and besides, you begat children in the city, showing that it pleased you’

(Plato, *Crito* 52c)

In (6), the subject of παιῖδας ἐποιήσω *paídas epoieō* ‘you begat children’ is Socrates, who, condemned to die, is rebuked by Crito for accepting death rather than going into exile and saving his life. Socrates responds to Crito’s accusations with a prosopopoeia of the Laws: they (the Laws) address Socrates, reminding him of how he had agreed to live under those same Laws that have now condemned him to death, albeit having been raised and educated in Athens and also having fathered children there. Therefore, in this case the children are Socrates’.

By contrast, in all the other occurrences, the noun of the analytical construction does not refer to specific entities. Indeed, it is always found in the plural, which is usually an indication of greater genericness (Timberlake 1975: 225). This means that all the other occurrences of analytical constructions are not selected for semantic reasons. For instances, in (7) and (8) the noun παιῖδας *paídas* ‘children’ is clearly generic, as in these instances children do not exist at all, no act of generation having taken place:

- (7) ἔτι δὲ πρὸς τούτοις οὔτε γυναῖκα  
*éti dé pròs toutois oute gunaika*  
 besides PRT beyond DEM.DAT.N.PL NEG woman.ACC.F  
 γήμας οὔτε παιῖδας ποιησάμενος  
*gēmas oute paídas poiēsámenos*  
 marry.AOR.PTCP.NOM.M NEG child.ACC.M.PL make.AOR.PTCP.MID.NOM.M  
 [...]  
 [...]

‘Moreover, he did not marry and beget children’ [...]

(Isocrates, *Speech* 15.156.4)

- (8) σοῦ δ', ἔφη, ὦ Γαδάτα, ὁ Ἀσσύριος  
*soû d' éphē ô Gadáta ho Assúrios*  
 2SG.GEN PRT say.IMP.3SG oh Gadatas.VOC.M ART.NOM.M Assyrian.NOM.M  
 παιῖδας μὲν, ὡς ἔοικε, τὸ ποιεῖσθαι  
*paídas mén hōs éoike tò poieísthai*  
 child.ACC.M.PL PRT as seem.PRF.3SG ART.ACC.N make.INF.MID/PASS

ἀφείλετο,	οὐ μέντοι	τό	γε φίλους
<i>apheileto</i>	<i>ou méntoi</i>	<i>tó</i>	<i>ge philous</i>
take.away.AOR.MID.3SG	NEG at.any.rate	ART.ACC.N	PRT friend.ACC.M.PL
δύνασθαι	κτᾶσθαι	ἀπεστέρησεν	
<i>dúnasthai</i>	<i>ktâsthai</i>	<i>apestéresen</i>	
be.able.INF.MID/PASS	acquire.INF.MID/PASS	deprive.AOR.3SG	

“From you, Gadatas,” [Cyrus] went on, “the Assyrian has, it seems, taken away the power of begetting children, but at any rate he has not deprived you of the ability of acquiring friends”

(Xenophon, *Cyropedia* 5.3.19)

To sum up, genericness is a compelling constraint for selecting instances of incorporation: specific nouns cannot be incorporated (see (1)) and (6)). When the conditions of use of *παῖδας ποιοῦμαι* *paídas poiôumi* ‘to beget children’ are very similar to those of incorporation from a semantic point of view, as the noun is generic (see (7) and (8)), the reasons for the selection are not semantic (Section 2.3).

### 2.3 Textual reasons

When the conditions for the use of *παῖδας ποιοῦμαι* *paídas poiôumi* ‘to beget children’ are not semantic in nature, they are textual. On this level of analysis, the meaning of the term *referentiality* does not relate to the logical-semantic value of existence in a possible world, but to the establishment of a referent in the discourse, which may be a “manipulable noun” to use Hopper & Thompson’s (1984: 711–713) term. This means that the noun is a free form because it serves the text grounding. An interesting case is provided in (9):

- (9) ἢ γὰρ οὐ χρεῖ ποιεῖσθαι παῖδας ἢ  
*è gàr ou khreè poièisthai paídas è*  
 either for NEG ought.3SG make.INF.MID/PASS child.ACC.M.PL OR  
 συνδιαταλαιπωρεῖν καὶ τρέφοντα καὶ παιδεύοντα.  
*sundiatalaipōreîn kai tréphonta kai paideúonta*  
 stay.by.INF and bring.up.PTCP.ACC.M and educate.PTCP.ACC.M

‘Either one ought not to beget children, or one ought to stay by them and bring them up and educate them’

(Plato, *Crito* 45d)

In this case, the conditions of use of *ποιεῖσθαι παῖδας poièisthai paídas* ‘to beget children’ are really very similar to those of incorporation from a semantic point of view as the noun is generic. However, from the perspective of text

grounding, it is necessary for παῖδας *paídas* ‘children’ to be a free form in order to be taken up in the reference tracking, and in particular by the null argument of the verbs that follow, i.e., by zero anaphora. Conversely, incorporated nouns do not usually constitute the starting point for reference tracking: being decategorised, they are non-prototypical nouns, whence they do not introduce participants into the discourse, like all nouns that are not the head of a compound.<sup>10</sup>

In an anaphoric chain, reference tracking might take place through different strategies, such as pronouns (including null ones, as in (9)), copies or semi-copies of the head lexeme, paradigmatic relations, and so on. In (1), for instance, there is a paradigmatic relation of hyponymy between θυγατέρα *thugatéra* ‘daughter’ and παῖδας *paídas* ‘children’. This means that textual reasons also apply when semantic reasons are present.

When there are no reference tracking reasons, the selection of the analytical construction is, in any case, usually due to the need for παῖδας *paídas* ‘children’ to occur as a free form to establish a referent—i.e., a Topic—in the discourse, perhaps as an element of a conjunct, see (6), which may also be negative, see (7), or of a correlation with a contrastive value, see (8). Since in all these cases there is the establishment of a Topic, textual reasons might also be considered as due to Information Structure, sometimes not disjunct from stylistic requirements.<sup>11</sup>

In (10), for instance, there is a parallelism between ὅτι πλείστους ποιῆσθαι παῖδας *hóti pleístous poieísthai paídas* ‘have as many children as possible’ and ὡς πλείστους εἶναι τοὺς Σπαρτιάτας *hōs pleístous eínai toùs Spartiátas* ‘make

<sup>10</sup>In fact, this is true for noun incorporation originating from lexical compounds—as occurs with Ancient Greek incorporation (Section 1)—according to the recent classification proposed by Olthof (2020). She deals with a sample of 21 languages, taking into account the two parameters of the modifiability and referentiality of the incorporated noun. The latter parameter is defined in pragmatic terms within the *Functional Discourse Grammar* framework (Hengeveld & Mackenzie 2008); the former is not pertinent to Ancient Greek, in which incorporated nouns cannot be modified. Cf. Pompei (2024) on the application of Olthof’s (2020) model to Ancient Greek.

<sup>11</sup>The notion of Topic concerns the Information Structure, an area of linguistics studied in particular by the *Prague School*. The Topic is usually intended as the item that the sentence is about, as opposed to the Focus, which can be considered the information given about the Topic (*inter alia* Lambrecht 1994). In addition to the introduction of a new referent (new Topic), the Topic can also recall a referent already present in the text (Topic continuity; cf. Givón 1983), and have a contrastive function (contrastive Topic; cf. Büring 1999). As far as stylistic requirements are concerned, correlations in conjunction, see (6), negative conjunction, see (7), or opposition, see (8), are, in a sense, also examples of isocolia. In (7), for instance, there is a parallelism between οὐτε παῖδας ποιησάμενος οὐτε *paídas poiēsámenos* ‘not having begotten children’ and οὐτε γυναῖκα γήμας οὐτε *gunaíka gēmas* ‘not having married’ (a collocation for ‘taking a wife’). Similarly, in (1), there is a parallelism between the analytic construction παῖδας ποιησάμενος *paídas poiēsámenos* ‘having begotten children’ and the SV λαβών *labón* ‘having taken (as a wife)’, in addition to the hyperonymy relation regarding θυγατέρ’ *thugatér* ‘daughter’. Thus, several textual reasons for selecting the analytical construction may be involved.

the Spartiates as numerous as possible’, in addition to the fact that ποιῆσθαι παῖδας *poieîsthai paídas* ‘have children’ constitutes a case of Topic continuity: in this instance, it conveys given semi-active information, in Chafe’s (1987) terms –of which the Topic is the linguistic correlate—since the increase in the number of Spartiates implies the increase in births:

- (10) βουλόμενος γὰρ ὁ νομοθέτης ὥς  
*boulómenos gâr ho nomothétēs hōs*  
 desire.PTCP.MID/PASS.NOM.M for ART.NOM.M lawgiver.NOM.M as  
 πλείστους εἶναι τοὺς Σπαρτιάτας,  
*pleístous eînai tou̓s Spartiátas*  
 numerous.SUP.ACC.M.PL be.INF ART.ACC.M.PL Spartiates.ACC.M.PL  
 προάγεται τοὺς πολίτας ὅτι  
*proágetai tou̓s polítas hóti*  
 induce.3SG.MID/PASS ART.ACC.M.PL citizen.ACC.M.PL as  
 πλείστους ποιῆσθαι παῖδας·  
*pleístous poieîsthai paídas·*  
 numerous.SUP.ACC.M.PL make.INF.MID/PASS child.ACC.M.PL  
 ‘For the lawgiver desiring to make the Spartiates as numerous as possible  
 holds out inducements to the citizens to have as many children as  
 possible’  
 (Aristotle, *Politics* 1270b)

Eventually, a case of Topic continuity is also quoted in (11); this is the only case in which the noun παῖδας *paídas* ‘children’ is definite:<sup>12</sup>

- (11) Καλῶς. ἔλθωμεν δ’ ἐπὶ τὰ νυμφικά,  
*Kalōs élthōmen d’ epì tà vumphiká*  
 well come.AOR.SBJV.1PL PRT to ART.ACC.N.PL nuptial.ACC.N.PL  
 διδάξοντές τε αὐτοὺς πῶς χρῆ και  
*didáksontés te autoùs pōs khrȇ kai*  
 instruct.FUT.PTCP.NOM.M.PL and DEM.ACC.M.PL how ought.3SG and  
 τίνα τρόπον τοὺς παῖδας ποιῆσθαι  
*tína trōpon tou̓s paídas poieîsthai*  
 Q.ACC.M manner.ACC.M ART.ACC.M.PL child.ACC.M.PL make.INF.MID/PASS

<sup>12</sup>Definiteness may be regarded as a property whereby the discourse referent can be identified with another, previously introduced, discourse item (von Heusinger & Kaiser 2003: 44–45, *inter alia*). In this case, τοὺς παῖδας *tou̓s paídas* ‘the children’ recalls the phrase παίδων γένεσιν *paídōn génesin* ‘production of children’ in Plato, *Laws* 783b; therefore, it probably answers the need to re-establish the referent after many lines.

‘Very good. Let us now come to the nuptials, so as to instruct them how and in what manner they ought to produce children’

(Plato, *Laws* 783d)

Nevertheless, it is very difficult to gauge the reasons for the selection of the analytical construction in an instance such as παιῖδας ποιεῖσθαι *paídas poieîsthai* ‘to beget children’ in (12):<sup>13</sup>

- (12) μηδ’ αὖ νύκτωρ ὅταν ἐπινοῆ                    τις                    παιῖδας  
*mēd’ aû nýktōr hótan epinoēi                    tis                    paídas*  
 NEG so at.night when think.SBJV.3SG INDF.NOM child.ACC.M.PL  
 ποιεῖσθαι                    ἀνὴρ                    ἢ καὶ γυνή.  
*poieîsthai                    anēr                    ê kai guné*  
 make.INF.MID/PASS man.NOM.M or also woman.NOM.F

‘[nor should anyone whatever taste of it at all, except for reasons of bodily training or health, in the daytime;] nor should anyone do so by night – be he man or woman – when proposing to procreate children’

(Plato, *Laws* 674b)

In this passage, the circumstances in which it is forbidden to drink wine are listed. The choice of the analytical form might be due to the fact that the incorporation is generally used with regard to men, while in this instance the prohibition to drink wine in case of procreation is valid for men and women. Alternatively, the very co-occurrence of παιῖδας *paídas* ‘children’ with ‘man’ and ‘woman’ might have played a role in the choice of the free form, this being a sort of third element, i.e., a possible result of their union. Finally, the author’s *usus scribendi* should perhaps also be considered, since 4 of the 10 analytical forms (40%) appear in Plato vs. 5 of the 31 instances of incorporation (16.13%) do.<sup>14</sup>

To sum up, regarding the first research question, the selection of an analytical construction is usually made for textual reasons, namely, the need to establish a referent in the discourse, which might possibly be “manipulable” in Hopper &

<sup>13</sup>Loeb’s translation—which we follow (cf. fn. 1)—is a little perplexing here; one reviewer suggested ‘nor should anyone—man or woman—do so by night, when...’.

<sup>14</sup>For the sake of comprehensiveness, in one of the two occurrences that have not been analysed in the text (Demosthenes, *Speech* 45.81), παιῖδας *paídas* ‘children’ as a free form is due to the need to establish an object taken up by an object predicative (‘after being allowed to beget children as brothers to your own masters’). In the other instance (Isocrates, *Speech* 4.42), the occurrence of the noun is a free form because it is in the genitive case, having a partitive value with regard to the pronominal forms τοὺς μὲν... τοὺς δ’ *toûs mèn... toûs d’* ‘some... others’ (see fn. 9).

Thompson's (1984: 711–713) terms. By contrast, incorporated nouns do not perform such a function in Ancient Greek. In Information Structure terms, the occurrence of *παῖδας paídas* 'children' as a free form usually has the function of (re-)establishing the Topic. The requirement of referentiality in discourse terms also applies in cases of the specificity of the noun; in other words, referentiality at the textual level can combine with referentiality at the logical-semantic one.

### 3 Second research question: the nature of analytical constructions equivalent to incorporation

In order to establish the reasons for the selection of either analytical or synthetic constructions, our second research question is twofold: (i) to verify whether analytic constructions are always SVCs or not, and (ii), in the latter case, to clarify the differences between types, particularly in terms of the possible equivalence with instances of incorporation.

The answer to the first part of the question is clear: analytical constructions are not always SVCs. Even if we only take into account the analytical constructions with *ποιέω poiéō* 'to do, make'—the focus of this article—in many of them the verb does not co-occur with predicative nouns (Section 3.2.1).

As for the second part of the research question, when the verb *ποιέω poiéō* 'to do, make' co-occurs with predicative nouns, we need to examine the meaning of predicativeness in relation to a noun (Section 3.2). This leads to interesting findings: nouns that occur in analytic constructions usually considered SVCs do not belong to the same type. Indeed, it is possible to identify two different cases: (i) nouns that acquire a full predicative value in co-occurrence with an SV (simple-event nominals), and (ii) nouns that fully inherit the event structure of the verb from which they derive (complex-event nominals) (Section 3.2.2). Only the former type has equivalent instances of incorporation. A third type of noun comprises non-eventive nouns that can sometimes acquire an eventive interpretation (Section 3.2.1).

#### 3.1 Corpus and methodology

The data considered in this second part of the study were taken from the main corpus (described in Section 1).<sup>15</sup> As for the methodology, firstly, the reverse dic-

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<sup>15</sup>The *Thesaurus Linguae Graecae* query also covered the Archaic period, although no occurrences of the forms in question were found. For this reason we consider our corpus as starting from the 5<sup>th</sup> c. BC.

tionary of Ancient Greek by Kretschmer & Locker (1977) was used to draw up the list of instances of incorporation in -ποιέω -ποιέō ‘to do, make’.

The instances of incorporation were then searched for in the *Thesaurus Linguae Graecae* to find their occurrences, which amount to 74 in the period considered.<sup>16</sup> Subsequently, instances of noun incorporation were divided into two groups on a semantic basis, namely, instances of non-eventive noun incorporation (58) and instances of eventive noun incorporation (16). Successively, the *Thesaurus Linguae Graecae* was queried in order to identify the equivalent analytical constructions.

### 3.2 Support-verb constructions, incorporation, and the predicativeness of nouns

Predicative nouns that occur in SVCs are not only and not always deverbal nouns. A seminal study on this topic was made by Gross & Kiefer (1995). In addition to nominalisations, i.e., deverbal nouns, Gross & Kiefer identify two further types of predicative non-deverbal nouns: those with the event reading in their lexical representation (e.g., French *orage* ‘storm’, *coup* ‘blow’, *épidémie* ‘epidemic’), and those whose event interpretation is due to a conceptual shift to a dynamic reading (e.g., when *film* stands for ‘the screening of the film’). Indeed, Vendler (1967: 141) had noted that among nouns there are what he calls *disguised nominals*: “Fires and blizzards, unlike tables, crystals or cows, can occur, begin and end, can be sudden or prolonged, can be watched and observed—they are, in a word, events and not objects”. From the actional point of view, the fact that the referents of *disguised nominals* “can occur” means that they are [+dynamic], i.e., events, as opposed to states; conversely, the fact that they can “begin and end” means that they have the feature [+durative].

Grimshaw (1990: 58–59) defines non-deverbal nouns (e.g., *race*, *trip*, and *exam*) as *simple-event nominals*. They differ from complex-event nominals—i.e., nominalisations, which inherit the argument and event structure from the verb from which they derive—since the former cannot co-occur with the modifiers that are used to detect telicity (“in-x-time”) and atelicity (“for-x-time”: e.g., \**Jack’s trip in five hours / for five hours was interesting*), as opposed to the latter (see, e.g., the *nomen actionis* construction in *Caesar’s construction of the bridge in five months*).

<sup>16</sup>The quantitative data presented in this section are the results of an initial survey (the study of the data is part of a doctoral thesis in progress). On a morphological basis, in addition to instances of noun incorporation, 27 instances of incorporation with an adjective as the first element were also identified (e.g., ἀγιοποιέω *hagiopoiéō* ‘to sanctify’ and ἀγαθοποιέω *agathopoiéō* ‘to do good, make good, do well’) making for a total of 101 incorporations.

According to Grimshaw (1990: 59), this means that what characterises complex-event nominals “is not a matter of temporal extent, but of an internal semantic analysis of the event provided by the event structures [...]”.<sup>17</sup> It is noteworthy that Borer (2013: 56) observes that ““simple” events are fully compatible, syntactically, with “complex” events, insofar as arguments and event modification are possible providing a light verb is present”. Moreover, Grimshaw (1990: 50–59) notes that simple-event nominals behave like result nominals (see, e.g., the *nomen rei construction* in *\*That construction in five months / for five months is horrible*) and she considers both as noun-like, unlike complex-event nominals, which are verb-like.

All these observations on the eventive nature and the degree of predicativeness of nouns are highly relevant in understanding their occurrence within SVCs and incorporation. Indeed, from the perspective of SVCs as complex predicates, the semantic contribution of the verb is not null (which is in contrast to how it is considered in the binary conception of predicative noun vs. “light” verb/“support” verb (Section 1)). Indeed, the contributions of the noun and the verb to predicativeness can be considered complementary and, in a sense, inversely proportional, on a continuum.

In the following sections, an attempt will be made to position the various analytical constructions (both effective SVCs (Section 3.2.2) and not (Section 3.2.1)) and their possible equivalent instances of incorporation on this continuum, according to the different noun types (Section 4).

### 3.2.1 Analytical constructions and incorporation with non-eventive nouns

Non-eventive nouns are mostly concrete nouns, which denote first-order entities in Lyons’s (1977: 443) terms, namely, they do not have any degree of predicativeness.<sup>18</sup> We can exemplify this type firstly by means of the noun ἄρτος *ártos* ‘cake,

<sup>17</sup>Indeed, Grimshaw (1990) simple-event nominals correspond to Vendler’s (1967) disguised nominals: they can co-occur with “happening” verbs (e.g., *The race will take place tomorrow*), with phasal verbs (e.g., *The trip started badly*), and with prepositions having a similar function (e.g., *during lunch*). On noun actionality, see also Simone (2003), and recently Pompei (in press).

<sup>18</sup>In fact, besides instances in which the non-eventive noun is actually concrete (e.g., ἀνδριάντο- *andrianto-* ‘statue’, γέφυρο- *gephuro-* ‘bridge’, λυχνό- *lukhno-* ‘lamp’, οἶνο- *oino-* ‘wine’), there are others in which it is abstract, albeit non-eventive (e.g., μέλο- *melo-* ‘lyric poem’, θεσμο- *thesmo-* ‘law’, ὀνοματο- *onomato-* ‘name’). Concrete nouns that can also acquire an eventive value—e.g., σῖτος *sítos* ‘grain, meal’ ((17) below)—have been classified for now according to their basic concrete semantic value. From the perspective of the syntactic function that the incorporated noun would have in the equivalent analytical construction, in many cases it is that of the object predicative, exclusively (e.g., θεοποιέω *theopoiéō* ‘deify’) or in addition to that of the object (e.g., ἄρτο- *arto-* ‘cake, loaf, bread’; cf. fn. 21).

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loaf of wheat-bread, bread’, which is present in 16 analytical constructions (Table 3) and 9 instances of incorporation (Table 4):<sup>19</sup>

Table 3: Occurrences of ἄρτον ποιέω *áرتون ποιέō* ‘to make bread’

Herodotus	Xenophon	Hippocrates	Theophrastus
2	1	4	2
Septuagint (LXX)	Josephus	Plutarch	Total
5	1	1	16

Table 4: Occurrences of ἀρτοποιοῦμαι *artopoiou̐mai* ‘to make bread’

Strabo	Josephus	Dioscorides Medicus	Total
2	1	6	9

An example of an analytical construction is given in (13) and one of incorporation in (14):

- (13) ἄρτοφαγέουσι δὲ ἐκ τῶν ὀλυρέων  
*artophagéousi dè ek tōn oluréōn*  
 eat.bread.3PL PRT from ART.GEN.F.PL coarse.grain.GEN.F.PL  
 ποιεῦντες ἄρτους, τοὺς ἐκεῖνοι  
*poiéũntes ártous, toũs ekeĩnoi*  
 make.PTCP.NOM.M.PL loaf.ACC.M.PL REL.ACC.M.PL DEM.NOM.M.PL  
 κυλλήστις ὀνομάζουσι.  
*kulléstis onomázousi*  
 cyllestis.ACC.F.PL call.3PL

‘They eat bread, making loaves which they call “cyllestis” of coarse grain’  
 (Herodotus, *Histories* 2.77.4)

<sup>19</sup>Out of 16 occurrences of analytical construction, 15 have the verb in the active voice and 1 has it in the middle-passive voice; the noun is a plural accusative in 11 occurrences and a singular accusative in the remaining 5 occurrences; only in 2 instances does the plural ἄρτους *ártous* co-occur with the article. As far as the 9 instances of incorporation are concerned, 6 are in the middle-passive voice, while 3 are in the passive voice. Two attestations of ἄρτον ποιέω *áرتون ποιέō* in Clemens Romanus—but more likely Pseudo-Clemens—(Clemens Romanus, *Homiliae* 2.32.3, Pseudo-Clemens, *Epitome de gestis Petri* 33) have been excluded from the count because of their uncertain attribution and dating.

- (14) εἶτ' ἄρτοποιοῦνται σίτου μικρὰ  
*eit' artopoioúntai sítou mikrà*  
 then make.cake.MID/PASS.3PL grain.flour.GEN.M a.bit.of  
 καταμίξαντες·  
*katamiksantes*  
 MIX.AOR.PTCP.NOM.M.PL

‘[The vertebral bones serve as mortars in which fish, which have been previously dried in the sun, are pounded.] Of this, with the addition of flour, cakes are made’

(Strabo, *Geography* 15.2.2)

In these occurrences, the meaning of the verb ποιέω *poiéō* ‘to do, make’ is its full lexical value, namely, ‘to create, realise’. This means that the verb is not an SV in this case, and the analytical constructions are not SVCs.

As far as semantic roles are concerned, the basic meaning of the verb implies an Agent and an incremental Theme denoting the entry of a new entity into the state of existence and its development at all the stages of production, as in the case of ‘to make loaves’ and ‘to make cakes’ with dried fish by the Ichthyophagi in (13) and (14), respectively.<sup>20</sup> In this case too, noun concreteness and genericness being equal, the choice of the analytical construction in (13) is for textual reasons, i.e., the requirement of a head noun for the relative pronoun, i.e., of a referent for the reference tracking.

An apparently similar case is the co-occurrence of the concrete noun σῖτος *sítos* ‘grain, food, allowance of grain’ with the verb both in analytical constructions (Table 5), exemplified in (15–16), and in instances of incorporation (Table 6), exemplified in (17):<sup>21</sup>

- (15) πλουτεῖς εἰκότως, ἐπειδὴν ποιῆς σίτου μὲν  
*plouteîs eikótōs epeidàn poiêis sítou mèn*  
 be.rich.2SG naturally as make.SBJV.2SG grain.GEN.M PRT

<sup>20</sup>This value is identified perfectly by Plato, *Symposium* 205b, where the ποίησις *poiêsis* ‘creation, production’ is described as the cause of anything that passes from not being into being; we thank Adele Teresa Cozzoli for this suggestion. In truth, the incorporation often has the value of ‘to make [something] into bread’ (e.g., ‘acorn flour’ in Strabo, *Geography* 3.3.7), where the incorporated noun is equivalent to the predicative object of the analytical form rather than its object.

<sup>21</sup>As for the analytical constructions, 4 verbs out of 5 are active and 1 is middle-passive. The noun is always singular: in the accusative in 3 occurrences, in the genitive in 2 (once with the article) given that the object of the verb is actually the quantity of the bread (cf. 15). There are 3 occurrences of incorporation in the active voice and 3 in the middle-passive.

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Table 5: Occurrences of σῖτον ποιέω *sítōn poiéō* ‘to make grain, bread, food’

Xenophon	Plato	Demosthenes	Aristotle	Total
1	1	2	1	5

Table 6: Occurrences of σιτοποιέω *sitopoiéō* ‘to make bread, food, a meal’

Euripides	Xenophon	Dioscorides Medicus	Total
1	3	2	6

μεδίμνους πλέον ἢ χιλίους  
*medímnous pléon ē khilíous*  
 medimnus.ACC.M.PL more than thousand.ACC.M.PL  
 ‘you [...] are a rich man, naturally, for you make more than a thousand medimni of grain’

(Demosthenes, *Speech* 42.31)

- (16) [...] ἄλλο τι ἢ σῖτόν τε ποιῶντες καὶ  
*áλλο ti ē sítōn te poiōntes kai*  
 other.ACC.N thing.ACC.N or bread.ACC.M and make.PTCP.NOM.M.PL and  
 οἶνον καὶ ἱμάτια καὶ ὑποδήματα;  
*oînon kai himátia kai hypodémata*  
 wine.ACC.M and garments.ACC.N.PL and shoes.ACC.N.PL

‘Will they not make bread and wine and garments and shoes?’

(Plato, *Republic* 372a)

- (17) σιτοποιεῖσθαί τε γὰρ ἀνάγκη ἀμφοτέρους,  
*sitopoiéisthai te gār anánkē amfotérous*  
 meal.make.INF.MID/PASS and for necessity.NOM.F both.ACC.M.PL

κοιμᾶσθαί τε ἀνάγκη ἀμφοτέρους  
*koimâsthai te anánkē amfotérous*  
 sleep.INF.MID/PASS and necessity.NOM.F both.ACC.M.PL

‘for instance, you must both eat, and you must both sleep’

(Xenophon, *Cyropedia* 1.6.36).

Interestingly, also in this case the analytical structure allows the noun to occur with a concrete, specific, and definite value, see (16), although here the frequent

metonymy of the substance ('grain') for the product ('bread') applies. The concrete meaning of 'grain' is retained in (15). Whereas in (16) the value of the verb is the full lexical one, in (15) it is to some extent bleached, as it means to 'to harvest, put together' a quantity of cereal; this would also be the case with 'grain' as an object. This value can perhaps be called effective, in the sense that an effect is produced, even if not through a process of concrete and direct realisation of an incremental Theme.<sup>22</sup>

In both examples the analytical constructions are not SVCs. As far as incorporation is concerned, the noun can also acquire a dynamic reading via an abstraction process, as happens in (17), through the metalepsis 'meal' < 'food' < 'bread' < 'grain'. Indeed, according to Gross & Kiefer (1995), this would be a case of event interpretation due to a conceptual shift (Section 3.2). In this instance, the value of the verb is completely bleached, and it only retains its event structure of a process in accordance with a noun that has acquired an event reading; nevertheless, this is an incorporation and not an analytical construction. It is therefore not an SVC.

If we now reconsider the analytical construction *παῖδας ποιῆσθαι* *paídas poiēsthai* 'beget children' (Section 2), the noun in this case denotes a concrete entity of the first order in Lyons's terms (1977: 443). The verb clearly means 'to create', although it only denotes the moment of the generation, or of the birth (in the case of the value 'to bear children' for the woman), rather than all the development stages of an incremental Theme. From this perspective, we cannot consider this analytical construction an SVC, since, on the one hand, the verb is not lexically empty, and on the other, the noun is not eventive. In this sense, this analytical construction cannot be considered as a "noun-oriented" collocation (Section 1, fn. 5). Also in this case, an effective value of the verb may be involved, as an effect is, in fact, produced.<sup>23</sup>

### 3.2.2 Analytical constructions and incorporation with event nouns

The co-occurrence of the verb *ποιέω* *poiēō* 'to do, make' with event nouns is the instance in which instances of incorporation and SVCs overlap perfectly.<sup>24</sup>

<sup>22</sup>See Pompei et al. (2023: 140) on the use of this label with reference to the Italian *fare rumore* 'to make noise'. However, in this case there is the production of a state of affairs, unlike the instance in (15).

<sup>23</sup>Therefore, the result of the reduction test seems to be due to the relational nature of the noun. As for the possible equivalence with synthetic verbs, this is consistent with the equivalence with an incorporation (which denotes a conceptually unitary state of affairs).

<sup>24</sup>In truth, the list of eventive nouns currently includes some stative nouns (e.g., *ἐλπιδό-* *elpido-* 'hope', *νοσο-* *noso-* 'sickness'), that are non-eventive by definition, not being dynamic (Section 3.2), although they are durative like eventive nouns. In these cases, the verb always has a causative value.

However, simple-event nominals in Grimshaw’s (1990) terms (Section 3.2) need to be distinguished from complex-event ones.

To exemplify simple-event nouns, we can consider the noun ἄριστον *áriston* ‘(morning) meal, breakfast, lunch’; this contains the event reading in its lexical structure, which is not the case with σῖτος *sítos* ‘grain, food, allowance of grain’, see (17). Its occurrences in analytical constructions and instances of incorporation are listed in Table 7 and Table 8, respectively.<sup>25</sup>

Table 7: Occurrences of ἄριστον ποιέω *áriston poiéō* ‘to make / have breakfast, lunch’

Thucydides	Herodotus	Xenophon
1	2	1
Hippocrates	New Testament (NT)	<b>Total</b>
1	1	<b>6</b>

Table 8: Occurrences of ἀριστοποιοῦμαι *aristopoioûmai* ‘to make / have breakfast, lunch’

Thucydides	Xenophon	Demosthenes	Polybios
6	17	2	5
Diodorus Siculus	Philo	Aristonicus	Josephus
1	1	2	2
Onosander (Onasander) Tacticus		Plutarch	<b>Total</b>
3		4	<b>43</b>

The structures are exemplified in (18) and (19):

- (18) ἱκανὸς γάρ ἐστι καὶ νυκτὶ ὅσαπερ ἡμέρα  
*hikanòs gár esti kai nuktì hósaper hēmérai*  
 able.NOM.M.SG for be.3SG and night.DAT.F as day.DAT.F

<sup>25</sup>In this case, the number of instances of incorporation (43) is far greater than the number of analytical constructions (6). In the latter, 5 out of 6 verbs are in the middle-passive with the meaning of ‘to have breakfast / lunch’; the only occurrence in the active (NT Luke 14.12) means ‘to make lunch’ for guests. On the other hand, all 43 instances of incorporation are in the middle-passive voice and mean ‘to have breakfast / lunch’ or ‘to make breakfast / lunch’ for themselves. The noun is always in the accusative singular and only once co-occurs with the article.

χρῆσθαι,                      καὶ ὅταν σπεύδῃ,                      ἄριστον                      καὶ  
*chrêsthai*                      *kai hótan speúdei*,                      *áriston*                      *kai*  
 use.INF.MID/PASS and when hasten.SBJV.3SG breakfast.ACC.N and  
 δεῖπνον                      ποιησάμενος                      ἅμα                      πονεῖσθαι.  
*deîpnon*                      *poiēsámenos*                      *háma*                      *poneîsthai*.  
 dinner.ACC.N make.AOR.PTCP.MID.NOM.M.SG together labour.INF.MID/PASS  
 ‘For he is able to make as good use of night as of day, and when he is in  
 haste, to take breakfast and dinner together and go on with his labours’  
 (Xenophon, *Hellenica* 6.1.15)

- (19) ταῦτα                      ποιήσαντες  
*taûta*                      *poiésantes*  
 DEM.ACC.N.PL make.AOR.PTCP.NOM.M.PL  
**ἤριστοποιοῦντο.**  
*ēristopoioûnto*  
 make.breakfast.IMPF.MID/PASS.3PL  
 ‘[When they had done all this,] they set about preparing breakfast’  
 (Xenophon, *Anabasis* 3.3.1)

This noun has the same meaning both when incorporated, see (18), and when occurring independently, see (19), in an SVC. In (18), we find the only independent occurrence of ἄριστον *áriston* ‘breakfast’ in Xenophon (vs. 17 instances of incorporation); this seems to be due to its coordination with δεῖπνον *deîpnon* ‘dinner’.

Another interesting case of a simple-event noun is πόλεμος *pólemos* ‘war, battle’ which has been formally linked to πελεμίζω *pelemízō* ‘to shake, tremble’ (Beekes 2010: s.v. πόλεμος), but certainly cannot be considered a deverbal noun. Table 9 presents the occurrences in analytical constructions for the period under consideration.

Table 10 presents the instances of incorporation.

They are exemplified in (20) and (21), respectively:<sup>26</sup>

<sup>26</sup>Of the 87 occurrences of the analytical construction, 51 have an active verb, with a causative value, whereas 36 have a middle-passive verb, meaning ‘to make war’ (on this cf. Jiménez López 2012, 2016). The noun is usually singular (82 instances, of which 35 co-occur with the article) with the exception of 5 occurrences (of which 3 co-occur with the article). By contrast, all the instances of incorporation are active forms, having both the meaning of ‘to make war’ and ‘to provoke war’. Two attestations of the analytical construction have been excluded from the count, *Oracula Sibyllina* 1.9 and *Testamenta XII Patriarcharum* 7.5.10, owing to their uncertain dating.

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Table 9: Occurrences of πόλεμον ποιέω *rólemon poiéō* ‘to provoke, make war’

Thucydides	Isocrates	Andocides	Xenophon	Plato
16	5	2	5	3
Septuagint (LXX)	D.	Aeschines	Polybios	Lysias
18	18	1	2	1
Diodorus Siculus	Dionysius Halicarnassensis		Philo	Strabo
3	1		2	2
New Testament (NT)	Josephus	Plutarch	<b>Total</b>	
4	1	3	<b>87</b>	

Table 10: Occurrences of πολεμοποιέω *polemopoiéō* ‘to provoke, make war’

Xenophon	Hippocrates	Diodorus Siculus	Philo	Plutarch	<b>Total</b>
1	1	1	3	1	7

- (20) καὶ τῇ πόλει ὠφελιμώτερον ἔφη εἶναι  
*kai tēi pólei ōphelimōteron éphē eînai*  
 and ART.DAT.F.SGS city.DAT.F profitable.COMP.V.ACC.N IMPF.3SG be.INF  
 πρὸς τοὺς ἐν τῇ χώρα σφῶν  
*pròs toús en tēi chōra sphōn*  
 against ART.ACC.M.PL in ART.DAT.F country.DAT.F 3PL.GEN  
 ἐπιτεχίζοντας τὸν πόλεμον ποιεῖσθαι ἢ  
*epiteichízontas tòn pólemon poiéisthai ē*  
 fortify.PTCP.ACC.M.PL ART.ACC.M war.ACC.M make.INF.MID/PASS than  
 Συρακοσίους  
*Surakosíous*  
 Syracusan.ACC.M.PL

‘He also said that it would be more profitable for the state to carry on the war against those who were building fortifications in Attica, than against the Syracusans’

(Thucydides, *Histories* 7.47.4)

- (21) εἴτε προφάσει χρώμενοι ταύτη τοῦ  
*eíte prophásei chrómēnoi taútēi tou*  
 either pretext.DAT.F use.PTCP.MID/PASS.NOM.M.PL DEM.DAT.F ART.GEN.N

ταράττειν καὶ πολεμοποιεῖν.  
*taráttein kai polemopoieîn*  
disturb.INF and make.war.INF

‘[It is uncertain whether...] they used this pretext for raising disturbance and war’

(Plutarch, *Life of Otho* 3.2)

In this case, the choice of SVCs is often due to the fact that the war is a specific and definite one, as in (20). Moreover, instances of incorporation appear later, probably because of competition with the denominative verbs πολεμέω *poleméō* ‘to battle, fight a war’ and πολεμίζω *polemízō* ‘to fight’.

It is also noteworthy that μάχη *mákhē* ‘battle, combat’ only occurs in SVCs as the equivalent incorporation does not exist.<sup>27</sup> From our perspective, this is due to the fact that this is a complex-event nominal relating to the verb μάχομαι *mákhomai* ‘to fight’. In Grimshaw’s (1990) terms, this means that the predication of ‘fighting’ is denoted by the noun alone, which fully inherits the argument and event structures of the verb (Section 3.2). Of course, it is possible that the incorporation did not develop precisely because of the existence of this verb, although it is interesting that it did develop in the case of πόλεμος *pólemos* ‘war, battle’, despite other existing verbal forms. Moreover, the same is true of all the other deverbal nouns (such as πλόος *plóos* ‘navigation’, φυλακή *phulakhé* ‘watching, guarding’, and so on). The alternation between SVCs with deverbal nouns and the synthetic verb from which they derive follows semantic and textual principles (Tambasco 2021) similar to those that we have seen for the selection of SVCs equivalent to instances of incorporation.

## 4 Conclusions

In this chapter, a comparison between analytical constructions and instances of incorporation with ποιέω *poiéō* ‘to do, make’ has been made with a twofold aim: (a) to identify the reasons for selecting either analytical constructions or synthetic verbs, and (b) to verify whether analytic predicates are always SVCs.

The answer to the first research question is that the selection of analytical constructions is mainly due to textual reasons, i.e., the establishment of the referent in the discourse, which also has some consequences on the Information

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<sup>27</sup>On SVCs with ποιέω *poiéō* ‘to do, make’ and πόλεμος *pólemos* ‘war, battle’ or μάχη *mákhē* ‘battle, combat’, see Jiménez López (2012, 2016) and Baños (2015).

Structure, particularly on Topic (re-)establishment (Section 2.3); secondarily, semantic reasons such as specificity can play a role (Section 2.2).

As for the second research question, it is clear that only analytical constructions with eventive nouns can be considered SVCs (Section 3). These fall into two types, namely, simple-event nominals, and complex-event ones (Section 3.2). The comparison with instances of incorporation can be made only when the eventive noun in the SVC is a simple-event nominal (Section 3.2.2), in addition to cases of analytical constructions where ποιέω ποιέō ‘to do, make’ co-occurs with non-eventive nouns (Section 3.2.1). Incorporated simple-event nominals are nouns with the event reading in their lexical representation (e.g., ἄριστον *áriston* ‘(morning) meal, breakfast, lunch’, πόλεμος *pólemos* ‘war, battle’); besides, other nouns may acquire an event interpretation thanks to a conceptual shift to a dynamic reading (e.g., σῖτος *sítos* ‘grain, food, allowance of grain’). By contrast, analytical constructions made up of complex-event nominals do not alternate with instances of incorporation, but only with the verb from which the noun derives.

These findings are illustrated in Figure 1.

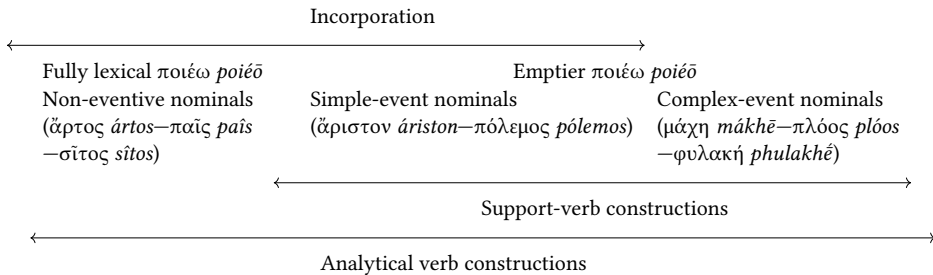


Figure 1: The noun predicativeness–verb lightness continuum

## Abbreviations

COMPV	comparative
NT	New Testament
SUP	superlative

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The text is the result of cooperation between the three authors. Nevertheless, for academic purposes, Flavia Pompeo is responsible for Section 1, Anna Pompei for Sections 2, 3, 3.2, 3.2.1, 3.2.2, and Eleonora Ricci for Sections 2.1, 2.2, 2.3, 3.1. The final section (Section 4) is to be ascribed jointly to Anna Pompei and Flavia Pompeo. We thank Victoria Fendel and two anonymous reviewers for their useful comments and suggestions; any remaining errors are our own.

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# Chapter 10

## Analyticity and syntheticity in Coptic: Noun incorporation, word segmentation, and clitics

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This chapter examines Sahidic Coptic morpho-syntax, focusing on prenominal verb states, clitics, word segmentation, and noun incorporation using the Coptic SCRIPTORIUM corpus. It analyzes noun and pseudo-noun incorporation, word segmentation complexities, and clitic categorization. The study addresses three main questions: the characteristics of Coptic noun incorporation, the impact of segmentation on morpho-syntactic boundaries, and the distinction and role of clitics in Coptic grammar. This research contributes to understanding Coptic morpho-syntax and its typological features, supporting further linguistic studies and comparisons with Afro-Asiatic languages.

本章では、Coptic SCRIPTORIUMコーパスを用いて、動詞の前名詞形（連語形）、接語、語分割、名詞抱合に焦点を当て、コプト語サイド方言の形態統語的特徴を調査する。名詞抱合と擬似名詞抱合の分析、語分割の複雑さの検討、接語の分類を行う。研究では主に3つの問いに取り組む：コプト語における名詞抱合の特徴、語分割が形態統語的境界の解釈に与える影響、およびコプト語文法における接語の区別と役割である。本研究は、コプト語の形態統語論とその類型論的特徴の理解に貢献し、アフロ=アジア諸語との言語学的研究と比較を支援する。

### 1 Introduction

This study seeks to elucidate the characteristics of the Coptic Egyptian morphosyntax, with a particular focus on the prenominal state of the verb in the



context of clitics, word segmentation, and noun incorporation through the lens of linguistic typology. Coptic Egyptian represents the final historical phase of the Egyptian language lineage, a unique branch of the Afro-Asiatic language family. With a recorded history spanning over five millennia (see Kammerzell 2000: 97), Egyptian holds the distinction of being the language with the longest traceable record of grammatical change via written documents.

This study delves into the morphological transitions of Coptic verbs, casting light on the syntactic and morphological synthesis within Coptic and exploring the concept of "wordhood" in this context. The research questions addressed in this chapter are threefold. First, what are the characteristics and extent of noun incorporation in Coptic? This question aims to investigate how noun incorporation manifests in Coptic, examining its morpho-syntactic properties, semantic constraints, and productivity across different noun classes. Second, how do word-segmentation strategies influence the interpretation of morpho-syntactic boundaries in Coptic, and which approach is optimal for typological analysis? This question explores the impact of various word-segmentation practices on the understanding of Coptic morpho-syntax and seeks to identify the most suitable segmentation method for cross-linguistic comparison. Finally, what are the morphological, syntactic, and phonological properties of the prenominal state of the verb in Coptic, and how does it function in marking grammatical relationships and interacting with other elements in the language's morpho-syntactic structure? This question delves into the nature of the prenominal state of the verb, its role in Coptic grammar, and its significance for understanding the language's typological characteristics.

The degree of synthesis in the Coptic language has been a subject of considerable debate among scholars. According to the experts, Coptic is:

- Polysynthetic (Loprieno 1995: 51, 92, 220)
- Synthetic (Haspelmath 2014: 121)
- Analytic (Reintges 2011a,b, Egedi 2007)

Synthesis in linguistics refers to the degree to which words in a language are comprised of multiple morphemes, which are the smallest units of meaning. A high index of synthesis indicates a synthetic language, where words often contain several morphemes. Conversely, a low index denotes an analytic language, characterised by a prevalence of single morphemes per word. At the extreme end of the synthetic spectrum we find polysynthetic languages, where a single word may encompass enough morphemes to convey a complete sentence. Upon initial

inspection of a printed Coptic text, such as the example shown in (1),<sup>1</sup> one might conjecture that Coptic exhibits characteristics of a polysynthetic language.

- (1)  $\chi\epsilon\epsilon\kappa\epsilon\mu\epsilon\rho\epsilon\pi\epsilon\tau\gamma\iota\tau\omicron\gamma\omega\kappa$   
*če-e-k-e-mere-p-et-hi-touô-k*  
 COMP-OPT-2SG.M-OPT-love.PNOM-DEF.SG.M-on-bosom-2SG.M  
 $\eta\bar{\gamma}\mu\epsilon\sigma\tau\epsilon\pi\epsilon\kappa\chi\alpha\chi\epsilon$   
*n-g-meste-pe-k-čače*  
 CONJ-hate.PNOM-POSS.SG.M-2SG.M-enemy.M  
 ‘(you have heard) that you shall love your neighbour and you shall hate your enemy’  
 (NT Matthew 5:43 from Wilmet (1958: 958))

In (2)–(4), I provide examples from languages that are representative of the polysynthetic, synthetic, and analytic typological categories. These serve as a point of comparison for the Coptic text previously discussed (see (1)). Fortescue (2013: 252) categorises Classical Nahuatl as polysynthetic due to its propensity for incorporating numerous morphemes into single words, see (2).<sup>2</sup>

- (2) Example of a polysynthetic language  
 o mitzmoteochihuiltzino  
 $\bar{o}=\emptyset\text{-mitz-mo-te}\bar{o}\text{-ch}\bar{i}hui\text{-lih-tzin-oh}$   
 PST=3.SBJ-2SG.OBJ-REFL-god-make-APPL-HON-VBLZ.PST  
 (Classical Nahuatl (Uto-Aztecan))  
 ‘He blessed you’  
 (Camino del Cielo, folio 107v (de León 1611), annotated and translated by Mitsuya Sasaki)

Old Nubian is identified as synthetic,<sup>3</sup> particularly in its verbal morphology, which van Gerven Oei (2014: 171) details extensively, see (3).<sup>4</sup>

<sup>1</sup>The romanization of Coptic is following Grossman & Haspelmath (2014).

<sup>2</sup>The hyphenated version is a linguistically interpreted version by a Nahuatl linguist, and the original is in Classical Nahuatl. <h> is not written in the original but it should be written in the linguistically interpreted text.

<sup>3</sup>In Old Nubian, a superlinear stroke on a consonant always means /i/ before the consonant, see van Gerven Oei (2022: 38).

<sup>4</sup>A different morphological interpretation with regard to morpheme boundaries and functions of morphemes was also proposed by Satzinger (2010: 751).

(3) Example of a synthetic language

εἴτιοι οὐέλλο      ἀπίποι οὐέλλα    ΔΟΥἄρα      ἄλεξανδρεν  
*eittou ouel-Ø-lo      dippou ouel-l-a    dou-ar-a      aleksandre-n*  
 woman one-NOM-FOC village one-DIR EXIST-PST1-PRED Alexandria-GEN  
 ወጅግዔላ      (Old Nubian (Nilo-Saharan))  
*šik-gou-la*  
 district-ground-DAT

‘There was a woman living in a village, in the district of Alexandria.’  
 (Miracles of St. Mina, p.1,  
 ll. 5-8, Browne (1994: 5), annotation following van Gerven Oei (2022: 67),  
 a different morphological interpretation regarding morpheme boundaries  
 and functions of morphemes was proposed by Satzinger (2010: 751))

By contrast, Classical Chinese exemplifies a highly analytic structure, surpassing even Modern Mandarin – a language often cited as a paradigm of analyticity – given its minimal use of inflectional morphemes, see (4).

(4) Example of an analytic language

不 尚 賢 使 民 不 爭      (Old Chinese (Sino-Tibetan))  
*bù shàng xián shǐ mǐn bù zhēng*  
 NEG respect clever CAUS people NEG conflict

‘If you don’t respect the clever, you never let people be in conflict’  
 (Laozi, *Tao Te Ching*, 3 (Hachiya 2008), with Modern Mandarin  
 pronunciation)

The concept of a word boundary (WB henceforth) is crucial for determining the index of synthesis in a language. For the languages previously mentioned, WBs are inferred based on modern counterparts.

Additionally, the absence of spaces in traditional Coptic manuscripts complicates the task of identifying WBs in Coptic texts.

The question arises, then: What do the spaces in our printed Coptic texts signify? Takla (1998) provides insight into the history of word division in Coptic literature:

The first attempt to divide the words was probably done by the scholars in Europe as early as [the] 17th and 18th centuries. Foremost among them is the Coptic Raphael al-Tukhi, residing in the Vatican. Eventually the same system was employed by Copts when they published the first printed texts during the days of Pope Cyril IV or shortly after. (Takla 1998: 121)

Following Takla (1998)'s account, the spaces found in modern Coptic texts are a relatively recent development and may not accurately reflect authentic word boundaries. It is worth noting that instances of segmentation exist in Coptic manuscripts predating the 17th century, such as the *Macquarie Magical Papyrus*.<sup>5</sup> Thus, it is probable that the segmentation approach employed by European scholars was influenced by an existing Coptic tradition of word division.

## 2 Typology of spacing on Coptic texts

In the study of Coptic texts, scholars have adopted various strategies for segmenting morpheme groups, particularly concerning the placement of spaces. For my analysis, these practices have been classified into four types, see Figure 1.

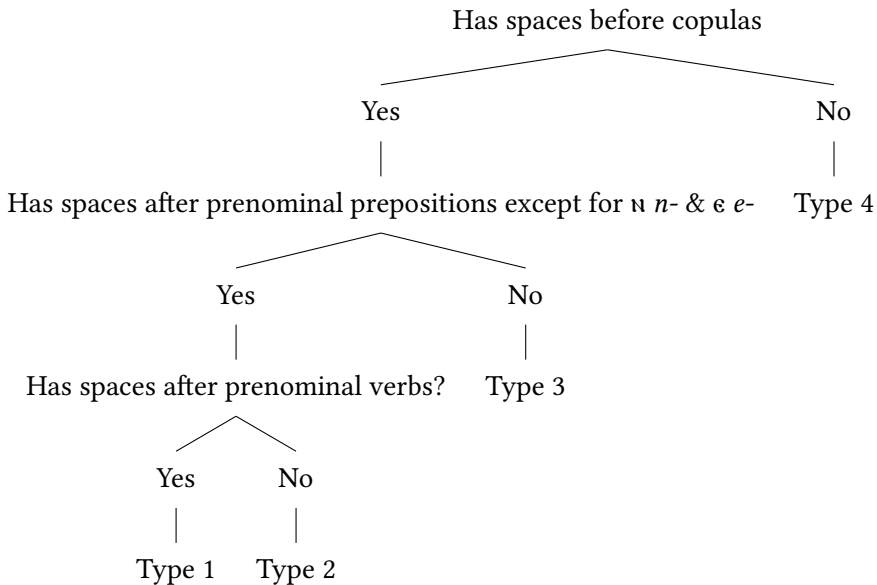


Figure 1: Typology of Coptic spacing

The first classification makes a distinction based on the presence or absence of spaces preceding copulas. When a space does not precede a copula, the text conforms to what I refer to as Type-4 spacing. This approach to spacing is consistent with the standards set forth by Kuhn (1956a), see (5), and further supported by Wilmet (1958), see (6).

<sup>5</sup>Choat & Gardner (2014); Example (10) from the *Macquarie Magical Papyrus* shows that the bound groups were divided by upper dots.

- (5) Type 4: (Kuhn 1956a: 12) with the copula *ne pe* attached to the word *paï pai* before it

εΤΒΕΠΑΙΘΕ	ΝΕCΝΗΥ	ΟΥΑΓΑΘΟΝ	
<i>etbe-pai-ce</i>	<i>ne-snêu</i>	<i>ou-agat<sup>h</sup>on</i>	
because-DEM.SG.M-therefore	DEF.PL-brother.PL	INDEF.SG-good	

ΝΑΝΠΕ	ΕΤΡΕΝΤΟΘἸ	ΕΠΝΟΥΤΕ	[...]
<i>na-n-pe</i>	<i>e-tre-n-tocn</i>	<i>e-pnoute</i>	[...]
DAT-1PL-COP.SG.M	DIR-CAUS-DEF.PL-cleave	DIR-DEF.SG.M-god	[...]

‘So therefore, brethren, it is good for us to cleave to God [...]

(Besa’s *Letters and Sermons*, ‘On Faith, Repentance, and Vigilance II,’ 1, (Kuhn 1956b: 11))

- (6) Type 4: (Wilmet 1958) with the copula *ne pe* attached to the word *paï pai* before it

ΑΥΩ ΔἸΤΡΕ	ϫΕΠΑἸΠΕ	
<i>auô a-i-r-mntre</i>	<i>çe-paï-pe</i>	
and PST-1SG-do.PNOM-witness	COMP-DEM.SG.M.ABS-COP.SG.M	

ΠCΩΤΠ	[...]
<i>p-sôtp</i>	[...]
DEF.SG.M-choice	[...]

‘and I witnessed that this one is the choice [...]

(NT John 1:34 (Wilmet 1958: 377))

The typology of spaces in relation to copulas and other morphological markers provides the basis for further classification. Type-3 segmentation is characterised by a space before a copula coupled with the absence of spaces following prenominal prepositions. This segmentation pattern is prominent in the field of Coptology; for example, Bentley Layton adopts this approach in his reference grammar of the Sahidic dialect of Coptic, where he also provides a theoretical framework for it (Layton 2011: 25–26).

In contemporary scholarship, Layton’s Bound Group (BG henceforth) model is frequently cited, delineated in his authoritative grammar work and represented as Type 3 in Figure 1. The largest corpus of Coptic text, the Coptic SCRIPTORIUM,<sup>6</sup> has implemented this spacing typology. Bentley Layton’s formulation of

<sup>6</sup>Coptic Scriptorium: Digital Research in Coptic Language and Literature (<https://copticcriptorium.org/>, last accessed 13 January 2024). See Schroeder & Zeldes (2016).

a BG is rooted in a prosodic framework, positing that a BG encapsulates a single stress point. Martin Haspelmath expands on this by characterising a BG as a “stress group” (Haspelmath 2014).

Nonetheless, it is crucial to acknowledge that there is no direct evidence of stress in morphs from the period of active Sahidic Coptic usage. Despite this absence, Layton’s propositions on stress patterns find corroborative evidence, albeit indirectly, through Prince’s analysis of Coptic pronunciation in liturgical contexts from the 20th century (Prince 1902).

While Layton’s BG theory provides a prosodic and phonological rationale for the cohesion of non-stressed morphs, it stops short of thoroughly addressing their morpho-syntactic interconnectedness, suggesting a potential avenue for future exploration.

It is also important to note that Layton (2011) employs a special hyphenation, where most morphemes, except for articles and possessive articles, are separated by hyphens. This hyphenation-based segmentation differs from the many other Type-3 editions.

Despite this difference, Layton’s work remains a fundamental reference for the study of Coptic grammar and provides valuable insights into the language’s structure and morpho-syntax. The hyphenation-based segmentation used by Layton serves to highlight the morphological composition of Coptic words and phrases, while the Type-3 segmentation focuses more on the prosodic and syntactic units of the language.

In this chapter, we primarily focus on the Type-3 segmentation as a basis for analysing word boundaries and calculating the morpheme-to-word ratio, as Type-3 segmentation aligns more closely with the concept of the bound group and provides a suitable framework for cross-linguistic comparison. However, we acknowledge the importance of Layton’s work and the alternative perspective offered by his hyphenation-based segmentation.

The final distinction shown in Figure 1 hinges on the spacing following verbs which are in the prenominal state. The absence of a space after such verbs denotes Type-2 segmentation, see (7). Conversely, if there is a space following prenominal verbs, the text is categorised as Type 1, a style utilised by scholars such as Till (1942), Steindorff (1883), and Quecke (1984).

(7) Type 2: Layton (2011: 219)

ⲛ̅-ⲁⲛⲟⲕ	ⲁⲛ	ⲙ̅ⲙⲁⲓⲉ	ⲡⲉ	ⲁⲗⲗⲁ	ⲁⲛⲟⲕ	ⲛ̅ⲙ̅-ⲡⲓⲱⲧ
<i>n-anok</i>	<i>an</i>	<i>m-mate</i>	<i>pe</i>	<i>alla</i>	<i>anok</i>	<i>nm-p-iôt</i>
NEG-1SG	NEG	LOC-very	COP.SG.M	but	1SG.M	with-DEF.SG.M-father

ენტ-αφ-ταουο-ει  
*ent-a-f-taouo-ei*  
 REL-PST-3SG.M-send-1SG

‘It is not a matter of Me alone, but of Me and the Father who sent Me’  
 (NT John 8:16 from Layton (2011: 219))

(8) presents one instance of Type-1 segmentation, a style characterised by the insertion of spaces after prenominal verbs.

(8) Type 1: Till (1942: 51)

πχοεις	ναφωπε	εογα	πε	αυω πεφραν
<i>p-choeis</i>	<i>na-šōpe</i>	<i>e-oua</i>	<i>pe</i>	<i>auō pe-f-ran</i>
DEF.SG.M-Lord	FUT-appear	CIRC-one	COP.SG.M and	POSS.SG.M-3SG.M-name
εογα	πε			
<i>e-oua</i>	<i>pe</i>			
CIRC-one	COP.SG.M			

‘The Lord will become one and his name is one’

(NT Zechariah 14:9)<sup>7</sup>

Till’s method conforms to Type 1, yet it is distinguished by its systematic use of spacing to differentiate homonyms across different parts of speech. Such an approach, while methodical, could be considered more prescriptive or artificial compared to other segmentation practices, as it intentionally modifies the text structure to clarify ambiguity in homonymy.

In conclusion, the various approaches to word segmentation and spacing in Coptic are synthesised in Figure 1. This visualization provides a systematic overview of the classification scheme applied to Coptic text segmentation.

While the typology of Coptic spacing provides valuable insights into the various approaches to segmentation, it is crucial to determine which type of spacing most accurately represents word boundaries in the language. For the purposes of this study, we argue that Layton’s bound group (Type 3) is the most suitable representation of word boundaries in Coptic from a typological perspective.

Layton (2011)’s bound group is characterised by a single stress and often corresponds to a grammatical word, aligning with Haspelmath (2023)’s definition of a word as a “minimal form that can express a complete grammatical word”. By treating bound groups as words, we can better capture the morpho-syntactic units of Coptic and analyze their properties in relation to cross-linguistic patterns.

<sup>7</sup>“Der Herr wird werden indem er eins ist und sein Name indem er eins ist” (Till 1942: 51).

Furthermore, Haspelmath (2023)'s definitions of an affix as a "bound form that is not a root and that cannot occur alone" and a clitic as a "bound form that is not an affix but still depends on another form" provide a useful framework for distinguishing between these elements in Coptic. Applying these definitions to the various segmentation types, we find that Layton (2011)'s bound group (Type 3) strikes a balance between representing the prosodic unity of Coptic words and capturing the grammatical independence of clitics.

While other segmentation types, such as Type 1 and Type 2, may offer alternative perspectives on word boundaries, we maintain that Layton's bound group (Type 3) provides the most typologically sound basis for analysing Coptic morpho-syntax and calculating the Morpheme-per-Word (M/W henceforth) ratio, as discussed further in Section 8.

### 3 Punctuation and diacritics

On late antique manuscripts, Coptic was originally written in *scriptio continua*, i.e., without spaces. In determining the segmentation of words in Coptic texts, we may rely on certain punctuation marks and diacritical signs that suggest boundaries. For instance, upper-dots (UD henceforth) typically signal the termination of sentences, clauses, or phrases, as exemplified in (9 and 10).

- (9) Use of UD ("|" indicates a line break)

·	πεχεπαγγελος πχοεις ναφ	·
UD	<i>peče-p-aggelos-m-p-čoeis-na-f</i>	UD
UD	said.PNOM-DEF.SG.M-angel-DIR-DEF.SG.M-lord-DAT-3SG.M	UD
·	χε̅ πρ ρ ροτεζαχαριας	·
	<i>če-mpr-r-hote-zak<sup>h</sup>arias</i>	UD
COMP-PROH-do.PNOM-fear-Zachariah		UD
·	χεδωτμε πεκσοπ̅	·
	<i>če-a-u-sôtm-epe-k-sops</i>	UD
COMP-PST-3PL-listen-DIR-POSS.SG.M-2SG.M-prayer		UD

'UD The angel of the Lord said to him, UD "Do not fear, Zachariah, UD because your prayer was heard UD [...]'

(P. Palau Rib. inv. 181 = NT Luke 1:13)

- (10) Diverse use of UD

·	αγγελος	·	ετοουαβ	·	ηνοση	·	παωτ
UD	<i>aggelos</i>	UD	<i>et-ouaab</i>	UD	<i>hn-com</i>	UD	<i>p-iôt</i>
UD	angel	UD	REL-be_holy.STA	UD	in.PNOM-power	UD	DEF.SG.M-father



ⲉⲡⲖⲚⲟⲩⲓⲧⲉ

*e-p-noute*

IN.PNOM-2PL DIR-inside

‘but we saw the abundant love in you toward God’

(Vienna K 925, l. 16–19)

In addition to the markers discussed previously, Coptic manuscripts feature a range of other punctuation marks that are less common. These include the colon (:), the *diplē* sign (Ϸ),<sup>8</sup> the period (.), and the comma (,), among others.

Generally, such punctuation is employed to denote boundaries at the more macro-level compared to the upper dots and apostrophe-like markers. These signs are instrumental in demarcating larger textual units, such as sentences and paragraphs. Among Coptic diacritical marks, superlinear strokes are particularly intriguing among the various punctuation marks, offering valuable insights into the word division in Coptic manuscripts. J. Martin Plumley has insightfully characterised the features of superlinear strokes as follows:

The unbroken succession of consonants in Coptic MSS makes word division a matter of extreme difficulty. What is to be made of such a group as ⲛⲧⲛⲧⲙⲛⲧⲉⲓⲟⲩⲧ [ *ntntmnteîôt* ], in which only one vowel is clearly discernable? How is such a succession of consonants to be divided into syllables? Fortunately the writers of Sahidic MSS were aware of this difficulty, and invented a simple method to aid the reader: the Superlinear Stroke, or Syllable Marker. By placing a stroke over the letters thus ⲃ̄ [ *b̄* ], ⲗ̄ [ *l̄* ], ⲙ̄ [ *m̄* ], ⲛ̄ [ *n̄* ] and ⲡ̄ [ *p̄* ], and less frequently ⲕ̄ [ *k̄* ], ⲥ̄ [ *s̄* ], Ⲕ̄ [ *š̄* ], Ⲓ̄ [ *m̄* ], and Ⲓ̄̄ [ *h̄* ], the correct division into syllables is indicated. Thus in good MSS, ⲛⲧⲛⲧⲙⲛⲧⲉⲓⲟⲩⲧ [ *ntntmnteîôt* ] would appear as ⲛ̄ⲧ̄ⲛ̄ⲧ̄ⲙ̄ⲛ̄ⲧ̄ⲉⲓⲟⲩⲧ [ *n̄t̄n̄t̄m̄n̄t̄eîô̄t* ], indicating the syllabic division ⲛ̄.ⲧ̄ⲛ̄.ⲧ̄ⲙ̄ⲛ̄ⲧ̄.ⲉⲓⲟⲩⲧ [ *n̄.t̄n̄.t̄m̄n̄t̄.eîô̄t* ].

Thus, superlinear strokes can divide syllable units but not word units. Summarising the above, punctuation marks mainly divide clauses and sentences, and superlinear strokes are hints at how to divide syllables. They can be clues for us to divide words in Coptic texts. However, they are incomplete for that purpose and no marks seem to have been designed for marking word boundaries consistently.

<sup>8</sup>For the history and functions of the *diplē* sign, see Miyagawa (2022: 84–89).

## 4 Clitics

The role of clitics in syntactic structure is a subject of keen interest to classicists. Specifically, Wackernagel clitics or second-position (P2 henceforth) discourse clitics, such as  $\Delta\epsilon$  *de* ‘but, and, on the other hand,’  $\Gamma\alpha\text{P}$  *gar* ‘for, because,’ and  $\text{ce}$  *ce* ‘then, therefore, so’ in Coptic, invariably occupy the second position in a sentence.<sup>9</sup> This consistent placement not only marks the boundary between the first and second syntactic elements but also provides insight into the sentence’s prosodic structure. However, these clitics do not necessarily correspond to a single word; they may also attach to phrases, indicating the boundary between the phrase and the following syntactic element. While clitics are dependent on their host words or phrases for pronunciation, they still function as separate grammatical units within the larger syntactic structure.

While Layton’s concept of the bound group is a well-accepted prosodic construct characterised by a single stress point, it is not synonymous with the linguistic definition of a word. In linguistics, a word is typically defined as the smallest unit of the language that can stand alone and convey a complete meaning. It is a grammatical unit that can be moved around within a sentence and that can take inflectional or derivational morphology (Aronoff & Fudeman 2023). This definition emphasises the syntactic and semantic independence of a word, as well as its potential for morphological modification.

By contrast, Layton’s bound group is primarily concerned with prosodic unity, focusing on the stress pattern within a group of morphemes. While a bound group may often correspond to a single word, it can also encompass clitics or other elements that are prosodically dependent but grammatically distinct. Therefore, it is essential to differentiate between the prosodic concept of the bound group and the linguistic definition of a word when analysing the structure of Coptic.

Cross-linguistic evidence shows that certain words lack inherent stress and are referred to as clitics. In the case of Modern Japanese, a language like Coptic that traditionally eschews spaces in writing, there has been considerable debate over the categorisation of adpositions, particles, and converbs as either words or affixes. Contemporary linguistic research, following the trajectory of Arnold Zwicky’s influential work (Zwicky 1977, 1985, Zwicky & Pullum 1983), leans towards classifying these elements as clitics rather than affixes. This perspective is supported by studies that focus on the distinction between clitics and affixes,

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<sup>9</sup>It is interesting that Coptic P2 means the position after the first phonological word, while Ancient Greek P2 is the position after the first morphological word.

such as Anderson (2005), Spencer & Luís (2012), and Haspelmath (2015). These researchers argue that clitics exhibit greater syntactic flexibility and independence compared to affixes, which are more tightly bound to their host words.

For instance, Anderson (2005) emphasises the syntactic independence of clitics, noting that they can attach to various parts of speech and are not restricted to a specific morphological host. Spencer & Luís (2012) further explore the differences between clitics and affixes, highlighting the role of clitics in marking grammatical relations and their ability to scope over larger syntactic constituents. Haspelmath (2015) provides a cross-linguistic perspective, demonstrating the wide range of functions that clitics can serve across different languages.

In the Japanese example (12), linguistic elements such as postpositions, verbal particles, copulas, auxiliary verbs, topic markers, and complementizers exhibit prosodic adherence to their preceding elements.

(12) Clitics in Japanese

では	みなさんは、	そう	いう	ふう	に	川	だ	と
<i>dewa</i>	<i>mina-san=wa,</i>	<i>soo</i>	<i>yu-u</i>	<i>fuu-ni</i>		<i>kawa=da=to</i>		
then	all-HON=TOP	thus	say-ADN	manner-ADVL		river=COP=COMP		
云われたり、	乳の	流れた		あと	だ	と		
<i>iw-are-tari,</i>	<i>chichi=no</i>	<i>nagare-ta</i>		<i>ato=da=to</i>				
say-PASS-CONV	milk=GEN	flow-PST.ADN		trace=COP=COMP				
云われたりしていた				この		ぼんやりと		
<i>iw-are-tari=shi-te=i-ta</i>				<i>kono</i>		<i>bon'yari=to</i>		
say-PASS-CONV=do-CONV=PROG-PST.ADN				this.ADN		vague=ADVZ		
白い	ものが	ほんとうは	何か	ご	承知	ですか		
<i>shiro-i</i>	<i>mono=ga</i>	<i>hontoo=wa</i>	<i>nani=ka</i>	<i>go-shoochi=desu=ka</i>				
white-ADN	thing=NOM	real=TOP	what==Q	HON-knowing=COP.HON=Q				

(Japonic)

‘So, do you know what this vague white thing that was said to be a river or the remains of flowing milk really is?’

Despite this prosodic bond, the diverse potential for these elements to attach to various hosts categorises them as clitics. A clitic functions as a grammatical word, a unit that operates independently within syntactic structures. However, from a phonological or prosodic perspective, it does not constitute a standalone word. Dixon & Aikhenvald (2002: 25) articulate this concept by distinguishing between a clitic’s prosodic dependency and its grammatical autonomy.

Therefore, although a clitic may exhibit phonological characteristics akin to an affix, it is, in essence, a separate word. Modern linguistic theory analyses morphs on two distinct planes: the morpho-syntax and the phonology (prosody). In notation, the juncture between two clitics or between a clitic and its host word is denoted by an equal sign (=), as systematised in the *Leipzig Glossing Rules* developed by the *Max Planck Institute for Evolutionary Anthropology*. Haspelmath & Sims (2010) have formulated six robust criteria to differentiate between affixes and clitics, as shown in Table (1).

Table 1: Criteria to distinguish between clitics and affixes (Haspelmath & Sims 2010: 202)

Clitics	Affixes
freedom of host selection	no freedom of stem selection possible
freedom of movement	no freedom of movement
less prosodically integrated	more prosodically integrated
may be outside the domain of a phonological rule	within the domain of a phonological rule
do not trigger/ undergo morphophonological or suppletive alternations	may trigger/ undergo morphophonological or suppletive alternations
clitic-host combinations...	
do not have idiosyncratic meanings	do not have arbitrary gaps
affix-base combinations...	
may have idiosyncratic meanings	may have arbitrary gaps

Within the spectrum of criteria for distinguishing clitics, the principle of Freedom of Host Selection (FHS henceforth) stands out as a particularly definitive factor in determining a morph's morpho-syntactic independence. For instance, the English abbreviated form of 'is,' which can attach to an entire noun phrase, exemplifies a clitic that exhibits FHS, thereby demonstrating its syntactic autonomy from any single host word, see (13).

- (13) enclitic =’s (is) in English  
 a. The Coptic parchment’s beautiful.

- b. The Coptic parchment I saw's beautiful.  
 c. The Coptic parchment I saw yesterday's beautiful.

The morpheme =’s, which can affix to nouns, verbs, and adverbs. It demonstrates the property of Freedom of Host Selection (FHS) by its ability to attach to various syntactic categories: nouns like ‘parchment,’ verbs in their past-tense form like ‘saw,’ and even adverbs like ‘yesterday.’ This versatility confirms that =’s functions as a clitic, as it maintains its syntactic role across different host words. Furthermore, applying the principle of FHS to Coptic, the conjunction or complementizer  $\chi\epsilon$  *čē-* can be identified as a clitic due to its ability to attach freely to different syntactic units, indicating its morpho-syntactic independence.

- Negative particle:  $\chi\epsilon\mu\pi\epsilon\mu\epsilon\lambda\ \sigma\omicron\omicron\gamma\ \alpha\ \eta\ \acute{\epsilon}\text{-}m\text{-}p\text{-}hmhal\ \sigma\omicron\omicron\ \eta\ \alpha\ \eta$  (*čē-m-p-hmhal sooun an* (COMP-NEG-DEF.SG.M-slave know.ABS NEG) ‘that the slave doesn’t know’)
- Interrogative pronoun:  $\chi\epsilon\omicron\gamma\ \pi\epsilon\ \pi\gamma\alpha\mu\omicron\sigma\ \acute{\epsilon}\text{-}ou\ \pi\epsilon\ p\text{-}\gamma\alpha\mu\omicron\sigma$  (COMP-what COP.SG.M DEF.SG.M-marriage) ‘what is the honorable marriage’ (Abraham.YA525-530 in Coptic SCRIPTORIUM)
- Verb:  $\chi\epsilon\omicron\gamma\chi\epsilon\ \epsilon\ \beta\omicron\lambda\ \eta\tau\epsilon\iota\mu\epsilon\lambda\ \acute{\epsilon}\text{-}nou\acute{\epsilon}\ \epsilon\text{-}\beta\omicron\lambda\ \eta\text{-}\tau\epsilon\iota\text{-}hmhal$  (COMP-throw.ABS DIR.ABS-outside ACC-this.SG.F-slave) ‘cast out this slave’ (Abraham.YA518-520 in Coptic SCRIPTORIUM)
- Demonstrative pronoun:  $\chi\epsilon\ \pi\alpha\iota\ \epsilon\tau\mu\mu\alpha\gamma\ \epsilon\tau\epsilon\iota\sigma\mu\alpha\eta\lambda\ \acute{\epsilon}\text{-}\pi\alpha\iota\ \epsilon\text{-}m\text{-}\mu\alpha\upsilon\ \epsilon\text{-}\tau\epsilon\text{-}\iota\sigma\mu\alpha\eta\lambda$  (COMP-DEM.SG.M-REL-LOC-there-REL-Ishmael) ‘that that one who is Ishmael [...]’ (Abraham.YA518-520 in Coptic SCRIPTORIUM)
- Auxiliary:  $\chi\epsilon\ \alpha\gamma\sigma\omicron\tau\tau\ \sigma\ \eta\alpha\gamma\ \epsilon\tau\ \rho\epsilon\gamma\omega\pi\epsilon\ \eta\ \alpha\beta\ \rho\eta\eta\ \alpha\gamma\omega\ \eta\chi\eta\ \rho\alpha\ \acute{\epsilon}\text{-}a\text{-}u\text{-}\sigma\omicron\tau\ \sigma\ \eta\alpha\upsilon\ \epsilon\text{-}\tau\ \rho\epsilon\text{-}u\text{-}\acute{\delta}\omicron\pi\epsilon\ \eta\text{-}\alpha\ \text{r}\acute{\epsilon}\eta\ \eta\ \alpha\upsilon\hat{\omicron}\ \eta\text{-}\kappa\hat{\eta}\ \rho\alpha$  (COMP-PST-3PL two-DIR-CAUS -3PL-be LOC-barren and LOC-widow) ‘since they chose to be barren women and widows?’ (Abraham.YA525-530 in Coptic SCRIPTORIUM)
- Article:  $\chi\epsilon\ \pi\iota\omicron\sigma\ \eta\ \alpha\ \rho\epsilon\mu\epsilon\lambda\ \mu\ \pi\ \kappa\omicron\gamma\ \iota\ \acute{\epsilon}\text{-}p\text{-}\eta\ \eta\ \alpha\text{-}\text{r}\text{-}hmhal\ \mu\text{-}p\text{-}\kappa\omicron\iota$  (COMP-DEF.SG.M-great FUT-do.PNOM-servant ACC-DEF.SG.M-lesser) ‘the great will serve the lesser’ (Abraham.YA518-520 in Coptic SCRIPTORIUM)
- Noun:  $\chi\epsilon\ \iota\alpha\kappa\omega\ \beta\ \delta\ \iota\ \mu\epsilon\ \rho\ \iota\ \tau\ \gamma\ \acute{\epsilon}\text{-}i\ \alpha\ \kappa\hat{\omicron}\ \beta\ \ \alpha\text{-}i\text{-}\mu\ \epsilon\ \rho\ \iota\ \text{-}f$  (COMP-Jacob PST-1SG-love.PPRO -3SG.M) ‘as for Jacob, I loved him’ (Abraham.YA518-520 in Coptic SCRIPTORIUM)

- Personal pronoun  $\chi\epsilon\tau\omicron\tau\iota\pi\epsilon\pi\epsilon\kappa\omega\tau\eta\rho$  *če-ntof pe pe-n-sôtêr* (COMP-2SG.M COP.SG.M POSS.SG.M- 1PL-savior) ‘because he is our savior’ (Abraham.YA535-540 in Coptic SCRIPTORIUM)
- Conjunction  $\chi\epsilon\rho\tau\alpha\kappa\alpha\iota\ \epsilon\rho\epsilon\pi\sigma\omicron\lambda\ \kappa\alpha\omega\lambda\chi\epsilon$  *če-hotan ere-p-col na-šače* (COMP- whenever CIRC-DEF.SG.M- liar FUT-speak) ‘whenever a liar speaks’ (Abraham.YA54-50 in Coptic SCRIPTORIUM)

The ability of the Coptic complementizer conjunction  $\chi\epsilon$  *če-* to attach to a wide range of parts of speech exemplifies its substantial FHS, a characteristic that classifies it as a clitic rather than an affix. Similarly, the relative marker  $\epsilon\tau$  *et-* demonstrates a broad FHS, as it can be found preceding various grammatical elements in a sentence, further supporting its identification as a clitic.

- Verb:  $\epsilon\tau\chi\eta$  *et-sêh* (REL-write.STA) ‘that is written’ (Abraham.YA535-540 in Coptic SCRIPTORIUM)
- Preposition:  $\epsilon\tau\chi\iota\lambda\omega\kappa\alpha\iota$  *et-hiçô-n* (REL-over-1PL) ‘who is over us’ (Abraham.YA535-540 in Coptic SCRIPTORIUM)
- Adverb:  $\epsilon\tau\mu\mu\alpha\gamma$  *et-mmau* (REL-there) ‘who is there’ (Abraham.YA518-520 in Coptic SCRIPTORIUM)

Based on the criterion of FHS, the Coptic relative marker  $\epsilon\tau$ - *et-* is categorised as a clitic. This is due to its syntactic flexibility in attaching to various grammatical constituents, distinguishing it from an affix, which typically has a more fixed position.

Similarly, Coptic articles display characteristics that align with the behavior of clitics. The definite articles in Coptic, coding for gender and number, include the masculine singular  $\pi(\epsilon)$ - *p(e)-*, the feminine singular  $\tau(\epsilon)$ - *t(e)-*, and the plural  $\kappa(\epsilon)$ - *n(e)-*. The indefinite articles, coding for number, include the singular  $\omicron\gamma$ - *ou-* and the plural forms  $\chi\epsilon\kappa$ - *hen-* /  $\chi\eta$ - *hn-*. The variation in form and the ability to attach to different noun phrases suggest that Coptic articles may also be considered clitics.

- Relative marker:  $\pi\epsilon\tau\kappa\alpha\lambda\omicron\upsilon\gamma$  *p-et-nanou-f* (DEF.SG.M- REL-be\_good-3SG.M) ‘the good one’ (*Letter to Aphthonia* in Coptic SCRIPTORIUM)
- Noun:  $\kappa\epsilon\sigma\eta\eta\gamma$  *ne-snêu* (DEF.PL-brother.PL) ‘the brothers’ (*Letter to Aphthonia* in Coptic SCRIPTORIUM)

- Definite article: ππεθουγ *p-p-et-<sup>h</sup>oou* (DEF.SG.M- DEF.SG.M- REL-be\_bad.STA) ‘the bad one’ (*Letter to Aphthonia* in Coptic SCRIPTORIUM)
- Causative auxiliary: ππρετνκαμα *p-tre-tn-ka-ma* (DEF.SG.M- CAUS - 2PL-leave. PNOM-place) ‘you leaving’ (*Letter to Aphthonia* in Coptic SCRIPTORIUM)
- Adverb: γενεβολ νλαος ναρχαιος *hen-ebol n-laos n-ark<sup>h</sup>aaios* (INDEF.PL-out LOC.PNOM-people LK.PNOM-ancient) ‘those who are from the ancient people’ (Shenoute, *Abraham Our Father* (Abraham\_YA) 547–50 in Coptic SCRIPTORIUM)

Consequently, the significant FHS exhibited by articles in Coptic positions them as clitics, not affixes. Their ability to freely associate with various noun phrases, irrespective of the latter’s syntactic role, underscores their clitic nature in the language structure.

## 5 Prenominal state

In Coptic, various words representing different parts of speech have a “state” (see Figure 2). There are three states: the absolute, the prenominal, and the prepronominal states. The absolute state always has an accent and can be a free form. The prenominal state has no accent, and its vowel is often weakened to a schwa or a zero vowel. Only nominals or noun phrases can stand after a word in a prenominal state. Various parts of speech in Coptic have prenominal states, such as prepositions, transitive verb infinitives and imperatives, body-part nouns, auxiliary verbs, and so-called “converters”.

State ↓ Part of speech →	Noun	Intransitive verb (no direct obj.)	Transitive verb (direct obj.)	Participium conjunctum	Preposition	Auxiliary verb (conjugational base)	Converter
absolute form	accented	accented	accented	–	–	–	–
prenominal form	unaccented	–	unaccented	unaccented	unaccented	unaccented	unaccented
prepronominal form	accented	–	accented	–	accented	unaccented	unaccented

Figure 2: Different state forms according to parts of speech (Miyagawa 2023: 566)

If the word is a transitive verb or a preposition, the following nominal or noun phrase is the complement of the word in the prenominal state. If the transitive

verb is in the absolute state, the object marker  $n-$  *n-* is needed. For example, in  $\text{c}\epsilon\tau\text{p}\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *setp-ou-rôme* (choose.PNOM-INDEF.SG-man) ‘choose a man’,  $\text{c}\epsilon\tau\text{p}$  *setp-* is in the prenominal state; but in  $\text{c}\omega\tau\text{p}\text{i}\text{ n}\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *sôtp n-ou-rôme* (choose.ABS OBJ-INDEF.SG-man) ‘choose a man’,  $\text{c}\omega\tau\text{p}\text{i}$  *sôtp* is the absolute state. The unaccented  $\epsilon$  *e* is pronounced as an unaccented schwa, but  $\omega$   $\hat{o}$  in  $\text{c}\omega\tau\text{p}\text{i}$  *sôtp* has an accent since  $\omega$   $\hat{o}$  is always accented in the Sahidic dialect of Coptic.

$\text{c}\epsilon\tau\text{p}\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *setp-ou-rôme* is one phonological word but  $\text{c}\omega\tau\text{p}\text{i}\text{ n}\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *sôtp n-ou-rôme* is two phonological words. We can also consider that the absolute state marks its complement with the complement/object marker before the complement (dependent marking). However, the prenominal state marks its complement with the vowel weakening on the verb (head marking). The prenominal-state verbs can take a noun with a definite or indefinite marker as their complement, such as  $\text{c}\epsilon\tau\text{p}\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *setp-ou-rôme*. Here,  $\text{o}\gamma$  *ou-* is an indefinite article. The prepositions, auxiliary verbs, and converters only have prenominal and prepronominal states, but no absolute states, whereas transitive verbs can appear in all three states.

In Coptic, articles exhibit a degree of syntactic flexibility that is characteristic of clitics. They can attach to a variety of syntactic elements, including prepositions, verbs, nouns, and even other articles. This behavior suggests that Coptic articles function as clitics rather than affixes.

However, the ability of adjectives to intervene between articles and nouns in Coptic raises questions about the status of articles as clitics or affixes. In some cases, adjectival elements can appear between the article and the noun, as in the construction article-adjective-noun (ART-ADJ-N). This flexibility in word order indicates that Coptic articles do not form a tight morphological unit with the nouns they modify, supporting their analysis as clitics.

It is also important to note that the behavior of adjectives in Coptic is complex and varies depending on the type of adjective and the specific construction. Some adjectives may follow the noun in an article-noun-adjective (ART-N-ADJ) order, while others may precede the noun. The variability in adjective placement suggests that the relationship between articles, adjectives, and nouns in Coptic requires further investigation to fully understand the nature of the articles as clitics or affixes.

- (14)  $\text{p}-\text{n}\text{i}$   $\bar{n}$ - $\text{n}\text{o}\varsigma$  *p-êi n-noc* (DEF.SG.M- house LK-big) /  $\text{p}-\text{n}\text{o}\varsigma$   $\bar{n}$ - $\text{n}\text{i}$  *p-noc n-êi*  
(DEF.SG.M- big LK-house) ‘the big house’
- (15)  $\text{p}-\text{w}\text{h}\text{r}\epsilon$   $\text{w}\text{h}\text{m}$  *p-šêre šêm* (DEF.SG.M-boy little) but \* $\text{p}-\text{w}\text{h}\text{m}$   $\text{w}\text{h}\text{r}\epsilon$  *p-šêm šêre*  
(DEF.SG.M-little boy) ‘the little boy’

While Coptic adjectives can indeed function as nouns, their behavior in the article-adjective-noun construction is complex. An attributive preposition is typically inserted before the noun in this construction, and both the adjective and the noun can be interchangeable, as seen in (14). Consequently, the clarity of Dryer's explanation that Coptic adjectives intervening between articles and nouns justify classifying articles as clitics becomes somewhat questionable.

Despite this, the Coptic definite article exhibits the ability to attach to a variety of syntactic elements, including prepositions, verbs, nouns, and even to another definite article, suggesting a degree of FHS. This flexibility extends to indefinite articles as well, supporting the view that Coptic articles function as clitics.

If we accept that the definite article behaves as a clitic, it follows that prenominal prepositions should also be considered clitics. This leads us to two possible interpretations of  $\zeta\mu\pi\rho\alpha\lambda$  *hm-p-ran* (in.PNOM-DEF.SG.M-name) 'in the name': either as three separate words *hm=p=ran* or as two words *hm-p=ran*.

Let us consider the latter interpretation, a head-marking solution, where  $\zeta\mu\pi$  *hm-p* is treated as a single unit attached to the noun  $\rho\alpha\lambda$  *ran*. If this were the case, we would expect  $\zeta\mu$  *hm-* to be a prefix that can attach directly to the noun, allowing for the form  $\zeta\mu\rho\alpha\lambda$  \**hm-ran*. However, this creates a contradiction, as  $\pi$  *p* (the definite article) is obligatory and cannot be omitted. The fact that  $\zeta\mu\rho\alpha\lambda$  \**hm-ran* is not a viable form suggests that  $\pi$  *p* is not merely a host for the prefix *hm-*, but rather an independent element.

Therefore, we must discard the head-marking solution and conclude that  $\zeta\mu\pi\rho\alpha\lambda$  *hm=p=ran* is the more logical segmentation. This analysis indicates that prenominal prepositions, like the definite article, are indeed clitics that attach to the noun phrase as separate elements, rather than prefixes that attach directly to the noun itself.

However, the categorisation of some prenominal prepositions as clitics becomes challenging when they appear before bare nouns and exhibit high lexicalisation, such as  $\epsilon\beta\omicron\lambda$  *e-bol* (DIR .PNOM-outside) meaning 'outwardly, away,' or  $\omicron\tau\tau\omicron\tau\omicron\upsilon$  *n-toot-ou* (LOC.PNOM-hand.PPRO-3PL) meaning 'at them.' Similarly, prenominal verbs that precede articles display characteristics of clitics.

The lexicalised patterns that emerge from the combination of prenominal prepositions and nouns in Coptic often result in single words that convey meanings beyond that which the Compositionality Principle would predict. In these instances, the prenominal prepositions function as grammatical or functional morphemes, which is consistent with their status as clitics. As clitics, they are expected to serve grammatical or functional roles within the larger syntactic structure. The highly lexicalised combinations of prenominal prepositions and nouns in Coptic demonstrate the close relationship between these elements, with

the prepositions contributing to the overall meaning of the construction in a way that is characteristic of clitics.

However, it is important to note that the degree of lexicalisation and the specific functional roles played by prenominal prepositions may vary across different constructions. While some combinations may exhibit a high degree of lexicalisation, others may retain a more compositional meaning. The status of prenominal prepositions as clitics does not necessarily imply a complete loss of their original semantic content, but rather highlights their integration into the larger syntactic and semantic unit.

## 6 Prenominal state of transitive verbs

In Coptic Egyptian, verbs have long been recognised as having distinct morphological states, a fact well-established in the literature (e.g., Stern 1880, Steindorff 1951, Polotsky 1960). These states are characterised by differences in their morphological forms and syntactic behavior. Layton's (2011) framework introduces a new terminology to describe these well-known categories, providing a systematic way of referring to the different verb forms.

According to Layton's terminology, the main morphological states of Coptic verbs are the absolute state (ABS), the prenominal state (PNOM), the prepronominal state (PPRO), and the stative form (STA). Each of these states has distinct morphological and syntactic properties that govern their use in Coptic sentences. Additionally, a select number of verbs possess a unique imperative form. For example, the verb  $\text{c}\omega\tau\pi\text{i}$  *sôtp* 'choose' has  $\text{c}\omega\tau\pi\text{i}$  *sôtp* in the absolute state,  $\text{c}\epsilon\tau\pi\text{i}$  *setp* in the prenominal state,  $\text{c}\sigma\tau\pi\text{i}$  *sotp-* in the prepronominal state, and  $\text{c}\sigma\tau\pi\text{i}$  *sotp* 'be chosen' as the stative form.

The division is primarily based on the position of the verb relative to the subject and object—with a standard order for verbs being subject-verb-object (SVO) and an alternate verb-subject-object (VSO) order for verboids—as well as the application or omission of tense-aspect-mood (TAM) markers, see Figure 3.

Historically, these states represent morphologically distinct forms of the verbal infinitive that are determined by what follows the verb: The prenominal state occurs before a nominal or a noun phrase with the indefinite or definite marker, such as  $\text{c}\epsilon\tau\pi\text{i}\sigma\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *setp-ou-rôme* (choose.PNOM-INDEF.SG -man) 'choose a man', the prepronominal state before a personal pronominal suffix, such as  $\text{c}\sigma\tau\pi\text{i}\text{q}$  *sotp-f* (choose.PPRO-3SG.M) 'choose him', and the absolute state is used in other contexts, such as  $\text{c}\omega\tau\pi\text{i}\sigma\text{o}\gamma\text{r}\omega\text{m}\epsilon$  *sôtp n-ou-rôme* (choose.ABS OBJ.PNOM-INDEF.SG-man) 'choose a man' or  $\text{c}\omega\tau\pi\text{i}\text{m}\text{m}\text{o}\text{q}$  *sôtp mmo-f* (choose.ABS OBJ-3SG.M) 'choose him'.

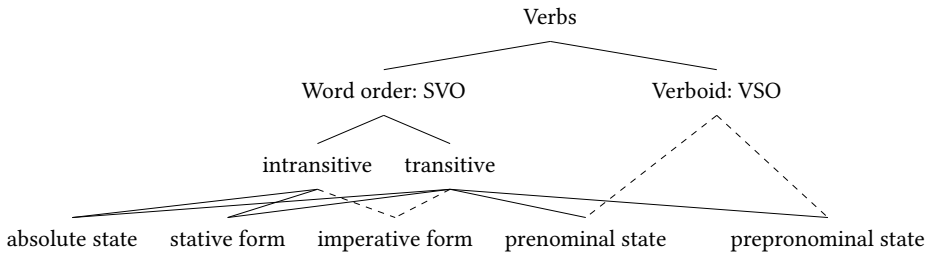


Figure 3: Morphological change of Coptic verbs

Transitive verbs in the imperative mood in Coptic may also appear in the absolute, prenominal, and prepronominal states. A limited number of the verbs have morphologically distinct imperative form, while the other verbs have no special imperative form, but they convey imperative meaning by having no subject. The latter is similar to the English imperative (e.g. ‘Do it!’). Moreover, there is an exceptional verb, namely *ei* ‘come’ which exhibits a fossilised conjugation pattern, which varies according to the subject’s gender and number: Masculine singular imperative *amou*; feminine singular imperative *amê*; plural imperative *amêin*, *amêeitn*, *amôine* (see Crum 1939: 7b).

Martin Haspelmath (2014) analyses the morpho-syntax of Coptic transitive verbs from a typological perspective, describing the absolute state as a free form. He characterises the prenominal state as bound when it precedes a full noun phrase (NP henceforth), and the prepronominal state as bound before a pronominal element.

In the realm of morpho-phonology, the historical change of prenominal states from their absolute counterparts can be categorised into several patterns: 1) weakening or loss of vowels (Types I, II, III, IV, V, VII), 2) weakening of vowels accompanied by the addition of a *t* at the end (VII), and 3) no change in form, as with the verb *fi* ‘take’, see further Table 2. Layton (2011: 152) has delineated seven types of regular verbal morphological alterations in Coptic as well as numerous irregular modifications.

The morphological shifts that Coptic transitive verbs undergo, particularly the reduction in vowel strength and their syntactic behavior with following nominal phrases, play a pivotal role in shaping the language’s grammatical framework. While the imperative forms of transitive verbs can manifest in the absolute, prenominal, and prepronominal states, the primary focus of this study will be on the non-imperative forms, as they are more central to the discussion of wordhood and morphological synthesis.

Table 2: Types of morphological changes of Sahidic Coptic verbs

Type	Infinitive			Meaning	Stative	Meaning
	ABS	PNOM	PPRO			
I	ϣΩΤΠ <i>sôtp</i>	ϣΕΤΠ <i>setp-</i>	ϣΟΤΠ <i>sotp-</i>	‘(to) choose’	ϣΟΤΠ <i>sotp</i>	‘be chosen’
II	ΚΩΤ <i>kôt</i>	ΚΕΤ <i>ket-</i>	ΚΟΤ <i>kot-</i>	‘(to) build’	ΚΗΤ	‘be built’
III	ΠΩΩΝΕ <i>pôône</i>	ΠΕΝΕ <i>pene-</i>	ΠΟΟΝΕ <i>poone-</i>	‘(to) change’	ΠΟΟΝΕ <i>poone</i>	‘be changed’
IV	ϢΟΛϢ <i>solsʃ</i>	ϢΛϢ <i>sʃsʃ-</i>	ϢΛϢΩΛ <i>sʃsʃôl-</i>	‘(to) comfort’	ϢΛϢΩΛ / ϢΛϢΟΛΤ <i>sʃsʃôl / sʃsolt</i>	‘be comforted’
V	ΤΑΚΟ <i>tako</i>	ΤΑΚΕ <i>take-</i>	ΤΑΚΟ <i>tako-</i>	‘(to) destroy’	ΤΑΚΗΥ / ΤΑΚΗΥΤ <i>takêu / takêut</i>	‘be destroyed’
VI	ϠΛΟϢ <i>hloc</i>			‘(to) become sweet’	ϠΟΛϢ <i>holc</i>	‘be sweet’
VII	ĉise <i>ĉise</i>	ϠΕϢΤ <i>ĉest-</i>	ϠΑϢΤ <i>ĉast-</i>	‘(to) exalt’	ϠΟϢΕ <i>ĉose</i>	‘be high’
Irreg. 1	ΕΙΡΕ <i>aire</i>	Ρ <i>r-</i>	ΑΑ <i>aa-</i>	‘(to) do’	Ο <i>o</i>	‘be being’
Irreg. 2	ΕΙ <i>ei</i>			‘(to) come’	ΝΗΥ <i>nêu</i>	‘be coming’

To illustrate the application of the absolute, prenominal, and prepronominal states, along with the stative form, this chapter uses the verb κω *kô* ‘to place/leave’ which is a prevalent example of Type-I verbs in Coptic. The analysis will commence with its dictionary form or the absolute state, providing a foundation for understanding its various morphological states within sentence structures.

In the absolute state within Coptic grammar, a direct object is indicated by the presence of an objective marker, such as *n-* *n-* ‘of, to, (or object marker)’ or *e-* *e-* ‘to, for’, which is prefixed to the noun or noun phrase. For instance, the direct object *ἡουεξεδρα* *n-ou-eksedra* includes the object marker *n-* *n-*, see (16).

(16) Absolute state: κω *kô* ‘to place / leave’

ΠΓΕΝΝΑΙΟΣ	ΔΕ	ΑΠΑ	ΒΙΚΤΩΡ	ΑΦΚΩ	ΝΑΦ
<i>p-gennaios</i>	<i>de</i>	<i>apa</i>	<i>biktôr</i>	<i>a-f-kô</i>	<i>na-f</i>
DEF.M.SG-noble	PRT	Apa	Victor	PST-3SG.M-place.ABS	DIR-3SG.M

ⲛⲟⲩⲉⲗⲉⲗⲣⲁ	ⲛ̄ⲗⲟⲩⲛ	ⲙⲡⲉϥⲛⲏ
<i>n-ou-ek'edra</i>	<i>n-houn</i>	<i>m-pe-f-êi</i>
ACC-INDEF.SG-chamber_small	LOC-inside	LOC-POSS.SG.M-3SG.M-house

‘And the noble Victor made for himself a small chamber in his house’  
(Martyrdom of Victor, 6.10 in Coptic SCRIPTORIUM)

In Coptic, prosodic rules dictate that the accent falls on the vowels ω ô, η ê, ο o, or any duplicated vowel letter, typically occurring on the ultima (last syllable) or penultima (second-to-last syllable). In the example ⲁϥⲕⲱ *afkô*, the accent is on the ultima, which is the vowel ω ô. Other vowels such as ⲁ a, ⲉⲓ ei, ⲓ i, ⲟⲩ ou, or ⲉ e may be accented or unaccented and are not restricted to the ultima or penultima positions. When ω ô, η ê, ο o, or a duplicated vowel is present in the ultima or penultima, they automatically receive the accent. However, if the vowel is ⲁ a, ⲉⲓ ei, ⲓ i, ⲟⲩ ou, ⲉ e, the accent is placed on the penultima if the penultima has the accented vowel letter ω ô, ο o, η ê, or vowel letter doubling, or on the ultima otherwise.

The prenominal state loses the accent, compared with its absolute state. The vowels in this state are always ⲁ a or ⲉ e, the semi-vowels ⲉⲓ ei, ⲓ i, or ⲟⲩ ou, or vowels are absent altogether. Verbs in the prenominal state directly precede a noun or a noun phrase with an article, with no intervening elements. The prosodic emphasis, or accent nucleus, for the prenominal state is consistently on the subsequent noun.

- (17) Prenominal state: ⲕⲁ *ka-* ‘to place / leave’

ⲁⲩⲱ	ⲛⲉ̅ⲙⲡⲟⲩⲕⲁⲧⲟⲟⲩⲟⲩ	ⲉⲃⲟⲗ	ⲡⲉ
<i>auô</i>	<i>ne-mp-ou-ka-toot-ou</i>	<i>e-bol</i>	<i>pe</i>
and	PRET-PST.NEG-3PL-place.PNOM-hand.PPRO-3PL	DAT-outside	COP.SG.M

ⲛ̄ⲃⲓⲛ̄ⲃⲟⲙ	ⲧⲏⲣⲟⲩ	ⲉⲧ̅ⲗ̅ⲛ̄ⲙⲡⲏⲛⲏⲩⲉ
<i>nci-n-com</i>	<i>têr-ou</i>	<i>et-hn-m-pêue</i>
NOM-DEF.PL-power.F	all-3PL	REL-in-DEF.PL-heaven.PL

‘And all the powers that are in heavens did not cease being disturbed’  
(Pistis Sophia, 1.1, AQ1 in Coptic SCRIPTORIUM)

In (17), the verb ⲕⲁ *ka-* is directly followed by the direct object ⲧⲟⲟⲩⲟⲩ *toot-ou*, which bears the prosodic accent due to its diphthong. The lack of an intervening case marker between ⲕⲁ *ka-* and ⲧⲟⲟⲩⲟⲩ *toot-ou* indicates a close syntactic relationship, with ⲕⲁ *ka-* being phonologically bound to ⲧⲟⲟⲩⲟⲩ *toot-ou*. This contiguous construction is indicative of the verb’s immediate action upon the direct object.

- (18) Prepronominal state:  $\kappa\alpha\alpha$ = *kaa*- “place / leave”

$\epsilon\omega\chi\epsilon$	$\tau\epsilon\tau\mu\mu\alpha\gamma$	$\mu\pi\kappa\alpha\alpha\varsigma$	
<i>ešče</i>	<i>t-et-mmau</i>	<i>mp-f-kaa-s</i>	
if	DEF.SG.F-REL-there	NEG.PST-3SG.M-place.PPRO-3SG.F	
$\gamma\mu\pi\pi\alpha\rho\alpha\Delta\epsilon\iota\varsigma\omicron\varsigma$	$\epsilon\varphi\eta\alpha\uparrow\varsigma\omicron$	$\epsilon\rho\omicron$	
<i>hm-p-paradeisos</i>	<i>e-f-na-t'so</i>	<i>ero</i>	
in-DEF.SG.M-paradise	FOC-3SG.M-FUT-spare	DAT:2SG.F	

‘If he didn’t leave the one who is there in paradise, is it you (Aphthonia) that he will spare?’

(Letter to Aphthonia in Coptic SCRIPTORIUM)

The prepronominal state in Coptic refers to the verb form that is immediately followed by a suffix pronoun or personal suffix, which functions as the direct object. In this state, just as with verbs that contain double vowel letters, the accent typically rests on the verb itself.

When a suffix pronoun serves as the direct object, employing the prepronominal state is not mandatory. An alternative construction is permissible, in which the suffix pronoun is joined to an object marker, and the verb appears in its absolute state. For instance, in (18), it is possible to use the form  $\kappa\omega$   $\mu\mu\omicron\varsigma$  *kô mmo-s* (place/leave.ABS ACC-3SG.F) as seen in (16), where  $\mu\mu\omicron\varsigma$  *mmo-s* denotes the third person singular feminine direct object, and the verb  $\kappa\omega$  *kô* is in the absolute state.

It is noteworthy that in Coptic, the absolute, pronominal, and prepronominal states can function as nouns without the need for a nominalising prefix. This multifunctionality allows these forms to be grouped under the term infinitives.

Finally, the stative form of the verb  $\kappa\omega$  *kô* ‘to to place’ or ‘to leave’ is  $\kappa\eta$  *kê*. This stative form encapsulates the resultant state or condition stemming from the action of the verb, providing a nominal or adjectival aspect to the verb’s meaning.

- (19) Stative:  $\kappa\eta$  *kê* ‘to be placed / left’

$\pi\kappa\alpha\iota\rho\varsigma$	$\eta\tau\mu\epsilon\tau\alpha\eta\omicron\iota\alpha$	$\kappa\eta$	$\eta\alpha\kappa$
<i>p-kairos</i>	<i>n-t-metanoia</i>	<i>kê</i>	<i>na-k</i>
DEF.SG.M-season	GEN-DEF.SG.F-repentance.F	place.STA	DAT-2SG.M

$\epsilon\varrho\rho\alpha\iota$   
*e-hrai*

DIR-upper.part

‘The season for repentance hath been set before thee’

(Pseudo-Ephrem, *Asceticon* 2, 4.8 in Coptic SCRIPTORIUM)

The stative in Coptic is used to express a continued state resulting from an action. When applied to transitive verbs, it conveys the ongoing state of being

acted upon, akin to a passive voice; with intransitive verbs, it describes the persistence of the action or state itself. Unlike infinitives, the stative form is distinct in that it never functions nominally.

Coptic also features a subset of verbs known as verboids, which are limited to the prenominal and prepronominal states. These verboids uniquely position the subject immediately after the verb. While most verboids are intransitive, there are some that are transitive, wherein the object, often a pronoun, follows the subject. In constructions where both the subject and the object are represented by suffix pronouns, the object pronoun assumes a specialised form, such as  $\rho\epsilon\chi\alpha\gamma\epsilon\upsilon$  *peča-u-sf* (said.PPRO-3PL.SBJ-3SG.M.OBJ) ‘they said it’. Here,  $\rho\epsilon\chi\alpha$ - *peča-* is a verboid and it has its subject after it.

## 7 Pseudo-noun incorporation and noun incorporation

In their analysis of Coptic through a linguistic typological lens, Grossman & Iemolo (2013) contend that the structure characterised by a “prenominal state – object” in Coptic can be identified as a form of noun incorporation. Noun incorporation is a morphological phenomenon where transitive objects are integrated into the verb structure, a trait prominently observed in languages across various regions such as the Americas (exemplified by Mohawk and Classical Nahuatl), New Guinea (e.g., in the Yimas language), Northeast Asia (such as in Ainu), and in the Australian languages.

The current most popular orthography of Coptic (Type 3 in Figure 1) reflects phonological unity, which Layton (2011) refers to as bound groups and Haspelmath (2014) as stress groups. It is posited that the stress typically occurs on the first or second syllable within a “stress group”. This observation suggests that the prenominal state of the verb inherently embodies a cohesive phonological unit.

In the prenominal state of Coptic transitive verbs, Miyagawa (2023) observed phenomena that could be interpreted as pseudo-noun incorporation or actual noun incorporation. To arrive at this conclusion, the study employed the criteria set forth in Mithun (1984)’s scale.

The nature of the relationship between the prenominal verb and its object noun raises the question of whether noun incorporation is occurring. This is particularly relevant when considering verboids that have objects, as the tight syntactic bonding in the prenominal state might suggest such an incorporation process. This concept contrasts with the prepronominal state, which presents different syntactic characteristics.

This section provides an analysis of the *Gospel of Thomas* from the Nag Ham-madi Codex II, written in the Sahidic dialect influenced by the Lycopolitan di-alect, focusing on instances of noun incorporation and pseudo-noun incorpora-tion within the text.<sup>10</sup>

Table 3 presents a detailed breakdown of the frequency of various states and forms of verbs and verboids as they appear in the *Gospel of Thomas*.

Table 3: Frequency of the use of verbs in the *Gospel of Thomas*

		Verb			Verboid	
ABS	PPRO	PNOM	STA	IMPER	PNOM	PPRO
421	129	104	91	7	128	68

### 7.1 Pseudo-noun incorporation

Pseudo-noun incorporation is well-attested in Polynesian languages such as Ni-uean and Maori.<sup>11</sup> Here is an example of pseudo-noun incorporation from Maori.

- (20) e [ruku~ruku koura nu~nui] ana (Maori)  
 T/A [dive~PROG crayfish INT~big PROG  
 ‘He is diving for big crayfish<sup>12</sup>. (lit. big-crayfish-diving)’  
 (Collberg (1997: 39))

In (20), the Maori construction *ruku~ruku* incorporates the noun phrase *koura nu~nui*, indicating a close syntactic relationship akin to incorporation. Maori syntax otherwise generally requires the use of a preposition to express the ob-ject. This syntactic feature of noun incorporation in Maori, often termed pseudo-incorporation, shares similarities with the Coptic prenominal verb + noun phrase constructions such, as (21).

In Coptic, if noun incorporation is recognised, it should be classified not as noun incorporation but rather as pseudo-noun incorporation.

<sup>10</sup>All the examples from the *Gospel of Thomas* are taken from Layton (2004).

<sup>11</sup>For Niuean pseudo-noun incorporation, see Massam (2001).

<sup>12</sup>I.e., *Plecoglossus altivelis*.



- (23) Noun incorporation in the Gospel of Thomas

ϕνα.χιτπε	αν μημοϋ
<i>f-na-či-t'pe</i>	<i>an m-p-mou</i>
3SG.M-FUT-receive.PNOM-taste NEG ACC-DEF.SG.M-death	
‘He shall not taste death.’	

(Logos 1, the Gospel of Thomas (Layton 2004))

In (23), the complex verb form  $\chi\iota\tau\epsilon$  *či-t'pe* is lexicalised, taking an additional object  $\mu\eta\mu\omicron\upsilon$  *m-p-mou* with the object marker, and it is separated from the compound verb  $\chi\iota\tau\epsilon$  *či-t'pe* by the negative particle  $\alpha\eta$  *an*. This arrangement is a definitive example of noun incorporation, aligning with Type II of noun incorporation as outlined by Marianne Mithun (1984).

There are many examples of lexicalised compound verbs consisting of prenominal-state verbs and object nouns, see (24).

- (24) Examples of noun incorporation in Coptic

- a.  $\tau\tau\kappa\alpha\varsigma$  *t<sup>l</sup>-tkas* (give.PNOM-pain) ‘to hurt’ (from Logos 28, the Gospel of Thomas, Layton 2004)
- b.  $\chi\iota\tau\epsilon$  *či-t'pe* (receive.PNOM-taste) ‘to taste’ (from Logos 1, the Gospel of Thomas, Layton 2004)
- c.  $\varphi\iota\omicron\omicron\upsilon\gamma\omega$  *fī-roouš* (take.PNOM-worry) ‘to worry’ (from Logos 36, the Gospel of Thomas, Layton 2004)
- d.  $\chi\epsilon\sigma\omicron\lambda$  *če-col* (say.PNOM-lie) ‘to lie’ (from Logos 6, the Gospel of Thomas, Layton 2004)

These are highly lexicalised since the meaning is not following the Principle of Compositionality, and also since they can take a direct object with the object marker  $\eta$  *n*- after them. Therefore, they are examples of pure morphological noun incorporation.

### 7.3 The verbalizer *p-* *r-*

Let us consider some cases of the use of *p-* *r-*, the prenominal state of  $\epsilon\iota\pi\epsilon$  *eire* ‘to do’, especially with Greek loan verbs.

- (25) Two uses of the prenominal state *p-* *r-* ‘to do’

- a. Usage with Greek verbs as the object

ϕναρτιμα	μποϋα
<i>f-na-r-tima</i>	<i>m=p-oua</i>
3SG.M-FUT-do.PNOM-honour ACC=DEF.SG.M=one	
‘He will honor the one.’	

(Logos 47, the Gospel of Thomas, Layton 2004)

## b. Usage with Coptic noun as the object

ϣⲣⲥⲣⲱⲗ	ⲙⲡⲙⲁ	ⲧⲏⲣⲥ
<i>f-r-crôh</i>	<i>m=p=ma</i>	<i>têr-f</i>
3SG.M-do.PNOM-need	ACC-DEF.SG.M-place	all-3SG.M

‘He needs all the places.’

(Logos 67, the Gospel of Thomas, Layton 2004)

For example, in (25a) and (25b), the verbs ϣⲏⲁⲣⲧⲙⲁ *f-na-r-tima* ‘he will do honor’ and ϣⲏⲁⲣⲥⲣⲱⲗ *f-r-çrôh* ‘he needs’ demonstrate the use of *p-r-* with a Greek verb as an object and a Coptic noun as an object, respectively. Notably, both (25a) and (25b) feature an additional object marked by a contrapositional preposition.

In this *r-OBJ1 n=OBJ2* construction, *r-OBJ1* is a lexicalised compound verb, and *OBJ2* is the direct object of *r-OBJ1*, indicating the transitivity of *r-OBJ1*. The absolute state ⲉⲓⲣⲉ *eire* can take *OBJ1* as *eire n-OBJ1* but cannot take both *OBJ1* and *OBJ2*. Also, *p-r-* assumes a diluted sense of ‘to do’ compared to ⲉⲓⲣⲉ *eire*, serving mainly to index nouns and Greek loan verbs as verbs—a verbalising role. The near absence of semantic load when *p-r-* takes Greek verbs as *OBJ1* is evident.

In the case of *p-r-* + Greek verb, the initial element of this construction is increasingly assuming the role of a verbalizer prefix, particularly evident in the prenominal state of ⲉⲓⲣⲉ *eire* when accompanied by Greek loan verbs. This linguistic phenomenon suggests that within the spectrum of prenominal-state verbs, the verbalizer *p-r-* exhibits properties most akin to an affix.

In the *Gospel of Thomas*, several verbs exhibit a high frequency of occurrence in the prenominal state compared to their absolute forms. These verbs—we can call them light verbs—while not forming a closed set, tend to take on a grammaticalised or semantically bleached meaning when used in the prenominal state, particularly in constructions involving a direct object (see Table 4).

Table 5 highlights the notable frequency of the prenominal state *p-r-* against the absolute state ⲉⲓⲣⲉ *eire* and suggests that its significant usage indicates its grammatical integration as a morphological verbalizer prefix.

## 8 The morphemes-per-word (M/W) ratio

Finally, in order to objectively and quantitatively measure the polysynthetic nature of the Coptic language, the ratio of morphemes per word (M/W ratio henceforth) will be calculated. The M/W ratio is a linguistic index used to determine a language’s level of synthesis. Table 5 shows examples of M/W ratios in various languages. The higher the M/W ratio, the higher the syntheticity of the language.

Table 4: Frequency of prenominal vs. absolute states for the most frequent verbs in the *Gospel of Thomas*

PNOM	ⲡ <i>r-</i> (59)	ⲧ <i>ti-</i> (9)	ⲭⲓ <i>či-</i> (6)	ⲭⲉ <i>če-</i> (4)	ϣⲓ <i>fi-</i> (3)	ⲙⲉⲤⲧⲉ <i>meste-</i> (3)	ⲛⲉⲭ <i>neč-</i> (2)
ABS	ⲉⲓⲣⲉ <i>eire</i> (7)	ⲧ <i>ti</i> (9)	ⲭⲓ <i>či</i> (3)	ⲭⲟ <i>čô</i> (11)	ϣⲓ <i>fi</i> (2)	ⲙⲟⲤⲧⲉ <i>moste</i> (3)	ⲛⲟϤⲭⲉ <i>nouče</i> (7)
Meaning	‘do’	‘give’	‘receive’	‘say’	‘take’	‘hate’	‘throw’

Table 5: M/W ratio of various languages based on Haspelmath &amp; Sims (2010: 6)

Language	Type	M/W ratio
West Greenlandic	Polysynthetic	3.72
Sanskrit	Synthetic	2.59
Swahili	Synthetic	2.55
Old English	Somewhat Synthetic	2.12
Lezgian		1.93
German		1.92
Modern English	Analytic	1.68
Vietnamese	Highly Analytic	1.06

For the purposes of this study, we define a word as a grammatical unit that can stand alone and convey a complete meaning, following the linguistic definition provided by Aronoff & Fudeman (2023).

In the context of Coptic, we will consider Layton’s concept of the bound group as the closest approximation to this definition of a word. Bound groups, as described by Layton, are prosodic units characterised by a single stress and often correspond to grammatical words. However, it is important to note that bound groups may also include clitics and other elements that are prosodically dependent but grammatically distinct.

For the calculation of the M/W ratio, we use the corpus of the *Letter to Aphthonia* written by Besa in the Sahidic dialect of Coptic, available in the Coptic SCRIPTORIUM, which uses spaces between Layton’s bound groups (Type 3 in Figure 1). In this corpus, prenominal-state words, articles, and complementizers

are written together with content words such as nouns and verbs, forming bound groups.

Table 6: The M/W ratio of *Letter to Aphthonia*

Words (bound groups)	Morphemes	M/W ratio
822	1,167	1.42

The resulting M/W ratio of 1.42 for the *Letter to Aphthonia* suggests that Coptic has a relatively low degree of synthesis, placing it closer to analytic languages on the typological spectrum. This finding aligns with the observations of Reintges (2011a,b) and Egedi (2007), who argue that Coptic displays a high degree of analyticity in its grammatical structure.

Furthermore, the results of this study challenge the claims made by Loprieno (1995), who argues for the polysynthetic nature of Coptic. The low M/W ratio indicates that Coptic words are not highly polysynthetic, as they do not exhibit the high number of morphemes per word typically associated with polysynthetic languages.

The M/W ratio also sheds light on the ongoing debate on the synthetic vs analytic nature of Coptic, as exemplified by the differing views of Haspelmath (2014) and Reintges (2011a). While Haspelmath argues for Coptic's synthetic status, the low M/W ratio found in this study lends support to Reintges' assessment of Coptic as an analytic language.

It is important to note that the M/W ratio is just one metric for assessing the synthetic or analytic nature of a language, and other factors, such as morphological and syntactic features, should also be considered. However, the quantitative evidence provided by the M/W ratio serves as a valuable contribution to the ongoing discussion on Coptic's typological classification and helps to substantiate the arguments made by scholars who propose an analytic status for the language.

## 9 Conclusion

In conclusion, perceptions of Coptic synthesis vary among scholars, largely due to the difficulty of defining word boundaries. Spaces are modern constructs, and punctuation and diacritics do not unequivocally indicate word boundaries. The introduction of the linguistic concept of clitics offers a more refined understanding of Coptic morpho-syntax. By evaluating elements such as articles, prenomi-

nal verbs, auxiliaries, and prepositions through the lens of *Freedom of Host Selection*, these are identified as clitics.

The morpho-syntactic analysis of Coptic, focusing on the interaction between clitics and word segmentation, reveals its analytic nature. Through the comprehensive exploration of noun incorporation and the functional dynamics of clitics, the study challenges and refines the traditional understanding of Coptic's grammatical structures.

This linguistic inquiry, although drawing on a limited spectrum of Coptic corpus analyses, ultimately positions the language closer to an analytic typology, characterised by a lower density of morphemes per word. The conclusion of this linguistic investigation is corroborated by the morpheme-per-word ratio derived from Coptic texts, which aligns with the typological features of more analytic languages.

The study's findings contribute significantly to the discourse on the degree of synthesis in Coptic morphology, offering new perspectives that could influence future linguistic research and the pedagogy of Coptic language studies. This research provides a vital step towards a more nuanced appreciation of Coptic's place in the landscape of linguistic typology.

## Abbreviations

ABS	absolute state	FOC	focalizer
ADJ	adjective	FUT	future
ADN	adnominal	GEN	genitive
ADVZ	adverbializer	HON	honorific
APPL	applicative	INDEF	indefinite
ART	article	INT	intensifier
CAUS	causative	LK	linker
CIRC	circumstantial	LOC	locative
COMP	complementizer	M	masculine
CONJ	conjunctive	N	noun
CONV	converb	NEG	negative
COP	copula	NOM	nominative
DAT	dative	NT	New Testament
DEF	definite	OBJ	object
DEM	demonstrative	OPT	optative
DIR	directional	PASS	passive
EXIST	existential	PL	plural
F	feminine	PNOM	prenominal

POSS	possessive	REL	relativizer
PPRO	pronominal state	SBJ	subject
PRED	predicative	SG	singular
PROH	prohibitive	STA	stative
PROG	progressive	T/A	temporal/aspectual
PST	past	TAM	tense-aspect-mood
PRT	particle	TOP	topic
Q	question marker	VBLZ	verbalizer
REFL	reflexive		

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# Epilogue: Taking wing

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This epilogue reflects on the shift in perspective between *taking initiative* which we began with and *taking wing* which we end on. It further sets out desiderata in the study of support-verb constructions, namely suitably annotated large-scale corpora, their coverage in authoritative lexicon resources, and their visibility in grammar books. It explains why and how support-verb constructions have so far-reaching an impact, using three poignant examples from Homer's *Odyssey* (epic), Thucydides' *Histories* (historiography), and Lysias' courtroom speeches (oratory). The epilogue finishes by outlining four concrete avenues for further research, namely corpora, corpus-language annotation procedures, cooperation with educators, and collaboration between disciplines.

Dieser Epilog zieht Bilanz in Bezug auf den Perspektivenwechsel betreffend Konstruktionen wie z.B. *to take initiative* „die Initiative ergreifen“ im Gegensatz zu *to take wing* „Flügel bekommen“ (metaphorisch), den wir durchlaufen haben. Er zeigt dabei Desiderata in der Forschung im Hinblick auf support-verb constructions auf, wie die Existenz von großen Korpora mit entsprechender Annotation, ihre Erfassung in einschlägigen lexikalischen Ressourcen sowie ihre Sichtbarmachung in Referenzgrammatiken. Anhand von drei aussagekräftigen Beispielen aus Homers Ilias (Epos), Thukydides Historien (Historiographie), und Lysias Gerichtreden (Rhetorik) wird erklärt, wie und warum support-verb constructions einen so weitreichenden Einfluss haben. Der Epilog schließt mit vier konkreten Vorschlägen für künftige Forschung im Gebiet der support-verb constructions. Diese sind die Erstellung großer kommentierter Korpora, die Etablierung von Annotations-schemata und -verfahren, die auf Korpussprachen abgestimmt sind, die Kooperation mit Lehrkräften, und eine stärkere Zusammenarbeit von Fachdisziplinen in diesem Rahmen.

The *Oxford English Dictionary* (s.v. epilogue 3a) defines an epilogue in a theatrical context as “[a] speech or short poem addressed to the spectators by one of the actors after the conclusion of the play”. In this sense, this epilogue rather than *taking stock* or *drawing conclusions* takes wing in that it briefly comments on what we hope will come next.



Purposefully, the *proemium* was entitled *taking initiative*, a support-verb construction that few would object to as the noun *initiative* is eventive and encodes inchoativity by itself. Conversely, some may have objected to *taking wing* being analysed as a support-verb construction early on when reading this volume, and some contributions in this volume do object (Ittzés [Chapter 1], Giouli [Chapter 2], and Pompei, Pompeo, and Ricci [Chapter 9]). We have pushed the boundaries with the chapters of this volume as regards approaches to support-verb constructions, corpora of Greek, and the interpretation of interfaces. As Squeri [Chapter 5] (similarly to Radimský 2011) has shown, concrete nouns such as *wing* can be reconceptualised as eventive in support-verb constructions. Support verbs can indicate aspect and voice (see Jiménez López and Baños [Chapter 4], Madrigal Acero [Chapter 3], and Vives Cuesta [Chapter 7]), even when morphologically functioning as clitics (Miyagawa [Chapter 10]). Crucially, we are not *winging* it but *taking wing*. What seems to be a formally related base-verb construction (see Veteikis [Chapter 6]) at first sight turns out to be semantically fundamentally different (see Ryan [Chapter 8]).

## 1 Desiderata

As support-verb constructions are highly susceptible to variation, we would need **diatopically, diastratically, and diachronically diverse corpora**, including those that are rather invisible in the current research landscape, **annotated for support-verb constructions**. Interest had focussed on three aspects which we have gone beyond. Firstly, instead of focussing only on a specific (small) range of support verbs ('to do', 'to put', 'to have', and 'to give'), various chapters have discussed e.g. the verb 'to use'. Secondly, instead of accepting only deverbal and non-deverbal eventive nouns as predicative nouns, several chapters questioned this approach and instead considered how nouns can be reconceptualised in support-verb constructions (Squeri [Chapter 5]) and how the polysemy of many nouns plays into their use in support-verb constructions (Pompei, Pompeo, and Ricci [Chapter 9]). Thirdly, instead of relying on a small range of very visible corpora including the Homeric epics (Bakker 2020, Vanséveren 1995, Schutzeichel 2014), classical literary Attic, and New Testament corpora, we have included e.g. classical technical texts and later hagiographical corpora.

Secondly, as support-verb constructions show significant lexical variability and can be collocations or idioms in Mel'čuk's sense, they would need to be **integrated in dictionaries not as prose phrases or idioms but as a category in their own right**. For example, one of the better catalogued support-verb-construction

families is that around δίκη *dike*, shown in (1). The reason for the support-verb-construction family around δίκη *dikē* ‘judgement, penalty’ having found a place in the dictionary in the first instance is likely the idiomatic nature of its most frequent exponents, i.e. δίκην δίδωμι *dikēn didōmi* ‘to pay the price for one’s actions’ and δίκην λαμβάνω *dikēn lambanō* ‘to exact punishment (from)’.

(1) Liddell-Scott-Jones s.v. δίκη *dikē* IV.3

the object or consequence of the action, atonement, satisfaction, penalty, δίκην ἐκτίνειν, τίνειν [*dikēn ektinein, tinein*], Hdt.9.94, S.Aj.113: adverbially in acc., τοῦ δίκην πάσχεις τάδε [*tou dikēn pask<sup>h</sup>eis tade*]; A.Pr.614; freq. δίκην or δίκας δίδοναι [*dikēn or dikas didonai*] suffer punishment, i. e. make amends (but δίκας δ. [*dikas d.*], in A.Supp.703 (Iyr.), to grant arbitration); δίκας δίδοναι τινί τινος [*dikas didonai tini tinos*] Hdt.1.2, cf. 5.106; ἔμελλε τῶνδέ μοι δώσειν δίκην [*emelle tōnde moi dōsein dikēn*] S.El.538, etc.; also ἀντί or ὑπέρ τινος [*anti or huper tinos*], Ar.Pl. 433, Lys.3.42; also δίκην δίδοναι ὑπὸ θεῶν [*dikēn didonai <sup>h</sup>upo t<sup>h</sup>eōn*] to be punished by . . . , Pl. Grg.525b; but δίκας ἤθελον δοῦναι [*dikas ēt<sup>h</sup>elon doūnai*] they consented to submit to trial, Th.1.28; δίκας λαμβάνειν sts. = δ. δίδοναι [*dikas lambanein sts. = d. didonai*], Hdt.1.115; δίκην ἀξίαν ἐλάμβανες [*dikēn axian elambanes*] E.Ba.1312, Heracl.852; more freq. its correlative, inflict punishment, take vengeance, Lys.1.29, etc.; λαβεῖν δίκην παρά τινος [*labein dikēn para tinos*] D.21.92, cf.9.2, etc.; so δίκην ἔχειν [*dikēn ek<sup>h</sup>ein*] to have one’s punishment, Antipho 3.4.9, Pl.R.529c (but ἔχω τὴν δ. [*ek<sup>h</sup>ō tēn d.*] have satisfaction, Id.Ep.319e; παρά τινος [*para tinos*] Hdt.1.45); δίκας or δίκην ὑπέχειν [*dikas or dikēn <sup>h</sup>upek<sup>h</sup>ein*] stand trial, Id.2.118, cf. S. OT552; δίκην παρασχέειν [*dikēn parask<sup>h</sup>ein*] E.Hipp.50; θανάτου δίκην ὀφλεῖν ὑπὸ τινος [*t<sup>h</sup>anatou dikēn op<sup>h</sup>lein <sup>h</sup>upo tinos*] to incur the death penalty, Pl.Ap.39b; δίκας λαγχάνειν τινί [*dikas lagk<sup>h</sup>anein tini*] D.21.78; δίκης τυχεῖν παρά τινος [*dikēs tuk<sup>h</sup>ein para tinos*] ib.142; δίκην ὀφείλειν, ὀφλεῖν [*dikēn op<sup>h</sup>eilein, op<sup>h</sup>lein*], Id.21.77, 47.63; ἐρήμην ὀφλεῖν τὴν δ. [*erēmēn op<sup>h</sup>lein tēn d.*] Antipho 5.13; δίκην φεύγειν [*dikēn p<sup>h</sup>eugein*] try to escape it, be the defendant in the trial (opp. διώκειν [*diōkein*] prosecute), D. 38.2; δίκας αἰτέειν [*dikas aiteein*] demand satisfaction, τινός [*tinos*] for a thing, Hdt.8.114; δ. ἐπιτιθέναι τινί [*d. epiti-t<sup>h</sup>enai tini*] Id.1.120; τινός [*tinos*] for a thing, Antipho 4.1.5; δίκαι ἐπιφερόμεναι [*dikai epip<sup>h</sup>eromenai*] Arist.Pol.1302b24; δίκας ἀφιέναι τινί [*dikas ap<sup>h</sup>ienai tini*] D.21.79; δίκας ἐλεῖν [*dikas <sup>h</sup>elein*], v. ἔρημος [*erēmos*] II; δίκην τείσασθαι [*dikēn teisast<sup>h</sup>ai*], v. τίνω [*tinō*] II; δὸς δὲ δίκην καὶ δέξο παρὰ Ζηνί [*dos de dikēn kai dexo para Zēni*] h.Merc.312; δίκας

διδόναι καὶ λαμβάνειν παρ' ἀλλήλων [*dikas didonai kai lambanein par' allēlōn*], of communities, submit causes to trial, Hdt.5.83; δίκην δοῦναι καὶ λαβεῖν ἐν τῷ δήμῳ [*dikēn dounai kai labein en tō dēmō*] X.Ath.1.18, etc.; δίκας δοῦναι καὶ δέξασθαι [*dikas dounai kai dexast<sup>hai</sup>*] submit differences to a peaceful settlement, Th.5.59.

(transcriptions and boldface were added, Liddell-Scott-Jones provides a full list to abbreviations used<sup>1</sup>, abbreviations are not resolved here)

However, the distinction between support verbs and verbs of realisation is not made (Fendel 2023a), modifications (such as pluralisation or determiner phrases) triggering meaning changes are listed as exceptions (“but”), collocations and idioms (in Mel’čuk’s sense) are mixed indiscriminately (Fendel 2023b, submitted[a]). The entry could be reorganised e.g. by drawing on the notion of support-verb-construction families and subdividing entries along the lines of Mel’čuk’s compositional vs. non-compositional semantic-lexemic phrasemes (collocations vs. idioms) (Mel’čuk 2023). We would thus distinguish between active collocation, active idiom, passive collocation, passive idiom, aspectual collocation, aspectual idiom, etc. A further caveat regards the text type from which the examples referenced come as support-verb constructions are susceptible to pragmatic indexing.

Thirdly, support-verb constructions sit at three interfaces, such that in addition to the lexical notions of collocation and idiom, the morphological notion of periphrasis and the syntactic notion of complex predicate have been discussed in this volume. They would need to be **integrated in grammar books**, similarly to what we find in Latin. Pinkster (2015: 74–77) dedicates a subsection in his chapter on verb frames in Latin to support verbs. The situation is considerably different in Greek. While Kühner and Gerth’s classical *Ausführliche Grammatik der griechischen Sprache* still has some brief, but insightful notes, shown in 2, the newer *Cambridge Grammar of Classical Greek* (Van Emde Boas et al. 2019) does not account for support-verb constructions.

(2) Kühner & Gerth 1894: 322<sup>2</sup>

Statt des einfachen Verbs bedienen sich die Griechen zuweilen einer Umschreibung durch den Akkusativ eines abstrakten Substantivs und die Verben ποιῆσθαι [*poieist<sup>hai</sup>*], τίθεσθαι [*tit<sup>hai</sup>est<sup>hai</sup>*], ἔχειν [*ek<sup>hai</sup>ein*], um den Verbalbegriff nachdrücklicher zu bezeichnen, wie συμβολὴν ποιῆσθαι [*sumbolēn poieist<sup>hai</sup>*] Hdt. 6, 110. ὀργὴν π. [*orgēn p.*] 3, 25, 7, 105. ἀπόπειραν π.

<sup>1</sup>[https://stephanus.tlg.uci.edu/ljsj/05-general\\_abbreviations.html](https://stephanus.tlg.uci.edu/ljsj/05-general_abbreviations.html) (last accessed 23 April 2024).

<sup>2</sup>Abbreviations are those used in Liddell-Scott-Jones, see [https://stephanus.tlg.uci.edu/ljsj/05-general\\_abbreviations.html](https://stephanus.tlg.uci.edu/ljsj/05-general_abbreviations.html) (last accessed 23 April 2024).

[*apopeiran p.*] 8, 10. πρόσοδον π. = προσιέναι [*prosodon p. = prosienai*] 7, 223. λήθην π. = ἐπιλανθάνεσθαι [*lēt<sup>h</sup>ēn p. = epilant<sup>h</sup>anest<sup>h</sup>ai*] 1, 127. σκῆψιν π. [*skēpsin p.*] 5,30. μάθησιν ποιεῖσθαι = μανθάνειν [*mat<sup>h</sup>ēsīn poeist<sup>h</sup>ai = mant<sup>h</sup>anein*] Th. 1, 68).

(my translation) ‘Instead of simplex verbs, the Greeks at times use periphrastic expressions with the accusative case of an abstract noun and verbs such as ποιεῖσθαι [*poieist<sup>h</sup>ai*], τίθεσθαι [*tit<sup>h</sup>est<sup>h</sup>ai*], ἔχειν [*ek<sup>h</sup>ein*] in order to express the predication with more intensity, e.g. συμβολὴν ποιεῖσθαι [*sumbolēn poieist<sup>h</sup>ai*] Hdt. 6, 110. ὀργὴν π. [*orgēn p.*] 3, 25. 7, 105. ἀπόπειραν π. [*apopeiran p.*] 8, 10. πρόσοδον π. = προσιέναι [*prosodon p. = prosienai*] 7, 223. λήθην π. = ἐπιλανθάνεσθαι [*lēt<sup>h</sup>ēn p. = epilant<sup>h</sup>anest<sup>h</sup>ai*] 1, 127. σκῆψιν π. [*skēpsin p.*] 5,30. μάθησιν ποιεῖσθαι = μανθάνειν [*mat<sup>h</sup>ēsīn poeist<sup>h</sup>ai = mant<sup>h</sup>anein*] Th. 1, 68).’

Kühner and Gerth only include support verbs that are common across languages and that form active and stative predicates. Equivalence between the support-verb construction and the simplex verb related to the predicative noun is assumed with the only difference identified being “Nachdruck” (intensity).<sup>3</sup> The examples come primarily from Herodotus’ *Histories*, an early historiographic text in the Ionic dialect, yet support-verb constructions are highly susceptible to diatopic variation (Fendel 2024b).

## 2 Relevance

Support-verb constructions permeate all the corpora of Greek such that they cause issues in canonical or less canonical texts. Support-verb constructions are inherently **ambiguous** due to the polysemy of the constituent parts (e.g. Savary et al. 2019) such that they cause issues in any environment. Support-verb constructions sit at three **interfaces** such that they cause issue to everyone, notwithstanding whether they are interested in the syntax, semantics, or pragmatics of a text. This is illustrated below with three examples from well-known corpora, i.e. where contextual information should be able to aid the modern reader. In all three cases, the correct reading of the support-verb constructions has implications well beyond the sentence(s) quoted, e.g. for the reconstruction of the composition process, for the narratological structure of the narrative, or for the embedding of the text into its socio-political reality.

<sup>3</sup>The interest appears stylistic (similarly Aerts 1965 is primarily focussed on the inflexional and not the derivational morphology).

Example one, (3), comes from Homer’s epics (pre 7th c. BC). The support-verb construction of interest is *κακὸν εὐρίσκομαι* *kakon* <sup>h</sup>*euriskomai* ‘to bring harm upon oneself’, which is anaphorically resumed in the subsequent sentence by means of the noun phrase *μέγα πῆμα* *mega pēma* ‘great harm’. The translation of West’s classical edition of the text and of the text containing Probert’s editorial suggestion are provided with the example.

- (3) ἐξ οὗ Κενταύροισι καὶ ἀνδράσι νεῖκος  
*ex* <sup>h</sup>*ou* *Kentaurioisi kai andrasi veikos*  
 out.of REL.GEN Centaurs.DAT and men.DAT battle.NOM  
 ἐτύχθη, οἳ δ’ αὐτῷ πρώτῳ κακὸν  
*etuk*<sup>ht</sup>*ē* <sup>h</sup>*oi* *d’ autō prōtō kakon*  
 happen.AOR.IND.PASS.3SG they.NOM PRT he.DAT first.DAT evil.ACC  
 ἤυρετο οἰνοβαρείων. ὥς καὶ σοὶ μέγα  
<sup>h</sup>*ēureto* *oinobareion* *hōs kai soi mega*  
 find.AOR.IND.MID.3SG heavy.with.wine.NOM so also you.DAT great.ACC  
 πῆμα πιφάυσκομαι [...] *pēma piphauiskomai* [...]  
 harm.ACC foretell.PRS.IND.1SG

‘Out of which arose the battle between centaurs and humans but he brought harm upon himself first, being heavy with wine. In the same way I foretell great harm for you too [...]’ (translation of the text as provided by West 2017: 447–448)

‘Ever since the battle between the centaurs and humans occurred, one who is heavy with wine brings harm first and foremost upon himself. In the same way I foretell great harm for you too [...]’ (translation of the text with τ’ *t’* instead of δ’ *d’* by Probert 2023)<sup>4</sup>

(Homer, *Odyssey* 21.303–305 (pre 7th c. BC))

The support-verb construction in question is interesting for two reasons, firstly since the predicative noun is a syntactic nominalisation rather than a lexical one, and secondly because the support verb is a verb that can appear in various argument frames.

<sup>4</sup>On Probert’s reading, the support-verb construction appears in a gnomic phrase, a general rule, after which the discourse returns to the main line of events. The anaphoric noun phrase *μέγα πῆμα* *mega pēma* ‘great harm’ acts as the discursive link (cf. Halliday & Hasan 1976: 278 on reiteration). While the syntactic nominalisation and the lexical noun are not formally related, they are functionally akin. *πῆμα* *pēma* ‘harm’ is a verbal noun from a root \**pē-*, possibly also found in e.g. *ταλαιπώρος* *talaipōros* ‘enduring hardship’ (Beekes 2010).

The syntactic nominalisation *κακόν kakon* ‘evil’ has to fill the object slot of the verb (εὐρίσκομαι <sup>h</sup>*euriskomai* ‘to find’), unlike in constructions with two accusatives (e.g. δίδωμι X μισθόν *didōmi X mist<sup>h</sup>on* ‘to give X as salary’) or in constructions in which the verb could be read intransitively (e.g. ποιέω κακόν *poieō kakon* ‘to act badly’). A support verb meaning ‘to find’ in Greek, as in English, can appear in various argument frames. (4) illustrates argument frames in English (see *British National Corpus*):

- (4) ‘to find’ in the *British National Corpus*
- a. Paul finds fault with his parents. ≈ Paul blames his parents. [causative]
  - b. Paul finds a compromise. ≈ Paul compromises. [active]
  - c. Paul finds fame. ≈ Paul becomes famous. [stative]
  - d. Paul finds favour with his parents. ≈ Paul becomes liked by his parents. [passive]

εὐρίσκω/ομαι <sup>h</sup>*euriskō/omai* ‘to find’ would deserve a study of its own. A cursory look through the literary classical Attic *ECF Leverhulme Corpus* reveals passages such as σπονδὰς εὐρίσκομαι *spondas<sup>h</sup> euriskomai* ‘to reach a truce’ (Thucydides, *Histories* 5.32.6), contrasting with more frequent σπονδὰς ποιέομαι *spondas poieomai* ‘to make a truce’, and φιλίας εὐρίσκω *ph<sup>h</sup>ilias<sup>h</sup> euriskō* ‘to make friends’ (Isocrates, *Speech* 4.45), akin to Euripides, *Electra* l. 650 (tragedy) εὐρίσκεῖς δὲ μητρὶ πῶς φόνον; *euriskeis de mētri pōs ph<sup>h</sup>onon* ‘how are you bringing about the murder of the mother?’. The frames seem active and causative. Examples of passive and stative frames appear in the Liddell-Scott-Jones’ entry for the verb (s.v. εὐρίσκω <sup>h</sup>*euriskō* ‘to find’ IV middle voice). The passive ones come primarily from passages cited from tragedy and hence predisposed to fall into the category of ‘to suffer, get oneself into, find [something negative such as fate, pain, etc.]’. The stative ones include κλέος εὐρίσκομαι *kleos<sup>h</sup> euriskomai* ‘to find fame’ (Pindar, *Pythiae* 3.111 (lyric poetry), ἐλπίδ’ ἔχω κλέος εὐρέσθαι *elpid’ ek<sup>h</sup>ō kleos<sup>h</sup> euriskest<sup>h</sup>ai* ‘I hope to gain/find fame’). The issue with the Liddell-Scott-Jones entry is the great variety of dialects, genres, registers, and periods of time evidenced by the examples. Corpus-based studies would be needed to gain a clear picture of the support-verb constructions with εὐρίσκω/ομαι <sup>h</sup>*euriskō/omai* ‘to find’ by dialect, genre, register, and period of time.

The impression gained is that at least in classical Greek, εὐρίσκω/ομαι <sup>h</sup>*euriskō/omai* ‘to find’ aligns with ποιέω/ομαι *poieō/omai* ‘to act, to do, to make’ in that the middle ending has a transitivity-reducing function (stative and passive frames).

However, this is not a hard-and-fast rule and verb lability allows for middle endings with causative semantics and active endings with reflexive semantics (Lavidas 2009) at times. Thus, without the syntactic (argument frame, esp. the indirect object), semantic (anaphoric resumption), and pragmatic (gnomic aorist and cue to return to main storyline) cues in (3), ambiguity abounds.

Example two, (5), comes from Thucydides' *Histories* (5th c. BC). The support-verb construction of interest is ἐκβολὴν ποιέομαι *ekbolēn poieomai* which is coordinated with preceding ἔγραψα *egrapsa* 'I wrote'. A genitive λόγου *logou* 'word, plan' is bracketed between the predicative noun and the support verb.

- (5) ἔγραψα                      δὲ αὐτὰ      καὶ τὴν      ἐκβολὴν  
*egrapsa*                      *de auta*      *kai tēn*      *ekbolēn*  
 write.AOR.IND.ACT.1SG PRT they.ACC and the.ACC throwing.away.ACC  
 τοῦ λόγου                      ἐποιησάμην                      διὰ τόδε, ὅτι (...)  
*tou logou*                      *epoiēsamēn*                      *dia tode hoti (...)*  
 the.GEN word/plan.GEN make.AOR.IND.MID.1SG due.to this.ACC that  
 'And I have made a digression to write of these matters for the reason  
 that (...)' (Forster Smith 1928: 165)  
 'I have written these things and discarded the plan due to the fact that  
 (...)' (Rusten 2020)

(Thucydides, *Histories* 1.97.2 (5th c. BC))

The difference between the classical and Rusten's readings of the passage boils down to (i) the semantics of the (polysemous) predicative noun ('digressing' or 'tossing out'), (ii) the syntactic function of the genitive λόγου *logou* 'word, plan' (qualitative or objective), and (iii) the semantics of the (polysemous) noun λόγου *logou* 'narrative' or 'plan'. Rusten (2020: 233) argues that the support-verb construction is "a periphrasis for ἐξέβαλον τὸν λόγον" *exebalon ton logon* meaning 'to toss out' (for reasons of consideration or rejection). This assumption entails that the genitive λόγου *logou* is objective for him. Rusten (2020: 234) further argues that multi-functional λόγος *logos* does not refer to "a unit of narrative" in Thucydides, as it does in Herodotus. From this, Rusten (2020: 251) concludes: "If 1.98–118 were a digression it would not have needed this preface. It is more than a digression like 88–96 (from which it is launched); it is instead a composition that nominally performs the mundane task (as does 5.25–116) of filling a gap in the record, but exploits it to reveal the terrible transformation of Athens from ξύμμαχος [*xummak<sup>hos</sup>* 'ally'] to ἡγεμών [*hēgemōn* 'ruler'] to ἄρχων [*ark<sup>hōn</sup>* 'sole ruler'], and to document the fully developed character of the newborn Athenian Empire." Rusten's new reading of the passage has far-reaching implications for the reconstruction of the composition process and the narratological structure of book 1 of the *Histories*.

Example three, (6), comes from Lysias' courtroom speeches (5th / 4th c. BC). The support-verb construction of interest is δίκην λαμβάνω *dikēn lambanō* 'to exact punishment' which is contrasted in a parallel structure (ὅταν <sup>h</sup>otan ... ἀλλ' ὅταν *all' <sup>h</sup>otan* 'whenever ... but whenever') with the simplex verb κολάζω *kolazō* 'to punish'.

- (6) οὐχ ὅταν τοὺς ἀδυνάτους εἰπεῖν  
*ouk<sup>h</sup> <sup>h</sup>otan tous adunatous eipein*  
 NEG when the.ACC unable.ACC speak.AOR.INF.ACT  
 κολάζετε, ἀλλ' ὅταν παρὰ τῶν  
*kolazēte, all' <sup>h</sup>otan para tōn*  
 punish.PRS.SBJV.ACT.2PL but when from the.GEN  
 δυναμένων λέγειν δίκην  
*dunamenōn legein dikēn*  
 be.able.PRS.PTCP.ACT.GEN speak.PRS.INF.ACT punishment.ACC  
**λαμβάνετε**  
*lambanēte*  
 take.PRS.SBJV.ACT.2PL

'if instead of punishing unskilful speakers you exact requital from the skilful' (Lamb 1930: 627)

'not when you punish those who cannot speak/defend themselves, but when you collect punishment from those who are able to speak/defend themselves' (Fendel 2023b: 397)

(Lysias, *Speech* 30.23–24)

In (6), the relationship between the base-verb construction (κολάζω *kolazō* 'to punish' + accusative object) and the support-verb construction (δίκην λαμβάνω *dikēn lambanō* 'to exact punishment' + prepositional object with παρὰ *para* 'from' + genitive) can perhaps be described as one of hyponymy semantically speaking.

The support-verb construction describes a specific type of punishing: "Suppose that simple punishment is the act of punishing someone without giving them the chance of defending themselves, i.e. using their rights within the legal framework, whereas punishment using the law (in the sense of 'exacting justice') means that the person to suffer the punishment is given the opportunity of a defence within the framework of the law. In the former case, the defendant will suffer punishment without any mediation; in the latter case, it is likely that the severity of the punishment and thus the impact on the one to be punished is mediated by the framework of the law (and the defendant's defence)" (Fendel

2023b: 397). The different encoding of the object indicates the lower degree of affectedness of the object with the support-verb construction. Pointedly, in (6), the object of the simplex verb is τοὺς ἀδυνάτους εἰπεῖν *tous adunatous eipein* ‘those unable to speak’ and the object of the support-verb construction is τῶν δυναμένων λέγειν *tōn dunamenōn legein* ‘those who are able to speak’.

However, there is also a pragmatic index applied to the support-verb construction that the base-verb construction does not have. Bentein (2019: 123) considers linguistic indexes “structures” (lexemes, affixes, diminutives, syntactic constructions, emphatic stress, etc.) that have become conventionally associated with a particular situational dimension, and that invoke that situational dimension whenever they are used (Ochs 1996: 411)”. While the support-verb construction seems to index the legal framework, the base-verb construction is domain-unspecific.<sup>5</sup>

The three passages illustrate (i) how support-verb constructions sit at three interfaces, (ii) how their correct reading can have far-reaching implications for the flow of the narrative, the reconstruction of the composition process, and the embedding of the text into the extra-linguistic reality, and (iii) how the polysemy of many nouns in Greek and the ambiguity inherent in support-verb constructions create a language barrier between us and the ancient native speakers, i.e., the texts.

### 3 Avenues

The reader will have noticed that the chapters of this volume are suspiciously focussed around literary texts. This is no coincidence but it does in no way mean that support-verb constructions do not appear in papyrological and epigraphic material – in fact, they do in great variety (e.g. Fendel 2021, 2022, 2023b on bilingual letter archives, Fendel submitted(b) on the Magical papyri, Fendel 2024b on structures with φροντίς *p<sup>h</sup>rontis* ‘care’ and χρεία *k<sup>h</sup>reia* ‘need’ in the documentary papyri, Fendel submitted(c) on support verb + prepositional phrase constructions in the documentary papyri).

However, papyrological and epigraphic corpora are less well prepared (as regards lemmatisation, part-of-speech tagging, etc.) than literary ones and often show a great amount of internal heterogeneity. Thus, the absence of chapters

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<sup>5</sup>The situation is in fact more complicated for δίκην δίδωμι *dikēn didōmi* ‘to pay the price for one’s action’ and ‘to judge’, which due to its polysemy in different verb frames (akin to simplex verbs with verb profiles) adopts multiple meanings, only one of which is specifically pragmatically indexed (Fendel 2024a).

on papyrological and epigraphic data is in fact a data-driven issue. Identification and discovery of support-verb constructions is complicated at the best of times (e.g. Doucet & Ahonen-Myka 2004, Sag et al. 2002) and noisy datasets exacerbate the issue. Therefore, the first avenue for further work is a collaborative initiative such as the PARSEME Ancient Greek corpus in order to produce relevant datasets and make them openly available.

In this context, the question of annotation guidelines arises, discussed e.g. by Giouli [Chapter 1]. Her el-PARSEME corpus applies a natural language processing annotation framework which is comparably narrow in the context of the chapters of this volume but has been tested on datasets in 20+ modern languages. However, this framework comes with a significant number of challenges when assessing corpus languages, as e.g. grammaticality judgements on transformations such as the deletion of the verb or the permissibility of pluralisation on the predicative noun cannot be obtained easily. The native speakers of corpus languages are the texts (Fleischman 2000). Thus, a second avenue for further work is to synthesise annotation frameworks and consider not only language-specificity as regards pre-modern Greek but also the intricacies of working with a corpus language.

Support-verb constructions are currently seemingly shut into the ivory tower of academic research despite appearing everywhere and posing a challenge to everyone. Yet, language learners still stumble and fall. The PARSEME Ancient Greek working group actively recruits undergraduate students in order to bridge this gap.<sup>6</sup> An excellent lexical resource has been introduced by Baños and Jiménez López [Chapter 4] in the form of the *Diccionario de Colocaciones del Griego Antiguo*.<sup>7</sup> The key issue is that support-verb constructions are not consistently listed in authoritative resources, such as the Liddell-Scott-Jones. John Temple, for example, describes the situation as expressions “buried within articles”.<sup>8</sup> Thus, a third avenue for further work is to enhance visibility of support-verb constructions for all those working with the corpora of Greek, e.g. by means of their integration into authoritative grammar books and dictionaries.

The PARSEME corpus shows the very fruitful collaboration between disciplines. This volume on a smaller scale focussed on the diachronic breadth of the corpora of Greek and thus brought together disciplines as far apart as comparative philology, dealing with the reconstructed proto-language, and natural

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<sup>6</sup><http://www.ancientgreekmwe.com/> (last accessed 23 April 2024).

<sup>7</sup><https://dicogra.iaetext.ulpgc.es/dicogra/> (last accessed 06 April 2024).

<sup>8</sup>Note that his dictionary goes beyond support-verb constructions and is focussed on non-compositional expressions and assembled from the perspective of translation: <https://sites.google.com/view/classical-greek-idioms/home>.

language processing, dealing with large-scale internet corpora. A fourth avenue for further work is to foster collaboration between disciplines. Nobody knows everything but together we know a lot more than each on our own, especially with the sentiment of a dialogue between antiquity and our present (Vereeck et al. 2023).

We started with Vergil and Homer, we end with Plato, in that the diversity of structures, approaches, and corpora has amply highlighted all the aspects of support-verb constructions that need and deserve further study. We now know how little we know or in the words of Plato's Socrates, we know that we know nothing (Plato, *Apology* 22d).

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# Support-verb constructions in the corpora of Greek

This volume brings together corpora that span more than 3,000 years of the history of the Greek language, from Ittzés' chapter on the proto-language to Giouli's chapter on the modern language. The authors take wider or narrower approaches with regard to the form and function of the type of construction that they include in the group of support-verb constructions: while all would agree that English *to take initiative* is a support-verb construction, opinions differ on English *to take wing*. The chapters reflect a fascinating diversity of approaches to support-verb constructions, including Natural Language Processing, Comparative Philology, New Testament Exegesis, Coptology, and General Linguistics. The volume is structured along the three interfaces that support-verb constructions sit on, the syntax-lexicon, the syntax-semantics, and the syntax-pragmatics interfaces. We finish with four concrete avenues for further research. Faced with the diversity of approaches and the magnitude of disagreements arising from them when working with as internally diverse a group of constructions as support-verb constructions, we strive for *in varietate unitas*.