Multiple preverbs in ancient Indo-European languages:
a comparative study on Vedic, Homeric Greek,
Old Church Slavic and Old Irish

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To the memory of my parents
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</tr>
<tr>
<td>PREV</td>
<td>preverb</td>
</tr>
<tr>
<td>PrevP</td>
<td>Preverbal Preverb</td>
</tr>
<tr>
<td>PROT</td>
<td>prototonic</td>
</tr>
<tr>
<td>PST</td>
<td>past</td>
</tr>
<tr>
<td>PTC</td>
<td>particle</td>
</tr>
<tr>
<td>PTCP</td>
<td>participle</td>
</tr>
<tr>
<td>PW</td>
<td>place word</td>
</tr>
</tbody>
</table>

In glosses, the nominal number is specified only if it is plural or dual (singular is not indicated), gender is not indicated unless it is feminine or neuter. Among verbal categories, indicative mood and active voice are likewise not indicated.

**Languages**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Language</th>
<th>Abbreviation</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>AG</td>
<td>Ancient Greek</td>
<td>Hom.Gr.</td>
<td>Homeric Greek</td>
</tr>
<tr>
<td>BCS</td>
<td>Bosnian-Croatian-Serbian</td>
<td>IE</td>
<td>Indo-European</td>
</tr>
<tr>
<td>Cypr.</td>
<td>Cypriot Greek</td>
<td>It.</td>
<td>Italian</td>
</tr>
<tr>
<td>CS</td>
<td>Common Slavic</td>
<td>Lat.</td>
<td>Latin</td>
</tr>
<tr>
<td>Germ.</td>
<td>German</td>
<td>Lyd.</td>
<td>Lydian</td>
</tr>
<tr>
<td>Hitt.</td>
<td>Hittite</td>
<td>MW</td>
<td>Middle Welsh</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Language</td>
<td>Abbreviation</td>
<td>Language</td>
</tr>
<tr>
<td>--------------</td>
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<td>--------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>OCS</td>
<td>Old Church Slavic</td>
<td>PIE</td>
<td>Proto-Indo-European</td>
</tr>
<tr>
<td>OIr.</td>
<td>Old Irish</td>
<td>Ved.</td>
<td>Vedic</td>
</tr>
<tr>
<td>OLat.</td>
<td>Old Latin</td>
<td>Vulg.Lat.</td>
<td>Vulgar Latin</td>
</tr>
<tr>
<td>OR</td>
<td>Old Russian</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Authors, works, and manuscripts**

- **AitBr.** Aitareya-Brahmana
- **Arist.** Aristotle
- **Bes.** Gregorii Magni papae Homiliae in Evangelia
  
  (Besëdy na evangelije papy Grigorija Velikago)
- **Euch.** Euchlogium Sinaiticum
- **Fest.** Sextus Pompeius Festus
- **Har.** Haravijaya
- **Il.** Iliad
- **Jn** John’s Gospel
- **KUB** Keilschrifturkunden aus Boghazköi
- **Lk** Luke’s Gospel
- **Mar.** Codex Marianus
- **MBh.** Mahābhārata
- **Metaph.** Metaphysics
- **Mk** Mark’s Gospel
- **Ml.** Milan Glosses
- **Mt** Matthew’s Gospel
- **Od.** Odyssey
- **RV** Ṛg-Veda
- **Sg.** Priscian Glosses
- **Supr.** Codex Suprasliensis
- **Wb.** Würzburg Glosses
- **Usp. Sbor.** Uspenskij sbornik
Zogr.  Codex Zographensis

Grammars and dictionaries

ACC    = Stokes 1899-1900
CGH    = O’Brien 1962
DELG   = Chantraine 1968
eDIL    = Electronic Dictionary of the Irish Language
EWAia  = Mayrhofer 1986-2001
GOI    = Thurneysen 1946
IEW    = Pokorny 1959
KPV    = Schumacher 2004
LIPP I  = Dunkel 2014a
LIPP II = Dunkel 2014b
LIV²    = Rix et al. 2001
LSJ    = The Online Liddell-Scott-Jones Greek-English Lexicon
REW    = Vasmer 1953-1958
RIVELEX = Krisch 2006
RIVELEX II = Krisch 2012
TOROT  = Eckhoff & Berdicevskis 2015
VKG II = Pedersen 1913

Symbols

→  become (synchronic rule) / context of a sound change
=  clitic boundary - morpheme boundary
~  correspond to _ position in a rule/sound change
>  develop into (diachronic change) √ root
+  combination of elements # starting-/endpoint of a sequence
|  context of a phonological rule * unattested form
Introduction

πάντων γὰρ ὃσα πλείω μέρη ἔχει καὶ μὴ ἔστιν οἶον ωρὸς
tὸ πᾶν ἄλλ᾿ ἔστι τι τὸ ὅλον παρὰ τὰ μόρια, ἔστι τι αἴτιον
‘In all things that have a plurality of parts, and that are not
a total aggregate but a whole of some sort distinct from the
parts, there is some cause.’ (Arist. *Metaph.* 8.1045a 9–10)

1. Object under investigation

This work investigates verbs modified by multiple preverbs in a number of ancient Indo-
European languages, specifically in Vedic, Homeric Greek, Old Church Slavic, and Old
Irish. The construction under research is schematized in (1)a and exemplified in (1)b:

(1) a. $P_n$[exterior] (...$P_2$[medial]) $P_1$[interior] V

b. Multiple preverb composites containing roots for ‘putting, laying, throwing’

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>VERB</th>
<th>ACTUAL MEANING</th>
<th>LITERAL MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ved.</td>
<td>adhī nī $\sqrt{\text{dhā}}$-1</td>
<td>‘deposit for’</td>
<td>‘over-down-put’</td>
</tr>
<tr>
<td>Hom.Gr.</td>
<td>ep-ana-tīthēmi</td>
<td>‘shut’</td>
<td>‘on-upward-put’</td>
</tr>
<tr>
<td>OCS</td>
<td>prēdv-po-lagati</td>
<td>‘distribute to’</td>
<td>‘in front of-along-lay’</td>
</tr>
<tr>
<td>OIr.</td>
<td>do-aithchuiredar</td>
<td>‘return’$^2$</td>
<td>‘to-back-put’</td>
</tr>
</tbody>
</table>

$^1$ Vedic multiple preverbs-verb combinations are written as separated items, based on the status of preverbs in
this variety, which is thoroughly discussed in Chapter 3.

$^2$ Though the Old Irish citation form morphologically represents a third person singular and is usually
translated with an English third person singular in the literature on Old Irish, I here decided to consistently use
the English citation form instead, namely the infinitive without *to*.
Each simplex base in (1)b is modified by more than one preverb, that is, a small uninflected morpheme with original spatial semantics and free-standing status. The resulting formations can develop predictable or unpredictable semantics, given the concrete basic meanings of the elements that make them up.

1.1. Motivations behind the present study

Preverbs and preverbation are two well-studied topics in Indo-European linguistics (cf. e.g. Rousseau 1995; Booij & Van Kemenade 2003; Chapter 2, and references therein), to such an extent that the notion of preverb itself saw its birth within this field of studies. However, this is not the case for multiple preverb constructions of the type in (1)a-b, whereby two or more such morphemes attach onto the same simplex verb. This gap in the literature is possibly due to the fact that the accumulation of preverbs, though possible, does not seem to be the favored procedure in ancient Indo-European languages (Kuryłowicz 1964: 174).

In spite of this general remark, a number of scholars noticed the relatively exceptional presence of multiple preverbs in Old Irish. Thurneysen (1946: 495) even wrote that “there is no restriction on the number of prepositions [i.e. preverbs] that may be employed in composition.” According to Kuryłowicz (1964: 174 ff.), in Old Irish, multiple preverbs are widespread as they do not constitute an ambiguous construction: the preverb farthest from the verbal stem is clearly separated from the rest of the verbal complex, as it retains a proclitic status. McCone (1997) offered an explanation of the ordering preferences of Old Irish preverbs in what he called ‘primary composition’, namely the inherited layer of composition, whereby more than one preverb simultaneously attached onto the same simplex verb. However, Trudy Rossiter, a student of McCone’s, in her doctoral thesis (Rossiter 2004), challenged this view: she showed that the vast majority of Old Irish verbs with multiple preverbs can be reduced by removing the outermost preverb. This fact points to a process of formation by incremental one-by-one accumulation of preverbs (the so-called ‘accretion’ or ‘recomposition’), a scenario that McCone (2006) also later embraced (cf. Chapter 6).
McCone’s (1997) monography offered Papke (2010) a starting point to develop her comparison between Vedic and Old Irish preverb ordering, which she also extended to Homeric Greek. Papke concluded that, as there are strong correlations between preverb ordering especially in Vedic and Old Irish, Vedic order must be historically motivated (cf. Chapters 3 and 7). In addition, in her view, Vedic verbs with multiple preverbs originated by a process that Rossiter and McCone would call ‘accretion’ or ‘recomposition’: at first, only one preverb and a verbal base combine; afterwards, this established combination becomes available for the attaching of further preverb(s) (cf. Chapter 2).

Caroline Imbert dedicated several studies to Homeric Greek multiple preverbs, to their historical sources, and to the synchronic constraints ruling preverb ordering (cf. e.g. Imbert 2008). Notably, Imbert’s works are typologically oriented: she applied to Homeric Greek the category of ‘relational preverbs’ (cf. Chapter 2), which Craig & Hale (1988) identified for preverbs in Rama (a Chibchan language). Accordingly, Imbert argued that Homeric Greek multiple preverbs developed from previous postpositions, as Craig & Hale showed for Rama. Zanchi (2014) is also devoted to Homeric multiple preverbs and their origins, but came to different conclusions from Imbert’s: multiple preverbs are believed to have developed from original adverbs, rather than from postpositions (cf. Chapter 4).

To the present day, there are no studies focusing on multiple preverbs in Old Church Slavic; both Fil’ (2011) and Zanchi & Naccarato (2016) take into account both Old Russian and Old Church Slavic data. Instead, multiple preverbs and their functions in modern Slavic languages have received much attention: for example, multiple preverbs are investigated in Czech by Filip (2003), in Bulgarian by Istratkova (2004), in Serbian by Miličević (2004), and in Russian, among others, by Babko-Malaya (1999), Filip (1999, 2003), Ramchand (2004), Romanova (2004), Svenonius (2004a, 2004b), and Tatevosov (2008, 2009). However, the system of multiple preverbs in modern Slavic turned out to be completely different from that of Old Church Slavic (cf. Chapter 5).

Alongside with this relative lack of studies on multiple preverbs, it is worth mentioning another crucial gap in the relevant literature. Specifically, no investigations are virtually available on preverbs’ origin, functions, and developments that integrate the results achieved for different languages, in order to gain a precise, and at the same time
more general, understanding of the common reasons behind their behaviors and historical developments. For example, the above-mentioned concept of ‘accretion’ or ‘recomposition’ was coined by Rossiter (2004) and McCone (2006) for Old Irish, and – to my knowledge – never brought beyond its original scope. A second case in point is the so-called ‘Vey-Schooneveld effect’, which basically accounts for the development of Slavic preverbs into aspectual markers as a reanalysis triggered by semantic redundancy. This hypothesis was born within Slavic linguistics and virtually never tested elsewhere (a limited exception is Latin linguistics; cf. Chapter 5, fn. 6). My third and final example follows: Viti (2008a, 2008b) connected the development of Homeric preverbs into markers of actionality (and transitivity) with their ability to draw anaphoric reference to discourse-active (i.e. topical) participants. Although Boley (2004) and others also regarded preverbs as elements contributing to textual cohesion, and Friederich (1987), Coleman (1991) and Cuzzolin (1995) spoke about ‘discourse-oriented grammaticalization’ for Latin (and generally Indo-European) preverbs, similar analyses were never performed on a wider language sample.

Thus, the choice to investigate a relatively underrepresented phenomenon such as multiple preverbs in a relatively wide sample of Indo-European languages aims to be a first contribution to fill the gaps that I outlined above. In particular, Vedic and Homeric Greek were selected as they represent comparably early stages of development, whereby preverbs retain most of their assumed original meanings, functions, and syntactic freedom (cf. Section 2 for the chronology of their attestation; the most ancienly attested Indo-European language, Hittite, was not included in this investigation, as it represents a divergent and to some extent problematic development, on which see Chapter 2, fn. 13). By contrast, Old Church Slavic offers a glimpse into the initial steps toward one of the possible developments of preverbs: specifically, their subsequent grammaticalization into fully-fledged aspectual markers. In parallel, Old Irish, with its flourishing usage of multiple preverbs, provides an excellent touchstone to assess another development that preverbs may undergo: specifically, their lexicalization into semantically idiosyncratic or unpredictable composite items.
2. **Aims of the study and parameters of investigation**

The aims of this work can be subcategorized as follows: (a) language-internal goals; (b) comparative goals; (c) wide-ranging goals. To begin with, for each language of the sample, the present investigation aims to (i) describe the full array of multiple preverb formations in terms of preverb combinations, verbal roots, and their frequencies; (ii) assess the extent to which multiple preverbs underwent lexicalization or grammaticalization; (iii) understand the morphosyntactic status of multiple preverbs; (iv) detect the meanings of preverbs in multiple preverb combinations; (v) provide insights on the formation process of verbs modified by multiple preverbs and preverb ordering.

Moving to type-(b) goals, this work seeks to (i) compare multiple preverb formations, multiple preverb combinations, the verbal bases that they contain, and preverb ordering; (ii) compare the statuses of multiple preverbs in the above-mentioned languages; (iii) identify, describe, and motivate common semantic shifts. At the most general level (type-(c) goals), the study aims to (i) provide, within a relatively limited data-sample, a more detailed view on the reasons why preverbs underwent the well-known lexicalization and grammaticalization; (ii) identify the pattern of formation of multiple preverb verbs; (iii) integrate references that focus on different languages to acquire a more general view of the common processes of development and their motivations.

In order to meet these goals, the present investigation takes into account a number of morphological, semantic, and syntactic parameters, which are briefly collected below:

(a) preverbs’ position with respect to that of the other pieces of preverbal morphology; the sandhi effects undergone by the elements that make up the formation; the position of the accent; when relevant, the metrical constraints that may influence preverbs’ placement and univerbation;

(b) multiple preverb verbs’ degree of semantic compositionality; preverbs’ degree of polysemy in multiple preverb combinations;

(c) preverbs’ potential displacement from the modified verbal base, the range, and the type of such displacement; preverbs’ obligatoriness; preverbs’ repetition outside the preverbal context; argument structure of multiple preverb verbs.
2.1. **Outline of the work**

The present work is organized as follows. The present introduction continues with brief descriptions of the texts selected for the present investigation. I focus on philological metadata, including dating, geographical origin, author, content, and textual tradition, as far as these are relevant to the linguistic amalgam that such written records transmit to us. The introduction ends with a few methodological caveats relating to the usage of the so-called ‘corpus languages’ (in Cuzzolin & Haverling’s 2010 terms) for research on historical linguistics.

Chapter 1 provides an overview of the theoretical background that the linguist needs to study preverbs and their developments in this language sample. Given the geographical and chronological dispersal that characterizes these languages (cf. Section 3 below), preverbs show very distinct behaviors, and thus require various analytical tools to be accounted for. On the one hand, the framework of Cognitive Grammar, spatial relations, and Semantic Roles are needed to analyze the basic meanings of preverbs and their paths of lexicalization. On the other hand, the categories of aspect and actionality are crucial to frame the developments of preverbs that are due to grammaticalization.

Chapter 2 provides the reader with an overview of preverbs inside and outside Indo-European. The first section, which deals with Indo-European, opens with a working definition of preverbs and a description of their functions. It then discusses their positional properties in ancient and modern Indo-European languages and their origin. Lastly, it addresses preverbs as a typological and a terminological problem, displays the terminology adopted in this work, and explains the reasons behind the outlined terminological choices (for the sake of clarity, it is worth anticipating that I consistently call multiple preverbs+verbs combinations ‘composites’ rather than ‘compounds’). Then, a section follows on the specific research topic: multiple preverbs. The last section of the chapter offers some typological insights on Finno-Ugric, Caucasian, Amerindian, and Northern Australian preverbs, insofar as their behavioral properties and paths of development can be relevant to our understanding of Indo-European preverbs.
The analysis unfolds in Chapters 3–6, starting with Vedic, going through Homeric Greek and Old Church Slavic, and concluding with Old Irish. Each of these chapters is organized in a consistent way. It first (Section 1) outlines the state of the art on preverbs and multiple preverbs in each language and provides information on their categorial status. The chapters continue displaying quantitative data on multiple preverbs: specifically, the catalogues of (i) multiple preverb composites, (ii) multiple preverb combinations, (iii) verbal roots modified by multiple preverbs together with their frequencies. For Old Church Slavic and Old Irish, the Greek and Latin counterparts of multiple preverb composites are also provided.

Section 3 addresses various issues relating to the form of composites: (a) possible *sandhi* phenomena occurring between their elements; (b) the relative positioning of preverbs with respect to other pieces of preverbal morphology; (c) in the case of Old Church Slavic, the interaction between preverbs and Slavic secondary verbal suffixes expressing imperfectivity. Section 4 analyzes the semantics of preverbs occurring in multiple preverb composites and the semantic compositionality of multiple preverb composites. It also focuses on a number of particularly interesting semantic developments, in order to show how new abstract meanings relate to the basic one via cognitive metaphors. It concludes with a table summarizing the meanings of preverbs as they occur in multiple preverb composites. Section 5 follows dealing with the syntax of multiple preverbs and/or the argument structure of multiple preverb composites. It explores (a) the possible alternative constructions to multiple preverb combinations (i.e. the ‘mobility’ of preverbs); (b) their optionality; (c) their ability to function as transitivizing morphemes; (d) their inclination to be repeated outside the preverbal context; (e) their capacity of referring back to previously mentioned or discourse-active participants.

The final section (Section 6) investigates the reasons behind preverb ordering, which is understood as originating from the interplay of factors of different sort: (a) semantic and cognitive motivations, most notably redundancy; (b) textual motivations, such as the reference to discourse-active participants; (c) historical motivations, such as specific etymological origins of specific preverbs; (d) contact-relating motivation, including
calquing from Greek or Latin. Chapter 7 sums up the analyses unfolded in the preceding four chapters, compares their results, and draws general concluding remarks.

3. **Description of the corpora and brief methodological remarks**

3.1. *The Rg-Veda*

The *RgVeda* (from *rc* ‘praise, verse’ + *veda* ‘knowledge’) represents the most ancient Indian collection (*saṃ-hita* ‘put together’) of hymns (*sūktas* (lit.) ‘well said’) addressed to the Vedic gods, mantras, magic spells, and sacred formulas. It belongs with the four canonical sacred texts of Hinduism, known as the *Vedas*, which also include the *Sāmaveda* ‘veda of chants’, the *Yajurveda* ‘veda of the sacrifices’, and the *Atharvaveda* ‘veda of the magic spells’. Together, they constitute the so-called ‘early Vedic’ or ‘mantra language’, the most ancient variety of Old Indo-Aryan. Alongside with the *Vedas*, the Vedic corpus also comprises later prose texts: the *Brāhmaṇas*, the *Āraṇyakas*, the *Upaniṣads*, and the *Sūtras*. Early Vedic can be considered a north-western dialect and as such is close to Avestan, whereas later Vedic shows many features of the central Vedic dialects, which approximate this variety to Sanskrit.

In this work, I only take into account the *RgVeda*, which is undoubtedly the most ancient among the *saṃhitās*: while the *RgVeda* is mentioned in the other three collections, in turn, it does not provide hints to their existence. The *RgVeda* is also one among the oldest extant texts in any Indo-European language. Philological and linguistic evidence suggests that the *RgVeda* was composed in the north-western region of the Indian subcontinent, most likely between 1500–1200 BC, though a wider approximation of 1700–1100 BC has also been proposed (cf. further Witzel 1995; Mallory & Douglas 1997; Anthony 2007; Kulikov 2017). The *Rg-Vedic* hymns certainly post-date the Indo-Iranian separation (about 2000 BC) and probably the Indo-Aryan Mitanni documents (1400 BC).

The *RgVeda* are organized in ten books, known as *maṇḍalas* (lit.) ‘circles’, of varying antiquity and length, for a total of 1028 hymns. The hymns in turn consist of
individual stanzas (ṛcas ‘praises’), which can be further subdivided into metrical units (pāda ‘foot’) (cf. Chapter 3). Different sections of the ṚgVeda can be assigned to different chronological layers. The maṇḍalas II-VII (‘family books’) constitute the oldest and the shortest bulk of the collection (‘early Ṛg-Vedic’); maṇḍalas I, X, and part of VIII (so-called Vālakhilya) are the latest additions (‘late Ṛg-Vedic’); maṇḍalas VIII-IX are chronologically heterogeneous.

3.2. The Homeric poems

The Ḫiliad and the Odyssey are two epic poems (for a total of about 28000 lines) that tell about the last weeks of the Trojan War and about the tribulations that Odysseus experienced when going back to Ithaca after the fall of Troy. The two poems also include various outer narrative materials: the Ḫiliad alludes or directly refers to other legends connected with the Trojan siege; the Odyssey is only one among the return stories circulating at the same age in which its material was collected.

The Homeric epic is composed in hexameters, that is, lines made up of six (héx ‘six’) feet, which in turn are constituted by regular alternations of light/short and heavy/long syllables, interrupted by regular patterns of metrical pauses (cf. Chapter 4). The variety transmitted by the epic tradition is basically an archaic eastern Ionic, enriched by an amalgam of Mycenean and Aeolic features, as well as by a number of other archaic traits that can be hardly ascribed to any particular dialect or region (Horrocks 2010: 44).

This arguably artificial admixture can be explained by taking into account that, although one usually refers to their author as Homer, the Ḫiliad and the Odyssey are actually examples of oral poetic diction (Lord 1960; Parry 1971). The early epic bards, most likely going back to the Bronze Age (Horrocks 1997, 2010), repeated, or better online recomposed, the poems during public performances, by drawing on a conventional range of recurrent narrative themes and of ready-made dictions to fit such themes into the meter (so-called ‘formulas’, that is, “group[s] of words which [are] regularly employed under the same metrical conditions to express a given essential idea;” cf. Lord 1960: 30). As a consequence, though the Ḫiliad and the Odyssey were probably written down during the 8th
century BC, they preserve more ancient layers of the Greek language, at least about two centuries earlier, in the shape of formulas, precisely by virtue of this peculiar process of composition. Therefore, the Homeric poems are of inestimable value for linguistic reconstruction (Watkins 1976). Through this passage from oral to written transmission, the texts are likely to have been updated by their editors, though without seriously damaging poets’ traditional narrative and stylistic repertoire (Horrocks 2010: 46).

The basis for the modern editions of the poems is constituted by the versions issued by the Hellenistic philologists (4th–1st centuries BC). They in turn had at their disposal different previous editions, which could be either previous or contemporary, either personal (kat’andrà ‘according to a man’) or official (katà póleis ‘according to towns’). All in all, the Homeric text was floating: both the bards who put together the Homeric texts and the editors who established their official form used a variety of Greek notably different from the original language of the oral tradition.

3.3. *Old Church Slavic and the Codices Zographensis, Marianus, and Suprasliensis*

Old Church Slavic (or Slavonic) is the variety attested in some of the oldest Slavic written records, which date back to the 10th–11th centuries AD. These records are not contemporary to Constantine (i.e. Cyril) and Methodius’ mission of christianization of ancient Morava (a region located somewhere in the Danube Basin), which crucially triggered the translation of Christian sacred texts from the Greek of the Septuagint and Byzantine Greek into Slavs’ language (Marcialis 2007). However, as first shown by August Leskien, a chronologically consistent and relatively old group of extensive manuscripts can be identified and employed as a canonical source to describe the system of Old Church Slavic.

The variety attested in this canon does not represent any particular Slavic regional dialect, but rather a literary language used by Slavs of different regions as a shared conduit within the Christian community (cf. Drinka 2011). Nonetheless, it has the general flavor of an early eastern Balkan Slavic (or Bulgaro-Macedonian) variety, and as such has also been addressed as Old Bulgarian or Old Macedonian (Lunt 1965: 4). As already touched upon above, Old Church Slavic texts are translations from original Greek sources, which boasted
a prestigious literary tradition and outstanding authority. For these reasons, Old Church Slavic has been frequently blamed to be deeply influenced by the Greek originals at different linguistic layers, ranging from syntax (Lunt 1977; MacRobert 1986) to the lexicon (cf. Chapter 5; Drinka 2011).

Among the manuscripts contained in the Old Church Slavic canon, this work takes into account the most ancient ones, i.e. Codex Zографesis and Codex Marianus, and the most extensive one, i.e. Codex Suprasliensis (Lunt 1965: 7, 9). The former are two of the so-called tetraevangelia, that is, full versions of the Gospels, both primarily written in glagolitic script (cf. Lunt 1965: 15 ff. for more information on this script). The Codex Zографesis is made up of 271 folia in standard Glagolitic, plus 17 folia in Macedonian Glagolitic, and later additions in cyrillic. It covers the Gospels from Mt 3.11 to the end of John (though the section Mt 16.20–24.20 belongs with the Macedonian addenda). It can be regarded as being phonetically faithful to Cyril and Methodius’ language (i.e. probably south-eastern Macedonian), but it also displays a number of arguably younger morphological features. The Codex Marianus, made up of 147 folia, contains the Gospel text from Mt 5.23 to Jn 21.7. It shows a number of deviations from the Cyril and Methodius’ language, which can be possibly motivated either by northern Macedonian or by Serbian influence. The Codex Suprasliensis, written entirely in Cyrillic, includes as many as 285 folia and covers different narrative materials. It mainly constitutes a menaem for the month of March, that is, a collection of saints’ lives for daily reading, enriched by a number of sermons for Holy Week and Easter. The variety that it transmits comes from a region located somewhere in central or eastern Bulgaria, and is undoubtedly later than the language of the two above-mentioned tetraevangelia. Its Greek sources have not come down to us, which makes it difficult to precisely identify the constructions with Greek influence (cf. Chapter 5).

3.4. The Milan and the Priscian Glosses

The fundamental sources for the linguistic study of Old Irish consist of glosses on Latin manuscripts, which have been put together in the two volumes of the Thesaurus
The Milan Glosses contain Old Irish interlinear and marginal explanations on and translation of a Latin commentary on the Psalms (manuscript Ambrosianus C301, now preserved in Milan). The manuscript dates back to the end of the 8th–9th centuries AD and reached Milan via Bobbio, after being written down most likely in Ireland. The earlier Latin commentary and the slightly later glosses and translations into Old Irish seem to be carried out by two different hands, as the glossator occasionally expresses hesitations as to the reading of the Latin commentary. Later on, a third scribe, probably equipped with better Latin skills, added a few corrections and the incipits of two Old Irish poems, now hardly readable. The main scribe has often been blamed to have worked with less precision than the scribes who compiled the Würzburg Glosses; hence, unsupported spellings and slips of the pen are frequent (McCone 1985b). Based mainly on phonological evidence, the Irish variety of the Milan Glosses has been said to be later than that of the Würzburg Glosses, but earlier than that of the Priscian Glosses (however, this is at present still matter of debate; cf. McCone 1985b; Roost 2013). As first shown by Strachan (1901), Latin massively influenced the Irish text at different linguistic layers: most notably for the purposes of the present work, Latin arguably played a role in the coinage of new Irish words and composites (cf. further Chapter 6; Strachan 1901; Strokes & Strachan 1901–1903; McCone 1985b).
The *Priscian Glosses* are made up of marginal and interlinear comments on a translation of Priscian’s *Institutiones Grammaticae* (5th–6th centuries AD) into Old Irish. They survived until us thanks to a number of manuscripts, among which *Cod. Sang. 904* is the largest and contains all glosses that also occur in all other manuscripts. It comes from St. Gall and may have been written down during the 9th century in Ireland. The St. Gall glosses were compiled by two hands, which transcribed from the same original, plus minor later addenda. The language of this collection is said to be heterogeneous; however, it is generally later than that of the *Milan Glosses*, though it also shows a number of archaisms, probably due to the fact that it was compiled from different sources of various antiquity (Strachan 1903: 470).

3.5. *Methodological remarks*

This work is entirely based on inherently limited corpora: the texts that survived until us, mainly due to accidents of the textual tradition, are the only material at linguists’ disposal. Cuzzolin & Haverling (2010: 25) addressed such varieties as ‘corpus languages’: “[they are] no longer anybody’s native language[s] and what we can know of [them] as […] living language[s] is to be traced in the written material still at our disposal.” Therefore, the picture of a certain language that such materials mirror is most likely to be fragmentary. Joseph & Janda (2003: 19) effectively sum up the consequences of these issues as follows: “no matter how carefully we deal with documentary evidence from the past, we will always be left with lacunae in coverage, with a record that remains imperfect and so confronts us with major chasms in our understanding that must somehow be bridged.”

To begin with, a lack of attestation does not necessarily imply actual absence in the grammar or in the lexicon of a certain language (cf. Joseph & Janda 2003: 15 ff. for some examples of “accidental gaps in the historical record”). And what is more, the textual tradition and the manuscript transmission of certain written sources can also be responsible for alterations or/and updating of the originals (cf. in particular Chapter 4). Thus, all above texts constitute instances of intrinsically diachronic corpora, in that they simultaneously attest to different chronological layers of a variety: on the one part, texts at our disposal are
the outcome of centuries of textual tradition; on the other part, different sections of the same text can date back to different time periods (Sections 3.1–3.4).

All in all, as is discussed in Chapter 1 (see especially Section 2.3.3), grammaticalization theory is the most adequate theoretical tool to deal with such inherently diachronic data: the developments that can be subsumed under the rubric of grammaticalization can be understood as gradual diachronic processes that result in gradient synchronic linguistic categories. This point has proved to be of crucial importance especially for the analysis of Vedic and Homeric multiple preverbs (cf. Chapters 3–4). In addition, by means of the grammaticalization theory and its intrinsic diachronic character, one can also assess the overall development of Indo-European preverbs, by analyzing their behavior in sub-varieties that belong to very spread out chronological layers. Specifically, as shown in Table 1, Vedic and Homeric Greek, on the one hand, and Old Church Slavic and Old Irish, on the other hand, are divided by a time gap of more than one millennium.

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>TEXTS &amp; MANUSCRIPTS</th>
<th>TIME PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vedic</td>
<td><em>R̥g-Veda</em></td>
<td>about 18th–12th centuries BC</td>
</tr>
<tr>
<td>Homeric Greek</td>
<td><em>Iliad, Odyssey</em></td>
<td>about 8th century BC</td>
</tr>
<tr>
<td>Old Irish</td>
<td><em>Milan Glosses, Priscian Glosses</em></td>
<td>about 8th–9th centuries AD</td>
</tr>
<tr>
<td>Old Church Slavic</td>
<td><em>Codex Marianus, Codex Zographensis, Codex Suprasliensis</em></td>
<td>10th–11th centuries AD</td>
</tr>
</tbody>
</table>

Furthermore, the *R̥g-Veda*, the Homeric poems, the Old Church Slavic texts represent literary corpora, in terms of their content and aims. Thus, their variety most likely does not faithfully mirror the actual usages of everyday speech (cf. Joseph & Janda 2003: 17–19). In addition, on the one hand, the Vedic hymns and the Homeric poems constitute poetic corpora. As such, they have to meet relatively rigid metrical requirements, which possibly also contributed to moving the language away from the daily practice.
Occasionally, meter might both constrain syntax in general, and word order in particular, as well as motivate otherwise obscure lexical choices (cf. Chapters 3 and 4, for further discussions and relevant examples).

On the other hand, for the Old Church Slavic texts and for the Old Irish glosses, one must take into account their undeniable interaction with the Greek source- and the Latin main texts. Thus, further issues relating to the employment of parallel (or quasi-parallel) corpora come into play, which have been touched upon in Sections 3.3–3.4 and further discussed in Chapters 5–6. However, as regards our understanding of the formation process of multiple preverb composites, Greek and Latin equivalents have proved to be crucial, in that they can provide access points to the various degrees of lexicalization and semantic bleaching affecting multiple preverb composites.
1 Theoretical background: Analytical tools for the study of preverbs

1. Cognitive Grammar

In this work, I adopt the theoretical framework of Cognitive Grammar, in which grammatical forms are conceived as meaningful: the difference between grammatical and lexical meanings essentially lies in their degree of abstractness. Thus, syntax and semantics are understood as a continuum: “lexicon and grammar form a gradation consisting solely in assemblies of symbolic structures” (Langacker 2008: 5). The meanings of the elements of grammar emerge as the concepts associated to linguistic expressions. Such concepts are grounded on elementary semantic structures, which in turn are based on humans’ perception and spatio-physical experience (cf. e.g. Talmy 1983; Lakoff 1987; Langacker 1987), as shown in Section 1.1.

1.1. Space as the basic domain of human cognition

Human beings’ perception, experience, and conceptualizations are mediated and constrained by human bodies: this is what is meant by ‘embodiment’ and ‘embodied cognition’. Embodied experience gives shape to conceptual structure: the world, as interfered by organs of perception, constitutes the basis of conceptual structure, that is, of human thoughts and concepts (cf. among many others, Lakoff 1987; Lakoff & Johnson 1980; Langacker 1987; Svorou 1994). Furthermore, if embodied experience shapes our conceptual structure, it must also constitute the foundation of meaning, that is, of concepts expressed by means of human language. This implies that meaning must derive from being in the world via human bodies: all concepts, both concrete and abstract, are grounded in terms of spatio-physical experience.
Therefore, in Cognitive Grammar, space is regarded as one of the basic domains of human cognition, as it does not seem to be understood through other cognitive domains, and provides the basis for understanding other more abstract domains (Lakoff & Johnson 1980). More generally, any set of concepts that cannot be described by means of another set of concepts can be regarded as a basic domain. By contrast, any domain that at least needs another domain to be conceptualized is abstract (Croft 1993).

Linguistic forms, which are humans’ means for expressing thoughts and concepts, are originally associated with a concrete and spatial meaning, which constitutes the starting point for developing more abstract meanings and functions. The mapping from a concrete to an abstract conceptual domain is possible thanks to the cognitive mechanisms of metonymy and metaphor. Importantly, several metonymic and metaphorical meanings are regularly connected to specific linguistic sources, and later on conventionalized (cf. Section 1.2). In conventionalized lexical items, it can become difficult to go back to the original spatial meaning, or to understand the links between the developed abstract and the basic spatial meanings from a synchronic point of view (cf. Section 2.5 on lexicalization; Chapters 5 and 6 on Old Church Slavic and Old Irish preverbs for cases in point). Thus, a given linguistic form is usually polysemous: each of its meanings can rely on the basic or on the abstract domains that pertain to said linguistic form. All meanings of a linguistic form are organized around its basic meaning in what can be called ‘structured polysemy’ (e.g. Tyler & Evans 2003): meanings directly or indirectly relate to the center or to each other in a motivated radial structure (e.g. Lakoff 1987).

1.2. Going from spatial to abstract domains: metaphor and metonymy

Metaphor is a way to conceptualize a cognitively difficult domain in terms of an easier domain; in other words, through metaphor it is possible to understand “conceptually complex phenomena in terms of less complex ones” (Claudi & Heine 1986: 299). Thus metaphor establishes a mapping between two different conceptual domains that, despite being equated, remain distinct (Croft 1993). Examples (1)–(2) show two different uses of the English preposition in:
Sentences (1) and (2) contain similar linguistic items: the proper name Luke, the third person singular of the verb to be, the preposition in, and a common noun, kitchen in (1), determined by the article the, and love in (2). However, while the noun kitchen denotes a real Location where Luke is, the noun love denotes a state that Luke experiences. Thus, the same verb to be and the same preposition in express a spatial relation in (1), but a metaphorical relation in (2). This shift toward the abstract plane is accounted for by conceptual metaphor: the room kitchen physically contains Luke; in a comparable way, the state of being in love is understood as a container in which Luke is metaphorically located.

As Lakoff & Johnson (1980: 32 ff.) point out, the same metaphors can be responsible for multiple semantic changes: for example, states are often conceptualized as containers (the so-called ‘Container metaphor’). This is valid within a single language and across different languages: in Sections 4 devoted to the semantics of multiple preverbs, Chapters 3–6 show that morphemes with similar basic spatial meaning also tend to develop similar abstract meanings (cf. further Chapter 7).

Metonymy occurs when an entity of a certain conceptual domain is referred to by means of an entity belonging to a contiguous or to the same conceptual domain (Lakoff & Johnson 1980: 29; Croft 1993). Within the same domain, such entities are connected by means of humans’ encyclopedic experience (Lakoff 1987). For example, in (3) below, the expression the ham sandwich does not refer to an actual sandwich, rather to the person who ordered it. The entity ham sandwich belongs to the conceptual domain that can be labelled as [CUSTOMER], because a customer is supposed to order something to eat or drink.3

(3) The ham sandwich is waiting for his check.

3 The notation with small caps and square brackets means that [CUSTOMER] should be interpreted as a conceptual domain (and not as an entity).
Notably, example (3) cannot be regarded as a case of personification metaphor, given that human qualities are not ascribed to the said sandwich. Rather, the sandwich is a part of the conceptual domain of the person ordering it. By contrast, example (4) contains an instance of personification:

(4) *Inflation* has attacked the *foundation of our economy*. *Inflation* has pinned us to the wall.

In example (4), a non-human entity, *inflation*, is conceived or conceptualized as human on account of the metaphor *INFLATION IS A HUMAN BEING* (Lakoff & Johnson 1980: 28 ff.).

This metaphoric extension only selects one feature of the source-entity, specifically ‘a human being can be an adversary’, according to the personification *INFLATION IS AN ADVERSARY*. Categories of entities, including human beings, show a number of properties that can be either overseen as a whole or observed one by one. Categories of entities seem to be organized as so-called *Gestalten*, that is, structures in terms of which our perception of the world is given a shape, and that exhibit a number of properties, including that of being “at once holistic and analyzable” (Lakoff 1977: 246). Thus, metaphors can also be triggered by a single property possessed by a category of entities, as in (4).

1.3. *The conceptualization of the spatial event*

Given that spatial concepts are cognitively basic for human beings (cf. Section 1.1), it is worth discussing how these events are conceptualized. As events of different sort, spatial events can be viewed from different standpoints, and consequently conceptualized in different ways. One of the most important varying parameters, in terms of conceptualization, is the so-called ‘prominence’ (in Langacker’s 1987, 2008 terms). Prominence is a kind of asymmetry related to the focus of attention, that is, to what a linguistic expression describes as foreground, and what as background (Langacker 2008: 68). Different types of prominence are discussed in what follows.

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4 Capital letters are Lakoff & Johnson’s (1980) and indicate that the above statement is a cognitive metaphor.
1.3.1.  *The first type of prominence: the profile-base asymmetry*

The concept of profile has been introduced by Langacker (1987) by means of the word *spoke*. In order to understand the meaning of *spoke*, Langacker writes, one must also be aware of what a *wheel* is. The segment *spoke* is defined in relation with the structure of the whole *wheel*. Langacker describes the relation holding between the *spoke* and the *wheel* as the relation of a ‘profile’ of a concept with respect to its ‘base’. The profile is the precise and narrow concept expressed by a word, whereas the base can be defined as the encyclopedic knowledge or conceptual structure presupposed by the said word.\(^5\)

As Croft (1993) points out, the profile and the base make up an inseparable pair: a profile needs a base against which it is individuated. Symmetrically, a base cannot be individuated without the profiles that are defined with respect to it. The verb ‘to profile’ corresponds to the noun ‘profile’: for example, *spoke* profiles a certain part of the base *wheel*. In a similar way, the meaning of *wheel* is also the base for *hub* and *rim*, as shown in Figure 1 below:

![Figure 1](https://via.placeholder.com/150)

**Figure 1.** The profile-base asymmetry: *wheel* vs. *spoke*, *rim*, *wheel*  
(from Langacker 2008: 67)

An expression can profile either a thing such as in Figure 1 or a relationship. Therefore, the concept of profile can also be employed to describe spatial and non-spatial relations and thus the meaning of preverbs. For example, the Homeric motion verb *eis-ana-bainō* ‘go up to’ profiles the movement of an entity going along a trajectory toward a certain direction.

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\(^5\) Langacker (1987) and Lakoff (1987) also use the term *domain* to indicate the base, whereas Fillmore (1982) calls it *frame*. 
This verb contains two preverbs: the former, *eis*—‘to’, profiles the direction of motion (Goal); the latter, *ana*—‘up’, instead profiles its orientation and Path, specifying that the verb indicates an upward motion. The whole spatial relation expressed by the compound *eis-ana-bainō* implies that there are a path, an entity that moves along a path, and an entity to be reached, which constitute the basis of the spatial relation.

1.3.2. *The second type of prominence: the Trajector-Landmark asymmetry*

As anticipated discussing the meaning of the verb *eis-ana-bainō* ‘go up to’, entities are usually located with respect to other entities functioning as reference points (Talmy 1983; Langacker 1987). This way of locating entities implies a further asymmetrical relation holding between the located entity, and the reference-entity.

Talmy (1983) introduces the terms ‘Figure’ and ‘Ground’, borrowed from *Gestalt* psychology (Köhler 1929; Koffka 1935), to describe this asymmetrical relation: the Figure is the object to be located, while the Ground is the object with respect to which the Figure is located. In reference works, other terms are also used to identify the participants in a spatial relation, including the pairs ‘locans’-‘locatum’, and ‘referent’-‘relatum’ (e.g. Rappaport & Levin 1985; Levinson 1996). In this work, I opt for Langacker’s (1987, 2008) terminology, which describes Talmy’s Figure and Ground in terms of focus of attention. Langacker argues that, while profiling a spatial relation holding between two entities, one of such entities is always more focused than the other one. Langacker calls the more prominent and located entity Trajector (henceforth TR), whereas the less prominent reference-entity Landmark (henceforth LM).

Langacker employs the concepts of TR and LM beyond the cognitive domain of space. After him, let us take as an example the kinship relations of *having a child* and *having a parent*. Both relations share the base, that is, the domain of kinship relations. In addition, they profile the same kinship relation, as they involve two participants, of whom one is the son or the parent of the other. What changes is the directionality of the relation, and thus their TR-LM alignment: *having a child* is primarily concerned with parents, who thus function as a TR. By contrast, *having a parent* is a predication concerning the child,
who in turn functions as a TR. Figure 2 shows both the profile-base and TR-LM asymmetries:

**Figure 2.** Kinship relations: profile-base and TR-LM asymmetries
(Langacker 2008: 68)

In Figure 2 (a)–(d), bold highlights the profile. Both in (a) and in (b), the profile is a human entity, either the *parent* or the *child*. They are both characterized by means of the relative role that they play in the kinship relation, which is conceptualized as the base. Both in (c) and in (d), instead, the same kinship relation is profiled. The semantic contrast between *have a parent* and *have a child* resides in their opposite directionalities.

1.3.3. **The parameters of the spatial event**

So far, I discussed static spatial events, in which a TR is located with respect to a LM. However, a spatial event can also imply motion: in such events, the TR moves with respect either to a stable or to another moving entity (LM). In each case, one recognizes an asymmetrical relation between a TR and a LM. Several parameters can contribute to such asymmetrical relation, including the number of the moving entities, the direction of movement, the path of movement, containment, orientation, or a combination of these (Svorou 1994: 24).

Motion events can also be conceptualized as having directionality, or a deictic orientation. TRs can be directed toward or away from LMs: for example, the English verb *to go* implies a motion away from the speaker, whereas *to come* implies a direction toward the speaker. Furthermore, the directionality of certain entities can be specified on a vertical
axis, such as in the following Italian verbs: *salire* ‘to go up’ entails an upward motion, while *scendere* ‘to go down’ a downward motion.

In addition, the conceptualization of a motion event subsumes a trajectory, that is, the path covered by a TR with respect to a LM. However, the trajectory can either be profiled or remain in the base. For example, the Ancient Greek verbs *pēgnumi* ‘fix’ and *bállō* ‘throw’ can take either the dative or the accusative, both expressing the direction of the motion. The dative and the accusative cases differ in their profile: the dative only profiles the endpoint of the trajectory, while the accusative profiles it as a whole.

Both location and motion events can involve the containment of the TR inside the LM, conceptualized as a container. As for location events, the TR can either be placed inside, near, or in contact with the LM (‘inessive’, ‘adessive’, and ‘superessive’ location, respectively). As regards motion events, the TR can move either toward the inside of a LM, toward its direction, or toward a contact position with the LM (‘illative’, ‘allative’, and ‘superallative’ motion). Conversely, the TR can move from the inside of the LM, from its vicinity, or from a contact position with the LM (‘elative’, ‘ablative’, ‘superablative’ motion, respectively). As discussed for examples (1) and (2), both spatial and metaphorical LMs can be conceived as containers: the so-called Container metaphor is one of the most widespread means for shifting from the concrete to the abstract plane in conceptualizing events (Lakoff & Johnson 1980: 32 ff.). The Container metaphor is based on the fact that the human body itself has its dimensionality and can be conceptualized as a container.

In contexts where containment is not involved, contact instead can be relevant to identify the position of a TR with respect to a LM. The opposition based on contact is not expressed through morphological cases in Indo-European languages. However, in English as well as in ancient Indo-European languages, a number of preverbs-adpositions (cf. Chapter 2 on this terminology) in fact express this contrast: in English both *on* and *over* indicate that the TR is vertically located with respect to the LM, and differ only in the presence/lack of contact (Brugmann 1988); in parallel, for example, the basic meanings of Ancient Greek *epí* ‘on’ and *hupér* ‘over’ express superiority, the former involving contact, the latter lacking this implication (Luraghi 2003: 24).
Another relevant parameter is the plexity (in Talmy’s 2000: 177–254) of the TR, of the LM and of the trajectory. TR and LM can consist of separate items (multiplex), or of a non-analyzable single entity (uniplex); in parallel, trajectory can be unidirectional (uniplex) or multidirectional (multiplex). Remarkably, the plexity is not an inherent feature of the participants in a spatial relation, but rather depends on how these participants are conceptualized. A further distinction only concerns multiplex entities: they can be either continuous or discontinuous. Discontinuous entities are typically plural count nouns, which profile the existence of a number of individuated entities; conversely, continuous entities are usually mass nouns and collectives, which profile an undifferentiated mass. Thus, discontinuous and continuous entities, as well as plural and mass nouns, are distinguished only by their degree of individuation (Langacker 1987: 294).

2. Grammaticalization

2.1. A brief history of grammaticalization studies

At least since the early 19th century, it has been a common observation that independent lexical items constitute the ultimate source for bound grammatical forms (e.g. Bopp 1816; Humboldt 1822; Wüllner 1931; von der Gabelenz 1961[1891]). As a matter of fact, however, Antoine Meillet was the one who presumably coined the term ‘grammaticalization’, which increasingly acquired better luck in later research. Meillet (1912) described grammaticalization as the development of an autonomous word into a grammatical element, that is, as a linguistic change whereby lexical items enter the grammatical system. Meillet (1912: 140–141) later on compared the changes that he regarded as making up grammaticalization to a spiral: first, languages add non-obligatory elements to a given expression for the sake of intensification; then, these elements

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7 “[…] le passage d’un mot autonome au rôle d’élément grammatical” (Meillet 1912: 131).
increasingly bleach, lose their autonomy, and eventually enter the grammatical system. Further new expressive elements thereafter come into play and in turn undergo bleaching in a neverending cycle.\(^8\) Crucially for the onward research (cf. Section 2.3), Meillet assigned gradualness to grammaticalization: focusing on the French verb ‘to be’, he individuated different stages within its path from a lexical locative-existential verb (je suis chez moi ‘I am home’), through a copula (je suis malade ‘I am sick’), into a tense auxiliary (je suis allé ‘I went’).

Building on Meillet’s ideas, Kuryłowicz (1975[1965]: 52) was among the first scholars undertaking new studies framed within the theory of grammaticalization. Kuryłowicz’s broadened definition of grammaticalization later on became traditional: “Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one.” Thus, not only a previously lexical item must enter the grammatical system for grammaticalization to take place, but also a less grammatical item can acquire new and more grammatical functions.

Kuryłowicz remained an isolated case till the 1970s, when Givón’s (1971, 1979) work gave new life to grammaticalization studies, by stressing the fact that a language structure can only be understood in the light of its past (Givón’s is the famous slogan “today’s morphology is yesterday’s syntax”). However, works consistently framed within grammaticalization theory only started flourishing during the 1980s (cf. Lehmann 1995[1982]; Heine & Reh 1982), and last till nowadays (cf. among many others Heine, Claudi & Hünßyer 1991; Traugott & Heine 1991a, 1991b; Hopper & Traugott 1993; Heine 1997; Rissanen et al. 1997; and Fischer et al. 2000). In last decades, however, grammaticalization theory also underwent serious criticism (cf. Section 2.4).

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\(^8\) Here are Meillet’s (1912: 140–141) words: “Les langues suivent ainsi une sorte de développement en spirale: elles ajoutent des mots accessoires pour obtenir une expression intense; ces mots s’affaiblissent, se dégradent et tombent au niveau de simples outils grammaticaux; on ajoute de nouveaux mots ou des mots diffèrents en vue de l’expression; l’affaiblissement recommence, et ainsi sans fin.”
2.2. *Nowadays approaches to grammaticalization*

Alongside with undergoing serious criticism, the grammaticalization theory has in parallel extended its traditional scope of application in different directions. While in the 20th century the grammaticalization theory was mostly confined to grammatical, semantic, and pragmatic analyses carried out by functionally oriented scholars from Europe and North America, it is now employed as a theoretical framework in works of corpus linguistics, phonology, language acquisition, and sociolinguistics, as well as in studies performed by formal linguists also in such regions including East Asia and South America (Narrog & Heine 2011: 2–3). This diversity had the consequence of multiplying the number of approaches to and definitions of grammaticalization (cf. Traugott 2010). A possible way to sort out this variety is grouping the approaches into two main groups based on the inclusiveness/exclusiveness of grammaticalization.

The more ancient and more restrictive approach to grammaticalization puts much emphasis on the parameter of obligatorification (cf. e.g. Lehmann 1995[1982]; Haspelmath 2004), which implies reduction in transparadigmatic variability, increased dependency, and tightening of boundaries. Haspelmath’s (2004: 26) definition is often cited to exemplify this approach: “A grammaticalization is a diachronic change by which the parts of a constructional schema come to have stronger internal dependencies” (Haspelmath 2004: 26). Lehmann (2004: 155) also describes grammaticalization as a reduction of autonomy: “Grammaticalization of a linguistic sign is a process in which it loses in autonomy by becoming more subject to constraints of the linguistic system” (Lehmann 2004: 155). It is common in both descriptive and theoretical literature on grammaticalization understood in the narrow sense to regard it as a loss: loss of meaning, loss of phonology, and loss of independence.

By contrast, more inclusive approaches regard grammaticalization as an expansion of grammar, and generally as an enrichment of languages (cf. e.g. von Fintel 1995; DeLancey 2001; Himmelmann 2004; Brinton & Traugott 2005; Croft 2006). Among others, a promoter of this view is DeLancey (2001): “The word *grammaticalization* [...] implies a process of becoming ‘grammatical.’ The reference can be taken as being to
lexical morphemes becoming grammatical ones, or, more broadly, to any linguistic construct (a morpheme, a syntactic construction, or a discourse pattern) becoming part of the grammatical system of a language.” Importantly, in his view, grammaticalization not only affects morphemes, but also linguistic units embedded within greater constructions or patterns; in addition, it not only causes the development of morphology, but also of all structures of languages. Brinton & Traugott (2005: 99) also adopt a similarly broad definition: “Grammaticalization is the change whereby in certain linguistic contexts speakers use parts of a construction with a grammatical function. Over time the resulting grammatical item may become more grammatical by acquiring more grammatical functions and expanding its host-classes.” Thus, to the foundational element of expansion, Brinton & Traugott add that of context expansion, or paradigmaticization. Croft’s (2006: 366) definition is downright wider: grammaticalization is “the process by which grammar is created.” As Fischer (2011b) notes, a number of linguists even employ ‘grammaticalization’ as a synonym of ‘change’, though not every linguistic change, for example sound change, can qualify as a grammaticalization.

The analysis of the developments of Indo-European preverbs can take advantage both from the inclusive and the exclusive approach to grammaticalization outlined so far. Specifically, on the one hand, the criterion of obligatoriness is crucial for understanding the developments of Vedic and Homeric Greek preverbs (cf. Chapters 3 and 4). We will see that the occurrence of a preverb gains increasing obligatoriness to express certain types of spatial and non-spatial meanings. On the other hand, the wider approach, by taking into consideration semantic bleaching and the concomitant context expansion undergone by grammatical items, is of particular importance for Chapters 5 and 6, in which Old Church Slavic and Old Irish preverbs are analyzed.

2.3. The continuum of grammaticalization

As DeLancey (2001) points out, a grammaticalization process entails changes at every level of language. Notably, although all changes outlined below typically occur in
grammaticalization processes, independently of each other, they are not essential for grammaticalization to take place (Bybee, Perkins & Pagliuca 1994).

At the semantic and pragmatic level, a grammaticalization process entails changes such as semantic bleaching, semantic specialization through metaphor (see Section 1.1.1), reanalysis through pragmatic inference, lexicalization – that is the process by which originally independent lexemes become parts of new lexical items (cf. Section 2.5), and ‘referent conflation’. A referent conflation is a semantic change according to which two conceptually distinct referents are reanalyzed as one. For example, in the development of an adposition from a relational noun, e.g. *atop + noun from *on the top of + noun, one can see the conflation of two referents into one (top + noun > noun) (DeLancey 2001).

At the layers of syntax and morphology, changes such as reanalysis and alterations in constituent structure also can occur. In addition, as already remarked, grammaticalization often involves obligatorification (Lehmann 1995[1982]). However, some scholars, such as Heine & Kuteva (2007: 34), point out that, though obligatorification seems to be important, it is not necessary for grammaticalization to take place, and that it also occurs in language changes different from grammaticalization. Heine et al. (1991) and Heine & Kuteva (2007: 40-41) also speak of decategorialization in grammaticalization processes. By decategorialization, a linguistic expression is likely to lose morphological and syntactic properties that were characteristic of its initial category, but which are not central for the new grammatical function. For example, in English a number of gerund forms, such as barring, concerning, and considering, came to acquire prepositional functions. This development led such forms to lose a number of properties normally associated with the morphological category of verbs: e.g. the possibility of taking auxiliaries, and of being inflected for tense and aspect.

At the phonological level, morphemes can undergo phonetic erosion or cliticization (Heine & Kuteva 2007: 42 ff.). In Himmelmann’s (2004) view, such changes result in a set of expansions (cf. Section 2.2): host-class expansion, in which expressions are generalized to more collocational contexts, syntactic expansion, in which expressions come to acquire new syntactic functions, and semantic-pragmatic expansion.
Gradualness and the stages of grammaticalization

Gradualness is a concept that affects linguistic change in general and grammaticalization in particular, and as such it is spread throughout diachronic depth. Gradualness can be understood as a two-fold concept. First, it describes how a linguistic change propagates among new groups of speakers, different situational contexts, and various stages of language. Second, it concerns the structural propagation of change: “gradualness refers to the fact that most change involves (a series of) micro-changes” (Traugott & Trousdale 2010: 23). Each medial step along this process represents an intermediate construction type in structural terms (Croft 2001: 313). In fact, by virtue of gradualness, more than one intermediate step in change may coexist in the same individual or community of speakers (cf. Section 2.3.3).

In contrast with Traugott & Trousdale (2010), who regard grammaticalization as a sequence of discrete changes, no matter how little these are, DeLancey (2001) understands the whole grammaticalization as a continuum: the distinction into a number of discrete processes only results from linguists’ idealization. Such processes must not necessarily be laid out in a strict serial order. However, some of them are likely to trigger other successive processes by providing them with the necessary conditions for development.

In what follows, I describe the stages of grammaticalization mainly based on DeLancey (2001). At first, the essential precondition for grammaticalization is a productive syntactic construction: a lexeme or some lexemes must frequently occur in a certain constructions on account of some semantic or pragmatic reasons. By virtue of their frequency, such constructions undergo conventionalization, or in DeLancey’s terms “undergo a functional specialization” (e.g. the face of NP, finish VP, and so on). In what one may call usage-based models of language, frequency is invoked as one of the main forces, or even as the main force, driving grammaticalization, or even linguistic change in general (cf. e.g. Bybee & Hopper 2001; Bybee 2011).

At a later stage, such a construction loses (a) part(s) of its meaning, and consequently acquires the possibility of being used in a wider range of contexts (this is ‘semantic bleaching’, in Givón’s terms). Notably, such a construction also comes to occur
in contexts conflicting with its original and more specific meaning. For example, when the noun *front* becomes a part of the adposition *in front of*, it loses the portion of its meaning that directly refers to the human body (Heine & Kuteva 2007: 40).

The next stage involves decategorialization (or recategorialization; cf. Heine et. al. 1991; Heine & Kuteva 2007; Section 2.3): the construction loses (some of) the morphosyntactic behaviors characteristic of its original category. For example, as discussed in Chapter 2, as soon as Indo-European local adverbs start developing into preverbs and/or into adpositions, they lose the typical syntactic freedom of adverbs. Such categorial reassessment can end up in a two-fold way. The developed form can enter one of the existing morphosyntactic categories of the language. As an alternative, the form comes to show behaviors that differentiate it from all the other items of the language. In this latter case, the said form gives birth to a new morphosyntactic category. This is the case of Proto-Indo-European local adverbs undergoing functional bifurcation into preverbs and adpositions.

In the end, further (non-obligatory) stages of grammaticalization are cliticization and morphologization. The grammaticalized form loses its independency, both at the phonological and at the syntactic level. For example, the grammaticalization path of Indo-European local adverbs includes the following loss of independency: local adverbs firstly develop into clitic preverbs, and secondly into prefixes that cannot be displaced from their hosting verbs (cf. Chapter 2).

2.3.2. Gradience

The concept of grammaticalization is grounded on the dichotomy of ‘lexical’ vs. ‘grammatical’ forms. However, grammaticalization studies contributed to blurring this clear-cut distinction (e.g. Lehmann 1985, 1995[1982]; Hopper & Traugott 1993; DeLancey 2001). In assuming a *continuum* between lexicon and grammar, most versions of grammaticalization theory go hand in hand with functionalist and usage-based models of language, including Cognitive Grammar (Narrog & Heine 2011: 9; Section 1).
As discussed for gradualness, the term gradience – here regarded as a synchronic phenomenon relating to the *continuum* of categoriality and grammaticalness (Traugott & Trusdale 2010: 22) – allows for a two-fold interpretation. To begin with, the members of a certain category do not equally fit that category; rather, there can be better or worse representatives of the said category. This interpretation of gradience involves only a single category. Instead, the second interpretation involves at least two categories, which are not understood as discrete and separated by clear-cut boundaries, but as constituting a *continuum*. Going back to the traditional dichotomy between lexicon and grammar, as much as it is doubtless that there exist linguistic elements that are either clearly grammatical (e.g. case inflections) or clearly lexical (e.g. nouns and verbs), it is as much as difficult to individuate a sharp dividing line between the categories of grammatical and lexical forms. Rather, linguistic forms are likely to be placed on a *continuum* of grammaticality and to be given accordingly a degree of grammaticality (cf. further the discussion on prototypical categories and prototypes at Section 3.1). Thus, one and the same linguistic element can be polysemous, in that it simultaneously expresses different lexical meanings, as well as serve grammatical functions. In such cases, a number of scholars speak of ‘polygrammaticalization’ (e.g. Craig 1991), whereby a single lexical item gives birth to distinct paths of development.

Furthermore, not only grammatical morphemes are grown from lexical morphemes, but also specific grammatical morphemes also tend to develop regularly from specific lexical sources cross-linguistically. Thus, grammaticalization is not a development based on random sources (e.g. Traugott 1988; Givón 1979, Bybee 1988; Bybee, Perkins & Pagliuca 1994; Heine et. al. 1991; various papers in Traugott & Heine 1991a, 1991b). For example, future tense constructions frequently develop from verbs that originally mean ‘want’, ‘go’, or ‘have’. One such case is found in the Romance languages, in which the emergence of synthetic future conjugations results from the univerbation of the auxiliary *habere* ‘have’ with an infinitive (e.g. It. *canterò* ‘I will sing’ < Vulg.Lat. *cantare*:INF *habeo*:PRS.1SG, which originally means ‘to sing’ + ‘I have’; cf. Benveniste 1968; Hopper & Traugott 1993). Causative morphemes regularly develop from serialized or complement-taking verbs with meanings like ‘make’, ‘give’ or ‘send’ (DeLancey 2001). Such systematic developments
also contribute to suggesting that grammatical functions must include a portion of semantic content, rather than being purely structural, which is one of the main claims of Cognitive Grammar (cf. Section 1).\(^9\)

In addition, as all these developments are gradual (cf. Section 2.3.1), there must be a diachronic stage in which a given form shows multiple functions, and thus displays an intermediate and uncertain categorial status (cf. the discussions on Vedic and Homeric Greek preverbs in Chapters 3 and 4). However, the categorial status of such items is uncertain or ambiguous only from the linguists’ standpoint, not from that of speakers, who naturally employ a certain form or a certain construction with its different meanings and functions. Therefore, not only can categories be said to be non-discrete, but they are not even theoretically given (cf. Haspelmath 2007b).

2.3.3. The intersection between gradience and gradualness

As discussed in Section 2.3.2, at a synchronic level, it is often impossible to unambiguously assign a morpheme or a construction to a discrete grammatical category (e.g. Hopper 1987; Givón 1979; Haspelmath 2011). Such synchronic gradience can be seen as a side-effect of diachronic gradualness (Hopper 1987; Bybee & Hopper 2001). In other words, “since grammaticalization is generally regarded as a gradual diachronic process, it is expected that the resulting function words form a gradient from full content words to clear function words” (Haspelmath 2001: 16539). This relies on the \textit{continuum} that characterizes grammaticalization, which provides a more adequate basis for understanding even the synchronic gradience structure. In this light, grammaticalization approaches also call into question the traditional dichotomy between synchronic vs. diachronic analyses (cf. Mithun

\(^9\) These common developments open the issue as to whether grammaticalization paths can be borrowed (Heine & Kuteva 2005, 2006 speak of ‘grammaticalization contact zones’). A putative case in point might be the emergence of a future marker based on a volition verb in the Balkans. At a closer look, however, the single steps and processes needed to explain the emergence of such future markers in different Balkan languages vary to such an extent that it is difficult to maintain the grammaticalization contact zone as a meaningful account (Joseph 2011).
2011 for a discussion and a case-study on Navajo, a Na-Dené language spoken in Arizona, New Mexico, Utah, and Colorado).

Such an approach to grammaticalization, which is based on the assumption that its diachronic gradualness results in a synchronic gradience, is particularly adequate to analyze the development of preverbs, especially in a sample including languages that are spread out in diachrony (roughly, Vedic: 18th–12th centuries BC; Homeric Greek: 8th century BC; Old Irish: 7th–9th AD; Old Church Slavic: 9th–11th centuries AD; cf. Table 1), and whose corpora are intrinsically diachronic, such as those of Vedic, Homeric Greek, Old Church Slavic and Old Irish (cf. Introduction). As discussed in Chapters 3 and 4, the Vedic and Homeric languages especially result from the stratification of different stages of Old Indo-Aryan and Ancient Greek. Thus, a purely synchronic analysis would have led to a multiplication of categories, as a number of linguistic forms, including preverbs, show multiple functions and, from the linguists’ viewpoint, seem to belong to more than one category. Rather, the uncertain behavior shown by a number of forms arguably reflect the gradual steps in their grammaticalization path, which their diachronically stratified corpora mirror to us.

2.4. Grammaticalization: an abused theoretical concept?

As touched upon in Section 2.2, the whole enterprise of grammaticalization has undergone serious critique in recent years. Joseph (2011: 193–194) summarizes the major themes that drew criticism as follows: (a) grammaticalization as a process or result; (b) privileging one cluster of developments over others; (c) alternative outcomes/results; (d) unidirectionality.10

The first reason for criticism questions the nature of grammaticalization itself, by claiming that it is not a distinct process nor a primitive concept, but rather a mere way of representing a whole series of independent linguistic processes or mechanisms of change, including for example sound change, semantic change, and reanalysis. Crucially, each of the mentioned changes also manifests itself independently of grammaticalization (cf.

10 Joseph (2011: 202 ff.) also adds the issue that he calls ‘grammaticalization and language contact’, which I do not thoroughly discuss here (cf. the hints in fn. 9).
As Joseph discusses in several papers, by keeping the grammaticalization process separated from the other mechanisms of change, linguists needlessly increase the dimensions of language change, which are ultimately three: (i) the physiological dimension, which is relevant for sound change; (ii) the cognitive dimension, which is the basis for analogy (of which metaphor is understood as a subtype, that is, as a conceptual analogy) and reanalysis; (iii) the social dimension, which is crucial for the diffusion of language changes. Should we add to these dimensions/mechanisms of change the grammaticalization process as a distinct type of development? Or, rather, is grammaticalization merely a label for naming the result of independently occurring processes? (cf. Joseph 2011). Moreover, if one assumes that grammaticalization indeed constitutes a distinct process, it remains difficult to assess how many grammaticalizations give birth to a certain gram, i.e. how many processes of change end up in a new grammatical item or category (cf. also Janda 2001; Fischer 2011b).

Line (b) of criticism expresses skepticism as to whether the series of sub-processes that are grouped under grammaticalization (on which cf. Section 2.3) really deserve to be treated separately as special, being assigned their own label, dedicated conferences, textbooks, and so forth, with respect to other (clusters of) changes with which historical linguistics is concerned. This also relates to the issue as to when grammaticalization exactly happens. For example, when does grammaticalization occur in the development of the Romance future of the type of Italian canterò ‘I will sing’ from Vulgar Latin cantare habeo ‘I have to sing’ (cf. Section 2.3.2)? Is it when the locution cantare habeo comes to show a conventionalized future meaning even without concomitant phonetic reduction? Or rather, are phonetic reduction and univerbation necessary to speak of grammaticalization? Or even, should these two processes (semantic change and univerbation) be regarded as two distinct grammaticalizations, though they result in a single one grammatical item and category?

Joseph’s (2011) elaboration on theme (b) directly leads us to his point (c), by which the author further emphasizes that “much more goes on in language change than just the often cited movement of lexical/somewhat-grammatical to (more) grammatical that characterizes grammaticalization” (Joseph 2011: 198). Joseph goes on discussing a number
of morphological developments that cannot be subsumed under the grammaticalization rubric. These are schematized below:

(a) derivational morphology > derivational morphology (e.g. resegmentation of morpheme boundaries);
(b) inflectional morphology > inflectional morphology (e.g. remaking of verbal endings based on other endings);
(c) inflectional morphology > derivational morphology (e.g. reanalysis of an inflectional ending as part of the stem onto which verbal endings are further added, as in the instances of the so-called Watkins’ Law; cf. Arlotto 1972; Collinge 1985).

The last line of criticism that I discuss here is one of the cornerstones of grammaticalization, specifically the so-called ‘unidirectionality hypothesis’: changes falling under the rubric of grammaticalization always go from less grammatical to more grammatical (Rosenbach 2004: 73; Börjars & Vincent 2011). From Givón (1971) onward, different works more or less strictly embraced the unidirectionality hypothesis, including Lehmann (1995[1982]: 16), Hopper & Traugott (1993: Chapter 5), Traugott (2001), Heine (2003), and Brinton & Traugott (2005: Chapter 4.3).

In usage-based models, unidirectionality is motivated by frequency: “Changes related to increases in frequency all move in one direction and even decreases in frequency do not condition reversals: there is no process of de-automatization or de-habituation, subtraction of pragmatic inferences, etc. Once phonetic form and semantic properties are lost, there is no way to retrieve them. Thus grammaticization [i.e. grammaticalization] is unidirectional” (Bybee 2008: 348). Other functionalist approaches also refer to social factors as driving grammaticalization, such as ‘the invisible hand’ (Keller 1990), the communicative goal of expressiveness, and speakers’ will of talking in such a way that they are noticed (so-called ‘extravagance’ in Haspelmath 1999: 1043) and later on imitated by other speakers (so-called ‘conformity’). By contrast, formalists explain unidirectionality based on some universal principles that eventually relate to the principle of Economy (cf. van Gelderen 2004, 2011), including that of ‘grammar optimization’, that is, the elimination of unmotivated grammatical complexity or idiosyncrasy (Kiparsky 2011).
The pieces of evidence against the unidirectionality hypothesis gathered together in recent decades (e.g. among many others Ramat 1992; Haspelmath 2004; Willis 2007; Norde 2009; Kiparsky 2011) were seized on to argue against the existence of grammaticalization as a distinct and pervasive process of linguistic change, precisely because of the said occurrence of many counterexamples (e.g. Janda 2001; Joseph 2001; Newmeyer 2001).

As in the case of grammaticalization (cf. Section 2.2), there exist wider and narrower definitions for the other-way process, often called ‘degrammaticalization’, ‘antigrammaticalization’ or ‘countergrammaticalization’. For example, Newmeyer (2001: 205) considers an instance of degrammaticalization any increase in lexical content or morphological independence. In a more precise way, Norde (2010: 126) defines degrammaticalization as a change that affects several linguistic layers: “Degrammaticalization is a composite change whereby a gram in a specific context gains in autonomy or substance on more than one linguistic level (semantics, morphology, syntax, or phonology).” This view is shared by other scholars, including Willis (2007: 273), who offers a catalogue of different linguistic changes operating at different linguistic levels that can be ascribed to degrammaticalization: (i) phonological strengthening, (ii) change rightward along the cline: affix > clitic > independent word; (iii) categorial reanalysis from grammatical to lexical; (iv) metaphorical shift from abstract to concrete; (v) pragmatic inferencing from abstract to concrete. Importantly, changes (i)–(v) mirror their opposite counterparts in grammaticalization. Such an idea that degrammaticalization must be described in parallel to grammaticalization is common to other scholars. Haspelmath (2004: 27) for example writes as follows: “By this [i.e. antigrammaticalization] I mean a change that leads from the endpoint to the starting point of a potential grammaticalization and also shows the same intermediate stages.”
2.5. **Grammaticalization and lexicalization**

Within the literature on grammaticalization (and degrammatilicalization), a central issue is assessing whether a linguistic change constitutes a real instance of grammaticalization, or can be better captured within some alternative fields of analysis.

For example, degrammaticalization of the type (iii) (cf. Section 2.4), that is, the categorial reanalysis from grammatical to lexical, implies new entries in the lexicon. Thus, what is the point in differentiating between type (iii) of degrammaticalization and ‘lexicalization’, which, according to some definitions, includes any type of lexical enrichment (cf. e.g. Hopper & Traugott 1993: 127; van der Auwera 2002; Lightfoot 2011: 438 ff.)? Thus, the first reason of ambiguity as regards the lexicalization is that, since the beginning of grammaticalization studies (Kuryłowicz 1975[1965]: 52), linguists have regarded lexicalization as the reverse of a grammaticalization. A way of distinguishing degrammaticalization of the (iii) type and lexicalization is emphasizing that the former, but not the latter, must genuinely mirror grammaticalization, thus involving the same sub-steps as those of grammaticalization, but in reverse order.

Moreover, as pointed out by Anttila (1989[1972]: 151), any new item entering the lexicon undergoes lexicalization, including those that instantiate developments whereby they increase their grammaticality (e.g. open-class noun > closed-class adverb). This somehow anticipates the second reason of confusion between grammaticalization and lexicalization: the fact that most functionalist scholars recognize that lexicon and grammar are not two discrete categories, but rather they are placed on a *continuum* (cf. Sections 1 and 2.3.2). Along this *continuum*, lexical words also contain grammatical information and,

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11 In this Section, I only discuss the diachronic definitions for ‘lexicalization’. This term however is even more ambiguous than outlined here: it is differently understood in works embracing a synchronic perspective. For example, for many synchronic researchers, including lexical typologists, ‘lexicalization’ and ‘lexicalize’ mean ‘has a segmental expression, or ‘is used to pack a certain portion of meaning’ (Brinton & Traugott 2005; Traugott & Trausdale 2013: 33 ff.). Talmy’s (e.g. 1985, 2000) well-known lexical typology of motion verbs, for example, distinguishes verbs that express (‘lexicalize’) the manner of motion, from verbs that encode the path of motion.
viceversa, grammatical words also include some sort of lexical meaning. In this view, both features of grammaticality and lexicality are gradual, and a certain form can be either more/less grammatical or lexical (cf. e.g. Lehmann 2002; Hopper & Traugott 2003; Fischer 2008; Trousdale 2008a, 2008b).

In fact, more recent and narrower definitions of lexicalization put much emphasis on the fact that lexicalization must also be understood as a sequential process, thus ruling out items such as acronyms, conversions, and metatalk due to their abrupt entry in the lexicon. This definition that regards gradualness as a crucial feature decisively contributed to complicating the whole picture (cf. Lehmann 1989; Wischer 2000; Brinton & Traugott 2005). To be sure, gradualness of development is not the only shared feature between lexicalization and grammaticalization. According to Lehmann (e.g. 1989) and Giacalone Ramat (1998: 121), for example, both processes entail a reductive component, understood as loss of autonomy and univerbation.

This theoretical chaos has been somewhat sorted out by highlighting that the semantic developments undergone by grammaticalized and lexicalized items are in fact opposite. On the one hand, grammaticalization implies generalization, and consequent host-class expansion (i.e. grammaticalized items are promiscuous, and usually show a high pattern and token productivity). On the other hand, lexicalization produces opacity (or fossilization, non-compositionality, idiosyncrasy), which results in host-class reduction (i.e. decrease in pattern productivity, and possibly in token productivity) (cf. Brinton & Traugott 2005: 96-110; Haas 2007: 34). Thus, for example, the Old Irish perfective marker ro- and empty preverb no- are grammaticalized, in that they (almost) systematically occur in certain morphosyntactic contexts (cf. Chapter 6). By contrast, there is no general consensus as to whether the development of Slavic preverbs into ‘bounder perfectives’ (in Bybee, Perkins & Pagliuca’s 1994 terms) can be regarded as an actual grammaticalization: first, there is not a single marker of perfectivity; second, specific preverbs allegedly perfectivize verbs belonging to specific semantic classes (cf. Chapter 5).
3. Describing the meanings and the functions of preverbs

3.1. Semantic Roles

In this work, the spatial and non-spatial meanings of Vedic, Homeric Greek, Old Church Slavic, and Old Irish preverbs are described in terms of Semantic Roles (henceforth SRs), that is, roles played by the participants in an event (Kittilä, Västi & Ylikoski 2011: 7). Only when SRs labels are regarded as being too generic, more specific definitions will also be provided.

In the light of Haspelmath (1997) and Luraghi (2003), SRs are distinguished depending on their encoding strategies: when a SR is expressed in a specific way that it is not shared with related SRs, it is considered to be independent. Such choice is motivated by the fact that “it would be very difficult to base such a list [of SRs] on semantic criteria alone, because then there would be no way of constraining the possible proliferation of functions” (Haspelmath 1997: 10–11). In order not to multiply SRs, they are also assumed to be organized in prototypical categories (cf. Luraghi 2003). Prototypicality allows considering categories as groups of entities more or less representative for said categories; the ‘prototype’ is the most representative entity for a certain category (Lakoff 1987). For example, the features of the prototypical Agent are humanity, causation, intentionality, control, and saliency (Givón 1984: 107; Fillmore 1968: 24–25; Jackendoff 1972: 32; Andrews 1985: 68; Luraghi 2003: 30). However, it is far from clear that an Agent always display all such features, as the following examples illustrate:

(5) Luke ate an apple.
(6) Luke accidentally broke a vase.

12 Prototype theory was at first developed by the cognitive psychologist Eleanor Rosch in the 1970s (cf. e.g. Rosch 1973, 1975, 1978). On the application of the concept of prototype in linguistics, see Lakoff (1977) and Taylor (1989).
Both in (5) and in (6), the Agent is canonically encoded by the subject (*Luke*), as usually happens in languages in which the nominative case is highly grammaticalized, including Indo-European languages. However, the events described (5) and (6) are different: in (5), *Luke* intentionally causes a change of state to the *apple*. In (6), *Luke* similarly brings about a change of state to the *vase*; however, the action of breaking is not intentional, as the occurrence of the adverb *accidentally* shows. Therefore, in (6), *Luke* is a non-prototypical Agent, in that it lacks the features of intentionality and control.

In ancient Indo-European languages, both spatial and non-spatial relations are expressed by means of morphological cases, preverbs, and adpositions (cf. Luraghi & Narrog 2014: 1–22). Importantly, the relative contribution brought about by cases, preverbs and adpositions in carrying out this function can undergo variation along the diachrony of a certain language (cf. the relevant sections in Chapters 4–6). Notably, such historical developments are consistent with the organization of meanings in prototypical categories proposed by Cognitive Grammar. In addition, in Cognitive Grammar, metaphor and metonymy are regarded as cognitive tools by which human beings can conceptualize non-basic domains in terms of more basic ones such as space (cf. Section 1).

For reasons of space, I cannot thoroughly discuss all Vedic, Homeric Greek, Old Church Slavic and Old Irish SRs and their coding strategies, for which I refer to Chapters 3–6 and references therein. Here, I must limit myself to provide a non-exhaustive catalogue of SRs, and to associate to each of them a prototypical definition.\(^\text{13}\)

- **Agent**: a prototypical Agent is an entity that performs and causes an action. Furthermore, Agent prototypically exercises a force over another entity (i.e. Patient) and is characterized by intentionality and control (cf. above in this Section; Section 3.2.3).

- **Patient**: prototypically, the SR of the entity that undergoes a change of state or location, performed by an Agent. It is usually coded by the accusative case in

\(^{13}\)A cross-linguistically valid catalogue including SRs and their definitions does not exist. However, for a proposal and a collection of typologically-oriented papers on semantic and diachronic aspects relating to SRs, I refer to Luraghi & Narrog (2014).
nominative-accusative languages. Its typical feature is a high degree of affectedness (cf. Section 3.2.3).

- **Recipient**: this SR is played by an animate entity that receives another entity. It is usually taken by the third argument of some trivalent predicates, typically of verbs of ‘giving' (transaction verbs).

- **Addressee**: the SR played by an entity, most frequently a human being, which is the goal of a communication event.

- **Experiencer**: the SR of the (animate) entity that experiences a physical or a psychological process triggered by another entity or event (*Stimulus*). The Experiencer is often coded as a subject (cf. *Luke* in (7)), but occasionally it can also be associated with direct objects, as *me* in (8).

(7) *Luke always gets my jokes.*

(8) *Luke annoys me to no end.*

- **Possessor**: the SR of the (animate) entity that possesses another entity. In Indo-European languages, possession shows different encoding strategies, including the genitive case, the external possessor construction (Luraghi forthc. a), be it in the double accusative case (Luraghi & Zanchi forthc. on Ancient Greek) or in the dative case.14

- **Beneficiary**: this SR is taken by the (human) entity in favor of which an action is carried out. A sub-type of Beneficiary is Malefactive, which is the human entity against which an action is performed. Another sub-type of Beneficiary is Substitute, which relies on the idea of replacement: if *x* acts in *y*’s behalf, *x* is conceived as acting in *y*’s place.

- **Cause**: the SR of the referent that originates an event. Such referent can be a natural force, an emotion, an abstract notion, another type of inanimate entity, a human being, a state of affairs or an event. Cause expressions are often grounded on Source expressions according to the metaphor CAUSES ARE ORIGINS (Lakoff & Johnson 1980),

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14 In external possession constructions, two NPs that are not in a relation of syntactic dependency indicate a *possessor* and a *possessum* (Luraghi forthc. a).
on Time expressions (an event that precedes another event can be understood as the cause of the subsequent event), and on Area expressions (cf. Area below).

- **Purpose**: this SR is taken by an entity, often a state of affairs, aimed by the intentional activity of an Agent. Such SR is often expressed through allative markers, or markers of Beneficiary or of Cause.

- **Instrument**: this SR is prototypically taken by an inanimate and manipulated entity that is used by an Agent to carry out an action. Being an inanimate entity, Instrument differs from Agent in the properties of intentionality and control.

- **Comitative**: this SR prototypically involves an animate Agent performing an action together with another animate individuated entity, which carries out the same action.

- **Location**: the SR of an entity (LM) that gives information about the position or the spatial orientation of another entity (TR).

- **Goal**: the SR of an entity (LM) that individuates a portion of space toward which another entity (TR) moves along a trajectory.

- **Source**: the SR of an entity (LM) that individuates a portion of space away from which another entity (TR) moves along a trajectory.

- **Path**: this SR describes the portion of space that a TR covers while performing a motion.

- **Time**: this SR describes either the temporal placement or the **Duration** (LM) of a certain event (TR). Notably, the event, conceived as a TR, appears either to be located within/before/after or to last a given time interval, conceived as a LM. Time cross-linguistically tends to be conceptualized in terms of space (Haspelmath 1997). These two conceptual domains are mapped by means of the metaphor **TIME IS SPACE** (Lakoff & Johnson 1980; Claudi & Heine 1986).

- **Manner**: this SR refers to the manner in which an action, a state of affairs, an experience or a process are brought about.

- **Area**: the SR of the thematic context or field within which an event is seen; it specifies the extent to which the state of affairs denoted by the verb applies. **Location**: the SR of an inanimate LM that gives information about the position or the spatial orientation of another entity or event (TR).
3.2. Aspect, actionality, and transitivity

3.2.1. Aspect and actionality: terminological and conceptual issues

Since their introduction in the linguistic terminology and discussion, the notions of ‘aspect’ and ‘actionality’ have long been confused and overlapped (cf. among others Viti 2008a; 2008b; Danesi 2009: 9 ff.).

The term aspect is the translational equivalent for Russian вид, which was first employed in Greč’s (1827) grammar of Russian to describe the ability of certain affixes to derive perfective and imperfective verbs from the same root. Later on, Curtius (1846) extended the notion of aspect to other Indo-European languages than Slavic, specifically to the Ancient Greek verbal system. Curtius’ terminology comprises the terms Zeitart (lit.) ‘temporal modality’, including past, present and future tenses, and Zeitstufe (lit.) ‘temporal layer’, including notions such as durativity, ingressivity, and completion. Brugmann (1885) and Delbrück (1897) introduced the terms Aktion and Aktionsart (lit.) ‘actional modality, actionality’, distinguishing among punctual, iterative, durative, and terminative events. The term Aktionsart was also used by Streitberg (1900), who ascribed to this category five different values, including the perfective.

In the early 20th century, the term Aspekt also officially entered the linguistic discussion thanks to the slavist Sigurd Agrell. In his grammar of Polish (Agrell 1908), he distinguished the categories of Aspekt ‘aspect’, which refers to the completeness-incompleteness of the action, and of Aktionsart, which describes the way in which the action is carried out (e.g., according to Agrell, definitive, effective, augmentative, perdurative, and others). These two notions were later on kept distinct, for example by Jacobsohn (1926), who assigned a subjective character to Aspekt, whereas an objective value to Aktionsart (cf. Section 3.2.2). Krause (1953) also separated the two notions on a similar account.

After the introduction of the concept of Aspekt early in the 20th century, the two categories of Aspekt ‘aspect’ and Aktionsart ‘actionality’ continued to be confused, and scholars exhibited – and to some extents still exhibit – little agreement on their definition,
scope, and values (cf. Bertinetto 1986; Bybee, Perkins & Pagliuca 1994; Sasse 2002; Tatevosov 2002; Croft 2012; and Filip 2012 for a thorough discussion of this issue). The confusion was especially clear in the 20th century’s discussions on the Ancient Greek verbal system, in particular when it comes to the description of the dichotomy between aorist and present tenses, and to the role of preverbs (cf. Brugmann &Thumb 1913; Meillet 1922; Meillet &Vendryes 1924; Ruípez 1954). Exactly because of this terminological fuzziness, perfectivizing value was ascribed to Ancient Greek (but also Vedic) preverbs (cf. Chapters 3 and 4), based on the much more grammaticalized perfective-imperfective opposition expressed through Slavic preverbs (i.e. ‘prefixes’, cf. Chapter 2 on terminology; Chapter 5 on Old Church Slavic).

In the last decades, the so-called bidimensional approach to aspect, which clearly distinguishes Aspekt and Aktionsart, has been the most widespread within the field of Indo-European studies (cf. Strunk 1994; Garcia Ramon 2002; Sasse 2002; Napoli 2006; Dahl 2010; Cotticelli-Kurras 2015; by contrast, cf. Inglese 2016, who, in his analysis of Hittite lexical aspect, adopted Croft’s cognitive approach, on which see below). Within the bidimensional approach, on the one hand, aspect, or more precisely ‘grammatical aspect’, encodes the grammatical expression of speakers’ viewpoint on events. On the other hand, Aktionsart, or ‘lexical aspect’, or ‘actionality’, is usually regarded as an objective, that is, inherent, feature of verbal roots, which can be classified into different categories accordingly (cf. Vendler 1957; Section 3.2.2). Recently, the bidimensional approach has been put into question within various theoretical frameworks, including Cognitive Grammar, which does not allow for any clear-cut distinction between the layers of lexicon and syntax (cf. Section 1). In Croft’s (2012) recent monography, for example, grammatical and lexical aspects are accordingly not distinguished, as they both emerge from the interaction between the idiosyncratic facets of verbal semantics, and the specific semantics of the constructions in which verbs occur. In what follows, I provide very brief definitions for both aspect and actionality, I discuss their interplay (Section 3.2.2), as well as the interaction between actionality and transitivity (Section 3.2.3), inasmuch as is sufficient for the present work.
3.2.2. Aspect and actionality: definitions, values, and their interplay

The category of grammatical aspect expresses the way in which speakers view the event, that is, speakers’ subjective perspective on the event, encoded through grammatical means (cf. Vendler 1957; Comrie 1976; Bertinetto 1986; Bybee, Perkins & Pagliuca 1994; Rothstein 2004). The notion of grammatical aspect is related to that of time, which expresses the relation between the moment of speaking and the time of the situation described. Present tense is seen as simultaneous to the moment of speaking, past tense as previous to the moment of speaking, and future tense as subsequent to the moment of speaking (Comrie 1976: 2). Thus, time is a deictic category, in that it is anchored to the spatiotemporal context created by the participants in a conversation (Lyons 1977: 637). By contrast, grammatical aspect has nothing to do with deixis, but rather interacts with speakers’ perspective in a different way: “aspects are different ways of viewing the internal temporal constituency of a situation” (Comrie 1976: 3). Comrie thus points out two main factors defining the category, specifically (a) speakers’ viewpoint, (b) the internal setting of a certain event itself (and not its temporal reference) (cf. also Bertinetto 1986: 76).

The two main values of aspect are what we call perfective (John sang a song) and imperfective (John was singing a song) aspects. On the one hand, perfective aspect implies a global, complete, and external viewpoint upon the event, including its starting point, its carrying out, and importantly its endpoint. On the other hand, imperfective aspect presupposes an internal viewpoint upon the event, of which an open window is profiled only, without any additional information on its temporal boundaries (e.g. Comrie 1976; Bertinetto 1986). Among tenses, present is usually regarded as inherently imperfective (i.e. ongoing), for example by Comrie (1976).\textsuperscript{15}

The main instantiations of the imperfective are the progressive (John is singing) and the habitual (John sings every Wednesday night) aspects. The two values are distinct, but can co-occur in the same sentence, as in John used to be writing poems (Comrie 1976: 33):

\textsuperscript{15} Comrie (1976) argues for a primary time distinction between present and past, to which the perfective-imperfective aspectual distinction is added. This view is not supported by Dahl (1985), who first distinguishes perfective and imperfective, and secondarily superimposes the layer of time distinctions.
any single occurrence of a certain situation contribute to building the progressive aspect, whereas the sum of all these occurrences is conceptualized as habitual. Alongside with those outlined above, different scholars identified further language-specific values for the imperfective, including the so-called ‘continue’ (cf. Bertinetto 1986: 172 ff. on Italian), the ‘continuative’ aspects (cf. Bybee, Perkins & Pagliuca 1994: 127 on English), and the ‘non-progressive continuative’ (cf. Comrie 1976: 35 on English).

In traditional descriptions, actionality or lexical aspect has a semantic nature, and is defined as the internal temporal structure of state of affairs denoted by verbs, regardless of speakers’ view on the said state of affairs. As actionality is inherently associated to verbal roots, verbs denoting different states of affairs can be grouped based on it. Building on Vendler’s (1957) traditional proposal displayed in Table 2, based on the actional traits of durativity, dynamicity, and homogeneity (or telicity), different scholars later on refined his classification, on account of several semantic criteria and syntactic tests (e.g. Bertinetto 1986; Botne 2003; Croft 2012; Bertinetto & Civardi 2015).16

Table 2. Vendler’s (1957) actional classes

<table>
<thead>
<tr>
<th></th>
<th>DURATIVE</th>
<th>DYNAMIC</th>
<th>HOMOGENOUS (ATELIC)</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>John stands still</td>
</tr>
<tr>
<td>Activity</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>John walks</td>
</tr>
<tr>
<td>Achievement</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>John heard the news</td>
</tr>
<tr>
<td>Accomplishment</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>John ate the apple</td>
</tr>
</tbody>
</table>

As emerges from the previous discussion, the notions of aspect and actionality are well sorted out at a theoretical level. However, when it comes to the empirical analysis, bidimensional approaches often run into issues, which point out the deep interplay of the two domains (cf. Tatevosov 2002). To begin with, depending on the construction in which

16 The mentioned actional traits of homogeneity and telicity (called also boundedness in Jackendoff 1990 and delimitedness in Tenny 1994) overlap at the practical classificatory level. However, these labels profile two different actional properties of events: on the one hand, the lack of a change of state; on the other hand, the lack of temporal boundaries.
they occur, verbs can instantiate different actional classes, a behavior that Bertinetto (1986) calls ‘aspectual hybridism’:

(9) *John sings (ACTIVITY) vs. John sang a song (ACCOMPLISHMENT).*

As shown in (9), the addition of an event participant can turn an atelic activity into a telic accomplishment (cf. also Dowty 1979: 61). For this reason, a number of authors suggested to ascribe the trait of telicity to verbal phrases, and not simply to verbs, thus regarding telicity as a compositional phenomenon (cf. Dowty 1979; Hinrichs 1985; Verkuyl 1972, 1993, 2005).

Furthermore, specific features of event participants can also contribute to building actionality, though in principle it should be stored in the lexicon:

(10) *John sang a song (ACCOMPLISHMENT) vs. John sang songs (ACTIVITY).*

The examples in (10) show that the actional value is determined by the verbal participants: when they are numerable and specific, the actionality is telic; otherwise, indefinite plurals and mass nouns are not able to change an activity into a telic predicate (in other languages, such as Hungarian, this distinction is expressed morphologically, via accusative-genitive alternation; cf. Heinämäki 1984).

As a third and final example, non-homogeneity and telicity are almost exclusively realized in perfective contexts (cf. the discussion on the ‘Slavic-style aspect’ in Chapter 5). This is what Bertinetto (2001) calls the ‘telicity paradox’:

(11) *John draw a circle (TELIC) vs. John was drawing a circle (ATELIC).*

Overall, examples from (9) to (11) contribute to pointing out that the clear-cut distinction drawn by the proponents of bidimensional approaches between the categories of aspect and actionality is not easy to maintain, as it largely relies on non-trivial theoretical assumptions. First, the categorial distinction between aspect and actionality mirrors a more general
separation between the grammar and the lexicon, which has been put into question by Cognitive Grammar and grammaticalization theory (cf. Sections 1 and 2). Second, though Vendler’s classification of Table 2 is often regarded as cross-linguistically valid, typological studies have shown that this is not always the case (cf. Tatevosov 2002; Botne 2003).

3.2.3. Telicity and transitivity

The aspectual notion of telicity is connected with prototypical transitivity. Traditionally speaking, transitivity is understood as a global transfer of an activity from an Agent to a Patient, carrying out a number of effects on the Patient. Since the work by Hopper & Thompson (1980), this traditional notion of transitivity has been decomposed into the various parameters displayed in Table 3. The higher the degree reached by each parameter in Table 3, the higher or the more prototypical is the transitivity of a certain sentence.

**Table 3. Hopper & Thompson’s parameters of transitivity**
(adapted from Hopper & Thompson 1980: 252)*

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) PARTICIPANTS</td>
<td>2 or more participants, A and O</td>
<td>1 participant</td>
</tr>
<tr>
<td>(b) KINESIS</td>
<td>action</td>
<td>non-action</td>
</tr>
<tr>
<td>(c) ASPECT (i.e. ACTIONALITY)</td>
<td>telic</td>
<td>atelic</td>
</tr>
<tr>
<td>(d) PUNCTUALITY</td>
<td>punctual</td>
<td>non-punctual</td>
</tr>
<tr>
<td>(e) VOLITIONALITY</td>
<td>volitional</td>
<td>non-volitional</td>
</tr>
<tr>
<td>(f) AFFIRMATION</td>
<td>affirmative</td>
<td>negative</td>
</tr>
<tr>
<td>(g) MODE</td>
<td>realis</td>
<td>irrealis</td>
</tr>
<tr>
<td>(h) AGENCY</td>
<td>A high in potency</td>
<td>A low in potency</td>
</tr>
<tr>
<td>(i) AFFECTEDNESS OF O</td>
<td>O totally affected</td>
<td>O not affected</td>
</tr>
<tr>
<td>(j) INDIVIDUATION OF O</td>
<td>O highly individuated</td>
<td>O non-individuated</td>
</tr>
</tbody>
</table>

*Hopper & Thompson (1980) employs Dixon’s (1979) terminology: O(bject) and A(gent) refer to the participant in the transitive event.

b. KINESIS is the ability of certain events (e.g. actions) of being transferred from one participant to another.

d. PUNCTUALITY refers to the feature of some predicates that have no intermediate phase between inception and completion. Alongside with parameter (c), PUNCTUALITY can also be regarded as relating to actionality.
Among such parameters, telicity (parameter (c), highlighted in grey in Table 3) also plays a role, which is explained in the following terms: “An action viewed from its endpoint, i.e. a telic action, is more effectively transferred to a patient than one not provided with such an endpoint. In the telic sentence I ate up, the activity is viewed as completed, and the transferral is carried out in its entirety; but in the atelic I am eating it, the transferral is only partially carried out” (Hopper & Thompson 1980: 252). In addition, with telic predicates, given the entirety of transferral, the object is also highly affected (parameter (i)), and individuated (parameter (j)). Both completeness and individuation in turn contribute to linking telicity and transitivity with topicality, as argued in Viti (2008a, 2008b). This linkage is crucial to account for the pragmatic properties of and the grammaticalization undergone by ancient Indo-European preverbs, which find a thorough general discussion in Chapter 2 language-specific treatments in Chapters from 3 to 6, and a summary in Chapter 7.
2 Preverbs: an overview

1. Preverbs in Indo-European

1.1. Preverbs: definition and functions

Preverbs are uninflected morphemes that occur in front of a verbal stem and modify its meaning, as shown in (1).

(1) **Simplex verb** | **Composite verb**
---|---
a. Ved. √i- ‘go, walk’ | **pra** √i- ‘come **forth**, go **on**, begin’
b. AG *eimi* ‘come, go’ | **pró-eimi** ‘go **forward**, advance’
c. OCS *iti* ‘go, come’ | **pro-iti** ‘go **through**’
d. OIr. √icc- ‘reach’ | **ro-icc-** ‘come, attain, reach, succeed’

Examples (1)a-d contain the reflexes of the Proto-Indo-European local adverb *pr-ō* ‘forward, forth’ (LIPP II: 636-637) occurring in front of a motion verb, and modifying its meaning accordingly.1 Vedic, Ancient Greek, and Old Church Slavic motion verbs of (1)a-d go back to the same PIE root, i.e. *h₁e₂̆j-‘go, walk’ (IEW: 293–296; LIV²: 232), whereas the Old Irish one is related to PIE *h₂ne₂̆k- ‘reach’ (IEW: 316–318; LIV²: 282).

Though the notion of preverb was coined, and is traditionally employed, in the field of Indo-European studies (Booij & Van Kamenade 2003: 1), many non-Indo-European languages also exhibit an array of uninflected morphemes that have the same functions as Indo-European preverbs (cf. Section 3). The functions of Indo-European preverbs are described in what follows (cf. Bader 1997; Booij & Van Kamenade 2003). In the first place, preverbs operate at the semantic level: they modify in different ways the meaning of

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1 Example (1)d shows one of the few Old Irish composites in which the preverb **ro** (<*pró* ‘forward, forth’) retains its etymological spatial semantics. Usually, **ro** functions as an aspectual marker in Old Irish (cf. Chapter 6).
the verb onto which they attach. They primarily provide a verbal root with spatial information: preverbs can give indication to location events, or specify the direction of motion. For example, the Ancient Greek and Old Irish simplex caused motion verbs *phérō* ‘bring, carry’ and *beirid* ‘carry, bring’ (< PIE *bʰer*- ‘carry, bring’; cf. IEW: 128 ff.; LIV²: 76 ff.) can be combined with a number of preverbs, resulting in the different composites displayed in (2) and (3) (the list of composites is not exhaustive for either language; the added preverb and its semantic contributions are highlighted in bold):

(2) AG composites with *phérō* ‘bring, carry’
   a. ana-*phérō* ‘bring up, bring back, report’
   b. apo-*phérō* ‘bring away, bring back, hand in’
   c. dia-*phérō* ‘carry in different ways, differ’
   d. ek-*phérō* ‘carry out of’
   e. em-*phérō* ‘carry in’
   f. eis-*phérō* ‘carry in(to), contribute, introduce’
   g. epi-*phérō* ‘bring upon’
   h. kata-*phérō* ‘bring down’
   i. meta-*phérō* ‘carry across, translate’
   j. pro-*phérō* ‘bring forward, utter’
   k. pros-*phérō* ‘bring to, offer, pay’
   l. huper-*phérō* ‘carry over, be preeminent’

(3) OIr. composites with *beirid* ‘bring, carry’
   a. ar-*beir* (lit.) ‘before bring → live, eat, use’
   b. as-*beir* (lit.) ‘out_of bring → say, speak’
   c. con-*beir* ‘bring together, conceive’
   d. do-*beir* ‘bring to, give’
   e. fo-*beir* ‘bring under, subdue’
   f. for-*beir* (lit.) ‘bring over → grow, surpass’
   g. fris-*beir* (lit.) ‘bring against → oppose, resist, obstruct’
   h. imm-*beir* ‘carry around, put, employ’

Preverb-verb combinations can result in non-compositional (idiomatic or unpredictable) meanings: put another way, the meaning of the resulting composite verbs cannot always be inferred from the sum of the meanings of their elements. Among composites in (2) and (3), the following show non-compositional semantics: AG *ana-phérō*
‘report’, *apo-phérō* ‘hand in’, *dia-phérō* ‘differ’, *meta-phérō* ‘translate’, *pro-phérō* ‘utter’, and *huper-phérō* ‘be preeminent’; OIr. *ar-beir* ‘live, eat, use’, *as-beir* ‘say, speak’, *con-beir* ‘conceive’, *for-beir* ‘grow, surpass’, *imm-beir* ‘employ’. A number of similar non-compositional developments occur across different languages: for example, in both Ancient Greek and Old Irish, the root for ‘bring’, combined with different preverbs (AG *pro-* ‘forth, forward’, OIr. *ess-* ‘out of’), produces a communication verb (*pro-phérō* ‘utter’(2)); *as-beir* ‘say, speak’ (3); cf. also Rus. *pro-iz-nosit* ‘forth-out_of-bring → say, pronounce, utter’ that contains the Slavic equivalents for both preverbs, and a verbal base for bringing). These similarities are arguably byproducts of the lexicalization of the so-called Container metaphor, according to which human body is conceptualized as a container (cf. Chapter 1).

In a number of formations, preverbs develop further lexical meanings than the etymological spatial ones: for example, the preverb *apó-* ‘away from’ basically expresses ablativity, but it comes to mean ‘back’ in *apo-phérō* ‘bring back’. The same preverb also gains more abstract meanings. For example, in combination with the communication verb *eîpon* ‘say’, *apo-* expresses refusal, such as in *ap-eîpon* ‘deny’ (< *apo-* ‘away’ + *eîpon* ‘say’).

Notably, preverbs can also carry out more grammatical functions than those outlined above. To begin with, preverbs frequently modify the actionality or lexical aspect of the verb onto which they attach, from durative to punctual, or from atelic to telic. This function has been ascribed to preverbs of Indo-European languages, including Vedic, Homeric Greek, Old Church Slavic, and Old Irish (cf. the relative discussions in Chapters 3–6). Relevant examples also come from other Indo-European languages, both ancient and modern, as is shown in (4):

(4) **The telic value of preverbs**

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Source 1</th>
<th>Source 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>‘drink’</td>
<td>‘drink up’</td>
</tr>
<tr>
<td>Lat.</td>
<td><em>bibo</em></td>
<td><em>con-bibo</em></td>
</tr>
<tr>
<td>Germ.</td>
<td><em>trinken</em></td>
<td><em>aus-trinken</em></td>
</tr>
<tr>
<td>b.</td>
<td>‘eat’</td>
<td>‘eat up’</td>
</tr>
<tr>
<td>Lat.</td>
<td><em>edo</em></td>
<td><em>com-edo</em>²</td>
</tr>
<tr>
<td>Germ.</td>
<td><em>essen</em></td>
<td><em>auf-essen</em></td>
</tr>
</tbody>
</table>

In addition, preverbs can bring about other types of actional meanings such as iterative (e.g. AG ana-metřēsthai ‘start again’), distributive (OR po-jati ‘take for multiple times’), delimitative (OR po-sêdêti ‘sit for a while’), and ingressive (e.g. Ved. prâ ṣan ‘start breathing’, ni svap- ‘fall asleep’; AG hupo-perkâzô ‘begin inch by inch to assume a dark color’; OCS vs-po-menqti ‘start remembering’; OR raz-bolētisja ‘fall ill’).

In Slavic languages, it is noteworthy that preverbs not only modify the lexical aspect of verbs, but eventually developed into fully-fledged markers of grammatical aspect: preverbs underwent grammaticalization into ‘bounder perfectives’ (Bybee 1985; Dahl 1985; Bybee & Dahl 1989; Bybee, Perkins & Pagliuca 1994; cf. the thorough collection of references contained in Ruvoletto 2016: 8–33). Such a typologically unusual development and its motivations are discussed in Chapter 5: even in the most anciently attested variety of Slavic, Old Church Slavic, one can find evidence for the subsequent expansion of the so-called ‘Slavic-style aspect’ (cf. also Eckhoff & Haug 2015; Wiemer & Seržant forthc.). As is shown in Chapter 6, Old Irish preverbs also carry out grammatical functions: specifically, the preverb ro (< PIE *pr-ō ‘forward, forth’) is paradigmaticized to express perfectivity; the contentless preverb no (< PIE *nū ‘now’; LIPP II: 577) behaves as a verbal auxiliary under certain morphosyntactic conditions.

Since the work by Hopper & Thompson (1980), it is acknowledged that a linkage exists between telicity-perfectivity and transitivity: in particular, a high degree of telicity-perfectivity is implied by prototypical transitivity (cf. Chapter 1, Section 3.2.3). Therefore, as preverbs can mark telicity and perfectivity, they are also candidates to function as so-called applicative markers. Applicatives are overt verbal morphemes that “allow the coding of a thematically peripheral argument or adjunct as a core-object argument” (Peterson 2007: 1). In (5), an example from Ainu (isolated, Hokkaido, Japan) is shown:

(5) **Applicative construction in Ainu (from Shibantani 1996: 159)**

a. **poro cise ta horari**
   big house in live

b. **poro cise e-horari**
   big house APP-live
‘He lives in a big house.’

The same state of affairs is denoted in (5)a-b: in the former example, on the one hand, Location is expressed through a PP introduced by *ta ‘in’; in the latter sentence, on the other hand, Location is promoted to direct object of the composite verb e-*horari, which crucially contains the applicative prefix e-.

A typological parallel has been drawn between Indo-European preverbs and applicatives, as Indo-European preverbs also seem to be able to promote an adjunct to argumental status (on Vedic, cf. Chapter 3; Danesi 2009; and reference therein; on Ancient Greek, cf. Chapter 4; Horrocks 1981; Viti 2008a; on Lithuanian, cf. Kozhanov 2016). In (6), it is shown that Lithuanian preverbs can function in the same way as the applicatives in (5): the simplex verb *eiti ‘go’ is intransitive, and takes an optional PP *per+ACC expressing Path in (6)a. By contrast, the same morpheme *per occurs in front of *eiti as a preverb in (6)b: accordingly, the Path-participant is promoted to direct object.

(6) Applicative construction in Lithuanian (from Kozhanov 2016: 370)

a.  *e-i-ti    *per    gatv-ė
    go-INF across street.ACC
    ‘to go across the street’

b.  *per-ei-ti  gatv-ė
    APP-go-INF street.ACC
    ‘to cross the street’

The preverb/applicative *per- of Lithuanian is etymologically connected with the corresponding preposition *per: they both go back to the same Proto-Indo-European adverb *pér (LIPP II: 607). The linkage just outlined between Lithuanian preverbs/applicatives and prepositions is common within the Indo-European languages, in which preverbs can usually also function as adpositions (that is, pre- and postpositions) and adverbs (cf. Sections 1.2 and 1.3), and also displays typological parallels: the same morphemes that function as applicatives can also occur out of the preverbal context, as adpositions or adverbs, in non-
Indo-European languages, including for example Ayoreo (Zamucoan, Paraguay, Bolivia; Prof. Pier Marco Bertinetto, p.c.). Switching to the diachronic plane, it is worth mentioning that adpositions constitute one of the possible sources for applicatives (cf. Seiter 1979 on Oceanic languages; Weir 1986 on Nadëb, Nadahup, Amazonas, Brazil; Craig & Hale 1988 on Algoquian languages; Peterson 2007: 125 ff.). This development is accounted for as a discourse-oriented grammaticalization: according to Craig & Hale (1988), what has triggered the reanalysis of an adposition as a preverb (i.e. applicative) is allegedly the null anaphora of the noun phrase taken by the preposition. Though a grammaticalization path triggered by null anaphora is difficult to hypothesize for Indo-European preverbs, due to the presence of a developed case system that contributes to complicate the whole picture, a number of scholars also believe that pragmatic features, such as topicality, are crucial to account for certain developments of Indo-European preverbs (cf. Sections 1.1 below and 1.3; Viti 2008a, 2008b).

The assessment of the actual role played by Indo-European preverbs in promoting an adjunct to argumental status is complicated by the fact that Proto-Indo-European and many daughter languages possess the said casual systems. On the one hand, it is true that preverbs can centralize an adjunct, thus aligning themselves with applicatives. On the other hand, the centralized adjunct frequently does not exhibit all the coding and behavioral properties of direct objects proper: often, it does not receive the usual coding, and does not play the usual role for direct objects, i.e. an accusative case expressing the Patient (e.g. Viti 2008a); in addition, these putative direct objects cannot always be passivized (e.g. Kulikov 2012).

Moreover, in Proto-Indo-European and in a number of ancient Indo-European languages, cases not only serve the grammar (i.e. by distinguishing subjects from objects), but also retain part of their concrete meanings (cf. especially Kuryłowicz 1964: 179 ff. on the distinction between grammatical and concrete cases). Accordingly, in many contexts, preverbs are not strictly necessary to allow for an adpositionless second argument, though they certainly contribute to clarifying the meaning of verbs and adpositionless cases. For example, the usage of the adpositionless genitive poliēs halös ‘gray sea’ is allowed both
with a composite containing *ex- ‘out of’* (*ex-ana-dúomai ‘emerge from’*) and with a composite lacking it (*ana-dúomai ‘emerge’):

(7) *hathróai heudosin, poliès halòs*
    close_together. NOM.PL sleep. PRS. 3PL grey. GEN sea. GEN
    *ex-anadûsai*
    from_emerge. PTCP. AOR. NOM. PL
    ‘(The seals) sleep close together, emerging from the grey sea.’ (Od. 4.405)

(8) *karpalimós d’ anédu poliès halòs ēút’ omíkhlē*
    quickly PTC rise. AOR. 3SG grey. GEN sea. GEN like fog. NOM
    ‘And (Thetis) rose from the grey sea like the fog.’ (Il. 1.359)

In addition, the extension of the transitive construction seems to be not always triggered by the occurrence of preverbs, but rather by its own frequency. This is true, for example, for Ancient Greek (cf. Luraghi 2010). Horrocks (1981: 41), alleging the applicative usage of Ancient Greek preverbs, mentions the composite *pros-eîpon,* which can take an accusative argument (*tòn ‘him’ expressing the Addressee*) in the sense of ‘address someone’, as in (9):

(9) *tòn d’ aûte pros-éeipe theà*
    him. ACC PTC then toward-say. AOR. 3SG goddess. NOM
    ‘Then the goddess addressed him.’ (Il. 1.206)

Horrocks remarks that the simplex *eîpon* cannot take a different direct object from the cognate *épos ‘word’* (or its non-cognate synonym, *mûthon*) or the indefinite pronoun *ti ‘something’*. However, the passage in (10) contradicts this remark: the simplex verb *eîpon* takes the accusative of the Addressee, that is, *Héktora.*

(10) *dē tòte Pouludámas thrasûn Héktora eîpe*
    PTC then P. NOM daring. ACC H. ACC say. AOR. 3SG
parastás
stand_by.PTCP.AOR.NOM

‘Then Polydamas, standing by, addressed daring Hector.’ (*Il.* 12.210)

As a matter of fact, it is undeniable that preverbs are connected with valency-related formations, at the very least, as they are involved in making up reciprocal constructions in different ancient Indo-European languages, as shown in (11)a-c:

(11)  a.** Hittite (from Inglese forthc.)**

GAL LÜMEŠ Ũ. BAR SÍG BABBAR SÍG SA₃ anda immiyazi

chief weaver(PL) wool white wool red REC mix.PRS.3SG

‘The chief of the weaver mixed together white (and) red wool.’ (KUB 21.20 i 9–10)

b. **Vedic (from Kulikov 2007: 718)**

añj-áte vy añj-ate sám añj-ate

anoint.PRS-3PL.MID REC anoint.PRS-3PL.MID together anoint.PRS-3PL.MID

krátum rih-anti mádhunāo abhy añj-ate

mental_power.ACC lick.PRS-3PL.MID sweetness.INST on anoint.PRS-3PL.MID

‘They (= waters) anoint themselves (with Soma), anoint each other (?), mix together with each other (?), lick (Soma’s) mental power, anoint themselves with (his) sweetness.’ (RV 9.86.43)

c. **Old Irish (from Dedio & Widmer forthc.)**

ni-mu-n-ˈaccamar

NEG-REC-1PL-see.PST.1PL

‘we have not seen one another’ (Wb.18d3)

In (11)a from Hittite, the verb *imiya* ‘mix’ and the preverb *anda* ‘in’ indicate an object-oriented spatial reciprocal situation. In (11)b from Vedic, a canonical intransitive reciprocal is expressed by means of the preverb *vิ* ‘in two spaces, in two times, in different directions’. In the Old Irish passage in (11)c, a personal reciprocal construction is built with
the verb taking the plural verbal endings, and preceded by the preverb \textit{imm}-, which in this context surfaces as \textit{-mu}.\footnote{According to Thurneysen (GOI: 516–518) and O’Brien (1938: 242–244), the reciprocal marker \textit{imm-(a-N)} is identical with the lexical preverb \textit{imm-} ‘around, about’. Though the two are undoubtedly etymologically related (GOI 517; LIPP II: 36), Dedio & Widmer (forthc.) assume them to constitute synchronically two different lexemes.}

Alongside with the semantic and syntactic functions outlined above, preverbs can also serve discourse-related purposes. Specifically, Boley (2004: 56–58) describes Hittite, Vedic, and Homeric preverbs (i.e. \textit{place words} in her terms; cf. Section 1.4.1) as elements able to draw anaphoric reference, and thus to contribute to textual cohesion. The following example from the \textit{Odyssey} is instructive in this respect:

(12) \textit{en dé hoi askôn éthēke theà mélanos oínoio tôn} in PTC DEM.DAT skin.ACC put.AOR.3SG goddess.NOM dark.GEN wine.GEN DEM.ACC hétéron, hétéron d’ húdatos mégan, \textit{en dé kai} one.ACC other.ACC PTC water.GEN big.ACC in PTC and éiа kórükōi: \textit{en dé hoi} provisions_for_a_journey(PL).ACC sack.DAT in PTC DEM.DAT ópsa títhei menoeikéa pollá cooked.ACC.PL put.IMPF.3SG satisfying.ACC.PL many.ACC.PL

‘On (the raft) the goddess put for him one wineskin of black wine, and a big one of water; then, on (the raft she put) grain in a wallet; on (the raft) she put many cooked delicacies.” (Od.5.265–267)

In (12), no overt referent occurs accompanying the preverbs \textit{en} in tmesis position (cf. Section 1.2), though one understands from the preceding context that the preverbs \textit{en} refer to a previously mentioned raft. Boley’s remark is backed up by the quantitative analysis carried out by Viti (2008a) on Homeric poems: Viti showed that the majority of referents liked to preverbs are topical, thus either previously mentioned in the discourse context, or known within speakers’ encyclopedic knowledge. The cohesive function of preverb
repetition in Vedic and Homeric Greek has been investigated by Dunkel (1976, 1979), and Klein (e.g. 1987, 2007, 2008). A relevant Vedic example follows: in (13), the preverb ní ‘down’ is repeated three times in the stanza, specifically at the beginning of each verse.

(13) ní grāmāso a-vikṣata
down inhabitant(PL).NOM to-enter.AOR.3PL
ní padvánto ní paksīṇaḥ
down having_feet.NOM.PL down winged.NOM.PL
ní šyenāsaś cid arthīnaḥ
down hawk.NOM.PL even greedy.NOM.PL

‘The villagers have gone into (their homes), into (their homes) the creatures with feet, into (their homes) those with wings, into (their homes) even the greedy hawks.’ (RV 10.127.5)

1.2. The positional properties of preverbs

In Indo-European, the same morpheme that functions as a preverb can also occur outside the preverbal context as an adverb or as an adposition. Garde (2004: 104–105) lists a number of such morphemes from five Indo-European languages: Ancient Greek, Latin, German, Russian and Lithuanian. To Garde’s language sample, I add Vedic, Old Church Slavic, and Old Irish, which are relevant for this work (Whitney 1955[1879]: 396 ff.; and Renou 1952: 316 ff. for Vedic; Aitzetmüller: 1991: 154 ff.; and Lunt 1965: 82, 151 on Old Church Slavic; VKG II: 242 ff.; and GOI 495 ff. on Old Irish). After Garde, I mark the morphemes that can also function as prepositions differently from those that only occur in preverbal position: the former are assigned the label Prep, the latter Prev. Morphemes carrying both labels also feature both functions.⁴

⁴ For a full catalogue of Proto-Indo-European preverbs with cognates, see Beekes (1995: 247 ff.). In this respect, the indexes collecting all particles of Indo-European languages contained in LIPP I are of much use as well. As defining the category of preverbs is not straightforward, there is sometimes disagreement as to
Preverb catalogue in a number of Indo-European languages

a. Vedic (cf. Chapter 3)
   Prep-Prev – 17: áchā, áti, ádhi, ánu, ántar, ápa, ápí, ábhi, áva, úpa, tirás, nís, pári, purás, prá, práti, sáṃ
   Prep – 3: upári, parás, púrā
   Prev – 4: úd, ní, párā, vi

b. Ancient Greek (cf. Chapter 4)
   Prep-Prev – 19: amphí, aná, antí, apó, diá, eis, ek, en, epí, katá, metá, pará, perí, pró, prós, sán, hupó, hupér

c. Old Church Slavic (cf. Chapter 5)
   Prep-Prev – 16: bedъ, do, izъ, na, nadъ, o(b), otъ, po, podъ, prědъ, pri, sъ, vъ(н), vъzъ, u, za
   Prep – 1: kъ
   Prev – 4: prě-, pro-, raz-, vy-

d. Old Irish (cf. Chapter 6)
   Prep-Prev – 15: air, com, dí, ess, eter, fo, for, frith, íar, imb, in, re, sech, tar, tri
   Prep – 1: ó
   Prev – 6: ad-, aith-, ne-, uss-, ro-, to-

e. Latin
   Prep-Prev – 14: ab, ad, ante, cum/con-, de, ex, in, ob, per, prae, pro, sub, super, trans
   Prep – 1: post
   Prev – 2: dis-, red-

f. German
   Prep-Prev – 15: ab, an, auf, bei, durch, in/ein-, mit, nach, über, um, unter, vor, wider, zu
   Prep – 5: fűr, gegen, ohne, seit, von

what items to be included in the preverb catalogue: for example, Vedic áchā ‘to, toward’ is included by Renou (1952), but not by Whitney (1955[1879]).
In a number of ancient Indo-European languages – notably in Hittite, Vedic, Old Avestan, Homeric Greek, Early Latin, Archaic Old Irish, and Gothic – preverbs can be separated from the verb that they modify, despite retaining their semantic cohesion with it. This apparent split is usually called *tmesis* (< AG témnō ‘cut’), and is exemplified in (15):

(15) **Tmesis in Vedic (from Danesi 2013: 61)**

a. **prá **vām **brahmāṇi **kāravo **bharante  
   forth 2DU.DAT prayer.ACC.PL poet.NOM.PL bring.PRS.3PL.MID  
   ‘To you the poets offer their prayers.’ (RV 7.72.4b)

b. **devo **devebhir **ā́ **gamat  
   god.NOM god.INS.PL to go.SBJV.PRS.3SG  
   ‘May the god come with the gods.’ (RV 1.1.5c)

In (15)a, the preverb *prá* modifies the meaning of the root √ḥṛ- ‘carry, bring’, resulting in ‘offer’. The two elements of the composite are displaced from one another: *prá* is sentence-initial, whereas the main verb *bharante* is sentence-final. In (15)b, instead, the preverb *ā́*, which reverses the deictic orientation of √gam- ‘go to, approach’, shows up immediately in front of the verb *gamat*, but remains an constituent independent of it, as is proved by accentuation. As demonstrated by Watkins (1963, 1964), in some ancient Indo-European languages, *tmesis* is not a literary artifact, but rather a testimony of the fuzzy categorial
status of a class of morphemes that fluctuate among being used as free adverbs, adpositions and preverbs (on tmesis, cf. further De Angelis 2004, and references therein; cf. Chapter 1, Section 1.3.2). Therefore, *tmesis* (lit.) ‘cutting apart’ is a misleading label that was assigned by ancient grammarians to the apparent split exemplified in (15)a.

The papers by Watkins (1963, 1964) describe the following types of verbal tmesis:

1. \#PN(E)...V(...)# (cf. (15)a). This type of tmesis has already been described by Wackernagel (1924: 171 f.; translation CZ): “From ancient times, tmesis mostly occurs if the preverb shows up at the beginning of the sentence.” In addition to Vedic, Hittite, Homeric Greek, Archaic Latin, and Archaic Old Irish allow this pattern (Watkins 1964).

2. \#N(E)...PV(...)# (cf. (15)b). This type of *tmesis* is difficult to detect, as the preverb immediately precedes the verb, though the two are only juxtaposed, and do not constitute a single word. This type of tmesis is also allowed in Hittite, Homeric Greek, and archaic Old Irish.

3. \#N(E)...VP(...)#, as in (16). In this passage, the preverb sám ‘with’ occurs in post-verbal position, and adds a telic nuance of meaning to the simplex verb. Watkins suspects this pattern of being a (purely poetic?) innovation of Vedic and Homeric Greek. This pattern is also called ‘reverse tmesis’ or ‘verbal anastrophe’ (cf. Petit 2017).

\[
\begin{align*}
(16) & \quad \mathtt{\dhatu} \quad \mathtt{s\dhatm} \quad \mathtt{\dhatuv\dhati} \quad \mathtt{sp\dhatdh\dhath} \\
& \quad \text{defeat.OPT.1PL} \quad \text{with} \quad \text{battle.LOC} \quad \text{enemy.ACC.PL}
\end{align*}
\]

‘May we conquer our enemies completely in battle.’ (RV 1.8.3c)

---

5 Among the languages investigated by Watkins (1963), Old Irish emerges as being problematic: there is no general consensus as to whether tmesis attests to an inherited but residual clausal configuration, or it is a mere literary artifact (cf. Chapter 6)

6 The concept of *tmesis* was also applied to PPs (‘prepositional *tmesis*’, whereby a preposition is split from the noun that it takes by one lexical word), and to words other than verbs including nouns or adverbs (‘defusional *tmesis*’; this terminology was coined by Petit’s (2017)).

7 Watkins’ (1964) abbreviations follow: \# = sentence border, N = sentence connective, E = (enclitic) pronominal element, V = verb form, P = preverb.

8 “Von alters her tritt Tmesis am ehesten ein, wenn das Präverbium zugleich an der Spitze des Satzes steht.”
Later on, preverbs underwent what Watkins descriptively labelled as *univerbation* (Watkins 1963, 1964). In other words, preverbs developed into bound morphemes, that is, prefixes inseparable from the verb, occasionally with concomitant stress shifts, phonetic erosion, or even ultimate disappearance. Pinault (1995) represents the grammaticalization path covered by preverbs as in (17).

(17) independent preverb > left member of a verbal compound > prefix > (zero)

The path in (17) can be exemplified through Latin preverbs. In the light of some passages from early Latin prayers, Cuzzolin (1995) and Vincent (1999) discuss the fact that, while in Early Latin preverbs must be analyzed as independent constituents, these morphemes later on became left members of verbal compounds, and eventually developed into (bound) prefixes. These stages can be discerned based on two remarks on the early prayers by the grammarian Festus (Cuzzolin 1995: 130; Vincent 1999: 1118):

(18) ‘Sub vos placó’, in precibus fere cum
under 2PL.ACC reconcile.PRS.1SG in prayer.DAT.PL mostly when
dicitur, significat id, quod ‘supplico’
say.PRS.3SG.PASS mean.PRS.3SG DEM.ACC REL.ACC implore.PRS.1SG
‘When people say, mostly in prayers, *sub vos placó*, it means the same as *supplico* [*implore’*].’ (Fest. 402; ed. Lindsay 1913)

(19) ‘Ob vos sacro’, in quibusdam precationibus
against 2PL.ACC devote.PRS.1SG in certain.DAT.PL prayer.DAT.PL
est, pro ‘vos obsecro’, ut ‘sub vos
be.PRS.3SG instead 2PL.ACC beseech.PRS.1SG as under 2PL.ACC
placo’, pro ‘supplico’
reconcile.PRS.1SG instead implore.PRS.1SG
‘*Ob vos sacro* in certain prayers stands for *vos obsecro*, just as *sub vos placó* stands for *supplico’.* (Fest. 206; ed. Lindsay 1913)
Festus points out that, though in the early Latin varieties of Latin *sub* ‘under’ and *ob* ‘to, toward’ could occur outside the immediate preverbal context, these displaced preverbs already constituted a single lexical units with the verbs *placo* ‘reconcile’ and *sacro* ‘consacrate’. Festus’ remark finds an effective reformulation in Romagno (2004: 68): “univerbation is only the end point of a grammaticalization, whose semantic effects are far earlier visible.” Accordingly, Cuzzolin (1995: 133) sets out to replace the misleading term *tmesis* with *costituenza discondinua* ‘discontinuous constituency’: in fact, there are no univerbated compounds proper to ‘cut apart’; rather, preverb-verb discontinuous and continuous combinations are on their way to actual univerbation. Even if displaced, preverbs can modify the semantics of simple verbs, adding spatial or aspectual information: the meaning of the resulting composites can be no longer compositional. Going back to (18)-(19), how can the meanings of *supplico* ‘kneel down/humble one’s self, pray/beg humbly, beseech, implore, supplicate’ and *obsecro* ‘beseech, entreat, implore, supplicate, conjure’ be straightforwardly derived from *sub+placo* and *ob+sacro*?

Along the path of development in (17), preverbs can partially or entirely lose their local and concrete meanings (De Angelis & Gasbarra 2010: 153): for example, *sub* no longer means ‘under’ in *supplico*, as well as *ob* no longer means ‘to, toward’ in *obsecro*. To be sure, univerbation does not necessarily imply semantic bleaching: both in Sanskrit and in Classical Greek, verbal composites can be fully univerbated, but still retain spatial and compositional meanings. Thus, the so-called *tmesis* attests to a step within the grammaticalization process in (17), in which an independent morpheme has started gravitating toward a verbal stem, and modifying it semantically, but does not yet constitute a bound morpheme with it.

Examples from Vedic (15) and Latin (18)–(19) represent two different stages along the path of development covered by preverbs: on the one hand, we a have a tmesis in which full lexical word(s) intervene(s) in between the preverb-verb combination. On the other hand, the Latin composites are split only by an enclitic pronoun. Precisely based on the type of material (lexical vs. grammatical) that interrupts the preverb-verb combinations, Bertrand (2014) distinguishes *lexical* and *non-lexical tmeses* (non-lexical tmesis being also called *clitic interposition*). Arguably, lexical tmesis mirrors a less advanced stage along the
continuum toward the grammaticalization and univerbation than that attested by non-lexical tmesis, as I explain in what follows.

One among the few generally accepted syntactic statements about Indo-European is Wackernagel’s law, claiming that enclitics originally occupied the second position in the sentence (Watkins 1964: 1036). Wackernagel’s formulation is based on the evidence of Greek, Indo-Iranian and Latin; its existence is also known from Celtic, and abundantly backed up by Anatolian and Balto-Slavic. Arguably, in cases of non-lexical tmesis, composites are ‘split’, exactly because the tendency toward univerbation runs against the stronger Wackernagel’s law. In this light, non-lexical tmesis is a weaker indicator of independent constituency than lexical tmesis. Accordingly, the non-lexical tmesis pattern is allowed by a wider range of languages than those outlined above, including Hittite, Gothic, Old Irish, Lithuanian, and Ossetic for example:

(20) a. Hittite (adapted from Petit 2017)

Para=[m]a=aš pa-iz-zì.

‘He goes forward.’

b. Gothic (adapted from Conforti 2014: 17)

.us =nu =gibit to kaisaris kaisara

back PTC pay.IMP.2PL DEM.ACC.PL.N C.GEN.SG C.DAT.SG

jah to gudis guda.

CONJ DEM.ACC.PL.N G.GEN.SG G.DAT.SG

‘Pay back to Caesar what (is) Caesar’s, to God what (is) God’s.’ (Lc. 20.25)

c. Old Irish

at-[t]at=chigestar a=dæ

to-2SG=see.FUT.3SG.PASS o=G.VOC

‘You will be seen, o God.’ (Ml.59c12)

d. Old/non-standard Lithuanian (from Rosinas 1995: 10)

ap-mi-šviesk akis

up/on/to-1SG-illuminate eyes
‘illuminate my eyes (lit. the eyes on/to me)’
e. Ossetic (Digor dialect) (adapted from Petit 2017)
Æra=sæ=farsta.
P=3PL.ACC=ask.PST.3SG
‘He asked them.’

In (20)a from Hittite, the interposition of the clitics -ma- ‘and’ and -aš ‘he’ occurs in between para-...paizzi ‘he goes forward’. In (20)b from Gothic, the enclitic connective =nu intervenes between the preverb us- and the verb =gibit (for a thorough catalogue of the elements that can occur in tmesis position in Gothic, cf. Conforti 2014). In (20)c from Old Irish, a second person enclitic pronoun separates at- ‘to, toward’ from =chigestar ‘will be seen’. In (20)d from Old/Non-standard Lithuanian, a first person pronoun encoding the animate Goal-participant ‘cuts’ the composite (in Modern Standard Lithuanian, reflexive pronoun only can occur in tmesis position; cf. Chapter 5). In (20)e from Ossetic, the composite æra-...farsta ‘he asked’ is split by the interposition of the clitic -sæ-‘them’.

Composite verbs and moveable preverbs of some modern Germanic languages, in particular West-Germanic, which have received attention in the recent literature (cf. e.g. Ackerman & Webelhuth 1998; McIntyre 2000, 2001, 2002, 2003; Dehé and Wanner 2001; Lüdeling 2001; Zeller 2001; Booij 2002a, 2002b; Dehé et al. 2002; Van Kemenade & Los 2003), seem to represent a different development. Van Kemenade & Los (2003: 79 ff.) call the productive preverb-verb combination in such languages separable complex verb. “Separable complex verbs in the present-day West-Germanic languages typically consist of a verbal base, and a non-verbal part, often but not always a ‘particle’” (Van Kemenade & Los 2003: 80). Such a prefix/particle is part of a separable complex verb that, though constituted by morphemes separable by syntactic processes, operates as a single lexical unit. Dutch and German, for example, feature two different word orders, specifically SVOP in main clauses (21)a, and SOV in subordinate clauses (21)b. By way of example, let us consider the Dutch verb op-bellen ‘call up’ in (21)a-b:
Word orders in Dutch: main vs. subordinate clauses

a. *Jan belt zijn moeder morgen op*
   
   John rings his mother tomorrow up
   
   ‘John will phone his mother tomorrow.’

b. *Jan zegt dat hij morgen zijn moeder op-belt*
   
   J. says that he tomorrow his mother up-rings
   
   ‘John says that he will phone his mother tomorrow.’

(adapted from Booij 1990)

As Booij & Van Kamenade (2003: 6) remark, the separability of separable complex verbs also manifests itself in the position of the infinitival particle *te*, which occurs between the two elements of separable complex verbs (e.g. *op te bellen* ‘to call up’), as well as in the form of the perfect passive participle, with the prefix *ge-* placed in between the preverb and the verbal stem (*op-ge-beld* ‘called up’). Separable complex verbs also behave similarly in derivational morphology: for example, the *ge-*nominalization of *opbellen* is *op-ge-bel* ‘phone call’, with the nominalizing prefix occurring in between the preverb and the verbal base.

1.3. The origin of preverbs

As discussed in Sections 1.1 and 1.2, in a number of Indo-European languages, the same set of morphemes can occur in adverbial, preverbal and adpositional (pre- and post-positional) position. Especially from Kuryłowicz (1964: 171) onward, the relation among adverbs, preverbs and adpositions is interpreted at the diachronic level as follows: “The fact that in the Indo-European languages many an indeclinable may function both as preverb and as preposition has been a sufficient reason for attributing to them an adverbial origin. Such an assumption fully accounts for their subsequent functional bifurcation. On the one hand, a group consisting of *adverb + verb* may develop into a compound […]. On the other hand, within a construction [(verb + adverb) + oblique case] a syntactic shift may entail a new articulation [verb + (adverb + oblique case)], i.e. (preposition + oblique case)” (italics is

Thus, in the early stages of Indo-European, preverbs used to be independent constituents of an adverbial character. Later on, these adverbs started gravitating semantically toward a verb, or toward an inflected NP: adverbs either came to modify the meaning of a verb, or to specify the value of a case. After such adverb+verb or adverb+NP combinations became conventionalized, adverbs began to lose their autonomy, and to be part of proper syntactic constituents with verbs or noun phrases: they underwent grammaticalization. The functional bifurcation of local adverbs into preverbs or adpositions is mirrored by their increasing obligatorification for the structure of the constituents in which they occur.

From the adpositional side, such an obligatorification undergone by previously free-standing adverbs has been interpreted as a piece of evidence in favor of the rise of configurational syntax among Indo-European languages (cf. Hewson & Bubenik 2006; Luraghi 2009, 2010, forthc.b, forthc.c; Reinöhl 2016, and references therein). The grammaticalization of adpositions can thus be framed within a larger picture, whereby non-configurational languages, exhibiting originally (i) free constituent order, (ii) discontinuous nominal expressions, and (iii) null anaphora (Hale 1983), such as ancient Indo-European languages, undergo a series of changes that bring about features of configurationality. In fact, a number of scholars (Meillet & Vendryes 1924: 520; Hewson & Bubenik 2006) regard the creation of adpositional phrases as crucial in creating configurationality in Indo-European.

As even in the oldest Indo-European languages it is relatively infrequent for these morphemes to display the purely adverbial function (cf. e.g. Dunkel 1976, 1980; Luraghi 2001), preverb+verb and adposition+NP combinations have been assumed for Proto-Indo-European itself. Specifically, in his pioneering works on Old Indo-Aryan and Proto-Indo-European word order, Delbrück (1878: 13, 1888: 15–16) formulated the following rule:
preverb/adposition usually precedes its verb, but follows its case (cf. further McCone 2006: 41 ff.). However, Delbrück’s remark on word order, whether correct or not (cf. fn. 13, and Chapter 3 on Vedic), does not imply that either bound preverbs (i.e. prefixes) proper or adpositions proper (i.e. obligatory adpositions selecting the case that accompanies them) can be assumed for Proto-Indo-European (on the rise of configurational syntax and the internal structure of Indo-European PPs, see Hewson & Bubenik 2006; Luraghi 2009, 2010, forthc.b, forthc.c; Reinöhl 2016, and references therein). Rather, in the oldest branches of Indo-European, the relationship that holds between preverbs+verbs and adpositions+NPs can mostly be described as modification, rather than as specification or government (cf. further Boley 2004: 34; Chapters 3 and 4). In her work on tmesis in Hittite, Vedic and Homeric Greek, Boley (2004: 52) summarizes this view as follows: “the preverb/preposition [PW, place word in her terminology] is clearly an addition to what we regard as a basic sentence.” By contrast, in most ancient Indo-European languages, including Old Church Slavic and Old Irish (Chapters 5 and 6), adpositions seem to already function as heads of the phrases in which they occur: their omission brings about agrammaticality and/or alterations in meaning.

1.4. Preverbs as a typological and a terminological problem

1.4.1. The terminological side of the issue

As discussed in Sections 1.2 and 1.3, the same Proto-Indo-European morphemes that developed into preverbs, also developed into adpositions in later languages. In addition, these morphemes originally used to function as free constituents of an adverbial character, being thus able to modify whole sentences, nouns and verbs. Furthermore, preverbs encompass a wide range of meanings and functions per se, different from their basic contribute of adding spatial specifications to verbal stems (cf. Section 1.1). This multiplicity of functions is mirrored in a high uncertainty in the terminology referring to these morphemes, as I discuss in what follows.
Precisely because of such variety of placements, meanings, and functions, Cuzzolin et al. (2006) consider these morphemes as constituting a problematic morphological category. Accordingly, the authors call the morphemes that belong to this category ‘adverbs-adpositions-preverbs’ (ADV-ADP-PREVs). Equally descriptive labels are employed by Bolinger (1971) and Friederich (1987): the former, in his work on English, uses the abbreviation *adprep* to combine their adverbial and prepositional function; the latter employs the same label to refer to these morphemes in the whole Indo-European language family.

Friederich (1987), in the heading of the same paper, explains what he means by *adprep*: in the subheading, within brackets, he adds the term *spatio-temporal auxiliaries*. The *spatio-temporal* part specifies the original semantics of these elements, whereas the *auxiliaries* part points out the fact that they are usually added as adverbial modifiers to a predicate or a noun. The primary spatial value of Hittite, Vedic, and Homeric ADV-ADP-PREVs also stands behind Boley’s (2004) choice, who calls these elements *place words* (PWs). The fact that ADV-ADP-PREVs originally functioned as modifiers, and not as syntactic heads, is also emphasized in Ivanov (1973), and in another paper by Friederich (1976), who opt for *locative auxiliaries*. The label *satellites* also points out the fact that these elements functionally gravitate toward a verbal center as their modifiers. The term *satellite* is used in the literature on the typology of motion events as well (from Talmy 1983 onward), and occasionally in works on the Old Irish verbal complex (e.g. McCone 2006: vii titles a section of his monography “The Verb and its Satellites in Proto-Indo-European”). Patri (2007) also focuses on the modifier character of preverbs, by calling them *determinant adverbial* ‘adverbial determiner’.

As Papke (2010: 4) shows, in works on Old Indo-Aryan, the morphemes under discussion are called in very different ways, arguably on account of the functional ambiguity that they exhibit in the oldest varieties of this branch: *Präpositionen* ‘prepositions’ (Delbrück 1888); *adverbial prepositions* (Macdonell 1910, 1916); *words of direction, elements of an adverbial character, the so-called prepositions, verbal prefixes* (Whitney 1955[1879]; Kulikov 2012); *preverbs*, or even *semi-autonomous verbal morphemes* (Kulikov 2012); and *Lokalpartikeln* ‘local particles’ in the various publications.
by Hettrich, Casaretto, and Scheider (cf. Chapter 3, Table 3 for exact references). Each among these terms points out a specific aspect relating to these morphemes: their ability of modifying nouns (Präpositionen, adverbial prepositions, the so-called prepositions), their etymological spatial meaning (words of direction), their original syntactic autonomy (elements of an adverbial character, semi-autonomous verbal morphemes), or their preverbal placement (verbal prefixes). Interestingly, no author names these morphemes as postpositions, though the Indo-Aryan branch later on develops secondary postpositions (cf. fn. 13; Reinhöl 2016; Chapter 3).

As Pompeo (2002) remarks, Chantraine (1953), in his Homeric grammar, tends to use the term prepositions ‘prepositions’, which is generally the usual one in the literature on Ancient Greek. As Chantraine (1953: 82) already pointed out, the label pre-position, a calque from the Greek term pró-thesis (pro- ‘in front of, forth’+ a derivate from the root *dʰeh₁- ‘put’), is inadequate, as it is a cover term that comprises petits mots invariables ‘small uninflected words’, which specify the value of cases and are variably used as adverbs, preverbs or adpositions. Nevertheless, Chantraine only switches to the label particules ‘particles’ in the passages in which he discusses the adverbial origins of these morphemes (Chantraine 1953: 82 ff.).

The term particle is often regarded as particularly confusing because of its genericity. This issue is clearly discussed by Schourup (1999: 229): the term “is sometimes used to refer to elements of those traditional word classes that are uninflecting (‘invariable’), such as conjunctions, prepositions, interjections, and adverbs; at other times it is applied to all invariables except adverbs, conjunctions, and prepositions (see Hartmann 1994: 2953); more often, though, […]it is applied to items that do not fit easily into any well-established word class.” A number of authors, such as Hettrich and colleagues, try to remedy such an ambiguity by adding the modification Lokal- ‘locative’. Horrocks (1981) and Luraghi (2003) also opt for local particle, whenever they do not want to specify the part of speech of these small uninflected words. However, naming ADVS-ADPS-PREVS as local particles can also generate ambiguity: in Hittite, for example, this label is employed to describe a specific class of P2 clitics, which result from a grammaticalization process.
undergone by Proto-Indo-European ADVS-ADPS-PREVS (cf. Luraghi 2001; fn. 13 in this Chapter).

Instead, the term *verbal prefixes* is the most widespread in works on Slavic, based on the fact that preverbs show the status of bound morphemes since the earliest attestations of this branch (i.e. tmesis is not attested; cf. Chapter 5). The term *prefixes* usually comprises more items than the ADV-ADP-PREV category, so as to include other types of preverbal morphemes such as the negation *ne*-. The same applies to the term *preverbs* in the literature on Old Irish, in which preverb is a cover-term for all morphemes occurring in preverbal position, including the negation, and the paradigmaticized perfective marker *ro*-(VGK II; Vendryes 1923; Lewis & Pedersen 1961[1937]; grammaticalized *ro* - is instead called *augment* in McCone 1997, 2006). As their Ancient Greek counterparts, Old Irish ADVS-ADPS-PREVS are frequently called *prepositions* as well (e.g. Pokorny 1914; GOI).

Preverbs also represent a terminological challenge because of the variety of functions that preverbal morphemes of different origin exhibit outside Indo-European. As Schultze-Berndt (2003: 145–146) points out, this issue is mirrored in the literature on Northern Australian languages: alongside with the terms *preverb* and *verb*, various others are also employed by some authors, and none is generally accepted to date. Without adding further details on the functions of preverbal morphemes in Northern Australian languages (cf. Section 3), it is sufficient to illustrate the range of terminological variation: Table 4 reports the selection of terms provided by Schultze-Berndt referring to the elements that constitute the Northern Australian verbal complex.

**Table 4.** Terms employed for the elements of Northern Australian complex verbs  
(adapted from Schultze-Berndt 2003: 146)

<table>
<thead>
<tr>
<th>UNINFLECTING ELEMENT</th>
<th>INFLECTING ELEMENT</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal particle</td>
<td>Verb/Auxiliary</td>
<td>Hoddinott &amp; Kofod 1976; Merlan 1994</td>
</tr>
<tr>
<td>Uninflecting verb</td>
<td>Inflecting verb</td>
<td>McGregor 2002</td>
</tr>
<tr>
<td>Participle</td>
<td>Finite verb</td>
<td>Cook 1988</td>
</tr>
<tr>
<td>Base</td>
<td>Auxiliary</td>
<td>Capell 1979</td>
</tr>
<tr>
<td>(Main) verb</td>
<td>Auxiliary</td>
<td>Reid 1990; Walsh 1996</td>
</tr>
</tbody>
</table>
In addition, while the label *preverbs* is broadly accepted as adequate to define the preverbal morphemes of Algonquian languages (cf. Section 3), such term is far from being precise. Accordingly, a number of scholars call preverbs all elements that show up in front of a verb, while others restrict the definition based on semantic, functional, or etymological criteria.

1.4.2. *Terminology adopted in this work*

As this work deals with different ancient Indo-European languages, including Vedic, Homeric Greek, Old Church Slavic, and Old Irish, in which these morphemes exhibit quite different statuses and behaviors, terminological choices turned out to be particularly problematic: specifically, non-neutral terms such as *place words* or *prefixes* would be particularly inadequate. For example, *place words* as well as *local particles* are inappropriate to name Slavic and Old Irish preverbs, which are quite advanced in their grammaticalization and lexicalization processes, and thus only infrequently show mere spatial semantics. Conversely, the label *prefixes* is adequate for Slavic, in which preverbs exhibit the morphological status of bound morphemes. However, this choice would be totally confusing for Vedic and Homeric Greek, in which preverbs partly retain their syntactic independence, and partially misleading for Old Irish, in which the outermost preverb shows instead a clitic status.

Therefore, I opted for what I regarded as the most neutral terminological choices. The morphemes belonging to the category of *ADVS-ADPS-PREVS* are called *preverbs* (also in *tmesis* position), unless clearly noun-oriented. In that case, they are called *adpositions*. Instead, preverb-verb combinations are referred to as *composites*, and not as compounds, as the latter term usually implies a certain degree of univerbation.\(^9\) In Vedic and Homeric Greek, however, it is not the case that these preverb-verb combinations actually represent single words in all contexts.

---

\(^9\) The term *compound* seems to carry the idea of univerbation within the field of nominal composition as well. In fact, multi-word expressions such as Italian *ferro da stiro* ‘iron’ and the like tend to be called not simply *compounds*, but rather *phrasal* or *prepositional compounds* (or *phrasal lexemes* as in Masini 2009).
1.4.3. *The typological side of the issue*

The terminological peculiarity relating to the category of **ADVs-ADPs-PREVs** is discussed by Garde with an eye on its typological implications (Garde 2004: 103 ff.). Both *ad*-positions and *pre*-verbs are named after their positional properties. ¹⁰ However, in the languages that feature both *pre*-verbs and *pre*-positions, this terminological consistency conceals a typological oddity.

Specifically, the category of **prepositions-preverbs** represents a two-fold paradox for word order typology. In the first place, the predominant phrase structure is reconstructed as centripetal (i.e. right-headed) for Indo-European (Garde 2004: 109). ¹¹ However, prepositions contradict this generalization: prepositions function as heads of the phrases to which they belong, and are nevertheless placed on their left; by contrast, exclusively centripetal languages such as Turkish usually allow for postpositions only (cf. Garde 2004: 111). In the second place, in the majority of centrifugal (i.e. left-headed) languages, prepositions and preverbs are both allowed. However, in centrifugal languages, preverbal morphology usually plays a far greater role than in Indo-European; for example, prefixation is usually employed for derivational purposes, e.g. in Indonesian, in which the prefix *pe-* derives deverbal nouns (cf. Teselkin & Aleva 1960: 18, 57–58; Garde 2004: 111).

Furthermore, Garde (2004: 111) points out a paradox within the paradox: in particular, “the preposition and the preverb, though both preposed, exhibit divergent roles in the dependency relation, and accordingly in the order (i.e. centripetal or centrifugal) featured by the constituents in which they occur” (Garde 2004: 111, translation CZ).

¹⁰ “La préposition se signale d’abord, parmi toutes les « parties du discours » des grammaires classiques, par une particularité terminologique: dès les origines, elle a été nommée uniquement par la place qu’elle occupe” (Garde 2004: 103 ff.).

¹¹ The terms *centripetal* and *centrifugal* were coined by Tesnière (1959: 22). Though they sound a bit old-fashioned, I also keep them in this section, in order to conform to Garde’s (2004) terminology.

¹² “[…] la PP et le PV, tous deux préposés, s’opposent par leur place dans le rapport de dépendance, et donc par l’ordre (centripète ou centrifuge) appliqué dans les syntagmes qui les contiennent. Dans le syntagme
preposition functions as a head of the PP (i.e. centrifugal order), whereas the preverb works as a verbal modifier in the composite verb (i.e. centripetal order).

To solve this puzzle, I suggest that such an apparent typological paradox can be overtaken keeping in mind the adverbial origin that prepositions and preverbs share (cf. Friedrich 1976; Section 1.3). In combination with both nouns and verbs, preverbs-adpositions started out as adverbial modifiers, occurring in front of the modified noun or verb. In this light, the word order featured by prepositions and preverbs is consistently centripetal (i.e. right-headed): the modifier precedes the modified.\footnote{The fact that two of the oldest Indo-European branches, that is, Anatolian and Old Indic, are postpositional is only an apparent issue. In both subgroups, postpositions are arguably secondary formations partly going back to nominal forms (cf. Luraghi 2001 on Anatolian; Reinhöl 2016 and Chapter 3 on Old Indic). In Anatolian and Old Indic, the counterparts of Indo-European ADVs-ADPs-PREVs only underwent grammaticalization as P2 clitics or as preverbs proper, respectively (not all scholars agree on the outlined grammaticalization of Anatolian ADVs-ADPs-PREVs; for updated references, see Luraghi 2001; Melchert 2009).}

Later on, these modifier-modified combinations underwent conventionalization, and accordingly the mutual relationships holding between these elements were arguably tightened until the eventual creation of a new continuous constituent or a bound composite.

2. Multiple preverbs

So far, I touched upon different aspects related with preverbs, including their functions, their positional properties, their origin, and their unclear categorial and typological statuses that are mirrored in the unclear relative terminology (cf. Section 1). What still needs to be discussed is the number of preverbs that can occur in front of a verbal stem.

Among Indo-European languages, single preverbs are widespread, whereas the same does not apply to multiple preverbs. However, Old Indic, Ancient Greek, Slavic and Old Irish, are noteworthy for allowing multiple preverbs. An example from each of the
mentioned branches is shown in (22); notably, all composites contain a Proto-Indo-European root for seeing or looking.\textsuperscript{14}

(22) Multiple preverb composites containing roots for ‘seeing, looking’:
\[ *kʰeis-, *spek-, *ueid- \] (LIV\textsuperscript{2}: 381, 575, 665)
\begin{itemize}
  \item a. Ved. \textit{á}hi \textit{vi śpaś} ‘look at, view’ (RV 3, 62, 9; 10, 187, 4)
  \item b. AG \textit{eis-an-eidōn} ‘look upward to’ (II.16.232, 24.307)
  \item c. OCS \textit{pro-pro-vēdēti} ‘proclaim, predict’ (Mar.Mk.1.38, 16.15 etc.)
  \item d. OIr. \textit{imm-accai} (imm-\textit{ad-}√\textit{kwis}) ‘look after, examine, consider’
\end{itemize}

The composites of (22) can be schematized as follows:

(23) \[
\text{P}_n [\text{exterior}] (\ldots \text{P}_2 [\text{medial}]) \text{P}_1 [\text{interior}] V
\]

According to my definition, multiple preverbs occur every time two or more of such morphemes are placed in front of a verbal base. Multiple preverbs can be either different, as in (22), or identical, as in AG \textit{pro-pro-kulindomai} ‘keep rolling in front of’ and OIr. \textit{ess-ess-√\textit{rig}} ‘rise again’. The preverb farthest from the verbal stem (\textit{P}_n) is called \textit{exterior preverb} (EP), whereas the closest to it \textit{interior preverb} (IP).\textsuperscript{15} All preverbs occurring in between the EP and IP are \textit{medial preverbs} (MPs). For example, the Ancient Greek composite \textit{ex-apo-bainō} ‘step out of’ contains \textit{ex} - ‘out of’, which is the EP, and \textit{apō} - ‘away from’, which is the IP. In case of more than two preverbs, such as in the composite \textit{ex-up-an-istēmi} ‘start up from under’, \textit{ex} is the EP, \textit{hupo} - ‘under’ the MP, and \textit{an(a)} - is IP.

\begin{footnotesize}
\textsuperscript{14} Lexicalized composites containing multiple preverbs are also found in Latin: e.g. \textit{exponō} ‘put out, set out’ < *(ex-)\textit{po-znō} < *(ex-)\textit{po-snō} < *(ex-)\textit{po-sinō} (Dunkel 1981b: 230 fn. 29; De Vaan 2008: 479).
\textsuperscript{15} I avoid the terms \textit{external} and \textit{internal preverbs}, as they are specifically used in the literature on Modern Slavic to distinguish two set of preverbs, featuring divergent semantic and behavioral properties. Multiple preverbs are very widespread in Modern Slavic languages, though they seem to constitute a quite different phenomenon from that investigated in this work (cf. Chapter 5). Cumulation of preverbs is also known from the closest branch to Slavic, that is, Baltic (on Lithuanian, e.g. cf. Nevis & Joseph 1992: 96).
\end{footnotesize}

\phantomsection
\addcontentsline{toc}{section}{References}
The cumulation of preverbs exemplified in (22) and represented in (23), though possible, does not seem to be the favored procedure in old Indo-European languages (Kuryłowicz 1964: 174 ff.). In this respect, Old Irish constitutes an exception: three, four, and even five preverbs are occasionally put in front of a verbal base (cf. Chapter 6; Rossiter 2004; McCone 2006). Kuryłowicz accounts for the productivity of verbal composition in Old Irish as follows: in Old Irish, the EP is clearly separated from the rest of the composite by a clear-cut juncture \#EP_n=MP_2-IP_1-V\#, and has the status of a proclitic, instead of a prefix. Furthermore, the addition of a new preverb pushes such a juncture: \#EP=MP_3-MP_2-IP_1-V\#. Therefore, while in principle the other Indo-European languages including Vedic, Homeric Greek, and Old Church Slavic allow for two interpretations for sequences such as \#EP-IP-V\#, namely \#EP-[IP-V]\# and \#[EP-IP]-V\#, only the former interpretation is possible for Old Irish (on this issue, cf. also McCone 2006: 177–189). Thus, multiple preverbs in Old Irish do not belong to an ambiguous structure: the EP is always perceived as the determination of the remaining verbal form taken as a whole (cf. also the concept of ‘recomposition’ or ‘accretion’, introduced by McCone 1997, 2006, mentioned in the introduction, and discussed in Chapter 6). This lack of ambiguity arguably favored the productivity of multiple preverbs in Old Irish. In addition, the earliest attestations of this language (4\textsuperscript{th}–5\textsuperscript{th} centuries onward) go back to a chronological phase, when composites were advanced in their lexicalization process: this means that a good number of lexicalized composites must have been already available for ‘recomposition’ or ‘accretion’ (cf. Chapter 6).

3. Preverbs outside Indo-European

3.1. Preverbs in Finno-Ugric and Caucasian languages

In Eurasia, preverbs do not only occur in the Indo-European family: Finno-Ugric languages and the languages of the Caucasus also know preverbs (concerning Finno-Ugric, cf. among others Metslang 2001 on Estonian; Wälchli 2001 on Livonian and Southern Finnic in

Hungarian preverbs are detachable preverbal morphemes with a primary spatial meaning (in (24)–(26) below, cf. át- ‘across’, el- ‘away’, and be- ‘into’), but, at a synchronic level, their main function is to modify the lexical or the grammatical aspect of the verbs onto which they attach (cf. also Kiefer 1994). Examples of Hungarian composites are provided in (24)–(27):

(24)  a. Péter    át-men-t-ø2    a    híd-on.
  P.    across-go-PST-3SG.I ART    bridge-SUP
  ‘Peter went across the bridge.’
  b. Be-járta    az    erdő-t
  into-walk.PST.3SG.D the    forest-ACC
  ‘He roamed the forest.’

(25)  Péter    el-alud-t.
  P.    away-sleep-Past-3sgI
  ‘Peter fell asleep.’

(26)  Péter    be-csomagol-t-a    az    ajándék-ot.
  P.    into-wrap-PST-3SG.D ART    gift-ACC
  ‘Peter wrapped the gift.’

(27)  Meg-főztem
  P-cook-PST-1SGI
  ‘I cooked (the meal).’

(adapted from Knittel 2015: 1–2)

Notably, in (24)a-b, the preverbs át- and be- bring about changes in the argument structure of simplex verbs (i.e. function as applicatives): they are responsible for the obligatorification of the locative arguments a híd ‘the bridge’ and az erdő-t ‘the forest’ in the superessive and accusative case, respectively (Nyéki, 1988: 144). In (25), the preverb el- changes the actionality of the verb: whereas alszik means ‘to sleep’, elalszik has the
inchoative meaning of falling asleep. Instead, the preverbs in (26) and (27) express telicity and perfectivity.

Among Caucasian languages, I take Georgian (Kartvelian, South Caucasian) preverbs as an example (cf. Harris 2003: 61–78 for a thorough description of their meaning and functions). Georgian preverbs synchronically exhibit a number of functions strikingly similar to those of their Indo-European counterparts: preverbs modify the meaning of a verbal stem by adding spatial or aspectual information. In addition, more than one preverb can attach onto a verbal base: for example, directional preverbs can occur in association with mo- ‘hither’, which is also a preverb, making up together a complex preverb. Such functional similarity is mirrored in the similarity of preverbs’ sources in these two families. In Georgian and sibling languages, a number of preverbs have relatively recently developed from previous adverbs. Two-fold evidence confirms this claim: (i) the etymological sources of Kartvelian preverbs are related to adverbs; (ii) Old Georgian allows for tmesis, which suggests a residual independent constituency status for preverbs. In Modern Georgian, tmesis is no longer possible.

3.2. Preverbs in Amerindian languages

Beyond the boundaries of Eurasia, preverbs show a wider range of uses than their Indo-European, Finno-Ugric, and Caucasian counterparts. This is the case of some Amerindian languages, particularly of those belonging to the Algonquian family. Penteland (2005) provides an exhaustive description of the differences and similarities between Indo-European and Algonquian preverbs. As a matter of fact, they mostly have similar functions. Notably, as in Indo-European, Algonquian preverbs are also used as adpositions. However, as Penteland (2005) remarks, the Indo-European counterparts of Algonquian preverbs are generally limited to forms with spatio-temporal meanings. Instead, Algonquian preverbs display many other meanings, as shown through some composites from Severn Ojibwe (Ojibwe, Northern Ontario and Manitoba) in (28):
The preverb *pimi*- is an adverbial element whose meaning is ‘along’. The preverb *nihta*- derives from a verbal root that means ‘do often or habitually’ and ‘be good at’. *Nihta-* is one of the so-called ‘modal preverbs’, which refer to an agent’s desire or ability to cause an event to happen (Slavin 2006a: 4). The preverb *ishi-* ‘in a certain time/place/manner’ belongs to the so-called class of *relative preverbs*. These preverbs that require an antecedent in the sentence, and “function to relate the verbal event to various associate circumstances, such as way in which it takes place, where it takes place, the reason it takes place, how long since it has taken place, how many times and how often” (Valentine 2001: 160).

Research on another Amerindian language, specifically Rama (Chibchan, Nicaragua), leads Craig & Hale (1988) to introduce a new type of preverbs: the so-called *relational preverbs*. These do not differ from the opposite group of *satellite preverbs* by virtue of their semantic properties, but rather by virtue of their syntactic and ordering properties (cf. Imbert & Grinevald 2004; Imbert 2008, 2009). Satellite preverbs are not syntactically linked to any particular argument in the sentence: instead, they are bound to the verb, and specify its lexical or semantic content. In a satellite preverb+verb combination, the verb functions as the syntactic head of the argument. Conversely, relational preverbs are elements that behave morphologically as preverbs, but syntactically as adpositions. In other words, relational preverbs select the argument taken by the verb (and determine its case). Precisely based on the evidence of relational preverbs, Craig & Hale (1988) argue for the postpositional origin of preverbs in Rama: *relational preverbs* are the endpoint of a grammaticalization process starting from previous postpositions.
3.3. Preverbs in Northern Australian languages

Preverbs characterize a number of languages of different genetic affiliation throughout Northern Australia (Schultze-Berndt 2003). In a large part of the linguistic area defined by the presence of preverbs, they form complex predicates that look strikingly similar to the separable complex verbs of Germanic languages. As Schultze-Berndt (2003: 145) points out, examples (29)a-b from Jaminjung (Australian, region around the Victoria River) have “straightforward translation equivalents in English”:

(29)  

a. Jaminjung: a spatial preverb  

\[ \text{jag } yirr-ijga-ny \] binka-bina  
\[ \text{down } 1PL.EXCL-go-PST \] river-ALL  
‘We went down to the river.’

b. Jaminjung: an actional preverb  

\[ \text{mangarra } burrb \] nganthi-wiya!  
\[ \text{plant.food } finish \ 2SG:3SG-POT-eat.IMPF \]  
‘You should have eaten up your food!’

(adapted from Schultze-Berndt 2003: 145)

However, while Germanic preverbs form a closed word class, Northern Australian preverbs crucially constitute an open class comprising hundreds of members, including recent loans. The sources for preverbs are diverse: spatial adverbs (as in Indo-European), nouns, and verbal roots or stems.

From their open class status, it follows that Northern Australian preverbs cover a wider range of meanings than their Indo-European counterparts: alongside with expressing spatial path or completion, they are able to encode manner of motion, change of state, impact, very specific actions, and communicative events (for relevant examples and further discussion, see Schultze-Berndt 2003: 149–150). Interestingly, preverbs in Jaminjung and in all the neighboring languages, do not assign a deictic orientation to verbs, as do their Indo-European counterparts.
In Northern-Australian languages, the abundancy of meanings just outlined also correlates with an even wider range of morphological and syntactic properties. With regard to morphology, Australian preverbs can constitute the input for several types of derivations, including reduplication, lexical aspect-changing derivations, and nominalizations. With regard to syntax, preverbs usually occur immediately to the left of the verb. But they may also be separated from the verb by other constituents (tmesis position), and show up postverbally. As in Indo-European, multiple preverbs are occasionally found within a single clause. In addition, Northern Australian preverbs do not only function as constituents of complex verbs, but show a wider range of syntactic functions, including that of main predicates in dependent clauses (cf. the so-called absolute usage of Vedic and Homeric preverbs, discussed in Chapters 3 and 4). Northern Australian preverbs can also affect the argument structure of composites.
3 Multiple preverbs in Vedic

1. Preverbs in Vedic

1.1. State of the art

Traditional grammars of Vedic and Sanskrit usually include a section devoted to preverbs, which are either called ‘preverbs’ or ‘prepositions’: this inconsistent terminological treatment mirrors their ambiguous categorial status (e.g. Delbrück 1888: 432 ff. uses the label ‘Präpositionen’; Renou 1935: 109 ff. ‘préverbes’; Whitney 1955[1879]: 414 ‘prepositions’; Macdonell 1916: 208, 210, 254, 266 ‘prepositions’ and ‘verbal prefixes’; cf. Section 1.2.1–1.2.4; Chapter 2). These grammars generally provide the list of preverbs with their basic usages as well as brief discussions on their phonetic, accentual, and positional properties. In addition, grammars exemplify the usages of each preverb in combination with a number of verbal stems, as well as with morphological cases.

Later investigations draw on the suggestions provided by traditional grammars to elaborate on specific features of Vedic preverbs. For example, the said grammars generally observe that, occasionally, preverbs completely change the meaning of base verbs; i.e. preverb-verb combinations can result in non-compositional composites (e.g. Whitney 1955[1879]: 396; Thumb 1905: 444; Renou 1935: 145). Building upon this observation, Sturm (2014) uses a construction-based approach to study preverb-verb combinations whose meaning is no longer transparently the sum of their parts. Sturm’s goal is to identify recurrent patterns of idiomaticization for Vedic preverb-verb constructions.

Renou (1935: 141) assigns actional values to Vedic preverbs: e.g. Renou describes abhi ‘to, unto, against’ and nis ‘out, forth’ as terminative, ā as resultative, and úpa as inchoative.1 Delbrück (1897: 146–147) also notes that Vedic and Sanskrit preverbs show these functions, but refers to them as perfectivizing functions: he thus regards preverbs as

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1 The basic translations of preverbs are Whitney’s (1955[1879]: 396 f.).
able to modify the grammatical, rather than the lexical aspect of verbs. Gonda (1962) react
to Delbrück’s approach, remarking that the function of preverbs pertains to the lexicon, and
not to the grammar. Danesi’s (2009) dissertation also proceeds along these lines: she
describes the meanings of Vedic preverbs in association with a selected list of roots that can
be ascribed to different actional classes (e.g. stative, activity, and resultative verbs). Danesi
also addresses the issue of the valency changing ability of Vedic preverbs (on which, cf.
further Kulikov 2012).

Delbrück (1888: 434–437) dedicates two sections of his grammar to combinations
of two and three preverbs (the latter only attested in Classical Sanskrit). Multiple preverbs
are also the focus of Papke’s (2010) dissertation, which constitutes a diachronic
investigation on these constructions from Vedic to Classical Sanskrit. Papke’s aim is to
understand the motivations for Sanskrit preverb ordering. To meet her goal, Papke
compares the preverb ordering of Classical Sanskrit with that of Vedic and of other ancient
Indo-European languages, including Homeric Greek and Old Irish (however, her Homeric
and Old Irish data are secondarily taken from Imbert 2008 and McCone 1997,
respectively).

A systematic investigation on almost all Vedic preverbs is offered in a series of
papers by Hettrich, Casaretto, and Schneider, which have been published as outcomes of a
project focused on local particles in the R̥g-Veda (Casaretto 2010a, 2010b, 2011a, 2011b,
Hettrich (1991, 1993, 2002), all cited publications are consistently organized according to
one single compositional scheme. After providing quantitative data on the frequency of
each preverb, a section follows on the semantics of local particles in their adnominal and
adverbial functions. Then, the authors describe the syntactic positioning of preverbs as well
as their obligatoriness for the syntax of the Vedic sentence. Subsequently, the semantic
modifications brought about by the local particle in its preverbal usage are tackled. Next,

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2 One can find the complete list of publications pertaining to the project at the following link:
https://www.phil.uni-wuerzburg.de/fileadmin/04080400/Projekt_Publikationen.pdf.
the issues of the interaction of the local particle with similar morphemes and of the iteration of particles are faced. A brief discussion on the etymology of the preverb closes each paper.

Alongside with the systematic works mentioned above, many other papers focus on different aspects related to the syntax, the diachrony, the semantics, and the etymology of Vedic preverbs. For example, Kulikov (2012) investigates the (in)transitivizing potential of Vedic preverbs. Another series of papers, such as e.g. Renou (1956), Watkins (1964), Sathe (1993), and Pinault (1995), are concerned with their positional properties, occasionally also in the general framework of word order typology (e.g. Andersen 1979). Dunkel (1981a) and Klein (2003) concentrate on preverb iteration, whereas Klein (e.g. 1987, 2008, 2012) deals with the pragmatic function of verse-initial preverb repetition within the Vedic discourse.

Danesi (2013) investigates the grammaticalization of Vedic preverbs through the case study of ápa ‘away, forth, off’: in particular, she shows that preverb-verb constructions constitute a semantic unit, though both the preverb and the verb retain much of their syntactic independency from one another. Casaretto & Schneider (2014) is a more general study on the grammaticalization of Vedic local particles into adpositions and preverbs. An even broader view on the grammaticalization of postpositions and the rise of configurational syntax in Indo-Aryan is offered by Reinöhl (2016), whose results are summarized in Section 1.2.7.

A number of etymological studies on Vedic preverbs also appeared: a case in point is Dunkel (1982a; LIPP II, and references therein) that deals with the origin Vedic ā ‘to, unto, at’. Gonda (1968) investigates the relatedness of the different usages of the preverb/particle ápi ‘unto, close upon, on’/‘and, too, moreover, also’.

1.2. **The categorial status of preverbs in Vedic**

In Vedic, preverbs display a high degree of syntactic and functional ambiguity, hovering between the status of adverbs, preverbs, and even adpositions. Such an ambiguity leads Renou to express skepticism as to the possibility, and even usefulness, of disambiguating the function of preverbs in the Vedic sentence: “it [i.e. assigning a clear-cut categorial function to preverbs] is a superimposition of our minds facing a linguistic structure that is
virtually ambiguous (Renou 1956: 119, translation CZ)” (cf. Chapter 1, Section 2.3.2 on the non-existence of theoretically given linguistic categories). This ambiguity is further explored in the next subsections, both from the standpoint of syntactic placement (Sections 1.2.1, 1.2.3, 1.2.4), and from that of accentuation (Section 1.2.5). Furthermore, I briefly touch upon the issues of the interaction between Vedic meter and preverb placement (Section 1.2.6), and of the grammaticalization of Indo-Aryan postpositions (Section 1.2.7).

1.2.1. *The free positioning of Vedic preverbs*

Differently from Classical Sanskrit preverbs, which are univerbated to the modified verb, Vedic preverbs still exhibit a wide syntactic freedom, and are not always univerbated to verbal stems. In particular, Vedic preverbs allow for the following placements (extensively described, among many others, by Delbrück 1888: 44–46; Macdonell 1910; Renou 1935; Watkins 1963: 1037; Pinault 1995).

(a) **Tmesis position**: #PN(E)…V(…)#: preverb(s) is(are) displaced from the verb, which occurs in sentence final position, and fronted at the beginning of the clause (1). In case of multiple preverbs, one of them is sentence initial, whereas the other allows for various positions: it rarely occurs at the beginning of the clause together with the former preverb (#PP…V#); it frequently shows up immediately in front of the verb (#P…PV#); it occasionally occurs in front of the verb, but not immediately (#P…P…V#; cf. (2)).

(1)  

<table>
<thead>
<tr>
<th>pré</th>
<th>nū</th>
<th>mahitvām</th>
<th>vrṣabhāśya</th>
<th>vocam</th>
</tr>
</thead>
<tbody>
<tr>
<td>forward</td>
<td>now</td>
<td>greatness.ACC</td>
<td>bull.GEN</td>
<td>say. INJ.AOR.1SG</td>
</tr>
</tbody>
</table>

‘Now I proclaim the greatness of the bull [=Indra].’ (RV 1.59.6a)

---

3 “[…] qu’elle est une surérogation de notre esprit devant une structure linguistique qui était fondamentalement ambiguë.”

4 Watkins’ (1964) abbreviations follow: # = initial/endpoint of a sequence; P = preverb; N = noun; E = enclitic; V = verb (cf. Chapter 2, fn.7).

5 The text of the *Rg Veda* is the online version of the metrically restored text published by van Nooten & Holland (1994).
(2) **prá vām māhi dyāvī abhy úpastutim bharāmahe**

forward 2DU.DAT great.VOC.N sky.VOC.DU to praise.ACC bring.PRS.1PL.MID

‘Great (Earth,) Sky, we bring our praise forward to you two.’ (ṚV 4.56.5ab)

For multiple preverbs, Papke (2010: 84–85) provides the number of tokens and the percentages for each position described above (cf. Table 5 below).

(b) **Postverbal position: #N(E)...VP(…)#.** Preverb(s) occur(s) immediately or non-immediately after the verb that they modify (3). In case of multiple preverbs, only one of them usually occurs after the verb, whereas the other occurs immediately before it (#...PV(…)P...#; cf. (4)) or is separated from the verb by one or more words (#...P…V(…)P…#).

(3) **jáyema sāṇa yudhī spṛ̥dhaḥ**

conquer.OPT.1PL together battle.LOC enemy.ACC.PL

‘May we conquer our enemies completely in battle.’ (ṚV 1.8.3c)

(4) **utā śuṣṇasya dhṛṣṇuyā prá mṛkṣo abhī védanam**

and S.GEN bodily forward anoint.INJ.AOR.2SG to property.ACC

‘And you boldly grab the property of Śuṣṇa.’ (ṚV 4.30.13ab)

Again, Papke’s (2010: 85–89) dissertation gives the number of tokens and the percentages for each position involving at least one preverb in postverbal placement. As the following

---

6 Example (2) displays difficult nominal syntax and irregularities: in particular, *dyāvī* must be the only example of a form made from the stem *duy-*, according to the neuter declension.

7 The total number of Papke’s occurrences comprises 387 Vedic passages. Papke’s (2010) data are taken from a manual search through Grassmann’s *Wörterbuch zum Rig-Veda* (1936[1873]). This is possible, as Grassmann’s dictionary provides, for each Vedic verbal root, the catalogue of preverbs or multiple preverbs that can modify it. Thus, Papke’s data rely on Grassmann’s judgements as to whether a specific preverb has nominal or verbal orientation. However, this matter is very controversial, and has not been systematically faced until the series of papers by Hettrich and colleagues (cf. Section 1.1), as explained in Section 1.2.4. Therefore, Grassmann’s evaluations, though precious, must be taken with caution.
quantitative data show, the orders whereby both preverbs occur after the verb are extremely rare (each is < 1%) (cf. Table 5).

(c) Immediate preverbal position without actual univerbation: #N(E)…PV(…)#. The preverb (5) or preverbs (6) directly occur(s) in front of the verb that it(they) modifies(modify). The occurrence or lack of univerbation depends on various factors, including the type of clause (main vs. subordinate), and the type of verbal form (finite vs. non-finite) (cf. Section 1.2.5).

(5) \textit{indrasya nú vīryāṇi \textit{prá vocam}}

\begin{tabular}{ll}
Indra GEN & now manly deed ACC P tell INJ 1SG
\end{tabular}

‘Now I proclaim the manly deeds of Indra.’ (RV 1.32.1a)

(6) \textit{tuvā́ m \textit{abhí prá nonumo jétāram áparājitam}}

\begin{tabular}{llll}
2SG ACC & to forward roar INTENS PRS 1PL conqueror ACC unconquered ACC
\end{tabular}

‘We keep crying out to you, the unconquered conqueror.’ (RV 1.11.2cd)

As Papke (2010: 84) points out, the order in (6), with two immediately preverbal preverbs, is the most common one (153 occurrences out of 387 (40%)). Overall, the quantitative data provided by Papke (2010) show that multiple preverbs tend to occur in immediate or non-immediate preverbal position. By contrast, the postverbal position is usually selected by only one preverb, and only rarely by both of them.

Papke’s data are summarized in Table 5 and in Table 6. Each of them provides the reader with a different viewpoint on the same Vedic data: Table 5 focuses on preverbs’ proximity to the verb, whereas Table 6 on preverbs’ relative positioning with respect to the verb.
Table 5. The positioning of Vedic multiple preverbs ((i) relative proximity to the verb)

<table>
<thead>
<tr>
<th>POSITIONING OF PREVERBS</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Tmesis position</td>
<td></td>
</tr>
<tr>
<td>#PP...V#</td>
<td>172 (45%)</td>
</tr>
<tr>
<td>#P...PV#</td>
<td>7 (2%)</td>
</tr>
<tr>
<td>#P...P...V#</td>
<td>127 (33%)</td>
</tr>
<tr>
<td>(b) Postverbal position</td>
<td></td>
</tr>
<tr>
<td>...PVP...#</td>
<td>62 (15%)</td>
</tr>
<tr>
<td>...PV...P...#</td>
<td>21 (5%)</td>
</tr>
<tr>
<td>...P...VP...#</td>
<td>15 (4%)</td>
</tr>
<tr>
<td>...P...V...P...#</td>
<td>12 (3%)</td>
</tr>
<tr>
<td>...V...PP...#</td>
<td>11 (3%)</td>
</tr>
<tr>
<td>...VP...P...#</td>
<td>1 (&lt; 1%)</td>
</tr>
<tr>
<td>...VPP...#</td>
<td>1 (&lt; 1%)</td>
</tr>
<tr>
<td>(c) Immediate preverbal position</td>
<td></td>
</tr>
<tr>
<td>...PPV#</td>
<td>153 (40%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>387</td>
</tr>
</tbody>
</table>

Table 6. The positioning of Vedic multiple preverbs ((ii) relative positioning with respect to the verb) (adapted from Papke 2010: 84–89)

<table>
<thead>
<tr>
<th>POSITIONING OF PREVERBS</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both preverbs before the verb</td>
<td>325 (84%)</td>
</tr>
<tr>
<td>One preverb after the verb</td>
<td>59 (15%)</td>
</tr>
<tr>
<td>Both preverbs after the verb</td>
<td>3 (1%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>387</td>
</tr>
</tbody>
</table>

1.2.2. *Vedic verbal composites: syntactic or lexical units?*

In Vedic, preverb-verb combinations still seem to operate at the syntactic, rather than at the lexical level: verbal composition is a quite productive process within Vedic verbal system. As Whitney (1955[1879]: 395) highlights, in Vedic, every verbal root virtually combines with preverbs. Delbrück (1888: 433) provides a short catalogue of verbal roots that are never attested in combinations with preverbs.8

Moreover, as Danesi (2013: 62) points out, the free positioning of preverbs described in Section 1.2.1 has no effects on the whole meaning of the composite. The comparison between (1) and (5) is instructive in this respect: both examples contain the root √vac- ‘speak’ in combination with the preverb prā ‘forward, onward, forth, fore-’, resulting in the meaning ‘announce, proclaim’ (‘fore-tell, tell openly’ → ‘proclaim’). In both passages, the poet is telling, in a solemn way, about the heroic actions of god Indra. As Pinault (1995: 47, translation CZ) puts it, “[…] the semantic modification undergone by the verb as the result of the combination with a preverb does not depend on the immediate proximity of the preverb and the verb” (cf. also Romagno’s 2004: 68 remark, Chapter 2, Section 1.2). Thus, semantic shifts to the metaphorical plane do not require univerbation. In parallel, univerbation does not imply either semantic shift from the basic spatial meaning or lexicalization, as shown in (7):

(7) ápāhan [ápa-ahan] vytrám paridhíṃ nadínām
    away-strike.AOR.3SG V.ACC encloser.ACC river.GEN.PL
    ‘He has smashed away Vṛtra, the encloser of the rivers.’ (ṚV 3.33.6b)

In (7), the preverb ápa ‘away, forth, off’ and the verb ahan (AOR.3SG) ‘has striken’ are univerbated in initial position. Nevertheless, they do not make up a non-compositional composite: the semantic contributions brought about by both elements are still recognizable. Accordingly, Casaretto & Schneider (2014: 232) call combinations of this type ‘syntactic compounds’, as they are still analyzable and do not result in a new lexical entry.10

The evidence provided so far suggests that Vedic composites are better analyzed as syntactic units, rather than as lexical units. By contrast, however, there are also composites whose meanings are non-compositional (i.e. idiomatic; cf. Chapter 2 on terminology). Non-

9 “[…] la modification sémantique du verbe par le préverbe ne dépend pas de la proximitée immédiate du préverbe et du verbe.”

compositionality points toward lexicalization and irregular semantic shifts that blur connection with the base verb. One such composite is shown in (8):

(8) yādī stutāṣya maruto adhīthā [adhi-ithā]
if praise.Gen M.Voc.Pl above-go.Prs.2Pl
‘If you, O Maruts, are aware of the praise…’ (RV 7.56.15a)

In (8), the combination of adhi- ‘above, over, on, onto’ and ithā (go:Prs.2Pl) ‘go’ results in the unpredictable meaning of being aware. Lexicalized composites of this kind are by no means infrequent in Vedic (cf. Sturm 2014).

Alongside with the lexicalization, the incipient grammaticalization undergone by a number of Vedic preverbs also indicates closeness to the verb. A number of Vedic preverbs, such as prá ‘forward, onward, forth, fore-’ and sām ‘along, with, together’, can modify lexical aspect, bringing about notions such as those of ingressivity or completion (Renou 1935; Gonda 1962; Danesi 2009; Casaretto & Schneider 2014: 246 ff.). In particular, prá occasionally develops ingressive meanings (Delbrück 1888: 460; Renou 1935: 144; Gonda 1962: 232–241): in (9), the composite prá-√i- means ‘begin, start’, whereas the simplex verb √i- means ‘go’ (prá ‘forward, onward’ > ‘at the beginning of’).

(9) pra-yatī yajñē asmīn
forward-go.PtCP.Prs.Loc sacrifice.Loc this.Loc
‘…during this sacrifice which begins.’ (RV 3.29.16a)

---

11 The fact that the composite exhibits an unpredictable meaning does not imply that the semantic shift undergone by adhi-√i- ‘above-go’ → ‘be aware’ cannot be retrospectively explained. The composite might describe the metaphorical movement of a metaphorical TR, i.e. Maruts’ mind, toward a metaphorical LM, i.e. the praise. It is not infrequent that preverbs having the basic spatial meaning of ‘over, above’ come to introduce the semantic role of Area (cf. Gr. hupér ‘over’; Engl. over; Germ. über).

12 On this passage, see also Delbrück (1888: 461), and Danesi (2013: 66).
Instead, *sáṃ* ‘with, together’ often expresses completion, even displaced from the verb with which it combines (Gonda 1962: 225 ff.). This actional meaning is based on the common semantic shift according to which *COMPLETION* can be thought of as *TOGETHERNESS* (Gonda 1962: 225 defines these as “two realizations of the same basic meaning”). In (10), the composite *sáṃ-√dah-* means ‘consume by fire’, whereas *dah-* per se means ‘burn’; the completive meaning of *sáṃ* is further emphasized by the indefinite *vīśvaṃ*:ACC ‘every’.13

(10)  
\[vīśvaṃ \ sáṃ \ atrīṇaṃ \ daha\]  
every.ACC with \ demon.ACC \ burn.IMP.2SG  
‘Burn completely every demon.’(RV 1.36.14b)

Moreover, Vedic preverbs can sometimes behave as applicatives: the addition of preverbs has sometimes the side-effect of centralizing the peripheral argument(s) taken by a verb.14 A case in point is the transitive composite *abhi-√vr̥t* ‘roll against > overcome’ (11), which contains the preverb *ábhi* ‘to, unto, against’, and the intransitive manner of motion verb *√vr̥t-* ‘roll’.15

(11)  
\[abhi-vṛtya \ sapātnān \ abhí \ yā \ no \ ārātayah\]  
to-roll.ABS rival.ACC.PL to \ REL.ACC.PL \ 1PL.GEN evil_spirit.ACC.PL

---

13 As remembered in Section 1.1, Delbrück (1897) assigns more of a perfectivizing function (i.e. pertaining grammatical aspect) to Vedic preverbs. Gonda (1962: 229) firmly opposes to Delbrück’s view, and remarks that “‘Perfektivierung’ is a question of semantics and lexicology.” Such a confusion between lexical and grammatical aspect has long characterized the discussions on preverbs and perfectivization/telicization (e.g. in Ernout & Thomas 1964; Brunel 1939; for similar remarks, see Chapter 1, as references therein).

14 Applicatives are “a means some languages have for structuring clauses which allow the coding of a thematically peripheral argument or adjunct as a core-object argument. Such constructions are signaled by overt verbal morphology” (Peterson 2007: 1; cf. Chapter 2).

15 Example (11) also contains *abhí* ‘to’ in absolute position (on this usage of Vedic preverbs, see Section 1.2.3). Moreover, in this context, this free-standing preverb seems to have the function of anaphorically recalling the just mentioned spatial relation (on the pragmatic functions of preverbs, cf. Chapter 2).
‘Having overcome the rivals and (having overcome those) who (are) our enemies…’
(ṚV 10.174.2ab)

As pointed out by Danesi (2013: 67) and Casaretto & Schneider (2014: 244 ff.), transitivity is the consequence of the semantic contribution brought about by the preverb abhī ‘to, toward, over’, which centralized the Goal-participant, thus building a transitive composite out of an intransitive manner of motion verb (for further remarks on this issue, cf. Section 5.3).

1.2.3. Vedic preverbs with adnominal, adverbial, and absolute positions

Besides modifying a verb, a number of Vedic preverbs can also function as noun modifiers, i.e. as quasi-adpositions.16 As pointed out e.g. by Whitney (1955[1879]: 414) and Casaretto & Schneider (2014), no Vedic preverb seems to function as an adposition proper, in that no preverb combines the following features: (i.) ability of determining the case of the noun to which it is juxtaposed; (ii.) syntactic obligatoriness; (iii.) compulsory adjacency to the noun that it modifies (on the criteria for detecting prepositional phrases, cf. also e.g. Hagège 2010; Luraghi 2010). Nevertheless, many Vedic preverbs occur in constructions that show one of the features just outlined (Casaretto & Schneider 2014: 233 ff.).

As nominal modifiers, preverbs can occur both before (12) and after (13) the modified noun (Casaretto & Schneider 2014: 241), though the prenominal position is usual for Vedic preverbs with nominal orientation (Reinöhl 2016: 75, who summarizes results obtained by Hettrich and his research group).

(12) dvimātā hótā vidātheṣu samrāḥ
    born_of_two_mothers.NOM hotar.NOM worship.LOC.PL sovereign.king.NOM

16 As pointed out in Chapter 2 and in Section 1.1, for this reason, Vedic preverbs are often called ‘prepositions’ in reference works: ‘prepositional prefixes’ (Whitney 1955[1879]: 396); ‘prepositions compounded with roots’ (Macdonell 1916: 265); die Präpositionen in Verbindung mit Verben ‘prepositions in connection with verbs’ (Delbrück 1888: 440).
ánu ágraṃ cārati kṣéti budhnāḥ
along top.ACC go.PRS.3SG remains.PRS.3SG bottom.NOM

‘The hotar (priest, or the sacrificial flame), born of two mothers, is the sovereign king during the worships; he goes to the top, the bottom remains (still).’

(ṚV 3.55.7ab)

(13) svastí pánthāṃ ánu carema sūryācandramásāv iva
happily path.ACC along walk.OPT.PRS.1PL sun_and_moon.NOM.DU like

‘Happily we may walk along (our) path like the sun and the moon.’ (ṚV 5.51.15ab)

In (12), the preverb ánu ‘after, along, toward’ precedes the noun in the accusative case ágraṃ ‘top’. The combination of ánu+ACC expresses Goal. In (13), instead, the postposed ánu ‘after, along, toward’ contributes to the expression of Path together with the accusative of extension pánthāṃ ‘path’. Both the accusative of Goal and the accusative of Path can also occur adpositionless. However, without the further specification of a preposition, the usual reading for an adpositionless accusative is that of Goal. Thus, in order to express the Path, the adpositionless accusative can be regarded as an exception to the far more frequent construction involving an adposition, such as ánu ‘after, along, toward’ (Hettrich 2007; Casaretto 2011a: 39–40; Casaretto & Schneider 2014: 235).

In other passages, the presence of an adposition is not syntactically compulsory, but adds the specification of the spatial region to the generic directional meaning of an adpositionless case. This is the case in (14) below, in which ádhi ‘above, over, on, onto’ clarifies that the direction of movement is ‘onto’, rather than simply ‘to’ (Casaretto & Schneider 2014: 226; for similar considerations, cf. also Boley 2004).

(14) tíṣṭhā rátham ádhi tām
stand.IMP.2SG chariot.ACC above DEM.ACC

‘Mount that chariot!’ (ṚV 5.33.3c)

Without an accompanying noun phrase, Vedic preverbs can also behave as adverbs. Adverbial is the function of úpa ‘to, unto, toward’ in (15):
(15) tā́ ni narā jujusānā úpa yātām
DEM. NOM. PL hero. VOC. PL enjoy. PTCP. PRF. VOC. PL MID toward drive. IMP. 2 PL

‘Having enjoyed those [praises], o heroes, drive hither!’ (ṚV 2.39.8c)

The syntactic freedom of Vedic preverbs is also shown by their usage in what is generally called absolute position, i.e. as ‘substitutes’ of verbal forms. ‘Omitted’ verbal forms can be recovered either from the previous linguistic material (16) or from the extralinguistic context (17).

(16) saptā svāsāro abhī māṭāraḥ śīṣum
seven sister. NOM. PL to mother. NOM. PL babe. ACC

‘The seven sisters (rush) as mothers to the babe.’ (ṚV 9.86.36a)

(17) prá te nāvaṁ nā sāmane vacasyuvam
forward 2 SG. DAT ship. ACC like assembly. LOC eloquent. ACC

‘In the assembly, I (set in motion my chant) forward to you as an eloquent ship.’
(ṚV 2.16.7a)

For the passage in (16), Renou (1935: 60) assumes the verbal form arṣanti:PRS.3PL ‘flow’ (from √ṛṣ- flow’), which can be recovered from the preceding stanza. Instead, for (17), the implied verbal form cannot be retrieved so easily: a possibility is iyarmi:PRS.1SG (from √ṛ- ‘go, move, set in motion’), as suggested by Renou (1935: 61) based on similar formulaic expressions occurring elsewhere in the hymns.

According to Danesi (2013: 65), the absolute usages just outlined tell, on the one hand, that there is a high degree of syntactic autonomy holding between preverbs and verbs; on the other hand, that certain preverb-verb combinations must be stored as single units in speakers’ mental lexicon: otherwise, the recovery of the missing verbal form would have been impossible. In my opinion, Danesi’s latter suggestion is not completely convincing. All in all, it takes for granted the compulsory presence of a verbal form in every context. Moreover, for passages such as (16) above, mental storage is an unnecessary assumption, as the missing verbal form shows up in the immediate previous material, and

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anaphoric reference is thus easy to draw. Then, for cases such as (17), the assumed motion verb could be easily replaced by another generic motion verb, thus making it difficult to argue for lexical storage.\textsuperscript{17}

1.2.4. \textit{The ambiguous status of Vedic preverbs}

In Sections 1.2.1–1.2.3, I have shown that Vedic preverbs still exhibit (a) a high degree of syntactic freedom as to their positioning; (b) no binding syntactic relations with any other element within the sentence. For these reasons, Vedic preverbs frequently represent functionally ambiguous elements, whose nominal or verbal orientation is difficult to determine. An instructive passage in this respect is provided in (18):

(18) \texttt{síndhor úrmā́v ádhi śritāḥ}
\hspace{1em} river.GEN wave.LOC above lean.PTCP.PST.NOM.PASS
\hspace{1em} ‘(the wise one) leaning on the wave of the river’ (\textit{RV} 9.14.1b)

As Hettrich et al. (2004: 20) explain, one cannot decide whether, in (18), \textit{ádhi} ‘above, over, on, on to’ is constructed with the preceding noun (\textit{úrmā́v:LOC} ‘wave’) or with the following verb (\textit{śritāḥ:PTCP.PST.NOM.PASS} ‘leaning’).

\textsuperscript{17} In order to clarify my position on the matter, it can be useful to provide an example from a contemporary language, such as Russian (example (i) comes from the \textit{Spoken Corpus} of the \textit{Russian National Corpus} (Aleksej Popogrebskij. \textit{Prostye veši}, k/f [2006]), see http://www.ruscorpora.ru/en/.

(i) a. “\textit{Ty kuda?}” (Vasin, Ivan Švedov, Muž, 37, 1969)
\hspace{1em} 2SG.NOM to\_where

b. “\textit{V metro}” [Sergej, Sergej Puskepalis, Muž, 40, 1966]
\hspace{1em} into metro.ACC

“‘Where (are) you (going)?’ ‘To the subway.’”

In spoken Russian, in many contexts such as that in (i), the overt expression of motion via a motion verb is unnecessary. In (i.a), the interrogative adverb \textit{kuda} unambiguously expresses Goal, as does the prepositional phrase \textit{v+ACC} in (i.b). Further specifications of motion are not required.
Though examples such as (18) are frequent in Vedic, and thus it can be very difficult, or even pointless, to assign Vedic preverbs a clear-cut functional category (Renou 1956), attempts have been made in this direction, in particular by Hettrich, Casaretto, and Schneider. In a series of papers, Hettrich and colleagues try to complete such a difficult classificatory task, based on the following assumptions (Hettrich et al. 2004: 20):

(i) clause-initial position is the marked option for verbal orientation (cf. (1), (2));
(ii) immediate preverbal position is the unmarked option for verbal orientation (cf. (5), (6));
(iii) adjacent placement to a noun, either pre- or post-nominal, indicates nominal orientation (cf. (12)–(14));

The orientations and possible positions of Vedic preverbs are summarized in Table 7. Positions from 2a to 4 indicate verbal orientation, with different degrees of markedness. Hettrich and colleagues regard as ambiguous positions 5a-c even in contexts where, from a semantic standpoint, preverbs clearly display verbal or nominal orientation.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Orientation</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>nominal</td>
<td>immediate prenominal</td>
</tr>
<tr>
<td>1b</td>
<td>nominal</td>
<td>immediate postnominal</td>
</tr>
<tr>
<td>2a</td>
<td>verbal</td>
<td>immediate preverbal, univerbated</td>
</tr>
<tr>
<td>2b</td>
<td>verbal</td>
<td>immediate postverbal</td>
</tr>
<tr>
<td>3</td>
<td>verbal</td>
<td>clause-initial (tmesis #P(E)...V#)</td>
</tr>
<tr>
<td>4</td>
<td>verbal</td>
<td>other position within the sentence</td>
</tr>
<tr>
<td>5a</td>
<td>ambiguous</td>
<td>NP_preverb_V</td>
</tr>
<tr>
<td>5b</td>
<td>ambiguous</td>
<td>preverb_NP...V</td>
</tr>
<tr>
<td>5c</td>
<td>ambiguous</td>
<td>V_preverb_NP</td>
</tr>
</tbody>
</table>

The results of the analysis performed by Hettrich and colleagues are summarized in Table 8. Overall, the verbal orientation prevails over the nominal orientation in Vedic. The preverbs showing a strong preference for the verbal orientation are highlighted in gray (i.e. ápa, áva, úd, nī, nīs, párā, purás, prá, sām, vī).
Table 8. The positions and orientations of Vedic preverbs.

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Position</th>
<th>Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1a</td>
<td>1b</td>
</tr>
<tr>
<td>ácha</td>
<td>25</td>
<td>57</td>
</tr>
<tr>
<td>áni</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td>ánu</td>
<td>165</td>
<td>83</td>
</tr>
<tr>
<td>āpa</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>āpa</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>áhá</td>
<td>165</td>
<td>70</td>
</tr>
<tr>
<td>áva</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>úd</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>úpa</td>
<td>98</td>
<td>34</td>
</tr>
<tr>
<td>tīrās</td>
<td>33</td>
<td>5</td>
</tr>
<tr>
<td>ni</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>nis</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>pārā</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>parās</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>purās</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>pūrā</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>prā</td>
<td>54</td>
<td>14</td>
</tr>
<tr>
<td>prāti</td>
<td>52</td>
<td>9</td>
</tr>
<tr>
<td>sám</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>vi</td>
<td>15</td>
<td>5</td>
</tr>
</tbody>
</table>

The data of Table 8 are taken from Casaretto (2010a, 2010b, 2011a, 2011b, 2011c, 2011d, 2012, 2013), Hettrich et al. (2009, 2010a, 2010b, 2011a, 2011b, 2011c, 2013a, 2013b, 2013c). The data on áhá however are not included in the table, as they are not published yet (all Rg-vedic occurrences of áhá are published in late publications). Thus, I also did not include those in Table 8. The data related to áhá, ávā, and purā are published (Hettrich 1991, 1993, 2002), but not analyzed according to the categories described in Table 7 and employed in later publications.
1.2.5. The accentual properties of Vedic preverbs

As Vedic grammars point out (e.g. Macdonell 1910: 76 ff.; Whitney 1955[1879]: 28 ff.), Vedic has a pitch accent of musical nature. Moreover, as a basic rule, every word bears its own accent. This rule however admits a number of exceptions: there are words that never take an accent (i.e. enclitic pronouns and particles including =ca ‘and’, =u ‘on the other hand’, iva ‘like’, etc.), as well as words that lose their accent under certain syntactic conditions. Both Vedic verbs and Vedic preverbs belong to the latter group; their accentual properties can vary and are interrelated, as explained in what follows.

Vedic verbs bear no accent in main clauses, except when the verb occurs in sentence- or pāda-initial position. By contrast, verbs are accented in subordinate clauses (Macdonell 1910: 107 ff.). Accordingly, in main clauses, whatever their positioning, preverbs usually behave as independent words and bear an independent accent, while the verbal form is unaccented. By contrast, in subordinate clauses, preverbs tend to lean onto the verbs that they modify, which are accented, and to make up actual composites with them. As far as multiple preverbs are concerned, they usually also instantiate the pattern outlined above and schematized below:

(a) main clauses: verb → unaccented; preverb(s) → accented (19);
(b) subordinate clauses: verb → accented; preverb(s) → unaccented (20).

(19) yunājmi te brāhmaṇā keśinā
    yoke.PRS.1SG 2SG.ACC prayer.INS hairy.INS
    hārī ápa prá yāhi
    fawn-coloured.ACC.DU toward forward proceed.IMP.2SG

‘With holy prayer, I yoke your long-maned pair of Bays: drive toward (them).’
(R̥V 1.82.6ab)

(20) yūyāṃ hi devīr ṭayūgbhir āśvaiḥ
    2PL.NOM for goddess.VOC.PL properly_harnessed.INS.PL horse.INS.PL

18 A pāda, or foot, is the minimal unit of the Vedic meter (see 1.2.6).
pari-prá-yāthá  bhúvanāni  sadyāḥ
around-forward-proceed.PRS.2PL  being.ACC.PL  on_the_same_day

‘For you, o goddesses, with your steeds yoked in due time, proceed around the living beings in one day’. (RV 4.51.5ab)

In (19), the preverbs úpa ‘to, unto, toward’ and prá ‘forward, onward, forth, fore-’ precede the verb that they modify, i.e. the unaccented yāhi ‘drive, go, proceed’. Despite their position, they retain their accent, and are not compounded with the verb. In (20), instead, the subordinate clause introduced by hí ‘for, because’ contains the accented verbal form yāthá ‘(you) drive, go, proceed’, onto which the preverbs pari- ‘round about, around’ and pra- ‘forward, onward, forth, fore-’ attach.

There are exceptions to the tendency outlined in (a) for main clauses. When the preverb ā ‘to’ modifies a verb together with a further preverb occurring in exterior position (#EP ā V#), the EP (here upa-) loses its accent, and undergoes univerbation with ā:

(21) imáṃ  yajñám  idáṃ  váco  jujusānā
DEM.ACC.M.SG sacrifice.ACC  DEM.ACC.N.SG speech.ACC enjoy.PTCP.PRF.NOM.MID
upágahi
come_near.IMP.2SG

‘Enjoying this sacrifice and this praise, (O Soma,) come near, (and stay close to make us prosper).’ (RV 1.91.10ab)

However, when the EP ends with -i (#EP[-i] ā V#), the univerbation shown in (21) does not occur, as exemplified in (22):

(22) úd  agne  tiṣṭha  práti  ā  tanuṣva  ní
up  A.VOC  stand.IMP.2SG  against to  extend.IMP.2SG  down
amitrāṃ  oṣatāt  tigma-hete
enemy.ACC  burn.IMP.2SG  sharp-weapons.VOC
'Rise up, O Agni! Stretch out against (the enemy)! Burn down the foes, O (god) with the sharp weapons!' (RV 4.4.4ab)

In a single passage, the combination of úpa ‘to, unto, toward’ and áva ‘down, off’ behaves as a combination containing á ‘to, unto, at’, in that úpa loses its accent, and is univerbated to the following áva (upāvasṛja:IMP.2SG, RV 10.110.10a).

As for verbs occurring in subordinate clauses, besides featuring the usual order shown in (20), they also allow for the displacement of the EP (sám ‘along, with, together’ in (23)), which is separated from the remaining composite IP-V, and retains its accent:¹⁹

(23) só agnīr yó vāsūr gr̥ṇé sāṃ yám

DEM.NOM A.NOM REL.NOM V.NOM call.STAT.3SG with REL.ACC

āyánti dhenávaḥ
come.PRS.3PL milk_cow.NOM.PL

‘He is Agni, who is praised as the Vasu, to whom the milk-cows come together.’

(RV 5.6.2ab)

However, separations such as that in (23) are by no means frequent, and in any case never go further than one pāda (Renou 1935: 51; Danesi 2013).²⁰ In addition, when separation occurs, the linguistic element splitting the composite frequently happens to be the subordinator (e.g. RV 5.56.4; 8.6.8; etc.). Furthermore, in cases of multiple preverbs, the word order whereby both preverbs occur separated from the verb and accented is extremely rare in subordinate clauses. One such rare example is provided in (24):

(24) prá yát stotā jaritā tūrṇyartho

forward when praising.NOM invoker.NOM pursuing_an_object.NOM

¹⁹ For the composite sám á śi- ‘come together’, the order [EP IP V] is also attested in main clauses (RV 7.40.70; 10.85.33).

²⁰ Cf. fn. 18.
vrṣāyāmāṇa

eager_as_a_bull.PTCP.PRS.NOM to song.INS.PL implore.PRS.3SG.MID

‘…what time the praising invoker, keen of purpose and eager as a bull, with songs implores you.’ (ṚV 3.52.5cd)

Preverb(s) is(are) usually univerbated in negative clauses, as well as with non-finite verbal forms. In case of multiple preverbs, however, the EP can be displaced, thus keeping its own accent (#P…P-V[non-finite]#, cf. ṚV 5.1.1cd; 7.104.21ab). Rarely, both preverbs are either separated from the verb (#P…P…V[non-finite]#, cf. ṚV 10.70.9cd), or separated and univerbated to one another (#P-P…V[non-finite]#, cf. ṚV 10.70.9cd).

To sum up, in main clauses, the accentual properties of preverbs strongly suggest that they retain much of their original adverbial status. This also holds true for other types of clauses, though to a lesser extent. In subordinate and negative clauses, as well as with non-finite verbal forms, preverbs are usually unaccented and univerbated, and only occasionally occur displaced from the verb that they modify.

1.2.6. *Stylistic and metrical reasons for preverb placement*

In Sections 1.2.1–1.2.5, I explained that the constraints driving the placement of preverbs are mainly syntactic in nature. We have also seen that the development of non-compositional meanings is not necessarily linked to the univerba tion of the composite. In this section, I briefly tackle the issue as to what extent the positioning of preverbs can be influenced by the stylistic and metrical features of the Vedic hymns.

The Ṛg-Veda consists of poetic texts composed in metrical structure, and organized in books, hymns, stanzas, and verses (cf. Introduction). Their basic unit is the pāda ‘foot’, that is, each verse, or line, that constitutes a stanza.21 Such verses are formed by five (rarely), eight, eleven, or twelve syllables. The more or less regular alternations of long and short syllables constitute the Vedic meter. Even syllables (second, fourth, etc.) are generally

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21 The Vedic ‘foot’ is not the same metrical unit as the Ancient Greek ‘foot’.
long, and the general look of the Vedic meter is iambic. The last part of the Vedic verses, called ‘cadence’, is clearly separated from the rest. Verses of eleven and twelve syllables are also split by a further metrical pause after the fourth or fifth syllable (Macdonell 1916: 436 ff.). The most common Vedic stanzas are formed by three or four dimeter (eight syllables) or trimeter (eleven/twelve syllables verses).

Does this metrical structure influence the placement of preverbs? A general answer is that the position of preverbs does not seem to depend on the meter (Papke 2010: 98 ff.). Monosyllabic preverbs can virtually occur in any position that allows for their quantity. In addition, the sandhi rules of Vedic can lengthen a short final syllable of a disyllabic preverb, if required by the metrical structure (cf. Section 3.1).

The displacement of preverbs seems to be more a matter of style and poetic diction. As Renou (1935: 52–53) points out, for example, preverbs are very likely to be fronted in invocations or prayers, thus gaining the pragmatic function of emphasizing the initial impetus. This is the case of examples (1) and (2) above, both starting with the preverb prā ‘forward, onward, forth, fore-’. In addition, the pragmatic value of preverb repetition in initial position has been investigated by Dunkel (1979) and Klein (e.g. 1987, 2007, 2008, 2012), who describe this anaphora as a kind of cohesive process of human language.

In any case, the displacement of preverbs usually leads them in clause-initial (or pāda-initial) position, which is the position in which preverbs in general also tend to occur. Thus, the possibilities of displacement remain within the boundaries of Vedic grammar.

1.2.7. The ongoing grammaticalization of Vedic adpositions

As remarked in Section 1.2.3, in Vedic, there are no binding syntactic relations between adpositions and the noun phrases that they modify (e.g. Hewson & Bubenik 2006: 102: ff.; Casaretto & Schneider 2014; Reinöhl 2016: 65–84, and references therein). Further indications in this respect are provided in what follows.

To begin with, adpositions are non-obligatory to express many spatial and non-spatial concepts. In parallel, Vedic morphological cases preserve their concrete values better than most other ancient Indo-European languages (Macdonell 1916: 298 ff.; Hewson
& Bubenik 2006: 102 ff.; Hettrich 2007; Casaretto & Schneider 2014, and references therein). As mentioned in Section 1.2.3, the prepositionless accusative can express Goal (frequently, e.g. RV 1.162.21), Path (rarely, e.g. RV 2.16.3), and Duration (rarely, e.g. RV 10.161.4). The instrumental case is also employed to express Path (e.g. RV 2.33.1) and Duration (e.g. RV 1.86.6), besides Comitative and Instrument. The ablative can mean separation or distance based on the semantics of the verb that takes it (dynamic or stative, cf. Hettrich 2007: C.a.IV, 2; e.g. RV 2.33.1). The locative case indicates Location (e.g. RV 1.32.2), Goal (cf. below), and Time (e.g. RV 10.53.3).

Frequently, the function of the adposition is only to specify the spatial region in which a certain event occurs (cf. example (14) above, in which the preverb ádhi ‘on’ clarifies that the motion is directed ‘onto’ a certain LM, and not simply ‘to’ it). In such examples, the preverb is syntactically unnecessary, though it provides a clear semantic contribution. By contrast, this is not the case for the following passage, in which the semantic contribution of úpa ‘toward’ is unclear, as its allative semantics overlaps with the allative semantics of the accusative case (índram).

(25) gíro ma índram úpa yanti
praise.NOM.PL POSS.1SG I.ACC toward go.PRS.3PL
‘My praises go toward Indra.’ (RV 3.51.2b)

There are only a few contexts in which the lack of a preverb totally changes the meaning of the sentence. A case in point follows:

(26) imé jīvā́ ví mṛtair āvāytran
DEM.NOM.PL living.NOM.PL asunder dead.INS.PL hither_turn.AOR.3PL.MID
‘These living ones have separated themselves from the dead ones.’
(RV 10.18.3a)22

---

22 The verbal form āvāytran is difficult and certainly irregular; it can either be a reduplicated aorist or a pluperfect.
In combination with ví ‘asunder’, the instrumental case indicates separation, whereas the adpositionless instrumental would express a Comitative meaning. Instead, the adpositionless case employed to convey a similar meaning of separation would be the ablative (Casaretto & Schneider 2014: 240), as shown in example (27):

(27) mā́ naḥ sū́ ryasya saṇḍ[śo] yuyothāḥ
    NEG 1PL.ACC sun.GEN sight.ABL keep_away.SBJ.VPRS.2SG.MID

‘Don’t keep us away from the sight of the sun!’ (ṚV 2.33.1b)

Overall, the few Vedic preverbs that preferably select the nominal orientation (e.g. ánu ‘along, after’, tirás ‘over, through’, parás ‘off’; cf. Table 8) tend to occur in prenominal position, though postnominal placement is by no means infrequent (cf. Sections 1.2.3 and 1.2.4). Despite this tendency to prenominal placement in Vedic, Indo-Aryan languages later on developed fully grammaticalized postpositions, rather than prepositions. These postpositions, however, do not continue the ancient Vedic preverbs, but go back to different etymological sources: cf. e.g. Hindi mē ‘in’ < Ved. mā́dhye:LOC ‘in the middle’ (Casaretto & Schneider 2014: 254; Reinöhl 2016: 65–84, and references therein). Thus, Indo-Aryan does not fit the general Indo-European pattern of development, whereby original free-standing locative adverbs undergo a functional bifurcation into preverbs or adpositions (contra Hewson & Bubenik 2006: 102 ff.). The reasons why in Vedic local adverbs do not develop into adpositions is explained by Reinöhl (2016: 80 ff.) in terms of a mismatch between the prosody and the semantics of local adverbs. In Vedic, even noun-oriented local adverbs could encliticize onto verbal forms because of Vedic prosodic rules (cf. Section 1.2.5). Such a mismatch between functional and prosodic affiliation arguably blocked the grammaticalization of Vedic local adverbs into proper adpositions.
2. Multiple preverbs in numbers

2.1. Composites with multiple preverbs

Table 9 contains Vedic multiple preverb composites. In order to identify such composites, I used Grassmann’s dictionary (1936[1873]) as a starting point (cf. fn. 7). Then, I exclusively selected those combinations of multiple preverbs-verbs that at least once attest to both preverbs in preverbal position (#P_P_V#). This methodology is based on Hettrich et al.’s (2004: 20) remark, according to which direct preverbal position is the unmarked option for local adverbs with verbal orientation (cf. Section 1.2.4). This selection process resulted in 116 composites occurring in 186 R̥g-Vedic passages. Thus, my criteria are stricter than Papke’s (2010), who individuated as many as 387 composites (cf. fn. 7).

<table>
<thead>
<tr>
<th>COMPOSITE</th>
<th>MEANING</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>abhí prá √arc-</td>
<td>sing loudly of</td>
<td>1</td>
</tr>
<tr>
<td>áchā párā √i-</td>
<td>go away toward</td>
<td>1</td>
</tr>
<tr>
<td>ánu áva √i-</td>
<td>go down after, follow</td>
<td>1</td>
</tr>
<tr>
<td>ánu párā √i-</td>
<td>go away after</td>
<td>1</td>
</tr>
<tr>
<td>ánu prá √i-</td>
<td>go after, follow</td>
<td>1</td>
</tr>
<tr>
<td>ápa párā √i-</td>
<td>go off</td>
<td>1</td>
</tr>
<tr>
<td>abhí prá √i-</td>
<td>go near to, approach</td>
<td>3</td>
</tr>
<tr>
<td>abhí sám √i-</td>
<td>approach together, come together at</td>
<td>2</td>
</tr>
<tr>
<td>abhí ví √i-</td>
<td>come toward from different parts</td>
<td>1</td>
</tr>
<tr>
<td>abhí ā́ √i-</td>
<td>come to, approach</td>
<td>1</td>
</tr>
<tr>
<td>ā́ áva √i-</td>
<td>rush down upon</td>
<td>1</td>
</tr>
<tr>
<td>ā́ nís √i-</td>
<td>go off, depart</td>
<td>1</td>
</tr>
<tr>
<td>úpa prá √i-</td>
<td>march on, go toward</td>
<td>9</td>
</tr>
<tr>
<td>nís ā́ √i-</td>
<td>go off, depart</td>
<td>3</td>
</tr>
<tr>
<td>páři ā́ √i-</td>
<td>circulate</td>
<td>1</td>
</tr>
<tr>
<td>párí prá √i-</td>
<td>run through on all sides</td>
<td>1</td>
</tr>
<tr>
<td>práti úd √i-</td>
<td>rise and go toward</td>
<td>1</td>
</tr>
<tr>
<td>sám ā́ √i-</td>
<td>come together, approach together, meet at/in/with</td>
<td>2</td>
</tr>
<tr>
<td>ví párā √i-</td>
<td>go back again</td>
<td>1</td>
</tr>
<tr>
<td>ví prá √i-</td>
<td>go forth in different directions, disperse, spread out</td>
<td>1</td>
</tr>
<tr>
<td>ní ā́ √ir-</td>
<td>set someone down</td>
<td>5</td>
</tr>
<tr>
<td>sám ā́ √ir-</td>
<td>put together, create</td>
<td>1</td>
</tr>
<tr>
<td>sám prá √ir-</td>
<td>come forth together</td>
<td>1</td>
</tr>
<tr>
<td>ní ā́ √kr-</td>
<td>hold back</td>
<td>1</td>
</tr>
<tr>
<td>sám ā́ √kr-</td>
<td>bring together, gather, prepare</td>
<td>3</td>
</tr>
<tr>
<td>ví ā́ √kr-</td>
<td>undo, sever, divide, separate from</td>
<td>1</td>
</tr>
<tr>
<td>adhí ví √kṣar-</td>
<td>pour out, flow out</td>
<td>1</td>
</tr>
<tr>
<td>abhí prá √gāh-</td>
<td>dig into, penetrate</td>
<td>1</td>
</tr>
</tbody>
</table>
áva ā √gam- undertake, begin 1
ádhi sám √gam- go up to, approach together 1
úpa ā √gam- come near, come to 2
abhí ā √gā- approach, come to 1
úpa prá √gā- step near to, proceed to 3
abhí prá √gā- (√gai-) encourage to start singing about, begin to praise 5
abhí prá √cakṣ- see 1
ánu sám √car- walk alongside, visit, seek after 2
abhí ā√car- come up, approach 1
abhí úd √car- rise over 1
abhí sám √car- go together to, seek for 5
úd ā√car- rise out of 1
úpa ā√car- come near to, attend upon 2
úpa prá √jinv- please or gratify in approaching 1
ánu prá √jñā- trace, discover 1
áti nís √tan- penetrate with rays 1
práti √tan- extend in the direction of, shine upon/against 1
abhí prá √tap- torment, pain 1
abhí ś√tr̥̄ come up to 1
ádhi sám √dhā take away from above 1
abhí ā√dhā aim at (in hostile manner) 1
ānī s√duh- create out of 1
abhí prá √dā- put forth by bursting or opening 1
ā prá √dru- run forth here 1
pāri prá √dhāv- flow forth around 1
adhí sám √dhā store up 1
abhí ni √dhā- deposit for 1
abhí sám √dhā compose the mind at 1
antār ā√dhā- receive into, contain 1
ánu ā√nū- sound here through 1
abhí prá √nū- praise highly to 6
abhí sám √nū- rejoice together at 5
úpa ni √pad- lie down beside 1
ánu ā√phan- jump 1
antār vī√bhā- shine in different directions between 1
ánu prá √bhā- spread over 2
abhí prá √bhū- assist, help 1
abhí sám √bhū- enter, reach, come to 1
ánu prá √bhūṣ- serve 1
abhí prá √bhr̥- bring forth to, offer to 1
pāri ā√bhr̥- carry near, fetch from 1
abhí prá √mand- feverishly await, confuse, infatuate 4
ánu prá √muc- let loose successively 1
abhí prá √mṛ̥ś- seize, grasp 1
prá abhī √mṛ̥ś- seize, grasp 1
ánu prá √vaj- win for oneself 1
abhī ā√yam- aim at 1
sām ā√yam- draw, pull, stretch 1
sām prá √yam- offer together/mutually, give to 1
áti ā√yā- drive by 2
abhī sām √yā- visit, approach to 1
úpa ā√yā- come near, approach 2
úpa prá √yā- proceed toward 2
pāri prá √yā- go forth around 1
<table>
<thead>
<tr>
<th>Composites</th>
<th>Meaning</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>prá á √vā-</code></td>
<td>come near, approach</td>
<td>1</td>
</tr>
<tr>
<td><code>práti prá √vā-</code></td>
<td>go back, return</td>
<td>2</td>
</tr>
<tr>
<td><code>ánu sám √rabh-</code></td>
<td>take hold of</td>
<td>1</td>
</tr>
<tr>
<td><code>abhí sám √rabh-</code></td>
<td>take hold of</td>
<td>2</td>
</tr>
<tr>
<td><code>ánu √labh-</code></td>
<td>lay hold of, grasp, handle, take in the hand</td>
<td>1</td>
</tr>
<tr>
<td><code>ápā ní √labh-</code></td>
<td>hide oneself, disappear completely</td>
<td>1</td>
</tr>
<tr>
<td><code>ánu prá √vah-</code></td>
<td>go, get forward</td>
<td>1</td>
</tr>
<tr>
<td><code>abhí √vah-</code></td>
<td>strive, seek to win</td>
<td>1</td>
</tr>
<tr>
<td><code>ánu prá √vid-</code></td>
<td>understand backward and forward</td>
<td>1</td>
</tr>
<tr>
<td><code>ā vī √vid-</code></td>
<td>know by distinguishing</td>
<td>1</td>
</tr>
<tr>
<td><code>úpa prá √vid-</code></td>
<td>understand</td>
<td>1</td>
</tr>
<tr>
<td><code>ā pári √vṛ-</code></td>
<td>surround with</td>
<td>1</td>
</tr>
<tr>
<td><code>ápā √vṛj-</code></td>
<td>wipe out, bring away</td>
<td>1</td>
</tr>
<tr>
<td><code>ánu √vṛt-</code></td>
<td>roll near along</td>
<td>1</td>
</tr>
<tr>
<td><code>ánu prá √vṛt-</code></td>
<td>proceed along/after</td>
<td>1</td>
</tr>
<tr>
<td><code>abhí √vṛt-</code></td>
<td>roll toward, hurry toward</td>
<td>4</td>
</tr>
<tr>
<td><code>pári √vṛt-</code></td>
<td>turn round, turn away from, return to</td>
<td>2</td>
</tr>
<tr>
<td><code>práti √vṛt-</code></td>
<td>turn against</td>
<td>1</td>
</tr>
<tr>
<td><code>sám √vṛt-</code></td>
<td>turn back, come back, return</td>
<td>1</td>
</tr>
<tr>
<td><code>átī prá √vṛdh-</code></td>
<td>outgrow</td>
<td>1</td>
</tr>
<tr>
<td><code>antār pári √vṛdh-</code></td>
<td>hide in</td>
<td>1</td>
</tr>
<tr>
<td><code>átī prá √śṛdh-</code></td>
<td>bring in front of in excess</td>
<td>1</td>
</tr>
<tr>
<td><code>abhí prá √śad-</code></td>
<td>sit down, settle along</td>
<td>1</td>
</tr>
<tr>
<td><code>ā ní ā √śad-</code></td>
<td>sit down on, cause to sit down, establish</td>
<td>12</td>
</tr>
<tr>
<td><code>átī prá √śṛ-</code></td>
<td>outstrip, surpass</td>
<td>1</td>
</tr>
<tr>
<td><code>vī ā √śṛ-</code></td>
<td>run through</td>
<td>1</td>
</tr>
<tr>
<td><code>vī prá √śṛ-</code></td>
<td>spread</td>
<td>1</td>
</tr>
<tr>
<td><code>úpa āva √śṛj-</code></td>
<td>reach over, give, bestow</td>
<td>1</td>
</tr>
<tr>
<td><code>ánu āvā √śṛh-</code></td>
<td>extend over</td>
<td>1</td>
</tr>
<tr>
<td><code>abhí prá √śṛh-</code></td>
<td>advance toward, reach, surpass</td>
<td>3</td>
</tr>
<tr>
<td><code>abhí vī √śpaś-</code></td>
<td>look at, view, look hither</td>
<td>2</td>
</tr>
<tr>
<td><code>pári prá √śyand-</code></td>
<td>gush around, flow forth or round</td>
<td>2</td>
</tr>
<tr>
<td><code>abhí prá √han-</code></td>
<td>overpower</td>
<td>1</td>
</tr>
<tr>
<td><code>pári sám √hā-</code></td>
<td>rise up from</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL: 186

*In all the tables of this Chapter, composites are sorted by root. This choice is motivated by the fact that, in Vedic, univerbation is only at its onset. Within a group of composites containing the same root, the EP determines the order. The last criterion for ordering is the IP. The alphabetical order is that of the Devanāgarī script.

The high number of composites (116), the high number of roots modified by multiple preverbs (56, cf. Table 10 below), and the high number of preverb combinations that can accompany many different verbal roots (52, cf. Table 11 below) all contribute to suggesting that multiple preverbs did not constitute an infrequent pattern in Vedic. As shown in Table 9, 88 out of 116 composites occur only once in the Rg-Veda, and only one composite, i.e. `ā ní ā √śad-` ‘sit down on, cause to sit down, establish’, shows up in more than
10 occurrences (on the productivity of verbal composition in Vedic, cf. Danesi 2013: 62 and Section 1.2.1).

Table 10 contains those composites that are also attested elsewhere than the R̥g-Veda, along with their R̥g-Vedic and post-Rg-Vedic meanings. As Table 10 shows, out of 116 composites, only 45 are attested in later texts. Post-Rg-Vedic attestation is significant, as it suggests a certain degree of conventionalization and stability in the lexicon. In addition, it allows for interesting comparisons. Going from the Vedic to the post-Vedic period, composites often come to acquire less concrete and more non-compositional meanings. Some cases in point are the following: abhí prá √i- ‘go near to, approach’ > ‘think of, aim, intend’; vi ā √kar- ‘undo, sever, divide, separate from’ > ‘explain, predict, declare’; abhí ā √gā- ‘approach, come to’ > ‘visit, begin to’; abhí ā √car- ‘come up, approach’ > ‘undertake, practice’; án̄u ā √vart- ‘roll near/along, move after/along’ > ‘revolve, move after, follow, change’; abhí ā √vart- ‘roll toward, hurry toward’ > ‘repeat’; pāri ā √vart- ‘turn round, turn away from, return to’ > ‘be changed into, get possessed of’. In other cases, composites gain a more specialized meaning from the Vedic to the post-Vedic period: sám ā √i- ‘come together, approach together, meet at/in/with’ > ‘unite in marriage, enter, emulate, form an alliance with’; abhí sám √bhū- ‘enter, reach, come to’ > ‘obtain the shape of’. Semantic shifts of this type are expected: all of them involve semantic bleaching of the elements making up the composite, which lose part of their original spatial value.

2.2. **Verbal roots modified by multiple preverbs**

Table 11 displays the 56 Vedic verbal roots modified by multiple preverbs occurring in immediate preverbal position and their meanings, their PIE roots with their meanings, and their frequencies, that is, the number of composites containing each root. The rightmost column specifies the verb type. For my purposes, a coarse-grained semantic classification of verbs suffices.23

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23 Other scholars, including Levin (1993) and Sausa (2015), proposed more fine-grained semantic classifications for English and Ancient Greek verbs, respectively.
Table 10. Vedic composites attested after the R̥g-Veda and their meanings*

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning in the RV</th>
<th>Post-RVedic meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ánu párā ści-</td>
<td>go away after</td>
<td>follow in walking off</td>
</tr>
<tr>
<td>ánu prá ści-</td>
<td>go after, follow</td>
<td>follow in death, seek after</td>
</tr>
<tr>
<td>abhī ā ści-</td>
<td>come to, approach</td>
<td>go near, come to, approach</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>go near to, approach</td>
<td>think of, aim, intend</td>
</tr>
<tr>
<td>abhī sám ści-</td>
<td>approach together, come together at</td>
<td>invade</td>
</tr>
<tr>
<td>úpa prá ści-</td>
<td>march on, go toward</td>
<td>march on, go toward, undertake an activity</td>
</tr>
<tr>
<td>nis ā ści-</td>
<td>go off, depart</td>
<td>go off, depart</td>
</tr>
<tr>
<td>pári ā ści-</td>
<td>circulate</td>
<td>roam about, go around, return</td>
</tr>
<tr>
<td>práti úd ści-</td>
<td>rise and go toward</td>
<td>ascend</td>
</tr>
<tr>
<td>sám ā ści-</td>
<td>come together, approach together, meet at/in/with</td>
<td>unite in marriage, enter, emulate, form an alliance with</td>
</tr>
<tr>
<td>ví prá ści-</td>
<td>go forth in different directions disperse, spread out</td>
<td>go away, depart</td>
</tr>
<tr>
<td>sám prá ści-</td>
<td>come forth together</td>
<td>(CAUS) drive, push forward</td>
</tr>
<tr>
<td>sám ā ści-</td>
<td>bring together, gather, prepare</td>
<td>bring together, gather, prepare</td>
</tr>
<tr>
<td>ví ā ści-</td>
<td>undo, seven, divide, separate from</td>
<td>explain, predict, declare</td>
</tr>
<tr>
<td>úpa ā ści-</td>
<td>come near, come to</td>
<td>come back, approach, enter in a condition, be subject to, occur</td>
</tr>
<tr>
<td>abhī ā ści-</td>
<td>step near to, proceed to</td>
<td>step near to, proceed to</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>dig into, penetrate</td>
<td>immerse</td>
</tr>
<tr>
<td>úpa ā ści-</td>
<td>come up, approach</td>
<td>undertake, practice</td>
</tr>
<tr>
<td>úpa ā ści-</td>
<td>come near to, attend upon</td>
<td>come near to, attend upon</td>
</tr>
<tr>
<td>práti ā ści-</td>
<td>put forth by bursting or opening</td>
<td>extend in the direction of, shine upon/against</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>compose the mind at</td>
<td>(PASS) be scattered/divided asunder</td>
</tr>
<tr>
<td>úpa ni ści-</td>
<td>lie down beside</td>
<td>take aim at, overcome, win, associate with lie down beside</td>
</tr>
<tr>
<td>abhī sám ści-</td>
<td>enter, reach, come to</td>
<td>obtain the shape of</td>
</tr>
<tr>
<td>abhī ā ści-</td>
<td>aim at</td>
<td>lengthen, draw, pull, assume</td>
</tr>
<tr>
<td>sám ā ści-</td>
<td>draw, pull, stretch</td>
<td>draw together, contract</td>
</tr>
<tr>
<td>sám prá ści-</td>
<td>offer together/mutually, give to</td>
<td>give in marriage, give back</td>
</tr>
<tr>
<td>abhī sám ści-</td>
<td>visit, approach to</td>
<td>approach in hostile manner</td>
</tr>
<tr>
<td>úpa ā ści-</td>
<td>come near, approach</td>
<td>come near, approach, undergo</td>
</tr>
<tr>
<td>úpa prá ści-</td>
<td>go toward, proceed toward</td>
<td>go toward, proceed toward</td>
</tr>
<tr>
<td>abhī sám ści-</td>
<td>take hold of</td>
<td>take hold of mutually</td>
</tr>
<tr>
<td>abhī ā ści-</td>
<td>lay hold of grasp, handle, take in the hand</td>
<td>lay hold of grasp, handle, take in the hand</td>
</tr>
<tr>
<td>tápa ni ści-</td>
<td>hide oneself, disappear completely</td>
<td>hide oneself, disappear</td>
</tr>
<tr>
<td>abhī ā ści-</td>
<td>roll near along</td>
<td>revolve, move after, follow, change repeat</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>roll toward, hurry toward</td>
<td>be changed into, get possessed of</td>
</tr>
<tr>
<td>práti ā ści-</td>
<td>turn round, turn away from, return to</td>
<td>return, come back</td>
</tr>
<tr>
<td>sám ā ści-</td>
<td>turn against</td>
<td>return home, approach, succeed, perish, dismiss, repeat</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>sit down, settle along</td>
<td>(CAUS) cause to be gracious</td>
</tr>
<tr>
<td>ví prá ści-</td>
<td>spread</td>
<td>spread</td>
</tr>
<tr>
<td>tápa prá ści-</td>
<td>reach over, give, bestow</td>
<td>dismiss toward, let lose, let go toward</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>advance toward, reach, surpass</td>
<td>start/advance toward, reach, surpass</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>look at, view, look hither</td>
<td>look at, view, look hither</td>
</tr>
<tr>
<td>abhī prá ści-</td>
<td>overpower</td>
<td>overpower</td>
</tr>
</tbody>
</table>
Motion verbs are regarded so as to include, beside motion or location verbs proper (e.g. √i- ‘walk, go’), manner of motion verbs (e.g. √muc- ‘loose, set free from’), verbs of caused motion (e.g. √dhan- ‘cause to run’), transfer verbs (which can be assimilated to verbs of caused motion; e.g. √dā- ‘give’), and verbs of putting and removing (which can be assimilated to verbs of caused motion; e.g. √dhā- ‘put’, √labh- ‘take’). Location verbs include posture verbs (e.g. √sad- ‘sit’), verbs of existence (e.g. √bhū- ‘be, become, happen’), and verbs of holding/keeping (e.g. √yam-). These verb classes comprise the most of Vedic verbal roots modified by multiple preverbs (35 out of 56).

Besides location and motion verbs, there is also one change of state verb, i.e. √vr̥dh- ‘increase, grow’: this verb can be easily assimilated to motion verbs, as increasing and growing can be metaphorically regarded as an upward motion. The remaining verbal roots indicate events in which a certain concrete or abstract TR is directed away from or toward (or both) a LM. The following verb classes belong to this group: (a) perception verbs, as eyes can follow a certain direction (√spaś- ‘watch, see, observe’; cf. Danesi 2009: 107–116); (b) emission verbs, by which the TR is the warmth, the light, a substance, or a sound (√arc- ‘shine’, √tap- ‘give out heat’, √duh- ‘milk’, √nū ‘sound’, √bhā- ‘shine’, √cakṣ- ‘shine, emit light’) (cf. also RIVELEX II: 32, fn. 3; Danesi 2009: 64–75); (c) communication verbs, as words and utterances go from the speaker toward his/her addressee (√gā2- ‘sing’, √diś- ‘show a direction’, √ṣṛdh- ‘mock at’; Danesi 2009: 119–121); (d) verbs of impact, in which hits or blows behave as moving entities (√han- ‘strike, beat’; cf. Danesi 2009: 158–175); (e) creation verbs, in which the event of creating is directed toward a certain Beneficiary (√kr̥- ‘do, make’); (f) verbs of mental state, whereby emotions or other mental states, such as effort, joy, veneration, and attraction, can be directed toward a certain LM (√bhūṣ- ‘strive after, use efforts for’, √mand- ‘rejoice’, √yaj- ‘venerate’, √vivās- ‘attract’; Danesi 2009: 60–64; 76–83). There are two other verbs of mental state left: one of them, √vid- ‘know’, goes back to a PIE root with the meaning of seeing (perception verb > verb of mental state), whereas another one, √jñā- ‘know’, goes back to a PIE root meaning ‘discern, distinguish’.
Table 11. Vedic verbal roots modified by multiple preverbs*
<table>
<thead>
<tr>
<th>Verbal root</th>
<th>Meaning</th>
<th>PIE root</th>
<th>Meaning</th>
<th>Frequency</th>
<th>Verb type</th>
</tr>
</thead>
<tbody>
<tr>
<td>bhik-</td>
<td>strive after, use efforts for</td>
<td>*b _neh- (LIV: 98)</td>
<td>grow, become</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td>bhy-</td>
<td>bear, bring</td>
<td>*b _er- (LIV: 76)</td>
<td>bring, carry</td>
<td>2</td>
<td>caused motion</td>
</tr>
<tr>
<td>mand-</td>
<td>rejoice</td>
<td>*med- (LIV: 423)</td>
<td>become full</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td>nue-</td>
<td>loose, set free from</td>
<td>*neyk- (LIV: 443)</td>
<td>loose, take off</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>mte-</td>
<td>touch, consider</td>
<td>*Hmelik- (LIV: 226)</td>
<td>spread, touch</td>
<td>1</td>
<td>contact</td>
</tr>
<tr>
<td>yaj-</td>
<td>venerate</td>
<td>*Haj- (LIV: 224)</td>
<td>admire</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td>yam-</td>
<td>sustain, hold</td>
<td>*jem- (LIV: 312)</td>
<td>extend, stretch</td>
<td>3</td>
<td>holding/keeping</td>
</tr>
<tr>
<td>ydh-</td>
<td>go, move</td>
<td>*ydh- (LIV: 89)</td>
<td>pull to, lead</td>
<td>7</td>
<td>motion</td>
</tr>
<tr>
<td>rabh-</td>
<td>take hold of, grasp</td>
<td>*reb- (LIV: 496)</td>
<td>move</td>
<td>2</td>
<td>removing</td>
</tr>
<tr>
<td>labh-</td>
<td>take, seize, catch</td>
<td>*reb- (LIV: 496)</td>
<td>move</td>
<td>1</td>
<td>removing</td>
</tr>
<tr>
<td>ir- (ri-)</td>
<td>set free</td>
<td>*hierH- (LIV: 305)</td>
<td>bubble, spin</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>vah-</td>
<td>carry, convey</td>
<td>*vahg- (LIV: 663)</td>
<td>recognize, respect</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>vid-</td>
<td>know, understand</td>
<td>*vijd- (LIV: 663)</td>
<td>catch sight of</td>
<td>3</td>
<td>mental activity</td>
</tr>
<tr>
<td>vidā-</td>
<td>attract</td>
<td>*vij- (LIV: 680)</td>
<td>overpower, win</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td>y-</td>
<td>cover, screen</td>
<td>*yeh- (LIV: 227)</td>
<td>shut, push in(to),</td>
<td>1</td>
<td>putting</td>
</tr>
<tr>
<td>yj-</td>
<td>turn, twist off</td>
<td>*yeg- (LIV: 290)</td>
<td>turn</td>
<td>1</td>
<td>manner of motion</td>
</tr>
<tr>
<td>ydh-</td>
<td>roll</td>
<td>*yih- (LIV: 691)</td>
<td>turn</td>
<td>6</td>
<td>manner of motion</td>
</tr>
<tr>
<td>ydh- (v-)</td>
<td>increase, strengthen</td>
<td>*HueRed- (LIV: 227)</td>
<td>bind</td>
<td>1</td>
<td>change of state</td>
</tr>
<tr>
<td>qāh-</td>
<td>cover, wrap</td>
<td>*qēh- (LIV: 693)</td>
<td>wrap, envelop</td>
<td>1</td>
<td>putting</td>
</tr>
<tr>
<td>Mayhofer:II</td>
<td>mock at</td>
<td>*qeh- (LIV: 620)</td>
<td>uncertain</td>
<td>1</td>
<td>communication</td>
</tr>
<tr>
<td>sad-</td>
<td>sit down</td>
<td>*sed- (LIV: 513)</td>
<td>sit</td>
<td>2</td>
<td>posture</td>
</tr>
<tr>
<td>sar-</td>
<td>run, flow</td>
<td>*sēl- (LIV: 496)</td>
<td>shoot out, jump</td>
<td>3</td>
<td>manner of motion</td>
</tr>
<tr>
<td>sgh-</td>
<td>let go, let fly, discharge</td>
<td>*sēl- (LIV: 528)</td>
<td>loose, send to</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>sthā-</td>
<td>stand</td>
<td>*sēth- (LIV: 590)</td>
<td>step to, stand up</td>
<td>2</td>
<td>posture</td>
</tr>
<tr>
<td>spēk (pas-)</td>
<td>sea, observe</td>
<td>*spēk- (LIV: 575)</td>
<td>look at</td>
<td>1</td>
<td>perception verb</td>
</tr>
<tr>
<td>sva- (syand-)</td>
<td>move/fast, drive</td>
<td>?uncertain?spand- (EWI: 781-782)</td>
<td>uncertain</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>han-</td>
<td>strike, beat</td>
<td>*g *en- (LIV: 218)</td>
<td>hit</td>
<td>1</td>
<td>contact/impact</td>
</tr>
<tr>
<td>hā-</td>
<td>start/prop forward</td>
<td>*g *eh- (LIV: 172)</td>
<td>change one's posture, move</td>
<td>1</td>
<td>motion</td>
</tr>
</tbody>
</table>
2.3. *Attested combinations of preverbs*

In Vedic, there are as many as 52 combinations of multiple preverbs. These are displayed in Table 12, as well as their frequencies, that is, the number of composites that contain a certain combination.

**Table 12. Vedic combinations of preverbs and their frequencies**

<table>
<thead>
<tr>
<th>Exterior preverb</th>
<th>Interior preverb</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>áchá</td>
<td>párā</td>
<td>1</td>
</tr>
<tr>
<td>áti</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>áti níṣ</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>áti prá</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>adhí</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>adhí ní</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>adhí sám</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>adhí ví</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ánú</td>
<td>ā</td>
<td>4</td>
</tr>
<tr>
<td>ánú áva</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ánu párā</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ánú prá</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>ánú sám</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ánú ví</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>abhí</td>
<td>ā</td>
<td>9</td>
</tr>
<tr>
<td>antár</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>antár ví</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>antár pári</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ápa</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>ápa ní</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ápa párā</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>abhí prá</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>abhí sám</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>abhí úd</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>abhí ví</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>áva</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>ā</td>
<td>áva</td>
<td>1</td>
</tr>
<tr>
<td>ā ní</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ā nís</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ā pári</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ā prá</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ní</td>
<td>ví</td>
<td>1</td>
</tr>
<tr>
<td>ní ā</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>nís</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>pári</td>
<td>ā</td>
<td>3</td>
</tr>
<tr>
<td>pári prá</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>pári sám</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>prá abhí</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>prá</td>
<td>ā</td>
<td>1</td>
</tr>
<tr>
<td>práti</td>
<td>ā</td>
<td>2</td>
</tr>
</tbody>
</table>
As shown in Table 12, in the Rg-Veda, combinations of more than two preverbs are not attested.24 Most combinations (32 out of 52) only occur with one verb; 9 out of 52 combinations are attested in two composites; the remaining 11 combinations are instantiated by more than two verbs (the most frequent combination has a frequency of 14 composites). These data also contribute to suggesting a low degree of conventionalization and a high degree of productivity for multiple preverbs.

The most frequent combinations, that is, abhí+prá ‘to, unto, against+forward, onward, forth, fore-’ (14 times), abhí+ā ‘to, unto, against+to, unto, at’ (9 times), ānu+prá ‘after, along, toward+forward, onward, forth, fore-’ (9 times), úpa+prá ‘to, unto, toward+forward, onward, forth, fore-’ (5 times), and sám+ā ‘along, with, together+to, unto, against’ (5 times), contain either prá or ā as IPs. The preverbs prá and ā are the most frequent ones in the Rg-Veda for a total of 1372 and 3347 occurrences, respectively (Casaretto 2012, 2013). These preverbs seem to be particularly prone to stack: 11 out of 56 combinations contain prá; 22 out of 56 combinations contain ā; together they cover more than a half of the combinations. Their high frequency as multiple preverbs might be related to their high absolute frequency. In addition, their generic semantics might also have played

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24 Combinations of three preverbs are known in later Vedic, as well as in Classical Sanskrit (Delbrück 1888: 435–437).
a role in their tendency to combine with other spatial specifications. The preverb *prá* indicates a generic forward motion (Path) without any inherent Goal. Instead, the preverb *â* expresses a generic movement directed toward the speaker, or toward the general location of the event (RIVELEX II: 1 ff.; Casaretto 2013: 15; Grassmann 1936[1873]).

No Vedic preverbs constitute stable double prepositions or adverbs. However, two of the most frequent preverb combinations also occur together outside the preverbal context, as exemplified in (28) and (29):

(28) **Non-immediately preverbal *abhí+prá***

\[
\begin{array}{llllll}
\text{náñám} & \text{u} & \text{tvā} & \text{ná tamam} & \text{girbhír} & \text{ukthaír} \\
\text{man.Gen.Pl} & \text{and} & \text{2sg.Acc} & \text{most_manly.Acc} & \text{praise.Ins.Pl} & \text{verse.Ins.Pl} \\
\end{array}
\]

\text{abhí} \text{ prá} \quad \text{vīrám} \quad \text{arcata} \quad \text{sabádhaḥ}

to forward \quad \text{man.Acc} \quad \text{sing.Imp.2Pl} \quad \text{afflicted.Nom.Pl}

‘Priests, glorify you, the hero, the most heroic of the heroes, with songs and praises.’ (ṚV 3.51.4b)\textsuperscript{25}

(29) **Non-immediately preverbal *ánu+prá***

\[
\begin{array}{lllll}
\text{pāśann} & \text{ánu} & \text{prá} & \text{gā} & \text{ihi} \\
\text{P.Voc} & \text{after} & \text{forward} & \text{cow.Acc.Pl} & \text{go.Imp.2SG} \\
\text{yājamāṇasya} & \text{sunvatāḥ} \\
\text{sacrificer.Gen} & \text{pressing_out.Gen} \\
\end{array}
\]

‘O Pūṣan, go forth after the cows of him who sacrifices and presses Soma.’

(ṚV 6.54.6a)

In the *Ṛg-Veda*, no preverb is iterated in preverbal position. In other positions, however, preverb iteration is relatively common, as shown by Dunkel (1981a). If iterated, preverbs are univerbated, and treated as compound words or *amredita* according to the Indian tradition (e.g. *ápāpa* ṚV 5.34.3; *abhābhi* ṚV 9.110.5; *údud* ṚV 4.21.9; *úpopa* ṚV 1.126.7; 8.51.7; 8.74.9; *pārāparā* ṚV 1.38.6; *prápra* ṚV 1.40.7; 1.129.8; 1.138.1; 1.150.3;

\textsuperscript{25} Cf. also ṚV 8.49.1 and 8.69.4.
In spite of the lack of preverb iteration in preverbal position, there are composites in which two quasi-equivalent preverbs modify a single verbal root. A case in point is the combination ápa+párā ‘away+away’ in ápa pára √i- ‘go off’, shown in example (30), in which two preverbs indicate Source. Both the composite containing only the EP ápa √i- (31)a and the composite containing only the IP pára √i- (31)b show the similar meaning of ‘run away’ (Grassmann 1936[1873]: 192 ff.).

(30) abhāgāḥ ... ápa páreto asmi
having_no_share.NOM away go_away.PTCP.PRF.NOM be.PRS.1SG
‘I have departed without a portion.’ (RV 10.83.5a)

(31) a. Composite with the EP only: ápa √i-
ápa-iti asyāḥ prati-cāksiyeva [praticāksiya iva]
away_go.PRS.3SG 2SG.GEN.F against-shine.ABS like
‘She goes away like a girl to be gazed upon.’ (RV 1.124.8b)

b. Composite with the IP only: pára √i-
pára ca yānti pūnar ā ca yanti
away and go.PRS.3PL back to and go.PRS.3PL
‘(The Dawns) go away and come again.’ (RV 1.123.12c)

In addition, the combinations abhi+ā ‘to+to’ and úpa+ā ‘to+to’ contain two Goal preverbs with partially overlapping meanings (Casaretto 2010b: 98, fn. 3, and references therein). These combinations are instantiated in eight composites (i.e. abhi ā √gā- ‘approach, come to’, abhi ā √car- ‘come up, approach’, abhi ā √tā- ‘pass through to, come up to’, abhi ā √yam- ‘aim at, attract’, abhi ā √yāt- ‘roll toward’; úpa ā √gam- ‘come near, come to’, úpa ā √yā- ‘approach, drive near’, úpa ā √car- ‘come near to, attend upon’).
3. The form of composites

In Section 1.2.5, I discussed the accentual properties of Vedic preverbs. In what follows, I describe the rules of vowel and consonant combinations affecting Vedic composites (Section 3.1), and the principles governing the interactions of preverbs with other preverbal morphology (Section 3.2).

3.1. Sandhi phenomena

The juxtaposition of preverbs and verbal stems results in various consonant and vowel clusters undergoing various assimilatory effects, i.e. the so-called sandhi effects (ṃ sām ‘along, with, together’ + √dhā ‘put’). Old Indo-Aryan is noteworthy in marking some of these sandhi effects in the Devanāgarī script (for an overview of Old Indo-Aryan sandhi rules, see e.g. Whitney 1955[1879]: 34 ff.; Macdonell 1916: 20 ff.; Renou 1935: 32 ff.).

Between the elements that constitute multiple preverb composites, the behavior of consonant and vowel clusters follows the rules of external (i.e. occurring at word-boundaries) sandhi, whenever they mismatch from those of internal (i.e. occurring at morpheme-boundaries) sandhi.26 Some combinations are exemplified in (32):

<table>
<thead>
<tr>
<th>Sandhi Rule</th>
<th>Composite</th>
<th>Occurring verbal form</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. a + i → e- ni ā √īr-</td>
<td>nieriré:PRF.3PL.MID (RV 8.19.18b)</td>
<td></td>
</tr>
<tr>
<td>b. a + a → -ā- úpa ā √yā-</td>
<td>upáyātam:IMP.2DU (RV 7.71.2a)</td>
<td></td>
</tr>
<tr>
<td>c. m → m</td>
<td>_C ádhi sām √gam-</td>
<td>ádhi sāṅgata:PTCP.PR.F.VOC (RV 7.76.5a)</td>
</tr>
<tr>
<td>d. ñ → c</td>
<td>_c abhí úd √car-</td>
<td>abhí úc cara:IMP.2SG (RV 8.25.21c)</td>
</tr>
<tr>
<td>e. r → ḥ</td>
<td>_C (√voice) antár pári √vyā -</td>
<td>antāḥ pārivita:IMP.2PL (RV 4.1.7c)</td>
</tr>
</tbody>
</table>

---

26 This is not often the case, as most preverb-preverb combinations involve vowel clusters. The rules governing the coalescence of vowels are nearly the same both in internal and in external sandhi (Whitney 1955[1879]: 42).
Occasionally, however, *sandhi* effects that Macdonell (1916: 42, 45) classifies as internal also occur between the IP and the verbal stem (cf. also Whitney 1955[1879]: 63). These are shown in (33):

(33)  

<table>
<thead>
<tr>
<th>Sandhi Rule</th>
<th>Composite</th>
<th>Occurring verbal form</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ( C_{\text{(dental)}} \rightarrow C_{\text{(cerebral)}} )</td>
<td>( \text{áti niś} ) tan-</td>
<td>( \text{áti niś} ) tatanyuhı:PRF.3PL</td>
</tr>
<tr>
<td>b. ( s \rightarrow š )</td>
<td>( \text{ā́} ) ní sad-</td>
<td>( \text{ā́} ) šida:IMP.2SG</td>
</tr>
</tbody>
</table>

It is of particular significance that the boundary between the IP *ni* ‘down, in, into’ and the root \( \sqrt{sad} \) ‘sit down’ (33) is somehow perceived as internal. The semantics of *ni* and \( \sqrt{sad} \)- is characterized by high solidarity, to such an extent that *ni* is able to push the preverb \( ā́ \) ‘to, unto, at’ farther from the verbal root (whereas \( ā́ \) usually selects the interior position, cf. Section 6; Papke 2010: 101; for similar effects on Homeric Greek and Old Irish composites, see McCone 2006: 181; cf. further Chapters 4 and 6).

The sound coalescence of *sandhi* occasionally obscures the morphological segmentation of composites, as in (34). Taken in isolation, the form of (34) allows for two morphological analyses: a former (a) including \( ā́ \) ‘to, unto, at’ as IP; a latter (b) lacking it.

(34)  

Morphological ambiguity due to *sandhi*

*upācarat* (RV 1.46.14b) ‘came here’

<table>
<thead>
<tr>
<th>a. upa-ā-acarat</th>
<th>b. upa-acarat</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-P-walk.IMPF.3SG</td>
<td>P-walk.IMPF.3SG</td>
</tr>
</tbody>
</table>

---

27 Cf. also RV 1.22.8, 3.35.6, 6.9.4, 6.40.1, 9.63.2, 9.99.8, 9.104.1, 10.104.5, 10.15.2, 10.73.9, 10.80.6, all attesting to the same composite as in (33).

28 Perhaps the form in (34) allows for a third reading, if one considers the injunctive with two preverbs.
However, the form upācarat is by no means ambiguous in main clauses, such as in RV 1.46.14b: without the IP, the accent would have occurred on the preverb úpa ‘to, unto, toward’ in a main clause (cf. Section 1.2.5).

3.2. The position of preverbs with respect to inflectional affixes

As happens in Homeric Greek (cf. Chapter 4), the position of Vedic preverbs interacts with that of the rest of the preverbal morphology. In Vedic, preverbal morphology includes reduplication and augment. Preverbs usually occur more externally than either, as exemplified in (35):

(35) a. Preverbs and reduplication
    abhī pra-ta-sth-ūḥ
    EP IP-RED-stand-3PL
    ‘(they) advanced toward’ (RV 10.65.15b)

b. Preverbs and augment
    úpa prāgāt [pra-a-gā-t]
    EP IP-AUG-go-3SG
    ‘(he) proceeded to’ (RV 1.162.7a)

Reduplication appears in the following formations: the present stems of a certain class (e.g. pīparti:PRS.3SG ‘fills’, class III stem from √pī- ‘fill’), nearly all perfect stems (e.g. (35)), a large number of aorist stems (e.g. ājījanat:AOR.3SG ‘(he) has generated’, a reduplicated aorist from √jan- ‘generate’), and the intensive and desiderative secondary conjugations (e.g. (36)). For roots beginning with consonants, reduplication consists of the initial consonant of the verbal root and a vowel.29 With roots beginning with vowels, it consists of that vowel, either alone or with a following consonant (Whitney 1955[1879]):

29 If the initial consonant of the root is aspirated, reduplication contains the corresponding non-aspirated consonant (Grassmann’s Law).
Thus, the phonetic shape of reduplication depends on that of the reduplicated verbal root (cf. further Janda & Joseph 1991).

Because of this phonetic consistency, reduplication not surprisingly constitutes the innermost piece of verbal morphology. As shown by the form in (36), in which two preverbs, the augment, and reduplication simultaneously occur, reduplication is also more interior than the augment:

(36) **Preverbs, reduplication, and augment**

\[
\begin{array}{l}
pári \quad prásiṣyadat [pra-a-si-syada-t] \\
EP \quad IP\text{-AUG}\text{-RED}\text{-flow_rapidly}\text{-3SG}\text{(CAUSATIVE STEM)}
\end{array}
\]

‘(he) gushed around’ (R̥V 9.14.1)

The augment marks past time reference, and characterizes the Vedic imperfect, pluperfect, and aorist, alongside with the conditional mood (Whitney 1955[1879]: 220 ff.). It possibly goes back to an independent particle (*h₁e- ‘then, at that time’; e.g. Beekes 2011: 252), which assumes the shape of a short *a- in Old Indic. The augment usually occurs between the preverb(s) and the verbal stem. In the R̥g-Veda, there are no exceptions to this rule.

However, in later Vedic, the augment rarely occurs between the EP and the IP (but never before the EP) (Whitney 1955[1879]: 400). A number of these anomalous formations are given in (37):

(37) a. *ud-a-pra-patat:* IMPF.3SG ‘flew forth onto’ (AitBr.)
    b. *anv-a-sam-carat:* IMPF.3SG ‘walked alongside’ (MBh.)
    c. *abhya-a-ni-mantrayat:* IMPF.3SG ‘invited’ (Har.)

In the later forms in (37)a-c, the placement of the augment points to a strong association between the IP and the verb.

Instead, what does the positioning of the augment suggest as regards the morphological status of R̥g-Vedic multiple preverbs? First, preverbs were probably not
considered part of the verb, as they occur more externally than the usual outermost piece of verbal morphology, i.e. the augment.\textsuperscript{30} Second, as prosodic (Section 1.2.5), and syntactic (Section 5) evidence confirms, multiple preverbs have mostly the status of clitics in Vedic (for similar considerations on Classical Sanskrit and Homeric Greek, see Whitney 1955[1879]: 354 ff.; Papke 2010: 9, 94; Chapter 4).

4. The semantics of multiple preverbs

4.1. Preverbs with spatial, abstract and actional meanings

From a semantic standpoint, Vedic preverbs show the following behaviors: (a) they retain their spatial basic usages; (b) they develop further spatial usages or other types of lexical meanings, i.e. they make up non-compositional composites together with the verbs that they modify; (c) they develop actional – and, in particular, telic/atelic – meanings, thus undergoing grammaticalization into actional markers. These different functions are not mutually exclusive: on the contrary, by adding an inherent point to a spatial event (or to an event which is comparable to a spatial event; cf. Section 2.2), preverbs at once add telic/atelic nuances to (non-)telic predicates (cf., in particular, Viti 2008a, 2008b on Homeric Greek; Danesi 2009 on Vedic; Ruvoletto 2016 on Old Russian).

In combination with a motion verb (e.g. √ni- ‘walk, go’) or with a verb comparable to a motion verb (e.g. √bhā- ‘shine’; see Section 2.2), multiple preverbs can either profile two different portions of the trajectory (38), or add semantic specifications to the same portion of it (39).\textsuperscript{31} In the latter case, their meanings can partially overlap. For example, both composites of (39)a and (40) contain two Goal-preverbs, that is, antār+vī ‘between, among, within+apart, asunder, away, out’ (39)a and úpa+ā ‘to, unto, toward+to, unto, at’ (40).

\textsuperscript{30} The robust cross-linguistic tendency according to which inflectional affixes are the farthest from the root is usually referred to as ‘relevance’ or ‘scope principle’, on which see e.g. Bybee 1985; Rice 2000.

\textsuperscript{31} In Homeric Greek, multiple preverbs usually, though by no means exclusively, profile the same portion of the trajectory (cf. Chapter 4, Section 4.1; Iacobini et al. 2017).
Whereas the preverbs of the combination in (39)a profile two different spatial regions of the Goal (i.e. ‘inside’, ‘toward different directions’) and thus do not semantically overlap, the preverbs of the combination in (40) show high semantic solidarity with respect to each other.

(38) a. Goal+Source: abhí ví ʏì- ‘go toward from different parts’

ékaṁ krátum abhí ví yanti sādhú
single.ACC purpose.ACC to asunder go.PRS.3PL straight

‘(They), from different parts, go straightly toward a single purpose.’ (RV 6.9.5d)

b. Goal+Path: úpa prá ʏì- ‘march on, go toward’

úpa prá yantu marútaḥ sudánava
to forth go.IMP.3PL M.NOM.PL munificent.NOM.PL

‘May the munificent Maruts come forth to (us).’ (RV 1.40.1c)

c. Path+Source: ánu párā ʏì- ‘come away along’

páram mṛtyo ánu párēhi [parā-ihi] pánthāṃ
far.ACC death.VOC along away-go.IMP.2SG way.GEN.PL

‘O Death, go away farther along the way…’ (RV 10.18.1a)

(39) a. Goal+Goal: antár ví ʜbhā- ‘shine in different directions between’

dyāvā-ksāmā rukmo antár ví bhāti
heaven-earth.ACC.DU golden.NOM between asunder shine.PRS.3SG

‘Golden, (he) shines in between the heaven and the earth.’ (RV 1.96.5c)

b. Source+Source: ápa párā ʏì- ‘pass over, go off’

(RV 10.83.5 = (30))

(40) úpa 前三季度 ‘come near to’ (RV 1.91.10 = (21))

In other composites, the IP – typically ა́ ‘to, unto, at’ – possibly reverses the deictic orientation of the base motion verb, whereas the EP adds a further spatial specification (41). Danesi (2009: 212–240) rather argues that ა́ only implies the achievement of a Goal, and is

32 As pointed out by Leonid Kulikov (p.c.), in this context, antár and ví might also profile Path, rather than Goal. In fact, the distinction between these two spatial roles is not always clear-cut.
not able to change the deictic orientation of motion verbs from itive to venitive. According to Danesi, the venitive reading is allegedly a byproduct of ā frequently indicating a Goal located in the speaker’s vicinity. As a matter of fact, ā clearly changes the deictic orientations of the transfer verb √dā- ‘give’ into ā √dā- ‘take, receive, such as in ādhi ā√dā- ‘take away from above’ (41)c, and of the verb of putting √dhā- ‘put’ into ā √dhā- ‘receive’ (41)d.33

(41) a. nīs ā√i- ‘come out, come forward’ vs. nīs √i- ‘go out’
b. ūpa ā√gam- ‘come near, come to’ vs. ūpa √gam- ‘go near to’
c. ādhi ā√dā- ‘take away from above’ vs. √dā- ‘give’
d. antār ā√dhā- ‘receive into, contain’ vs. √dhā- ‘put’

It also happens that a preverb retaining a spatial meaning combines with another preverb developing a lexical meaning of a different type. Neither meaning exclusively selects the interior or the exterior position.34 So, for example, in (42), the EPs show abstract meanings, whereas the IP spatial meanings; for (43), the opposite is true. However, the EP usually retains a spatial meaning when the spatial notion is further specified by a noun phrase, such as anantē:LOC ‘boundless (region)’ in (43).

(42) EP = non-spatial; IP = spatial
   a. Comitative+Goal: sām ā√i- ‘come together, approach together’
   b. Again+Path: prāti prá√yā- ‘go back, return’
   c. Successively+Path: ānu prá√muc- ‘let loose successively’
      yāt sīm ānu prá mucō badbadhānā
      when them after forward loose.INJ.2SG strike.PTCP.PRF.ACC.PL
      ‘When you let go forth the prisoned ones successively.’ (RV 4.22.7c)

(43) EP = spatial; IP = non-spatial
    antār pāri√vyā- ‘hide in’

33 The composite ā√dhā- also has other meanings in the Rg-Veda that do not imply a change in its orientation.
34 Cf. fn. 22, Chapter 2.
In (42)a, the EP sām displays its usual Comitative meaning; in (42)b, prāti ‘in reverse direction’ develops the Time meaning of ‘again, returning activity’; in (42)c, ánū, whose basic meaning is ‘after’ in a spatial sense, comes to mean ‘successively’: the ‘after’ notion is shifted from the SPATIAL to the TEMPORAL conceptual domain. In (43), the semantics of the IP pārī ‘round about, around’ is partially bleached: its meaning of ‘around’ is subsumed by the verbal root √vyā- ‘cover’ (cf. Section 4.3). Thus, the IP arguably comes to imply a lack of visibility, according to the following inference: being all around (pārī) can imply obstructing the visual access to a certain entity (LM).

In addition, two non-spatial but still lexical preverbs can combine, as shown in examples (44):

(44) Two non-spatial lexical preverbs
   a. Addressee+‘loudly’: abhī prā √arc- ‘sing loudly to’
      tāṁ u abhī prā arcata
      3SG.ACC PTC to forth sing.IMP.2PL
      ‘Come on! Sing loud to him [=Indra].’ (RV 8.92.5a)
   b. Excess+metaphorical Path: āṭi prā √vr̥dh- ‘outgrow’
   c. Again+back: ví pārā √i- ‘go back again’

In (44)a, the IP prā means ‘loudly, openly’: the semantic shift from ‘forward’, forth’ to ‘loudly, openly’ can also be observed in Old Church Slavic (cf. Chapter 5), as well as in other Indo-European languages (e.g. Lat. pro-clamō ‘cry out, appeal noisly, pro-claim’). In (44)b, the same IP instead describes the metaphorical Path of growing (√vr̥dh- ‘increase, augment’). The EPs of (44)a-b develop the following meanings: abhī ‘to, unto, against’ centralizes the Addressee-participant; āṭi ‘across, beyond, past’ expresses EXCESS, that is, going beyond (āṭi) certain metaphorical limits (LM). In (44)c, the Source-preverb pārā
comes to indicate the way ‘back’ (cf. the Greek Source-preverb *apo- ‘away from’, which can also undergo the same semantic shift). The EP *vī ‘apart, asunder, away, out’ is etymologically connected to a PIE adverb *dusī ‘in two’ (cf. Kulikov 2007: 723). Accordingly, it frequently means ‘in two different places’ or – shifting to the temporal domain – ‘in two different times’, as it seems to do in (44)c.35

As remarked in Section 1.2.2, Vedic preverbs occasionally also behave as actional markers. This is particularly evident for Goal-preverbs, which are able to specify the endpoint of a motion event. The following comparison is instructive between the composites ā prā √dru- (45)a and prā √dru- (45)b:

\(\text{(45) a. prā tū drava mátsvā sutāsyā gómataḥ} \)

forth run.IMP.2SG rejoice.IMP.2SG soma_juice.GEN mixed_with_milk.GEN

‘Run forth, rejoice of the juice mixed with milk!’ (RV 8.13.14ab)36

b. ā prā drava harivo
to forth run.IMP.2SG possessing_bay_horses.VOC

‘Run forth to (us), Lord of Bays! (Be not ungracious: visit us, lover of gold-hued oblation).’(RV 5.31.2a)

The root √dru- encodes an intransitive and atelic manner of motion verb (Danesi 2009: 135). In combination with the Path-preverb prā ‘forward, onward, forth, fore-’, the predicate remains atelic, and means ‘go/come forth’ (45). With the further addition of the Goal-preverb ā ‘to, unto, at’, however, a Goal of motion close to the speaker’s position

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35 As remarked by Leonid Kulikov (p.c.), the composite vi pārā √vī- only occurs in RV 10.85.33, the so-called wedding-hymn. Thus, as a hāpax, its meaning is not completely straightforward: e.g. Geldner (1951–1957) interprets it as ‘go away and asunder’. In the latter case, the two preverbs would profile two different portions of the trajectory, i.e. Source+Goal (cf. (38)a).

36 The composite prā √dru- is interrupted by the particle tū, in this passage. This type of interruption, or tmesis, is however less significant than a tmesis involving lexical words. On the difference between the so-called lexical and non-lexical tmesis in Greek, see Chapter 4, and Bertrand (2014).
becomes inherent: in (45)b, the Goal is the first person plural pronoun naḥ:1PL.ACC (which occurs in the following pāda).

Not only can Goal-preverbs express resultativity or telicity in Vedic. Source-preverbs can also have this function, as happens with āpa ‘away, forth, off’ in āpa ni √lī ‘disappear completely’:

\[
\text{(46)} \quad \begin{array}{cccc}
\text{bhīyaṃ} & \text{dādhānā} & \text{hṛ̥dayeṣu} & \text{sātravah} \\
\text{fear.ACC} & \text{put.PTCP.PRS.NOM.PL} & \text{heart.LOC.PL} & \text{enemy.NOM.PL} \\
\text{pārājitāso} & \text{āpa} & \text{nī} & \text{layantām} \\
\text{conquer.PTCP.PST.NOM.PL.PASS} & \text{away} & \text{down} & \text{dissolve.IMP.3PL.MID}
\end{array}
\]

‘And let (our) enemies, who put terror in their spirits, disappear away defeated.’

(R̥V 10.84.7cd)

The reason why Source-preverbs can also express completion is connected to EVENTS being conceptualized as LOCATIONS: departing from an EVENT (i.e. a LOCATION) implies that such an event is completed (Zanchi 2017).37

Preverbs expressing actional meanings are not linked to the exterior position. In the composite pārī sām √hā- ‘rise up from’, the IP has the actional meaning of intensification/completeness (cf. Section 1.2.2), whereas the EP still exhibits the spatial value of Source. In (47), the Source component of movement is further specified by the noun phrase vidyūto:ABL ‘flash of lightning’.

\[
\text{(47)} \quad \begin{array}{cccc}
\text{vidyūto} & \text{jyōtiḥ} & \text{pārī} & \text{samjihānam} \\
\text{flash_of_lightning.ABL} & \text{light.ACC} & \text{around} & \text{spring_out.PTCP.PRS.NOM}
\end{array}
\]

‘light springing out from a flash of lightning’ (R̥V 7.33.10a)

37 In this case, in addition, the semantics solidarity between āpa and √lī- arguably favored the reanalysis of the EP as an actional marker (so-called Vey-Schooneveld effect).
Other types of actional meanings are also be expressed by both EPs and IPs. In (48)a-b, for example, the EPs áva ‘down, off’ and prá ‘forward, onward, forth, fore-’ have ingressive values.

(48) a. māhi stotrām áva āganma sūrēr
   great.ACC praise.ACC down begin.AOR.1PL.learned_man.GEN.PL
   ‘We have begun the great praise of the learned men.’ (RV 3.31.14c)

b. īndram abhī prā gāyata
   I.ACC to forth sing.IMP.2PL
   ‘(Here, come here, sit down.) Start singing to Indra!’ (RV 1.5.1b)

4.2. Same (combination of) preverbs, different meanings

Preverbs are polysemous elements, whose meaning can change based on the verbal root on which they attach: for example, we have seen that prá can indicate Path (cf. (38)b and (45)a-b), and metaphorical Path (cf. (44)b) with motion verbs or verbs that can be assimilated to motion verbs. The same preverb can also mean ‘loudly’ with communication verbs (cf. (44)a), or undergo grammaticalization into a marker of ingressivity (cf. (48)b).

The uses outlined so far do not cover the range of functions that prá can carry out in the Rg-Veda (cf. the summary in Table 16). From its basic usage of ‘forward, onward’, two abstract meanings derive: (a) ‘before’ in the sense of being pre-posed to something, as in abhī prá √bhū- ‘to_before_be’ → ‘assist, help’; (b) ‘before’ in the sense of being metaphorically ‘in front of’, as in āti prá √śṛdh- ‘bring in front of in excess’ (this composite is used to describe an extremely zealous priest, who boldly sings his praises to Indra; cf. RV 8.13.6b). The latter meaning ‘in front of’ provides the link from the basic meaning of prá and its Beneficiary reading, attested in ānu prá √yaj- ‘win for oneself’. In this composite, ānu has a resultative meaning, whereas prá centralizes the Beneficiary of the event of winning or offering (cf. prá √yaj- ‘offer’(+ACC)). Lastly, prá is bleached so as to function as a mere intensifier in abhī prá √mand- ‘feverishly await, confuse, infatuate’ (cf. √mand- ‘rejoice’).
For reasons of space, it is impossible to discuss all the semantic shifts undergone by each preverb occurring in multiple preverb composites. These developments are summarized in Table 16. Here, I only focus on particularly interesting cases, i.e. those of *nī ‘down, in, into’, *pārī ‘round about, around’, and *vī ‘apart, asunder, away, out’, which I explain in what follows. A first intriguing preverb is *nī. It retains its basic spatial usage ‘downward’ both in exterior and in interior positions, as in *nī ā√īr- ‘set someone down’ and in ānī √sad- ‘sit down on, cause to sit down, establish’. Shifting to the metaphorical plane, *nī can indicate lack of control, according to the following cluster of metaphors: HAVING CONTROL OR FORCE IS UP, BEING SUBJECT TO CONTROL OR FORCE IS DOWN (Lakoff & Johnson 1980: 15). Such a metaphorical meaning is instantiated in *nī ā√kr̥- ‘hold back’ (cf. ā√kr̥- ‘drive near). Lastly, an entity (TR) placed in a lower position can happen to be difficult to see: hence, the meaning that *nī exhibits in āpa nī √lī- ‘hide oneself, disappear completely’ (cf. nī√lī- ‘hide oneself, conceal oneself from (+ABL)).

The preverb *pārī also shows very interesting semantic developments. Its basic usage is instantiated in the composite *pārī prá √dhanv- ‘flow forth around’, in which the Goal-preverb *pārī ‘around’ and the Path-preverb prá ‘forth’ are added to the manner of motion verb √dhanv- ‘flow, move rapidly’. It also conveys a telic nuance of meaning in āpārī √vṛ- (lit.) ‘to around cover’ → ‘surround with’: surrounding means totally covering around a certain entity (the telic reading is probably triggered by the overlap of the semantics of *pārī ‘around’ with the meaning of the verbal root √vṛ- ‘cover’; cf. Section 6.2 and Chapter 5 on the so-called Vey-Schooneveld effect). Another composite, that is, *antār pārī √vṛyā- ‘hide in’ demonstrates that *nī ‘down, in, into’ is not the only preverb associated to the notion of lack of visibility. The preverb *pārī also carries this semantic contribution, via the metaphorical shift that can be schematized as follows: AROUND > ALL AROUND > COVERING > LACK OF VISIBILITY (cf. Section 4.1). Lastly, *pārī can indicate the Source of movement, as in pārī sām √hā₂- ‘rise up from’. However, this meaning is tied to the simultaneous occurrence of a noun phrase in the ablative case (cf. (47); see also Sections 1.2.7 and 5.2 on the still widespread concrete usages of Vedic adpositionless cases).

As already remarked in Section 4.1, the preverb *vī can probably be traced back to the PIE adverb *dyis ‘in two’ (cf. Lubotsky 1994: 202 ff.; Kulikov 2007: 723; contra
Accordingly, it can indicate an activity oriented toward (two) different Goals, as in ví prá √i- ‘go forth in different directions, disperse, spread out’ (in exterior position), or a Source from different directions, as in abhí ví √i- ‘come toward from different parts’ (in interior position). From this basic meaning, the notion of covering can be easily derived via the following shift: ‘in two directions’ > ‘in all directions’, as happens in ví prá √sṛ- ‘spread’ (cf. Gr. amphi ‘on both sides’ > ‘on all sides’ > ‘around’; Luraghi 2003: 256; Chapter 4). The meaning of ‘through’, instantiated in ví ā √sṛ- ‘run through’, is also connected to the basic meaning: the way ‘through’ is the shortest way connecting Goal₁ and Goal₂ (cf. Zanchi 2017). Moreover, the preverb ví indicates division or separation, as in ví ā √ kṛ- ‘divide, separate from’: ‘in two directions’ > ‘in two different directions’. Its usage as a Source-preverb (cf. adhí ví √kṣar- ‘pour out, flow out’) is linked to the generic meaning of separation just outlined. Separation and division can also result in distinction, which is another possible semantic development of ví, exemplified in ā ví √vid- ‘know by distinguishing’. Moving from the spatial to the temporal plane, i.e. ‘in two directions’ > ‘in two times’ (cf. fn. 35), one easily gets to the meaning of ‘again’, as in the composite ví pārā √i- ‘go back again’. Both this temporal meaning and its Source usage contribute to explaining the very widespread reversative employment of ví. This use is instantiated in the polysemous composite ví ā √ kṛ-, which can also mean ‘undo’ (some of the meanings just outlined are also discussed in Kulikov 2007).

Obviously, as preverbs are polysemous morphemes, their combinations are also polysemous. For example, abhí+prá shows different meanings if combined with motion verbs, such as √i- ‘walk, go’, or with communication verbs, such as √arc- ‘sing’ or √nū- ‘roar, yell’. With √i-, the preverbs indicate Goal+Path, whereas with √arc- and √nū- the EP introduces the Addressee of singing, the IP means ‘loudly’ (cf. (44)). With another communication verb, i.e. √gā₂- (gai-) ‘sing’, the same combination shows a different meaning, as the IP expresses ingressivity (cf. (48)). With √caks- ‘shine, see, appear’, abhí points to the entity that is seen (Stimulus), whereas prá to the fictive Path of the eye directed toward that certain Stimulus. Together, these elements make up the composite abhí prá √caks- ‘look at, see’. All in all, what these data clearly suggest is that each preverb independently develops a range of meanings, and that these meanings contribute to the
formation of multiple preverb composites as independent units. There do not seem to be specific meanings associated to specific combinations of preverbs.

4.3. Different degrees of compositionality

It is not always easy to assess the degree of compositionality of Vedic composites. To begin with, multiple preverb composites can show different meanings in different contexts, which can also exhibit various degree of compositionality. Among such polysemous composites are the following ones: ví prá √i- ‘go forth in different directions (compositional), disperse, spread out (non-compositional)’; sám ā śkr- ‘bring together, gather (compositional), prepare (non-compositional)’; abhí sám √cār- ‘go together to (compositional), seek for (non-compositional) (cf. examples (49)a-b); upā ā ścār- ‘come near to (compositional), attend upon (non-compositional)’; ā ní śsad- ‘sit down on, cause to sit down, establish (non-compositional)’.

(49) a. Compositional abhí sám √cār- ‘go together to’
samānāṃ vatsām abhī sam-cārantī
same.ACC calf.ACC to with-go.PRS.3PL
‘They go together to (their) common calf.’ (RV 1.146.3a)

b. Non-compositional abhí sám √cār ‘seek for’
anyāsyā cittām abhī samcāreniṇyam
another.GEN thinking.ACC to seek_for.PTCP.FUT.ACC.PASS
‘(We must) seek for another’s thought.’ (RV 1.170.1c)

In addition, though a certain composite results in a non-compositional formation, it might be the case that the semantic contribution brought about by each of its parts is still traceable (certainly by the linguist, and possibly by the speaker as well). For example, this is the case with anū ví śsthā- (lit.) ‘along_in different directions _stay’ → ‘extend over’ and ātī prá śsr- (lit.) ‘beyond_forth_run’ → ‘outstrip, surpass’. Lastly, the semantic contribution of certain preverbs, though detectable, is redundant. A good example for that is
<table>
<thead>
<tr>
<th>COMPOSITE</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>āpa pára √i-</td>
<td>go off</td>
</tr>
<tr>
<td>abhī ā √i-</td>
<td>come to, approach</td>
</tr>
<tr>
<td>ā nis √i-</td>
<td>go off, depart</td>
</tr>
<tr>
<td>nis ā √i-</td>
<td>go off, depart</td>
</tr>
<tr>
<td>pārī ā √i-</td>
<td>circulate</td>
</tr>
<tr>
<td>ví prā √i-</td>
<td>go forth in different directions, disperse, spread out</td>
</tr>
<tr>
<td>nī ā √iṛ-</td>
<td>set someone down</td>
</tr>
<tr>
<td>sāṁ ā √iṛ-</td>
<td>put together, create</td>
</tr>
<tr>
<td>sāṁ ā √kṛ-</td>
<td>bring together, gather, prepare</td>
</tr>
<tr>
<td>vī ā √kṛ-</td>
<td>undo, sever, divide, separate from</td>
</tr>
<tr>
<td>adhī vī √kṣar-</td>
<td>pour out, flow out</td>
</tr>
<tr>
<td>adhī sāṁ √gam-</td>
<td>go up to, approach together</td>
</tr>
<tr>
<td>upā ā √gam-</td>
<td>come near, come to</td>
</tr>
<tr>
<td>abhī ā √gā-</td>
<td>approach, come to</td>
</tr>
<tr>
<td>āṇu sāṁ √car-</td>
<td>walk alongside, visit, seek after</td>
</tr>
<tr>
<td>abhī ā √car-</td>
<td>come up, approach</td>
</tr>
<tr>
<td>abhī sāṁ √car-</td>
<td>go together to, seek for</td>
</tr>
<tr>
<td>ūḍ ā √car-</td>
<td>rise out of</td>
</tr>
<tr>
<td>upā ā √car-</td>
<td>come near to, attend upon</td>
</tr>
<tr>
<td>prāṭī ā √tan-</td>
<td>extend in the direction of, shine upon/against</td>
</tr>
<tr>
<td>abhī ā √tṛ-</td>
<td>pass through to, come up to</td>
</tr>
<tr>
<td>ā nī āduḥ-</td>
<td>create out of</td>
</tr>
<tr>
<td>abhī prā √dṛ-</td>
<td>put forth by bursting or opening</td>
</tr>
<tr>
<td>adhī sāṁ √dhā-</td>
<td>store up</td>
</tr>
<tr>
<td>antār vī √bhā-</td>
<td>shine in different directions between</td>
</tr>
<tr>
<td>āṇu prā √muc-</td>
<td>let loose successively</td>
</tr>
<tr>
<td>abhī prā √mr̥ś-</td>
<td>seize, grasp</td>
</tr>
<tr>
<td>prā abhī √mr̥ś-</td>
<td>seize, grasp</td>
</tr>
<tr>
<td>āṭī ā īyā-</td>
<td>drive by</td>
</tr>
<tr>
<td>upā ā īyā-</td>
<td>come near, approach</td>
</tr>
<tr>
<td>prā ā īyā-</td>
<td>come near, approach</td>
</tr>
<tr>
<td>āṇu sāṁ √rabh-</td>
<td>take hold of</td>
</tr>
<tr>
<td>abhī sāṁ √rabh-</td>
<td>take hold of</td>
</tr>
<tr>
<td>āṇu ā √labh-</td>
<td>lay hold of grasp, handle, take in the hand</td>
</tr>
<tr>
<td>āṇu prā √vah-</td>
<td>go, get forward</td>
</tr>
<tr>
<td>abhī ā √van-</td>
<td>strive, seek to win</td>
</tr>
<tr>
<td>ā pārī √ṛ-</td>
<td>surround with</td>
</tr>
<tr>
<td>āpa ā √vṛj-</td>
<td>wipe out, bring away</td>
</tr>
<tr>
<td>abhī ā √vṛt-</td>
<td>roll toward, hurry toward</td>
</tr>
<tr>
<td>pārī ā √vṛt-</td>
<td>turn round, turn away from, return to</td>
</tr>
<tr>
<td>prāṭī ā √vṛt-</td>
<td>turn against</td>
</tr>
<tr>
<td>sāṁ ā √vṛt-</td>
<td>turn back, come back, return</td>
</tr>
<tr>
<td>āṭī prā √vṛdh-</td>
<td>outgrow</td>
</tr>
<tr>
<td>antār pārī √vyā-</td>
<td>hide in</td>
</tr>
<tr>
<td>abhī prā īsad-</td>
<td>sit down, settle along</td>
</tr>
<tr>
<td>ā nī īsad-</td>
<td>sit down on, cause to sit down, establish</td>
</tr>
<tr>
<td>vī ā īṛ-</td>
<td>run through</td>
</tr>
<tr>
<td>āṇu vī īsthā-</td>
<td>extend over</td>
</tr>
<tr>
<td>abhī vī īspaś-</td>
<td>look at, view, look hither</td>
</tr>
<tr>
<td>pārī sāṁ īhā-</td>
<td>rise up from</td>
</tr>
</tbody>
</table>
antár pári √vyā- (lit.) ‘between_around_cover’ > ‘hide in’, in which the meaning of covering (√vyā-) partly subsumes the semantic contribution brought about by the IP pári ‘round about, around’ (cf. Section 4.2).

I also considered as partially compositional all composites in which one element at least retains a detectable meaning – be it the EP, the IP, or the verbal root. The partially compositional categorization composites are displayed in Table 13. All composites that escape a clear-cut categorization are classified as ‘partially compositional’. Not surprisingly, about a half of Vedic composites (51 out of 116) belong to this group.

As anticipated above in this section, a number of partially compositional composites show redundancy of some kind. Either the meanings of the preverbs overlap with each other (cf. (39) above, (50)); or the meaning of one of the preverbs, usually the IP, shows semantic solidarity with that of the verbal stem to which it attaches (51).

(50) Composites containing preverbs with overlapping meanings
a. abhí ā √i- ‘come to, approach’ (Goal+Goal)
b. ánu prá √vah- ‘go, get forward’ (Path+Path)

(51) Composites containing a redundant preverb
a. ví prá √li- ‘go forth in different directions, disperse, spread out’
b. abhí ā √diś- ‘aim at (in hostile manner)’
c. ā nís √duh- ‘create out of’
d. antár ví √bhā- ‘shine in different directions between’
e. ánu sáṃ √rabh- ‘take hold of’
f. ā pári √vr̥- ‘surround with’
g. ā ní √sad- ‘sit down on, cause to sit down, establish’

In (51)a, the act of going (√li-) implies a Path (prá ‘forward, onward, forth, fore’). The root of the composite in (51)b, √diś- ‘point out’, is per se Goal-oriented, and the composite further contains two Goal-preverbs. By contrast, the root in (51)c, √duh- ‘milk, extract’, is Source-oriented, and is combined with a Source-preverb, i.e. nís ‘out, forth’. In (51)d, √bhā- ‘shine, be bright’ already implies the idea of emission and diffusion, reinforced by the addition of ví ‘in two directions > in all directions’ (cf. Section 4.2). In (51)e, the concept of togetherness, expressed by sáṃ ‘with, together’, is subsumed by √rabh- ‘grasp’. The notion of covering expressed by √vr̥- ‘cover’ comprises the meaning of pári ‘round
about, all around’ (51)f. In (51)g, the downward direction (mt) is likewise implicit in the act of sitting (√sad-).

Non-compositionality does not always originate from the redundancy: in many composites, the meaning of the IP is bleached, which also results in partial compositionality. Cases in point are sām ā√īr- ‘put together, create’ and sām ā√kr- ‘bring together, gather, prepare’, in which only the meaning of togetherness provided by the EP is still detectable, whereas the IP ā is bleached (on the tendency of ā to undergo semantic bleaching, cf. Section 2.3). Other examples containing ā are the composites pārī ā√ni- ‘circulate’ and prāti ā√tan- ‘extend in the direction of, shine upon/against’, in which only the EP pārī ‘round about, around’ and prāti ‘in reversed direction, back to, against, in return’ retain fully detectable meanings. The same can be also said for the many multiple preverb composites built on ā√vr̥- ‘turn near, turn towards’, such as those exemplified in (52):38

A similar process of accretion as in (52) also lies behind the composite āpa ā√vr̥j- ‘wipe out, bring away’: the base verb √vr̥j- means ‘bend, turn, divert’. If combined only with ā, which expresses speaker’s vicinity, it comes to acquire the meaning of ‘bring in the possession of’: the IP defines the orientation of the motion expressed by √vr̥j. The further addition of āpa then reverses such an orientation, resulting in ‘wipe out, bring away’.

The composites that I regarded as fully compositional and as non-compositional are displayed in Table 14 and in Table 15, respectively: these two groups include 37 and 26 verbs, respectively. As one may expect, fully compositional composites (Table 14) contain motion, manner of motion, caused motion and location verbs (√i- ‘walk, go’, √īr- ‘go, move’, √gā- ‘go to’, √car- ‘go walk’, √dru- ‘run’, √dhanv- ‘cause to run’, √pad- ‘fall’,

38 Unless underwise specified, verbs in (52) should be understood as intransitive: ā√vr̥t- and pārī ā√vr̥t- can be also used transitively, whereas ā√vr̥t-, pārī ā√vr̥t- and prāti ā√vr̥t- also occur in the causative stem.
√bhr̥- ‘bear’, √yā- ‘go, move’, √vr̥t- ‘turn’, √syand- ‘move, flow on rapidly’), as well as verbs that can be assimilated to them, such as communication verbs (√gā2- ‘sing’, √śrdh-‘mock at’), verbs of emission (√arc- ‘shine, sing’, √nū- ‘sound’), transfer verbs (√dā-‘give’), verbs of putting/taking (√dhā- ‘put’), and verbs of holding/keeping (√yam- ‘hold, sustain’) (cf. Section 2.2).

<table>
<thead>
<tr>
<th>COMPOSITE</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>abhī prá √arc-</td>
<td>sing loudly of</td>
</tr>
<tr>
<td>áchā pārā √i-</td>
<td>go away toward</td>
</tr>
<tr>
<td>ánu áva √i-</td>
<td>go down after, follow</td>
</tr>
<tr>
<td>ánu pārā √i-</td>
<td>go away after</td>
</tr>
<tr>
<td>ánu prá √i-</td>
<td>go after, follow</td>
</tr>
<tr>
<td>abhī prá √i-</td>
<td>go near to, approach</td>
</tr>
<tr>
<td>abhī sām √i-</td>
<td>approach together, come together at</td>
</tr>
<tr>
<td>abhī ví √i-</td>
<td>come toward from different parts</td>
</tr>
<tr>
<td>ā́ áva √i-</td>
<td>rush down upon</td>
</tr>
<tr>
<td>úpa prá √i-</td>
<td>march on, go toward</td>
</tr>
<tr>
<td>pārī prá √i-</td>
<td>run through on all sides</td>
</tr>
<tr>
<td>prāti úd √i-</td>
<td>rise and go toward</td>
</tr>
<tr>
<td>sām ā́ √i-</td>
<td>come together, approach together, meet at/in/with</td>
</tr>
<tr>
<td>ví pārā √i-</td>
<td>go back again</td>
</tr>
<tr>
<td>sām prá √ir-</td>
<td>come forth together</td>
</tr>
<tr>
<td>úpa prá √gā-</td>
<td>step near to, proceed to</td>
</tr>
<tr>
<td>abhī prá √gā2- (√gai-)</td>
<td>encourage to start singing about, begin to praise</td>
</tr>
<tr>
<td>abhī úd √car-</td>
<td>rise over</td>
</tr>
<tr>
<td>ádhi ā́ √dā-</td>
<td>take away from above</td>
</tr>
<tr>
<td>ā́ prá √dru-</td>
<td>run forth here</td>
</tr>
<tr>
<td>pārī prá √dhān-</td>
<td>flow forth around</td>
</tr>
<tr>
<td>antār ā́ √dhā-</td>
<td>receive into, contain</td>
</tr>
<tr>
<td>ānu ā́ √nū-</td>
<td>sound here through</td>
</tr>
<tr>
<td>abhī prá √nū-</td>
<td>praise highly to</td>
</tr>
<tr>
<td>abhī sām √nū-</td>
<td>rejoice together at</td>
</tr>
<tr>
<td>úpa ní √pad-</td>
<td>lie down beside</td>
</tr>
<tr>
<td>abhī prá √bhr̥-</td>
<td>bring forth to, offer to</td>
</tr>
<tr>
<td>pārī ā́ √bhr̥-</td>
<td>carry near, fetch from</td>
</tr>
<tr>
<td>sām prá √yam-</td>
<td>offer together/mutually, give to</td>
</tr>
<tr>
<td>ábhi sām √yā-</td>
<td>visit, approach to</td>
</tr>
<tr>
<td>úpa prá √yā-</td>
<td>proceed toward</td>
</tr>
<tr>
<td>pārī prá √yā-</td>
<td>go forth around</td>
</tr>
<tr>
<td>prāti prá √yā-</td>
<td>go back, return</td>
</tr>
<tr>
<td>ānu ā́ √vr̥t-</td>
<td>roll near along</td>
</tr>
<tr>
<td>ánu prá √vr̥t-</td>
<td>proceed along/after</td>
</tr>
<tr>
<td>pārī prá √syand-</td>
<td>gush around, flow forth or round</td>
</tr>
<tr>
<td>āti prá √śrdh-</td>
<td>bring in front of in excess</td>
</tr>
</tbody>
</table>
Table 15. Vedic non-compositional composites

<table>
<thead>
<tr>
<th>COMPOSITE</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ni ā √kṛ-</td>
<td>hold back</td>
</tr>
<tr>
<td>āva ā √gam-</td>
<td>undertake, begin</td>
</tr>
<tr>
<td>abhi prá √cakṣ-</td>
<td>see</td>
</tr>
<tr>
<td>úpa prá √jinv-</td>
<td>please or gratify in approaching</td>
</tr>
<tr>
<td>ānu prá √jñā-</td>
<td>trace, discover</td>
</tr>
<tr>
<td>āti nís √tan-</td>
<td>penetrate with rays</td>
</tr>
<tr>
<td>abhi ā √nap-</td>
<td>torment, pain</td>
</tr>
<tr>
<td>abhi sám √dhā-</td>
<td>compose the mind at</td>
</tr>
<tr>
<td>ānu ā √phaṇ-</td>
<td>jump</td>
</tr>
<tr>
<td>ānu prá √bhū-</td>
<td>spread over</td>
</tr>
<tr>
<td>abhi prá √bhū-</td>
<td>assist, help</td>
</tr>
<tr>
<td>abhi sám √bhū-</td>
<td>enter, reach, come to</td>
</tr>
<tr>
<td>ānu prá √bhūṣ-</td>
<td>serve</td>
</tr>
<tr>
<td>abhi prá √mand-</td>
<td>feverishly await, confuse, infatuate</td>
</tr>
<tr>
<td>ānu prá √yaj-</td>
<td>win for oneself</td>
</tr>
<tr>
<td>abhi ā √yam-</td>
<td>aim at</td>
</tr>
<tr>
<td>sám ā √yam-</td>
<td>draw, pull, stretch</td>
</tr>
<tr>
<td>āpa nís √lī-</td>
<td>hide oneself, disappear completely</td>
</tr>
<tr>
<td>ānu prá √vid-</td>
<td>understand backward and forward</td>
</tr>
<tr>
<td>ā √vid-</td>
<td>know by distinguishing</td>
</tr>
<tr>
<td>úpa prá √vid-</td>
<td>understand</td>
</tr>
<tr>
<td>āti prá √sr-</td>
<td>outstrip, surpass</td>
</tr>
<tr>
<td>vi prá √sr-</td>
<td>spread</td>
</tr>
<tr>
<td>úpa āva √srj-</td>
<td>reach over, give, bestow</td>
</tr>
<tr>
<td>abhi prá √sthā-</td>
<td>advance toward, reach, surpass</td>
</tr>
<tr>
<td>abhi prá √shan-</td>
<td>overpower</td>
</tr>
</tbody>
</table>

The group of non-compositional composites (Table 15) includes the following subgroups: (a) motion or location verbs that develop non-spatial meanings in combination with preverbs; (b) verbal roots that cannot be assimilated to motion or location verbs (√vid- ‘know’ and √jñā- ‘know’). A good example for the group (a) is āva ā √gam-, which literally means ‘down_to_go’, but actually comes to mean ‘under-take, begin’. The outcome of the root √dhā- ‘put’ in combination with abhi ‘to, unto, against’ and sám ‘along, with, together’ is also interesting: the composite abhi sám√dhā- means (lit.) ‘put (the mind) together to’ → ‘acknowledge unanimously’. Another instructive example is abhi ā √yam-: in this composite, the Goal-preverbs cause the stative verb √yam- ‘hold’ to acquire directional nuances. The composite abhi ā √yam- means ‘aim at’, i.e. indicates a mental metaphorical motion toward a LM. Something similar can also be observed in abhi prá √sthā- ‘advance toward, reach, surpass’, whereby the stative root √sthā- ‘stand’ comes to indicate motion in combination with a Goal- (abhī) and a Path-preverb (prā) (on the
ability of Vedic preverbs to provide stative roots with dynamic nuances of meaning, cf. also Danesi 2009).

Group (b) includes mental verbs, to which preverbs add the traits of intensification or telicity. For example, the root √mand- means ‘rejoice’; if compounded with ābhi ‘to, unto, against’ and prā ‘forward, onward, forth, fore-’, it indicates the activity of feverishly awaiting (intran.) or infatuating (tran.). In both cases, the exact semantic contributions of the preverbs are difficult to trace. With stative verbs of knowing, such as √jñā- and √vid-, preverbs also have the effect of adding dynamic nuances: ānu and prā, two Path-preverbs, result in the meaning of tracing or discovering in combination with √jñā-. The events of tracing and discovering are possibly regarded as the acts of knowing after covering a metaphorical Path toward knowledge. The root √vid- instead is found in various composites, among which ānu prā √vid-, which means ‘understand backward and forward’, i.e. ‘understand completely’. A last interesting example is ápa ní √lī- ‘hide oneself, disappear completely’. The root per se means ‘dissolve, melt, disappear’. It combines with ní ‘down, in, into’, possibly bringing about the idea of dissolving down and eventually of lacking visibility (cf. Section 4.2); then, the EP ápa modifies the whole composite, by adding the actional meaning of completion (cf. example (46)).

4.4. **Summarizing the meanings of preverbs in multiple preverb combinations**

Table 16 displays the meanings of Vedic multiple preverbs. Each meaning is exemplified at least by a composite. Many semantic developments have been discussed in Sections 4.1, 4.2, and 4.3; those that have been overlooked either for reasons of space, or because they are assumed to be immediately clear, are also included in Table 16.
<table>
<thead>
<tr>
<th>Preverb</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>áti</td>
<td>beyond</td>
<td>áti á śvā- ‘drive by’</td>
</tr>
<tr>
<td></td>
<td>over (diffusion)</td>
<td>áti nis śvan- ‘penetrate with rays’</td>
</tr>
<tr>
<td></td>
<td>over (excess)</td>
<td>áti prá śvṛdh- ‘outgrow’</td>
</tr>
<tr>
<td>ádhi</td>
<td>up</td>
<td>ádhi sām śgam- ‘go up to, approach together’</td>
</tr>
<tr>
<td></td>
<td>for (Beneficiary)</td>
<td>ádhi nī śdāh- ‘deposit for’</td>
</tr>
<tr>
<td></td>
<td>from above</td>
<td>ádhi á śdāh- ‘take away from above’</td>
</tr>
<tr>
<td>ánu</td>
<td>after</td>
<td>ánu pārā śi- ‘go away after’</td>
</tr>
<tr>
<td></td>
<td>along (Path)</td>
<td>ánu á śvṛt- ‘roll near along’</td>
</tr>
<tr>
<td></td>
<td>along/over (covering)</td>
<td>ánu prá śbhū- ‘spread over’</td>
</tr>
<tr>
<td></td>
<td>over (Beneficiary)</td>
<td>ánu prá śḥūs- ‘serve’</td>
</tr>
<tr>
<td></td>
<td>agreement (concede a point)</td>
<td>ánu prá śṇāh- ‘trace, discover’</td>
</tr>
<tr>
<td></td>
<td>resultative</td>
<td>ánu prá śvaj- ‘win for oneself’</td>
</tr>
<tr>
<td>antár</td>
<td>between</td>
<td>antár vī śbhāh- ‘shine in different directions between’</td>
</tr>
<tr>
<td></td>
<td>inside</td>
<td>antár pārī śvā- ‘hide in’</td>
</tr>
<tr>
<td>ápa</td>
<td>away</td>
<td>ápa á śvṛt- ‘wipe out, bring away’</td>
</tr>
<tr>
<td></td>
<td>off</td>
<td>ápa pārā śi- ‘go off’</td>
</tr>
<tr>
<td></td>
<td>away+telic</td>
<td>ápa nī ślī- ‘hide oneself, disappear completely’</td>
</tr>
<tr>
<td>abhi</td>
<td>to (Goal)</td>
<td>abhi á śi- ‘come to, approach’</td>
</tr>
<tr>
<td></td>
<td>to (Addressee)</td>
<td>abhi prá śarc- ‘sing loudly of’</td>
</tr>
<tr>
<td></td>
<td>to (Stimulus)</td>
<td>abhi prá ścaks- ‘see’</td>
</tr>
<tr>
<td></td>
<td>to (Maleficiary)</td>
<td>abhi á ślap- ‘torment, pain’</td>
</tr>
<tr>
<td></td>
<td>to (Beneficiary)</td>
<td>abhi prá śbhū- ‘assist, help’</td>
</tr>
<tr>
<td></td>
<td>to (Recipient)</td>
<td>abhi prá śbhr̥- ‘serve’</td>
</tr>
<tr>
<td></td>
<td>to (Purpose)</td>
<td>abhi sām śdāh- ‘compose the mind at’</td>
</tr>
<tr>
<td></td>
<td>against</td>
<td>prá abhi śmr̥- ‘attack, tackle’</td>
</tr>
<tr>
<td></td>
<td>over</td>
<td>abhi ud ścar- ‘rise over’</td>
</tr>
<tr>
<td></td>
<td>intensive</td>
<td>abhi prá śhan- ‘overpower’</td>
</tr>
<tr>
<td>áchā</td>
<td>toward</td>
<td>áchā pārā śi- ‘go away toward’</td>
</tr>
<tr>
<td>áva</td>
<td>downward</td>
<td>áva nī śvā- ‘rush down upon’</td>
</tr>
<tr>
<td></td>
<td>off</td>
<td>úpa áva śṣṛj- ‘reach over, give, bestow’</td>
</tr>
<tr>
<td></td>
<td>progressive</td>
<td>áva á śgam- ‘undertake, begin’</td>
</tr>
<tr>
<td>ā</td>
<td>Goal</td>
<td>á áva nī- ‘rush down upon’</td>
</tr>
<tr>
<td></td>
<td>here (subject’s vicinity)</td>
<td>á prá śdṛu- ‘run forth here’</td>
</tr>
<tr>
<td></td>
<td>subject’s interest,(rMID)</td>
<td>sām ā nī- ‘come together, approach together’</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>á prá śvṛ- ‘surround with’</td>
</tr>
<tr>
<td></td>
<td>back</td>
<td>sām ā śvṛt- ‘turn back, come back, return’</td>
</tr>
<tr>
<td></td>
<td>reversative</td>
<td>ádhi á śdāh- ‘take away from above’</td>
</tr>
<tr>
<td></td>
<td>intensity</td>
<td>á vī śvid- ‘know by distinguishing’</td>
</tr>
<tr>
<td></td>
<td>telic</td>
<td>nī ā śvā- ‘set someone down’</td>
</tr>
<tr>
<td>úd</td>
<td>upward</td>
<td>práti úd nī- ‘rise and go toward’</td>
</tr>
<tr>
<td></td>
<td>upward+out of,(rAbb)</td>
<td>úd á ścar- ‘rise out of’</td>
</tr>
<tr>
<td>úpa</td>
<td>toward</td>
<td>úpa prá nī- ‘march on, go toward’</td>
</tr>
<tr>
<td></td>
<td>beside (Location)</td>
<td>úpa nī śpad- ‘lie down beside’</td>
</tr>
<tr>
<td></td>
<td>beside (Goal)</td>
<td>úpa á ścar- ‘come near to, attend upon’</td>
</tr>
<tr>
<td></td>
<td>under- (as in under-stand)</td>
<td>úpa prá śvid- ‘understand’</td>
</tr>
<tr>
<td></td>
<td>telic</td>
<td>úpa áva śṣṛj- ‘reach over, give, bestow’</td>
</tr>
<tr>
<td>nī</td>
<td>downward</td>
<td>nī ā ślī- ‘set someone down’</td>
</tr>
<tr>
<td></td>
<td>down as lacking control</td>
<td>nī ā śvād- ‘sit down on, cause to sit down, establish’</td>
</tr>
<tr>
<td></td>
<td>down (lacking visibility)</td>
<td>ápá nī ślī- ‘hide oneself, disappear completely’</td>
</tr>
<tr>
<td>nís</td>
<td>away/forth</td>
<td>nís ā Śi- ‘go off, depart’</td>
</tr>
<tr>
<td>-----</td>
<td>------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>out of (creation)</td>
<td>ā nís Āduḥ- ‘create out of’</td>
</tr>
<tr>
<td></td>
<td>division</td>
<td>āti nís Āhan- ‘penetrate with rays’</td>
</tr>
<tr>
<td>pārā</td>
<td>away</td>
<td>āchā pārā Śi- ‘go away toward’</td>
</tr>
<tr>
<td></td>
<td>back</td>
<td>vī pārā Śi- ‘go back again’</td>
</tr>
<tr>
<td>pārī</td>
<td>around</td>
<td>pārī pārā Śdhan- ‘flow forth around’</td>
</tr>
<tr>
<td></td>
<td>around+telic</td>
<td>ā pārī Śyṛ- ‘surround with’</td>
</tr>
<tr>
<td></td>
<td>lack of visibility/imprisonment</td>
<td>antār pārī Śvṛā- ‘hide in’</td>
</tr>
<tr>
<td></td>
<td>from (ABL)</td>
<td>pārī sām Śhā- ‘rise up from’</td>
</tr>
<tr>
<td>prā</td>
<td>forth, forward (Path)</td>
<td>abhī prā Śi- ‘go near to, approach’</td>
</tr>
<tr>
<td></td>
<td>metaphorical Path</td>
<td>āti prā Śvṛdh- ‘outgrow’</td>
</tr>
<tr>
<td></td>
<td>openly, loudly</td>
<td>abhī prā Śarc- ‘sing loudly of’</td>
</tr>
<tr>
<td></td>
<td>before (be pre-posed)</td>
<td>abhī prā Śbhū- ‘assist, help’</td>
</tr>
<tr>
<td></td>
<td>in front of</td>
<td>āti prā Śvṛdh- ‘bring in front of in excess’</td>
</tr>
<tr>
<td></td>
<td>in front of (Beneficiary)</td>
<td>ānu prā Śvaj- ‘win for oneself’</td>
</tr>
<tr>
<td></td>
<td>intensive</td>
<td>abhī prā Śmand- ‘feverishly await, confuse, infatuate’</td>
</tr>
<tr>
<td></td>
<td>telic</td>
<td>abhī prā Śhan- ‘overpower’</td>
</tr>
<tr>
<td>prāti</td>
<td>toward</td>
<td>prāti ud Śi- ‘rise and go toward’</td>
</tr>
<tr>
<td></td>
<td>against</td>
<td>prāti ā Śyān- ‘shine upon/against’</td>
</tr>
<tr>
<td></td>
<td>back, again (returning activity)</td>
<td>prāti prā Śvṛā- ‘go back, return’</td>
</tr>
<tr>
<td>vī</td>
<td>toward different directions</td>
<td>vī prā Śi- ‘go forth in different directions’</td>
</tr>
<tr>
<td></td>
<td>from different directions</td>
<td>abhī vī Śi- ‘come toward from different parts’</td>
</tr>
<tr>
<td></td>
<td>covering</td>
<td>vī śpr- ‘spread’</td>
</tr>
<tr>
<td></td>
<td>through</td>
<td>vī ā Śkr- ‘undo, sever, divide from’</td>
</tr>
<tr>
<td></td>
<td>division (pseudoreversative)</td>
<td>adhī vī Śkṣar- ‘pour out, flow out’</td>
</tr>
<tr>
<td></td>
<td>out</td>
<td>vī ā Śvidh- ‘know by distinguishing’</td>
</tr>
<tr>
<td></td>
<td>precisely (in distinguishing)</td>
<td>vī pārā Śi- ‘go back again’</td>
</tr>
<tr>
<td></td>
<td>again (in two times)</td>
<td></td>
</tr>
<tr>
<td>sām</td>
<td>with (Comitative)</td>
<td>abhī sām Śi- ‘approach together, come together at’</td>
</tr>
<tr>
<td></td>
<td>vicinity</td>
<td>abhī sām Śvṛā- ‘visit, approach to’</td>
</tr>
<tr>
<td></td>
<td>mutually</td>
<td>sām prā Śyam- ‘offer together/mutually, give to’</td>
</tr>
<tr>
<td></td>
<td>intensive</td>
<td>pārī sām Śhā- ‘rise up from’</td>
</tr>
<tr>
<td></td>
<td>telic</td>
<td>sām ā Śvṛty- ‘turn back, come back, return’</td>
</tr>
</tbody>
</table>

5. The syntax of multiple preverbs

5.1. Moveable preverbs

As remarked in Section 1.2, Vedic preverbs are not morphologically bound to the verb. On the contrary, on account of syntactic or pragmatic reasons, preverbs can be displaced from the immediate preverbal position, that is, the unmarked position for preverbs with verbal orientation.
Tmesis is very widespread in Vedic, and does not affect the semantic behavior of preverbs, to such an extent that dictionaries, such as Grassmann’s (1936[1873]), even lemmatize those composites, so to say, in which two preverbs never occur in immediate preverbal position (in other words, those composites for which the sequence #P_P_V# is never attested in the R̥g-Veda). For example, putative composites of this type are listed under the root √i- ‘walk, go’. Along with the combinations included in my sample, which feature the order #P_P_V#, Grassmann states that √i- can be modified by the following multiple preverbs (after each composite, the attested preverb ordering is presented):

(53)  
a. abhí ní √i- ‘come up, have sexual intercourse with’  #P…P_V#  
b. abhí úd √i- ‘rise over’  #P_V…P#  
c. abhí úpa √i- ‘come closer to’  #P_V…P#  
d. ápā prá √i- ‘pass over, distance oneself from’  #P…P_V#  
e. prá áti √i- ‘march past’  #P…P_V#, #P…P_V#, #P…P…V#  
f. sám abhí √i- ‘come near to’  #P…P_V#  
g. sám prá √i- ‘get ahead together’  #P…P_V#  
h. úd ā́ √i- ‘come out, come upstairs’  #P…P…V#  
i. úpa ā́ √i- ‘come up, come close to, try to gain’  #P…P_V#, #P…P…V#  

Among composites in (53)a-i, the verb in (53)i is interesting, as it develops the non-compositional meaning of ‘try to gain’, besides retaining its basic use of ‘come up, come close to’. As shown in (54), úpa ā́ √i- develops a non-compositional meaning even though the EP úpa ‘to, unto, toward’ is displaced from the rest of the composite. Exceptionally, in (54), tmesis is possible even with a non-finite verbal form (cf. Section 1.2.5).

(54)  
{\rm índur}  \quad {\rm dev\vec{\rm a}n\vec{\rm ā}m}  \quad {\rm úpa}  \quad {\rm sakhy\vec{\rm ā}m}  \quad {\rm ā\text{-yán}}  
L.NOM  god.GEN.PL  to  friendship.ACC  P-go.PTCP.PRS.NOM  
‘The drop, trying to gain the friendship of the gods,…’ (RV 9.97.5a)  

For a number of occurrences with composites of (53)a-i, it is difficult to determine whether a displaced preverb has nominal or verbal orientation. One such occurrence is exemplified in (55), containing the composite ápā prá √i- ‘pass over, distance oneself from’ (cf. (53)d):
(55) ápāsmāt [ápa asmāt] préyān [prá iyāt]
away DEM.ABL.N forward go.OPT.3SG
‘May (he) depart from here – (no home is that to rest in.)’ (RV 10.117.4c)

In (55), the demonstrative pronoun in the ablative case, asmāt, which immediately follows and specifies the Source-preverb ápa, splits the composite ápa prá √i-. Though rarely, the preverb ápa can also be used adnominally in combination with an ablative case, such as asmāt (Delbrück 1888: 446). Thus, the actual function of ápa is difficult to assess for (55), as its positioning allows for divergent readings (however, Hettrich and colleagues argue that orders such as that in (55) usually suggest adnominal orientation; cf. Section 1.2.4).

Even composites with multiple preverbs in immediate preverbal position frequently allow for preverb displacement. Out of 117 composites, 73 occur in passages in which at least one of the preverbs is not immediately preverbal. Such a freedom is exemplified by means of the composite úpa ā́ √yā- ‘come near, approach’. As shown in (56), the elements of the composite can be arranged in various ways within the Vedic sentence:

(56) a. upā́yātam (RV 7.71.2a) #P_P_V#
b. ā́ yātam úpa (RV 1.2.6c) #P_V_P#
c. īndrā́yāhi tútuśāna úpa (RV 1.3.6ab) #P_V…P#
d. ā́ indra yāhi úpa naḥ parāváto (RV 1.130.1ab) #P…VP#
e. úpem ā́yāta mānasā juśānā (RV 1.171.2c) #P…PV#
f. ā́ na stutá úpa vājebhir ūtī indra yāhi (RV 4.29.1) #P…P…V#

5.2. Optional preverbs

As explained in Section 1, the various publications by Hettrich and colleagues always include a section in which the authors discuss the omissibility (Weglassbarkeit in their terms) of a certain preverb. All in all, preverbs-adpositions can be omitted in the vast majority of contexts, and their function can be taken over by adpositionless cases. This is arguably possible, as Vedic cases retain many of their concrete meanings (cf. Section 1.2.7). As Hettrich and colleagues take into account all instances of a certain preverb,
including those in which a preverb co-occurs with other preverbs, their findings also hold for multiple preverb composites, as I summarize in what follows.

First, there are composites that do allow for the omission of the EP, though they undergo detectable semantic changes because of the presence of that EP. In this respect, an instructive pair is *práti* prá yā- ‘go forth back’ and *prá* √yā- ‘go forth to’.

(57) **práti**   **prá**   yāhindra [yāhi indra] mīlhūso     nīn
in_reverse_direction  forth  go.IMP.2SG  I.VOC bountiful.ACC.PL  man.ACC.PL
‘Drive forth back toward the men who grant rewards [=Maruts], Indra.’
(RV 1.169.6a)

(58) **pró**   **ayāsid**   Índur  Índrasya  niskrtám
forth  go.AOR.3SG  drop.NOM  I.GEN.SG  place_of_rendezvous.ACC
‘The drop has proceeded forth to Indra’s place of rendezvous.’ (RV 9.86.1a)

Both composites in (57) and (58) take the accusative indicating the Goal, that is, *mīlhūso nīn* ‘bountiful men’ and *niskrtám* ‘place of rendezvous’. The addition of *práti* ‘in reversed direction, back to, against, in return’ thus does not affect the syntax of the composite in (57), though it changes its meaning: *práti* adds the notion of ‘in reversed direction, back’.

The adpositionless accusative can also express Goal even in combination with composites containing only Source-preverbs. This is the case of *párai √i*- ‘go away toward’, as shown in (59).

(59) **párehi**   **vígram**   **ásttam**
go_away.IMP.2SG  strong.ACC  invincible.ACC
‘Go away to the spirited and indestructible [=Indra].’ (RV 1.4.4a)

In (59), the adpositionless accusative *vígram ásttam*, Indra’s attributes, expresses the Goal of motion. This construction is possible even if the composite *párai √i*- only contains the Source-preverb *párai* ‘to a distance, away, forth’, without an additional Goal-preverb.
What is evident is that it is the concrete value of cases that imposes an orientation to the motion event.

(60) \(\sqrt{i}\) ‘go, walk’ + ACC

\(kaniyeva\ [kanyã́ iva]\ tanúvå\ śåśadänǻm\ ési\ devi\)

girl.NOM like body.INS fall.PTCP.F PRF.F go.PRS.2SG goddess.NOM
devǻm
god.ACC

‘Like a girl exulting in her body, you go, o goddess, to the god (who seeks to attain you [=Sun]).’ (RV 1.123.10ab)

(61) \(\sqrt{i}\) +ABL

\(prayuñjatǻ\ divǻ\ eti\)

yoke_to.PTCP.NOM sky.ABL go.PRS.3SG

‘Hitching up, she goes away from heaven.’ (RV 5.47.1a)

The bare root \(\sqrt{i}\) ‘walk, go’ can be combined both with the adpositionless accusative, devǻm (60), and with the adpositionless ablative (61), resulting in the opposite meanings ‘go toward’ and ‘go away’ respectively.

5.3. Vedic preverbs as transitivizing morphemes

As discussed by Danesi (2009: 249) for single preverbation, Vedic preverbs also seem to function as applicatives (on this terminology, cf. Chapter 2; Austin 1997; Shibatani 2000; Petersen 2007). This transitivizing function is allegedly connected to their ability of telicizing stative and activity predicates. A case in point is the emission verb \(\sqrt{bhǻ}\) ‘shine, emit light’, which is intransitive in its absolute usages (62), but can take the accusative in combination with the preverbs antǻr ‘between, among, within’ and vî ‘apart, asunder, away, out’ (63).
Thus, one might be inclined to think that the preverbs antār and vī allow the occurrence of the second argument in the accusative case in (63).

As a matter of fact, however, a number of emission verb roots, including \(\sqrt{caktu} \)- ‘emit light, shine’ (64) and \(\sqrt{tapu} \)- ‘give out heat’ (65), do not require a preverb to be employed as telic and transitive predicates. In fact, the addition of an adpositionless directional accusative, such as \(\text{āditi} \text{mā} \text{di} \text{mā} \text{ca} \) ‘Aditi and Diti’ in (64) and \(\text{nas} \) ‘us’ in (65), can also bring about the same effect.

Moreover, similarly to what observed for \(\sqrt{bhā} \)- ‘shine, emit light’ in (63)–(64), there exist composites containing roots of location or motion verbs, in which preverbs seem
to centralize the Goal- and the Path-participants (i.e. they seem to function as applicatives). In (66), áti á \(\sqrt{yā}\) - ‘drive by’ takes the Goal-accusative \(\text{sāśvato}[aḥ]\) ‘every’; in (67), áti prá \(\sqrt{sr}\) - ‘outstrip, surpass’ takes the Path-accusative \(jānīma\) ‘generation’.

(66) Transitive áti á \(\sqrt{yā}\) - ‘drive by’ (\(\sqrt{yā}\) - ‘go, move, drive’)

\[
\text{atiāyāhi} \quad \text{sāśvato} \quad \text{vayām} \quad \text{te} \quad \text{āraṃ}
\]
\[
\text{pass}_\text{by}.\text{IMP}.2\text{SG} \quad \text{every}.\text{ACC}.\text{PL} \quad 1\text{PL}.\text{NOM} \quad 2\text{SG}.\text{DAT} \quad \text{properly}
\]
\[
\text{sutēbhīḥ} \quad \text{kṛṇavāma} \quad \text{sōmaiḥ}
\]
\[
\text{press}_\text{out}.\text{PTCP}.\text{PST}.\text{INS}.\text{PL}.\text{PASS} \quad \text{do}.\text{SBJV}.\text{PRS}.\text{1PL} \quad \text{S.INS}.\text{PL}
\]

‘Drive beyond them, each and every one. We will prepare properly for you with pressed soma drinks.’ (ṚV 3.35.5cd)

(67) Transitive áti prá \(\sqrt{sr}\) - ‘outstrip, surpass’ (\(\sqrt{sr}\) -)

\[
\text{sā} \quad \text{majmānā} \quad \text{jānīma} \quad \text{mānuṣaṇāṃ}
\]
\[
\text{DEm}.\text{NOM} \quad \text{greatness}.\text{INS} \quad \text{generation}.\text{ACC} \quad \text{human}.\text{GEN}.\text{PL}
\]
\[
\text{āmartiyena} \quad \text{nāmni}[\text{nāmni} \quad \text{ati}] \quad \text{prá} \quad \text{sarsre}
\]
\[
\text{immortal}.\text{INS} \quad \text{name}.\text{INS} \quad \text{beyond} \quad \text{forth} \quad \text{run}.\text{INTENS}.\text{PRF}.3\text{SG}
\]

‘Through (his) greatness and (his) immortal name he has extended himself over the generations of humans.’ (ṚV 6.18.7ab)

However, in parallel to what outlined above for emission verbs, simplex motion or manner of motion verbs, such as \(\sqrt{yā}\) ‘go, move, walk’ and \(\sqrt{sr}\) ‘run’, can also be given an endpoint by adpositionless accusatives. In (68), the two accusatives \(ādityān\) and \(āditiṃ\) are the animate Goals of motion. The same role is played by the accusative \(sāram\) in (69).

(68) \(ādityān\) \(\quad yāmi\) \(\quad āditiṃ\) \(\quad duvoyū\)

\[
A.\text{ACC}.\text{PL} \quad \text{go}.\text{PRS}.1\text{SG} \quad A.\text{ACC} \quad \text{reverently}
\]

‘(To those who care for the stranger, the lords of settlements, undeceivable, the great kings, givers of good dwelling, the youths of good rule ruling over Heaven, the superior men –) to the Ādityas I go and to Aditi, in quest of friendship.’

(ṚV 6.51.4d)
However, not all (manner of) motion verbs behave this way: for example, √drā- ‘run’, √dru- ‘run’, and √vr̥t- ‘roll’ are not attested in combination with the adpositionless accusative of Goal, though √vr̥t- can instead take an adpositionless locative with the same function.

All in all, the transitivization of an intransitive simplex verb can be caused by any linguistic element able to assign an inherent endpoint to the event – be it a preverb, a multiple preverb combination, or a prepositionless accusative. Moreover, the transitivization of multiple preverb composites frequently seems to be a side-effect of the semantic changes brought about by preverbs: this is the case with the non-compositional transitive composites abhī prá √bhū- ‘assist, help’ (√bhū- ‘be, become’), or abhī ā́ √tap- ‘torment, pain’ (√tap- ‘give out heat’). The fact that idiomatic semantic changes of the verbal root play a crucial role in the transitivization caused by preverbs is also assessed by Kulikov (2012: 732): all composites containing the putative applicative preverbs ādhi, abhi, úpa, pāri, prá, and práti that pass Kulikov’s passivization test show non-compositional meanings (Kulikov 2012: 730 ff.).39

5.4. Composites taking no second argument

In passages in which multiple preverb composites take no second argument, preverbs seem to be able to activate in the discourse sphere certain spatial regions and relations, whose specifications (i.e. LMs) are constituted by certain known referents. Such known LMs can be of the following types: (a) referents that are active in the discourse sphere, as they have

39 The only reliable passivization test for Old Indo-Aryan is the ability of a verb to form -vá- passives. However, such passives are virtually unattested in early Vedic (i.e. in the Ṛg-Veda), and all Kulikov’s examples of these passives come from later stages of the Vedic language.
been mentioned in the previous discourse context (70); (b) referents that are active, as they belong to speakers’ encyclopedic knowledge (71).

(70)  

a. ánu prá yanti vr̥ṣṭáyah
after forth go.PRS.3PL rain.NOM.PL
‘(Your troop of chariots, the glittering Marut flock of newer), do the rains come following after.’ (RV 5.53.10c)

b. niraítu jívó ákṣato
go_off.IMP.3SG alive.NOM not_crushed.NOM
‘(Having lain for ten months within his mother,) let (the boy) come out, alive and unharmed.’ (RV 5.78.9c)

(71)  

tuváṃ hi agne sádam ít samanyávo
2SG.ACC for A.VOC always indeed having_the_same_mind.NOM.PL
deváso devám aratíṃ nierirá
god.NOM.PL god.ACC moving_quicly.ACC set_down.PRF.3PL
íti krátvā nieriré
thus do.ABS set_down.PRF.3PL
‘You, o Agni, the god, did the gods of equal fervor set down for always as the wheel (of the sacrifice) – with such a purpose did they set (you) down.’
(RV 4.1.1abc)

In (70)a, the EP ánu ‘after, along, toward’ establishes a reference to the previously mentioned referents (LMs), after which the TR starts its motion, the Maruts. In (70)b, the outward motion is that of a newborn, who abandons his mother’s womb. In (71), instead, the downward motion is Agni’s, whom other gods send downward from heaven to earth.

Thus, preverbs, via referring to certain spatial relations, are consequently able to recall previously mentioned entities (70) or entities belonging to speakers’ encyclopedic knowledge (71). In both cases, such entities can be regarded as topical, as they are active in the discourse sphere or can be easily activated. Such an ability of recalling topical entities possibly lies among the reasons why preverbs underwent grammaticalization into actional
markers. The link between topicality, telicity (and eventually perfectivity) is the fact that topical elements are conceptualized as entire in space and complete in time (Viti 2008a, 2008b). A similar discourse-oriented grammaticalization has been previously assumed for Indo-European preverbs, in particular by Friederich (1987: 134), Coleman (1994: 324), and Cuzzolin (1995: 137).

Such a development also has typological parallels: first, the preverbs of Rama (Chibchan, Nicaragua) are said to develop from previous postpositions that start gravitating toward verbs, when null anaphora of the noun phrase occurs (Craig 1991: 468). Second, Severn Ojibwe (Algonquian, Canada) possesses a category of preverbs that are called relational by virtue of the fact that they require an antecedent in the previous context (cf. Chapter 2, Section 3.2).

Dunkel (1987), Boley (2004), and Klein (e.g. 2007) also describe preverbs as linguistic elements that fulfill pragmatic functions, by contributing to textual cohesion. This function of preverbs is clear when they are repeated outside the preverbal context, as in example (72), in which the EP of the multiple preverb composite pári prá √dhanv- ‘flow forth around’ also occurs at the beginning of the subsequent pāda.

(72) pári ū śú prá dhanva vājasātaye
    around PTC good forth run.IMP.2SG winning_of_a_prize.DAT
    pári vr̥trāṇi …
    around V.VOC.PL
    ‘Around and forth run to the winning of the prize, around, O Vṛtras!’
    (RV 9.110.1a)

---

40 These authors however are inclined to think that Indo-European preverbs underwent grammaticalization from previous postpositions, and not from previous adverbs.

41 Rama is a language with no morphological cases, which can express SRs. Thus, in Rama, it is quite undisputed that preverbs were postpositions at a preceding stage. This is not the case for Vedic, in which there is virtually no government relation between preverbs (also called adpositions), and noun phrases (cf. Section 1.2.7)

42 In (72), the composite pári prá √dhanv- ‘flow forth around’ is split by two indeclinables, i.e. ū and śú. The same composite occurs in initial position with no splits in the preceding hymn, RV 9.109.1a.
6. Preverb ordering

A number of preverbs only rarely occur in multiple preverb constructions. For this reason, it is difficult to provide conclusive data on preverb ordering (cf. also Papke 2010: 102 on this issue). In particular, preverbs that occur less than 10 times are the followings: ádhi ‘above, over, on, onto’, áchā toward‘to, unto’, antár ‘between, among, within’, ápa ‘away, forth, off’, áti ‘across, beyond, past, over’, áva ‘down, off’, ní ‘down, in, into’, nís ‘out, forth’, pára ‘to a distance, away, forth’, práti ‘in reversed direction, back to, against, in return’, and úd ‘up, up forth or out’. Thus, one must look at Table 17, which summarizes the favourite positioning of Vedic preverbs, with this caveat in mind.

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Interior</th>
<th>Exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>áchā</td>
<td>0</td>
<td>1 (100%)</td>
</tr>
<tr>
<td>áti</td>
<td>0</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>ádhi</td>
<td>1 (20%)</td>
<td>4 (80%)</td>
</tr>
<tr>
<td>ánú</td>
<td>0</td>
<td>18 (100%)</td>
</tr>
<tr>
<td>antár</td>
<td>0</td>
<td>3 (100%)</td>
</tr>
<tr>
<td>ápa</td>
<td>0</td>
<td>3 (100%)</td>
</tr>
<tr>
<td>abhí</td>
<td>1 (3%)</td>
<td>32 (97%)</td>
</tr>
<tr>
<td>áva</td>
<td>3 (75%)</td>
<td>1 (25%)</td>
</tr>
<tr>
<td>ā</td>
<td>38 (81%)</td>
<td>9 (19%)</td>
</tr>
<tr>
<td>úd</td>
<td>2 (67%)</td>
<td>1 (33%)</td>
</tr>
<tr>
<td>úpa</td>
<td>0</td>
<td>10 (100%)</td>
</tr>
<tr>
<td>ní</td>
<td>4 (67%)</td>
<td>2 (33%)</td>
</tr>
<tr>
<td>nís</td>
<td>3 (75%)</td>
<td>1 (25%)</td>
</tr>
<tr>
<td>pára</td>
<td>4 (100%)</td>
<td>0</td>
</tr>
<tr>
<td>pári</td>
<td>2 (20%)</td>
<td>8 (80%)</td>
</tr>
<tr>
<td>prá</td>
<td>41 (98%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>práti</td>
<td>0</td>
<td>4 (100%)</td>
</tr>
<tr>
<td>ví</td>
<td>7 (59%)</td>
<td>5 (41%)</td>
</tr>
<tr>
<td>sám</td>
<td>12 (63%)</td>
<td>7 (37%)</td>
</tr>
</tbody>
</table>

Not all preverbs can occur both in the interior and in the exterior positions: in particular, áchā, antár, ánú, ápa, áti, práti, and úpa ‘to, unto, toward’ are never interior; by contrast, pára is never, and prá ‘forward, onward, forth, fore’ hardly ever exterior. Other preverbs show clear, though not absolute, positional tendencies: ā ‘to, unto, at’, áva, ní, nís, and úd are preferably interior, whereas abhí ‘to, unto, against’, ádhi, and práti ‘round about,
around’ favor the exterior position. Lastly, the positional tendencies of sám ‘along, with, together’ and ví ‘apart, asunder, away, out’ are unclear.

These data confirm Macdonell’s (1910: §593, fn. 7) remark, according to which “when there are two [preverbs], párā always immediately precedes the verb; ā and áva nearly always; úd, ní, prá usually. On the other hand, abhí is all but invariably the first of the two; adhí and ánú are nearly always so, úpa and práti usually.” In addition, it is also consistent with Papke’s findings, summarized in Figure 3:

**Figure 3.** Vedic token data: ordering (from Papke 2010: 101)

This consistency is significant: both Macdonell’s and Papke’s data samples are wider than mine. Macdonell includes the entire Vedic (not only Rg-Vedic) corpus. Papke’s investigation instead is limited to the Rg-Veda, but she also takes into account those composites for which the order #P_P_V# is never attested (cf. fn. 7).
6.1. Papke’s (2010) account of preverb ordering

In her dissertation, Papke (2010: 104 ff.) remarks that the relative positioning of preverbs is very similar in Vedic and in Classical Sanskrit. These data suggest that, in spite of the high productivity of verbal composition, and its syntactic nature (Danesi 2013: 62; Section 1.2.1), Vedic multiple preverb composites should at least partially be regarded as conventionalized units, as they survive in the later stages of the language (cf. Table 10). Papke (2010) also considers conventionalization (i.e. lexicalization, in her terms) the reason why multiple preverb composites remain relatively stable from the Vedic to the Classical period.

As for the motivations behind preverb ordering, Papke (2010: 108 ff.) excludes any significant correlation between the order of preverbs and the resulting meaning of the composite verbs. In particular, she shows that composites allowing for more than one order are frequently synonyms. This also holds true for my data, in which the composites ā́ nís ŋi- ~ nís ā́ ŋi- ‘go off, depart’ and abhí prá ∨mr̥ś- ~ prá abhí ∨mr̥ś- ‘seize, grasp’ alternate without any significant semantic difference, as shown in examples (73)a-b. Crucially (cf. Section 6.2), however, the difference between (73)a and (73)b is the overt expression of the Goal-participant (śriyē:DAT ‘glory’), which specifies the generic Goal meaning of the exterior preverb ā́ ‘to, unto, at’ in (73)a.

(73)  a. ā́ nís ŋi- ‘go off, depart’ (overtly expressed Goal)

śriyē  jātāḥ  śriyē  ā́  nír  iyāya
light.DAT born.NOM light.DAT to out go.PRФ.3SG

‘Born for glory, he went off to glory.’ (RV 9.94.4a)

b. nís ā́ ŋi- ‘go off, depart’ (omitted Goal)

niraítu  jīvō  ákṣato
go_off.IMP.3SG alive.NOM not_crushed.NOM

‘(Having lain for ten months within his mother,) let (the boy) come out, alive and unharmed.’ (RV 5.78.9c = (70))
Moreover, Papke (2010: 111–112) fails to identify any correlation between the interior/exterior positions and the meanings of single preverbs: morphemes expressing Direction, Location, and Orientation (in Imbert’s 2008 terms; cf. Chapter 4) can equally select both positions. However, Papke’s approach raises a number of issues. First, it is not entirely clear to me according to which criteria Papke (2010) grouped preverbs according to their meanings. For example, why is \( \text{ní} \) ‘down, in, into’ categorized among Orientation preverbs, whereas its antonym, i.e. \( \text{úd} \) ‘up, up forth, up out’, among Direction (i.e. Goal) preverbs? Second, Direction (i.e. Goal), Location, and Orientation are probably not the right distinctions to account for preverb ordering. As discussed in Section 6.2, among Direction preverbs, there is a difference between preverbs profiling different portions of the trajectory: on the one side are Source- and Path preverbs; on the other side Goal-preverbs.

Besides excluding any semantic motivation for preverb ordering, Papke (2010: 112–114) in parallel rules out that preverb positioning can be due to formal factors, as the meter, the phonological, or the syllabic shape of preverbs. Ultimately, Papke argues that Vedic preverb ordering must be inherited (on issues relating to the inheritance of preverb ordering, cf. Chapter 7, Section 2.1): multiple composition is a process of accretion (in McCone’s 2006 terms), whereby a new preverb stacks onto an already lexicalized composite. Thus, the question of preverb ordering can be touched as a question regarding the reasons for the lexicalization of the IP.

6.2. An integrated account of preverb ordering

A correlation exists between the interior position and prevalent verbal orientation, and between the exterior position and prevalent nominal orientation. Put another way, preverbs that are unlikely to receive a further spatial specification by means of a noun phrase tend to occur in interior position (cf. Table 8). Interestingly, these are mostly preverbs profiling portions of the trajectory that are frequently left unspecified in the discourse, i.e. Path (e.g. \( \text{úd}, \text{ní}, \text{prá} \), cf. (74)a) or Source (e.g. \( \text{párā} \), cf. (74)b):
In (74)a, the Path-preverb úd ‘up, up forth, up out’ is interior with respect to the Goal-preverbs abhi ‘to, unto, against’ and práti ‘in reversed direction, back to, against, in return’.

In (74)b, the Source-preverb párā ‘to a distance, away, forth’ occurs internally with respect to the Path-preverb ánú ‘after, along, toward’, the Goal-preverb áchā ‘to, unto’, and the Time-preverb vī ‘in two different times, again’ (cf. Section 4.2), which modify the preceding composite – párā ī- ‘go away, go back’ – as a whole. The preverb ánú, despite encoding Path, tends to show nominal, rather than verbal orientation (cf. Table 8). In fact, the composite ánú párā ī- ‘go away after’ takes a Path-participant (páram…pánthāṃ ‘farther on the way’), which happens to be particularly salient in the context of RV 10.18.1:

(75) pāram mṛtyo ánú pár-ehi pánthāṃ
    far.ACC death.VOC along away-go.IMP.2SG way.GEN.PL
    ‘O Death, go away farther along the way (that Gods are wanted to travel…)
    (RV 10.18.1a = (38))

As explained for ánú, the other preverbs that preferably select the exterior position also have nominal orientation in the majority of the Ṛg-Vedic passages. In particular, preverbs of this type are abhi, úpa, and práti, which all encode the Goal of motion. As is well known (cf. Ikegami 1987; Ungerer & Schmidt 1996; Verspoor, Dirven & Radden 1999; various papers in Luraghi et al. 2017), the overt specification of the Goal of motion is more frequent than that of the Paths and Source. Goal is the result or the endpoint of the motion event, and as such, the most salient of its parts. Interestingly, the preverb ánú, which is exterior in Vedic though it encodes the Path of motion, tends to move to the interior position in Classical Sanskrit (Papke 2010: 105).
This cognitive explanation for ordering is also backed up by the behavior of those preverbs that do not show clear preference either for the interior or for the exterior position. One such preverb is ví ‘apart, asunder, away, out’. It occurs internally when it expresses Source or adverbial meanings very close to the semantics of the verbal root itself (76)a. By contrast, it occurs externally when it indicates the Goal of motion, or when it reverses the meaning of a preceding composite treated as a whole (76)b (cf. also (74)b for another exterior usage of the preverb ví).

(76) a. Interior ví: Source  
   abhi ví √i- ‘come forward from different parts’
   ‘precisely’ abhi ví √spaś- ‘look at, look hither’
   (with verbs of seeing)

b. Exterior ví: Goal  
   ví prá √i- ‘go forth in different directions’
   ví ā√sṛ- ‘run through’
   ví prá √sṛ- ‘spread’

   Reversative ví ā√kṛ- ‘undo, divide’ (√kṛ- ‘do, make’)

This principle of ordering might be called the ‘lower salience’ principle: preverbs expressing less salient portions of spatial relations tend to occur in internal position, as they are less likely to be further specified by a noun phrase. Obviously, this principle is highly context dependent: as we have seen by means of example (75), even Path can constitute a salient piece of information in certain specific contexts.

Another motivation behind preverb positioning is the semantic solidarity between a certain preverb and a certain verbal stem. That is to say that preverbs whose meaning is partially subsumed by the meaning of the verb occur internally. Examples are nī ‘down, in, into’ and prá ‘forward, onward, forth, fore-’, exemplified in (77) (see also examples in (51)):

(77) a. nī ‘down’ + √pad- ‘fall’, √lī- ‘melt, disappear’, √sad- ‘sit’

b. prá ‘forward’ + √īr-, √i-, √dṛ-, √dr̥u2-, √dhanv-, √yā-, √vah-, √vr̥t-, √sṛ-
   (motion, manner of motion, caused motion verbs)
The downward motion indicated by $nî$ is inherent in the events of falling ($\sqrt{pad}$-), of melting/disappearing ($\sqrt{lî}$-), and of sitting ($\sqrt{sad}$-). The forward Path expressed by $p rá$ is likewise implied in any motion, manner of motion, or caused motion verb of $\text{(77)}$.

This principle ruling ordering, which one might call the ‘redundancy’ principle, somewhat remembers the *order and relevance principle* of affix ordering, formulated by Bybee (1985). Bybee defines relevance as follows: “A meaning element is relevant to another meaning element if the semantic content of the first directly affects or modifies the semantic content of the second” (Bybee 1985: 13). However, in the case of preverbs, the meaning of the IP is often so close to the verb that it shows a high semantic solidarity with it. Thus, semantic closeness makes a certain preverb redundant, so to say, rather than relevant.

Such semantic redundancy or low saliency arguably triggers the reanalysis of preverbs as part of the verbal item onto which they attach: this development results in the lexicalization of preverbs, which are reinterpreted by speakers as parts of verbal stems. Redundancy however can also trigger the grammaticalization of preverbs as markers for actionality: once a lexical (i.e. spatial) contribution is perceived as irrelevant, speakers assign preverbs with the new function of carrying more information for the event, i.e. notions such as those of ingressitivity, telicity, completion, and so on. In Slavic languages, in which the grammaticalization of preverbs has gone much farther than in the other Indo-European languages, this phenomenon is called Vey-Schooneveld effect or subsumption (cf. Chapter 5).
Multiple preverbs in Homeric Greek

1. Preverbs in Homeric Greek

1.1. State of the art

In traditional grammars of Ancient and Homeric Greek, such as Schwyzer & Debrunner (1950: 417 ff.) and Chantraine (1953: 82 ff.), the status, the development, and the meanings of preverbs are usually addressed together with those of their cognate prepositions. In her comprehensive monography on the expression of semantic roles in Ancient Greek, Luraghi (2003) also touches upon the grammaticalization undergone by preverbs, insofar as it follows a parallel path to that of prepositions. Accordingly, Luraghi hints at the semantics of preverbs, before moving on to the semantics of the corresponding prepositions, which is the focus of her book.

In fact, a systematic investigation on Ancient Greek preverbs is still a desideratum, though several papers are devoted to specific issues related to a single or a few preverbs (e.g. Dietrich 1909 and Papanastassiou 2011 on apo-; Dunkel 1982b and Neri 2007 on the etymology of sín and xún; Chantraine 1942 on en-; Citraro 2014 on epi-, ana- and huper-; Revuelta 2014 on peri-; see also Shain 2011 on the values of eis- in Koine Greek; and Charitonidis 2013 on apo-, ek(s)-, and kse- in Modern Greek). Actually, there exists a systematic book on Ancient Greek preverbs, but it only focuses on their role in nominal composition (Strömberg 1946).¹

Horrock’s (1980) book deals with preverbs as elements contributing to the expression of the conceptual domains of space and time in the Homeric language. Space is the preferential domain for focusing on how preverbs, prepositions, and cases interact and compete with each other to express certain meanings (e.g. Viti 2008a and 2008b; Zanchi

¹ The literature on Ancient Greek preverbs’ prepositional counterparts is much more abundant: see, beside the above-mentioned Luraghi (2003, 2006, 2009, 2012), Bortone (2010), and Hettrich (2012), among others.
2017; cf. Chapter 1 on Cognitive Grammar), for, to a certain extent, Homeric Greek attests to a linguistic stage when constructions involving preverbs, prepositions, or both could express a certain spatial role (Section 1.2.2). Viti (2008a) highlights the contextual differences triggering the selection of either construction, showing that preverbs tend to encode spatial relations involving a human, specific, and topical referent. She then connects this tendency with the development of Ancient Greek preverbs into markers of completion (i.e. telicity, perfectivity), insofar as topicality implies that a referent is conceptualized as entire in space and complete in time.

Viti’s (2008a, 2008b) papers lead us into another field of studies on Greek preverbs, i.e. their development from free-standing adverbs into affixes, and their parallel semantic shift from spatial indicators into actional markers – and, eventually, as Viti argues for en-, into transitive markers. On the so-called tmesis (‘split’) in Ancient Greek and in other Indo-European languages, see, among many others, Boley (2004), De Angelis (2004) and the traditional references cited therein, Haug (2009), and Bertrand (2014) (see also Duhoux 1998 and references therein on Mycenaean; Chapter 2). The actional value of completion has been assigned to Ancient Greek preverbs by many scholars, including Brugmann (1885: 268), Meillet (1922: 352, 1948), Brunel (1939), Humbert (1960: §586), Leroy (1958: 135), Roussel (1958), Grassi (1966: 158 ff.), Friedrich (1974: 5), Pernée (1983: 298), and Giannakis (1997: 55ff.).²

Caroline Imbert dedicated several studies to the encoding of spatial relations in Homeric Greek by means of multiple preverbs, to the historical sources of such a system, and to the semantic constraints ruling the orders of preverb stacking (Imbert 2006, 2007, 2008, 2009; Imbert & Grinevald 2004). Imbert’s theoretical framework is grounded in the studies on grammaticalization, which she regards as a gradual process in diachrony, resulting in categorial gradience in synchrony (cf. Chapter 1, Section 2). In addition, Imbert’s works take into account the studies on preverbs in non-Indo-European languages. In particular, Imbert applies to Homeric Greek multiple preverbs the morphological and syntactic category of relational preverbs (i.e. preverbs that behave morphologically as

² As correctly pointed out by Viti (2008a: 395), “most of these scholars wrote in a period where aspect […] was often confounded with actionality […]” (cf. further Chapter 1, Section 3.2).
preverbs, but syntactically as adpositions), which Craig & Hale (1988) individuated for preverbs in Rama (Nicaragua, Chibchan family; see Chapter 2, Section 3). Accordingly, Imbert argues that Homeric Greek multiple preverbs have developed from previous postpositions, as Craig & Hale (1988) argued for preverbs in Rama.

1.2. *The unclear categorial status of preverbs in Homeric Greek*

In a number of ancient IE languages including Homeric Greek, preverbs, beside preceding a verbal stem, may also occur before (pre-) or after a noun (post-positions), or virtually in any other position within the sentence (free-standing adverbs) (see, among many others, Chantraine 1953: 82 ff.; Watkins 1964; Luraghi 2010; Section 1.2.2). Such a syntactic freedom results in a great deal of uncertainty regarding both the morphological status (clitics vs. independent words) and the part of speech of preverbs (free-standing adverbs, adpositions, or preverbs proper).

1.2.1. *Preverbs: clitics vs. independent words*

In Ancient Greek, preverbs can either bear a graphic accent (cf. *amphí* ‘on both sides’, *aná* ‘upward’, *antí* ‘in front of’, *apò* ‘away from’, *diá* ‘through’, *ení* ‘in’, *epí* ‘on’, *hupér* ‘over’, *hupó* ‘under’, *katá* ‘downward’, *metá* ‘between’, *pará* ‘besides’, *peri* ‘around’, *pró* ‘before’, *prós/potí* ‘toward’, *sún* ‘with’) or lack it (*ek* ‘out of’, *en* ‘in’, *eis/es* ‘(in)to’).

However, accentuation has little to say about the morphological status of preverbs for a number of reasons. To begin with, the invention of the Greek accentuation system dates back to the Hellenistic period (3rd–2nd centuries BC) (Laum 1928; Pfeiffer 1968; Dickey 2006), which at least means about five centuries after the Homeric period (8th century BC; cf. Introduction): thus, Hellenistic philologists are likely to have projected their accentuation rules back onto the Homeric period. Moreover, even though almost everyone agrees that the usual Greek diacritics mark lexically assigned pitch levels (Allen 1973:

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3 The preverb *en* ‘in’ is a more frequent variant for *ení* ‘in’.
it remains disputed what exactly acute, grave, and circumflex diacritics actually represent. Furthermore, the accentuation practice has changed over time, as demonstrated by the papyrological tradition, on the one hand, and by scribes’ inconsistency in accent placement, on the other hand (see West 2000 for an analysis of some Homeric variants).

Actually, preverbs/prepositions sometimes show clitic behavior. For example, as suggested by Lupaş (1972: 174) and Probert (2003: 133–142; 2006: 69 n. 35), usually, they only bear a “conventional” and not linguistically real accent, as shown by example (1).

(1) **apó** → **ap’** (not *áp’*) / _#vowel

*ap’* ouranó-then
away_from heaven-from
‘from heaven’ (*Il*.8.365)

(2) **pollà** → **póll’** / _#vowel

*póll’* aekazoménē
much constrained
‘much constrained’ (*Il*.6.458)

When, such as in (1), **apó** occurs before a vowel-initial word, it undergoes apocope, i.e. its tonic final vowel drops, and its accent does not retract onto the previous syllable, as is usual with clitics. Such a behavior has to be compared with that of vowel-final oxytone proper words, shown in (2). In (2), after the drop of the tonic final vowel in front of a subsequent vowel, the accent moves one syllable to the left (see also Goldstein 2010: 48 ff.).

Conversely, preverbs/prepositions may also behave as accented words in Homer. A case in point is when they bear an accent on the first syllable under certain syntactic conditions (for a thorough discussion of which, see Vendryes 1904: §309 ff.), notably when in absolute (3), postnominal (4), and postverbal positions (5).

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4 A preposition-preverb occurs in absolute position when it is not linked to any noun or verb in the sentence, and ultimately “substitutes” the verb (Chantraine 1953: 82; see further, in Section 1.2.2, the discussion of example (6); cf. also Vedic absolute preverbs in Chapter 3).
‘Immediately then Agamemnon, king of men, rose up, and up (rose) Odysseus of many wiles as well.’ (Il.3.267–268)

‘And Alcinous was now king, made wise in counsel by the gods.’ (Od.6.12)

‘after losing all (his) comrades altogether’ (Od.2.174)

Hellenistic grammarians have named this apparent retraction of the accent anastrophē (< ana- ‘upside down’ + strephō ‘turn’). However, the accentuation shown in (3), (4) and (5) is in fact etymological, as demonstrated by the comparison of Greek ápo ‘away from’, pára ‘beside’, péri ‘around’, húpo ‘under’, with their Sanskrit counterparts, such as āpa ‘away from’, pára ‘beyond’, pári ‘around’, úpa ‘toward’, or with Greek etymologically related adverbs, such as ánō ‘upward’ and kátō ‘downward’. Thus, when preverbs-prepositions show the so-called anastrophē, they retain their original accentuation. Only when employed as clitics, i.e. as unaccented words, they lose their initial accent (Vendryes 1904: §72).

1.2.2. Free-standings adverbs, adpositions, and preverbs proper

Homeric Greek lacks both preverbal and prepositional configurations, which became the rule in post-Homeric Greek (cf. among many others Schwyzer & Debrunner 1950: 419; Chantraine 1953: 82 ff.; Fritz 1997; Hewson & Bubenik 2006: 4; Bortone 2010: 123 ff.; Luraghi 2010). The passages in (6)–(11) exemplify the quite free positioning of preverbs-
prepositions in Homeric Greek (for this reason, and given their etymological meanings, preverbs/prepositions are sometimes called *local particles* or *place words* in order to leave unspecified their syntactic function; see Chapter 2, Section 1.4 on terminology).

(6) **Absolute position**

\[ \text{épí déos} \]

for (there is) no fear on you.’ (*Il.1.515*)

(7) **Adverbial position**

\[ \text{kai épi knéphas hierón élthēi} \]

‘And the sacred darkness closes in.’ (*Il.11.209*)

(8) **Prenominal position**

\[ \text{epi gaían ap’ ouranó-thein protrápētai} \]

‘(He) turned (the sun) (on)to earth away from heaven.’ (*Od.11.18*)

(9) **Postnominal position**

\[ \text{hai mèn aletreúousi múlēis épi mélopa} \]

‘They grind the yellow grain on the millstone.’ (*Od.7.104*)

(10) **Preverbal position**

\[ \text{tmédēn d’ aukhén’ ep-élthe} \]

‘And (the spear) came upon his neck so as to cut.’ (*Il.7.262*)

(11) **Postverbal position**

\[ \text{éluth’ épi psukhê Agamémnōnos} \]

‘The soul of Agamemnon approached.’ (*Od.24.20*)
Example (6) shows the absolute usage (in Chantraine’s 1953 terms): the preverb épi occurs instead of the whole composite verb ép-eimi ‘be upon, set upon’ (epi- ‘on’ + eimi ‘be’): the copula eimi is omitted, and the preverb alone takes its place and carries out its function.

Given their syntactic freedom, judging the actual function of preverbs/prepositions can be a tricky task. For example, one may wonder whether, in (10), ep- ‘upon’ selects the accusative aukhén’(a) ‘neck’, thus functioning morphologically as a preverb, but syntactically as a postposition (i.e. as a relational preverb, in Craig & Hale (1988) and Imbert’s (2008) terms). However, epi- is not syntactically obligatory in (10): in similar contexts, the accusative case (klisiēn ‘hut’ in (12)) can in fact express the Goal-participant in combination with the simplex verb érkhomai ‘go, come’, as shown by example (12).

(12) érkhesthon klisiēn Pēlēïádeō Akhilēos
    go.PRS.IMP.2DU  hut.ACC  of_P.GEN  A.GEN

‘Go to the hut of Achilles, Peleus’ son!’ (Il.1.322)

Therefore, in (10), the preverb epi- semantically contributes to specifying the spatial region in which the spatial relation expressed by the verb érkhomai ‘go, come’ and the accusative case takes place. However, it is not syntactically obligatory (see further Horrocks 1981; Fritz 1997; Luraghi 2003; Zanchi 2017 on the expression of spatial relations in Ancient Greek).5

What the historical development of Greek tells us is that the most frequent positions for preverbs/prepositions, which later on became conventionalized, are the prenominal (8) and preverbal (10) ones. By virtue of their frequency, such conventionalized positions then triggered grammaticalization processes of local adverbs into prepositions or preverbs (cf., among many others, Horrocks 1981: 117 ff.; Hewson & Bubenik 2006; Bortone 2010: 109-170; Luraghi 2010).

5 In addition to that, if epi- in (10) were a postposition, it would have occurred between the noun and its adjectival modifier, as adpositions tend to be placed after the first word of a complex nominal phrase (Irigoin 1954).
1.2.2.1. The ongoing grammaticalization of prepositions

So far, I provided supporting evidence that neither the postpositional nor the prepositional configurations are fully developed in Homeric Greek. To begin with, as shown by examples (8) and (9), local particles can occur both before and after a noun, even though the prenominal position is more frequent and later on became conventionalized.

Moreover, case alternation is meaningful in Homeric Greek. A number of Greek adpositions, i.e. *amphí* ‘on both sides’, *epí* ‘on’, *pará* ‘beside’, *perí* ‘around’ *prós* ‘to’ *hupó* ‘under’, can be used in combination with all three cases that can be combined with prepositions (genitive, dative, and accusative). The meanings of the adpositions in combination with the case endings to some extent correspond to the old concrete value of the respective case forms (Kuryłowicz 1964: 176; Luraghi 2003: 79–80; Cuzzolin et al. 2006). In addition, adpositionless cases occasionally retain their old concrete value in Homer, especially in association with inherent Goal-, or Source-oriented verbs, that is, composite or non-composite verbs requiring a specific spatial participant (Chantraine 1953: 38–81; Zanchi 2017). As a result, the simultaneous occurrence of a verb requiring a specific spatial participant, of a preverb/preposition, and of a case ending is frequently redundant to express a certain meaning: the free combination of only two of these elements is sufficient to disambiguate a spatial relation (see Section 5.2, which contains a thorough discussion of relevant examples with multiple preverbs).

Much to the contrary, Homeric Greek also offers evidence for the obligatoriness of preverbs/prepositions. In (13), the dative *prótoisi* ‘first:DAT.PL’, in association with *metà* ‘between, among’, makes up an optional participant expressing Location ‘among the foremost’. Without the preposition *metà*, however, the dative would function as second argument of the verb *mákhomai*, which, in the meaning of ‘fight against someone’, takes the dative case (Luraghi 2014: 34; see further Sausa 2015 on the encoding of second arguments in Homeric Greek).

(13)  
\begin{verbatim}
epeì  thoòs  éskε  metà  prótoisi  mákhesthai
\end{verbatim}

for quick.NOM be.IMPF.3SG among first.DAT.PL fight.IND.PRS.M/P
‘For he used to be ready to fight among the foremost.’ (*Il.5.536*)

1.2.2.2. The so-called *tmesis* in Homeric Greek

In the same way as prepositions are not fully grammaticalized yet (see Section 1.2.2.1), the phenomenon of the so-called *tmesis* suggests that preverbs are not fully developed as such either. *Tmesis* is a misleading label given by Hellenistic grammarians to the phenomenon whereby a putative composite is split, and preverbs occurs displaced from the verbal stem that they modify (cf. also Section 1.2.2). In Homeric Greek, *tmesis* is not a literary artifact. Rather, it provides further evidence for the uncertain categorial status of local particles, which range from adverbal, to adpositional, and to preverbal usages (cf. De Angelis 2004, and references therein).\(^6\)

Even though Ancient Greek appears to have gone further than any other IE language in the elaboration of a free word order (Dover 1960), the basic positional options for preverbs (and the allowed types of *tmesis*) are the following (Watkins 1964):\(^7\)

\begin{align*}
\text{a) } & \# \text{PN(E)}\ldots \text{V(\ldots)} \#; \\
\text{b) } & \# \text{N(E)}\ldots \text{VP(\ldots)} \#
\end{align*}

Type a) is attested in Hittite, Vedic, Archaic Latin, and Archaic Old Irish, and has first been described by Wackernagel (1924). Type b) is allegedly a Greek literary innovation, as other ancient IE languages do not usually attest to it. Type c) is the most difficult to detect, as the preverb does precede the verb, though it is merely juxtaposed and not univerbated to it (see Section 1.2.2.4).

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\(^6\) It is our flawed standpoint that regards the categorial status of these elements as *uncertain*. Indeed, we usually analyze the behavior of these elements in view of their subsequent functional and categorial split into adpositions and preverbs (cf. Haspelmath 2007b on the non-existence of pre-established linguistic categories; cf. Chapter 1).

\(^7\) Watkins’ (1964) abbreviations follow: \# = initial/endpoint of a sequence; P = preverb; N = noun; E = enclitic; V = verb (cf. Chapter 2, fn. 7).
1.2.2.3. The interactions between preverbs and postpositives

Postpositives are words that exhibit word order restrictions: a) roughly speaking, they either occur in second or peninitial position (Wackernagel’s law);\(^8\) b) they cannot begin a clause; c) they never occur in isolation (Wackernagel 1892; Fraenkel 1964[1933]; Revuelta 2014: 128–130). The full list of Ancient Greek postpositives is provided by Dover (1960: 12–13).

How does the position of postpositives interact with that of preverbs? Examples (14) and (15) give a first answer. The placement of postpositives occasionally has the side effect of splitting a putative composite, or a putative adpositional phrase. In other words, postpositives sometimes intervene either between a preverb and a verb (14), or between an adposition and a noun (15).

(14) \( es \quad d' \quad élthon \quad mnēstēres \quad agēnores \)
\( \text{to} \quad \text{PTC come.aor.3pl} \quad \text{wooer.nom.pl} \quad \text{heroic.nom.pl} \)
‘Then the heroic wooers came in.’ (\textit{Od.} 1.144)

(15) \( en \quad d' \quad autoïsi \quad pūlas \quad poïēsomen \)
\( \text{in} \quad \text{PTC 3sg.dat.pl} \quad \text{gate.acc.pl} \quad \text{build.sbjv.aor.1pl} \)
‘And let us build gates on them (ships).’ (\textit{Il.} 7.339)

In (14), the particle \( d'(è) \) occurs in between the local particle \( es \) ‘(in)to’ and the verb \( élthon \) ‘came’. In (15), the same particle separates \( en \) ‘in(to)’ from the dative \( autoïsi \) ‘to them’. In (14) and (15), Wackenagel’s law overrides the tendency for juxtaposition of locative particles and verbs (14), or of locative particles and nouns (15) (cf. further Chapter 2, Section 1.2).\(^9\) Passages (14) and (15) are examples of what Bertrand (2014) calls non-lexical \textit{tmesis}, i.e. a split in which only non-lexical words intervene.

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\(^8\) For further discussion on the actual – syntactic, pragmatic, prosodic, or underspecified – nature of the so-called second position, see e.g. Fraenkel (1964[1933]), Dik (1995, 2007), and Goldstein (2010).

\(^9\) In addition, the elided particle \( d'(è) \) serves the meter in both examples: the consonant \( d \) lengthens the vowel of \( es \) and \( en \), which can thus constitute the first long half of a spondaic foot.
Examples (14) and (15) are to be compared with passages such as (16) below, in which a preverb is separated from the verbal stem by lexical words (Bertrand’s (2014) *lexical tmesis*).

(16) \textit{en} \textit{dè} \textit{tà mâla} \textit{labôntes}
\begin{tabular}{llllll}
in & PTC & DEM.ACC.PL.N & sheep(N).ACC.PL & take.PTCP.AOR.NOM.PL \\
\end{tabular}
\textit{ebêsamen}
\textit{walk.AOR.3PL}

‘As we have taken the sheep, we stepped into (the ships).’ (Od.11.4)

In my view, examples (14) and (15), on the one hand, and (16), on the other hand, attest to two different stages in the grammaticalization process undergone by preverbs/prepositions. In particular, examples (14) and (15) show a more advanced stage than example (16). In (16), a particle (\textit{dè}), a noun phrase (\textit{tà mâla} ‘the sheep’) and a conjunct participle (\textit{labôntes}) split the putative composite \textit{en...bainô} ‘step into’. In (14) and (15), instead, only a postpositive particle intervenes, due to its tendency to occur in second position.

1.2.2.4. The status of preverbs: what philology and meter tell us

Homeric poems were written down in the 8\textsuperscript{th} century BC, but attest to even more ancient stages of the Greek language. In addition, modern editions of the Homeric texts are based on those by the Hellenistic grammarians (4\textsuperscript{th}–1\textsuperscript{st} centuries BC), who to some extent restyled the language according to their more recent variety of Greek. Homeric text is thus floating between older and newer elements, and Homeric tradition sometimes gives back several textual variants for one single passage (cf. Introduction).

Crucially for our purposes, Hellenistic philologists’ work dates back to a period when Greek syntax no longer allowed tmesis. In fact, the above-mentioned textual variants frequently concern hesitations relating to word boundaries, and in particular on preverbs’ univerbation, as shown in examples (17)a-b:
Gr. 6.11 and Genav. 44:12)

\[
mákhēs \quad \text{ex} \quad \text{apo-diōmai}
\]

struggle.GEN out_of away_from-drive.PRS.1SG.M/P

b. Univerbated variant (attested in all other manuscripts)

\[
mákhēs \quad \text{ex-poi-diōmai}
\]

struggle.GEN out_of-away_from-drive.PRS.1SG.M/P

‘I drive (Ares) out of the struggle.’ (Il.5.763)

In (17)a, the preverb *ex* ‘out of’ occurs as a separate word from the composite *apo-diōmai* ‘drive away from’, whereas in (17)b is univerbated to it. The choice between these two variants is particularly difficult: the composite *ex-poi-diōmai* is a hápax and the metrical structure of *Il.5.763* does not suggest anything on word boundaries.

In what way might the meter be useful to detect word boundaries in other contexts? The metrical structure of Homeric poems has frequently been blamed for altering the Greek syntax (cf. Introduction). However, as noted by De Angelis (2004) and extensively investigated in Zanchi (forthc.), the metrical structure can instead be exploited to reconstruct Homeric syntax, as well as word boundaries overridden by Hellenistic grammarians. As Sommer (1926: 257–261) and Chantraine (1953: 85 ff.) already pointed out, certain compound forms handed down by the manuscript tradition are likely to rely on the alteration of a group that did not constitute a single morphological unit.

According to De Angelis (2004) and Zanchi (forthc.), one must assume a split between a preverb and a verb whenever their univerbation violates a metrical pause (or incision, that is, a place within the verse in which word boundaries occur more often than by chance; West 1982: 6). On the contrary, one cannot assume a pause when the meaning of a composite is non-compositional, when the elements making up the composite underwent phonetic erosion, and when the remaining simplex verb or composite are not elsewhere attested in the Homeric texts.
In fact, composites with multiple preverbs can occur in correspondence either with a metrical pause (18), or with a metrical bridge (19) (i.e. a place within the verse in which word boundaries tend to be avoided).

(18) **Composite in correspondence with a pause (so-called katà triton trokhaíon)**

all’   oú    hoi    kháris
but    NEG  3SG.DAT grace.NOM

*amphi-*|-*peri-stéphetai*   *epéessin,*
on_both_sides-*|*-around-put_as_a_crown.PRS.3SG.M/P    word.DAT.PL

‘But the grace is not put around his words as a crown.’ (*Od*.8.175)

(19) **Composite in correspondence with a metrical bridge (so-called Hermann’s bridge)**

hoi    d’   ou    gignóskontes    *apēnēnanto*
DEM.NOM.PL   PTC  NEG know.PTCP.PRS.NOM.PL deny.AOR.3PL.MID

*hékastos*

*every_one.NOM*

‘But as they knew it not, everyone denied.’ (*Il*.7.185)

In (18), a metrical pause is assumed splitting *amphi-* from the remaining composite. This assumption is backed up by linguistic evidence: first, the composite is semantically compositional and a Homeric *hápax*; second, the composite containing only the IP (*peri-stéphō ‘surround’) is attested in Homer (*Od*.5.303); third, the presence of the preverbs is not syntactically compulsory: there exists an equivalent passage, in which none of the preverbs occurs (*Od*.8.170). By contrast, in (19), *ap-an-aínomai ‘refuse completely’ occurs in correspondence with a metrical bridge. Accordingly, the composite shows non-compositional meaning and is attested in post-Homeric Greek.

Obviously, an analysis such as that just outlined presupposes a fixed metrical structure for the Homeric verse, including a fixed number of metrical pauses. However, there is little agreement as for the number of pauses to be assumed for the Homeric verse, ranging from one to three (for a thorough discussion of this issue, I refer to Kahane 1994; Martinelli 2001; Zanchi forthc., and references therein). In spite of this, I ultimately regard
metrical analysis enlightening to identify word boundaries, when supported by further linguistic evidence.

2. Multiple preverbs in numbers

2.1. Composites with multiple preverbs

In Homeric poems, multiple preverbs occur in 64 composites. These are attested in 138 Homeric passages, a number of them in a formulaic expression (cf. Introduction). In Table 18, attested composites and their meanings are displayed, together with their token and types frequencies. Type-frequency means that formulas are counted only once. Table 19 shows those composites that are attested in post-Homeric prose, as well as their Homeric and post-Homeric meanings.\(^\text{10}\)

<table>
<thead>
<tr>
<th>COMPOSITES</th>
<th>MEANING</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Iliad</td>
</tr>
<tr>
<td>amphi-peri-stéphomai</td>
<td>put round as a crown</td>
<td>0</td>
</tr>
<tr>
<td>amphi-peri-strrópháō</td>
<td>keep turning about all ways</td>
<td>1</td>
</tr>
<tr>
<td>an-éph-állomai</td>
<td>spring upon after</td>
<td>3</td>
</tr>
<tr>
<td>ap-an-ainomai</td>
<td>refuse completely</td>
<td>1</td>
</tr>
<tr>
<td>ap-ek-lanthánomai</td>
<td>forget entirely</td>
<td>0</td>
</tr>
<tr>
<td>apo-pro-airéō</td>
<td>take away from</td>
<td>0</td>
</tr>
<tr>
<td>apo-pro-řěmi</td>
<td>send forth away, let fall</td>
<td>0</td>
</tr>
<tr>
<td>apo-pro-řěmnů</td>
<td>cut off from</td>
<td>0</td>
</tr>
<tr>
<td>di-éx-eimi</td>
<td>go out through</td>
<td>1</td>
</tr>
<tr>
<td>di-ex-éréomai</td>
<td>question closely, completely</td>
<td>1</td>
</tr>
<tr>
<td>eg-kata-pěgnumi</td>
<td>thrust firmly in</td>
<td>0</td>
</tr>
<tr>
<td>eg-kata-tithemi</td>
<td>put upon/around, store up</td>
<td>2</td>
</tr>
<tr>
<td>eis-ana-bainů</td>
<td>go upward to</td>
<td>7</td>
</tr>
<tr>
<td>eis-an-ágů</td>
<td>lead upward to</td>
<td>0</td>
</tr>
<tr>
<td>eis-an-eidón</td>
<td>look upward to</td>
<td>2</td>
</tr>
<tr>
<td>eis-án-eimi</td>
<td>go upward to</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 18. Homeric composites with multiple preverbs and their frequency

\(^\text{10}\) Only attestations in post-Homeric prose are relevant, as post-Homeric epic and poetic authors mostly try to imitate Homer’s poetic diction, by also using typically Homeric lexicon.
<table>
<thead>
<tr>
<th>Greek Word</th>
<th>Meaning</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>eis-aph-ikánō</td>
<td>arrive at, come to</td>
<td>1 2 3 2</td>
</tr>
<tr>
<td>eis-aph-iknéomai</td>
<td>arrive at, come to</td>
<td>2 8 10 7</td>
</tr>
<tr>
<td>eis-kata-bainō</td>
<td>go down (in)to</td>
<td>0 1 1 1</td>
</tr>
<tr>
<td>ek-dia-bainō</td>
<td>pass over</td>
<td>1 0 1 1</td>
</tr>
<tr>
<td>ek-kat-éidon</td>
<td>look down from</td>
<td>2 0 2 2</td>
</tr>
<tr>
<td>ek-kat-ep-állomai</td>
<td>leap down from against</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ek-pro-kaléomai</td>
<td>call forth from</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ek-pro-leipō</td>
<td>forsake</td>
<td>0 1 1 1</td>
</tr>
<tr>
<td>ex-ana-bainō</td>
<td>go upward out of</td>
<td>1 0 1 1</td>
</tr>
<tr>
<td>ex-ana-diómair</td>
<td>emerge from</td>
<td>0 2 2</td>
</tr>
<tr>
<td>ex-ana-lúō</td>
<td>set quite free from</td>
<td>2 0 2</td>
</tr>
<tr>
<td>ex-an-iémi</td>
<td>send upward out, emit</td>
<td>1 0 1 1</td>
</tr>
<tr>
<td>ex-apo-bainō</td>
<td>step out of</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ex-apo-diómair</td>
<td>chase out of</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ex-apo-dúnō</td>
<td>put off</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ex-ap-óllumi</td>
<td>perish utterly out of</td>
<td>2 1 3 3</td>
</tr>
<tr>
<td>ex-apo-néomai</td>
<td>return back out of</td>
<td>2 0 2</td>
</tr>
<tr>
<td>ex-apo-nízō</td>
<td>wash thoroughly</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ex-apo-tímō</td>
<td>pay back in full</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ex-aph-aírēō</td>
<td>take away from</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ex-up-an-ístēmi</td>
<td>stand up from under</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ep-an-ásthēmi</td>
<td>shut</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ep-an-ístēmi</td>
<td>stand up after</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ep-em-bainō</td>
<td>stand upon</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ep-en-tanúō</td>
<td>bind tightly to</td>
<td>0 1 1</td>
</tr>
<tr>
<td>epi-pro-íallō</td>
<td>place forth before (set out)</td>
<td>1 0 1</td>
</tr>
<tr>
<td>epi-pro-íēmi</td>
<td>send forth (to)</td>
<td>5 1 6 5</td>
</tr>
<tr>
<td>hup-ek-phérō</td>
<td>carry out from under, carry</td>
<td>3 1 4 4</td>
</tr>
<tr>
<td>hup-ek-pheugō</td>
<td>flee away secretly</td>
<td>8 7 15 11</td>
</tr>
<tr>
<td>hup-ek-pro-lúō</td>
<td>loose from under</td>
<td>0 1 1</td>
</tr>
<tr>
<td>hup-ek-pro-théō</td>
<td>run forth from behind,</td>
<td>2 1 3 3</td>
</tr>
<tr>
<td>hup-ek-pro-réō</td>
<td>flow forth from beneath</td>
<td>0 1 1</td>
</tr>
<tr>
<td>hup-ek-pro-pheugō</td>
<td>flee away secretly</td>
<td>2 2 4 4</td>
</tr>
<tr>
<td>hup-ek-sóizō</td>
<td>save (by drawing) away</td>
<td>1 0 1</td>
</tr>
<tr>
<td>hup-ex-ágō</td>
<td>carry out from under (out of</td>
<td>0 1 1</td>
</tr>
<tr>
<td></td>
<td>danger into safety)</td>
<td></td>
</tr>
<tr>
<td>hup-ex-aléasthai</td>
<td>flee out from</td>
<td>1 0 1</td>
</tr>
<tr>
<td>hup-ex-an-diómair</td>
<td>come up secretly</td>
<td>1 0 1</td>
</tr>
<tr>
<td>huper-kata-bainō</td>
<td>go downward over</td>
<td>2 0 2</td>
</tr>
<tr>
<td>kat-éph-allomai</td>
<td>leap down against</td>
<td>1 0 1</td>
</tr>
<tr>
<td>para-kata-bállō</td>
<td>throw down beside</td>
<td>2 0 2</td>
</tr>
<tr>
<td>para-kata-lékhomai</td>
<td>lie down beside</td>
<td>2 0 2</td>
</tr>
<tr>
<td>par-ek-pro-pheugō</td>
<td>flee away</td>
<td>1 0 1</td>
</tr>
<tr>
<td>par-ex-ágō</td>
<td>lead past</td>
<td>0 1 1</td>
</tr>
<tr>
<td>par-ex-elaunō</td>
<td>drive past</td>
<td>1 2 3 3</td>
</tr>
<tr>
<td>par-ex-érkhamai</td>
<td>slip past, pass by, overstep</td>
<td>1 3 4 3</td>
</tr>
<tr>
<td>peri-pro-khéomai</td>
<td>be poured all around</td>
<td>1 0 1</td>
</tr>
<tr>
<td>pro-kath-ízō</td>
<td>perch forth (of birds)</td>
<td>1 0 1</td>
</tr>
<tr>
<td>pro-pro-kulindomai</td>
<td>keep rolling in front of</td>
<td>1 1 2 2</td>
</tr>
</tbody>
</table>

**Total** 77 61 138 125
Table 19. Composites attested in post-Homeric prose and their meanings

<table>
<thead>
<tr>
<th>Composite</th>
<th>Homeric meaning</th>
<th>Post-Homeric meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ap-an-aínomai</td>
<td>refuse completely</td>
<td>disown, reject</td>
</tr>
<tr>
<td>di-éx-eimi</td>
<td>go out through</td>
<td>go out through, go through in detail</td>
</tr>
<tr>
<td>eg-kata-pégnumi</td>
<td>thrust firmly in</td>
<td>thrust firmly in, sheathe</td>
</tr>
<tr>
<td>eis-an-ágō</td>
<td>lead upward to</td>
<td>lead up to</td>
</tr>
<tr>
<td>eis-aph-iknéomai</td>
<td>arrive at, come to</td>
<td>arrive at, come to</td>
</tr>
<tr>
<td>eis-kata-bainō</td>
<td>go down (in)to</td>
<td>go down into</td>
</tr>
<tr>
<td>ex-ana-duómai</td>
<td>emerge from</td>
<td>emerge from, escape from</td>
</tr>
<tr>
<td>ex-an-íēmi</td>
<td>send upward out, emit</td>
<td>send forth, loosen, slacken</td>
</tr>
<tr>
<td>ex-ap-óllumi</td>
<td>perish utterly out of</td>
<td>perish utterly</td>
</tr>
<tr>
<td>ep-ana-tithemi</td>
<td>shut</td>
<td>lay upon</td>
</tr>
<tr>
<td>ep-an-istēmi</td>
<td>stand up after</td>
<td>set up again, make to rise against</td>
</tr>
<tr>
<td>ep-em-bainō</td>
<td>stand upon</td>
<td>step upon, mount on, approach</td>
</tr>
<tr>
<td>epi-pro-iēmi</td>
<td>send forth (to)</td>
<td>send forth</td>
</tr>
<tr>
<td>hup-ek-phérō</td>
<td>carry out from under, carry away</td>
<td>carry away, have a start by a day's journey</td>
</tr>
<tr>
<td>hup-ek-pheúgō</td>
<td>flee away secretly</td>
<td>escape from</td>
</tr>
<tr>
<td>hup-ex-ágō</td>
<td>carry out from under (out of danger into safety)</td>
<td>carry out from, carry away, withdraw</td>
</tr>
<tr>
<td>para-kata-bállō</td>
<td>throw down beside</td>
<td>make a claim to property together with a deposit</td>
</tr>
<tr>
<td>par-ex-ágō</td>
<td>lead past</td>
<td>lead past, mislead</td>
</tr>
<tr>
<td>par-ex-elau nō</td>
<td>drive past</td>
<td>march by, ride past</td>
</tr>
<tr>
<td>par-ex-érkhomai</td>
<td>slip past, pass by, overstep</td>
<td>pass by, go aside from</td>
</tr>
<tr>
<td>pro-kath-ízō</td>
<td>perch forth (of birds)</td>
<td>sit in public, sit before</td>
</tr>
</tbody>
</table>

As type-frequencies show, out of 64 composites, only six are attested in formulaic expressions, that is, eis-an-eidōn ‘look upward to’, eis-aph-iknéomai ‘arrive at, come to’, epi-pro-iēmi ‘send forth (to)’, hup-ek-pheúgō ‘flee away secretly’, huper-kata-bainō ‘go downward over’, par-ex-érkhomai ‘slip past, pass by, overstep’. Attestation in formulaic expressions is relevant for comparative purposes, as formulas frequently preserve a more ancient variety of the language (cf. Watkins 1976; Joseph & Janda 2003: 15; Introduction). Thus, the six composites listed above are candidates for being particularly old.

As Table 19 shows, out of 64 composites, only 21 are attested in post-Homeric Greek. Attestation in post-Homeric Greek is also relevant: on the one hand, it offers hints to identify those composites which are likely to be conventionalized, on the basis of the fact that they are retained and univerbated in the later language. On the other hand, attestation in post-Homeric Greek allows for interesting comparisons. As expected, a number of composites show more compositional meanings in Homer than in post-Homeric prose. Two cases in point follow: ex-ap-óllumi, which means ‘perish entirely out of’ in Homer, with the
obligatory expression of the Source argument (*Il.6.60, Od.20.357*; see example (32)), but which allows for later absolute usages ‘perish entirely’ (e.g. Hdt.4.173); *para-kata-bállō*, ‘throw down beside’ in Homer (*Il.23.127, 23.683*), which later on develops the very specialized meaning of ‘make a claim to property together with a deposit’ in post-Homeric prose (e.g. in D.44.42).

Unexpectedly, a few composites apparently show the opposite behavior. The composite *pro-kath-ízō* is particularly instructive in this respect. It means ‘perch forth (of birds)’ in Homer, and ‘sit in public, sit before’ in post-Homeric prose (e.g. Hdt.1.14, Plb.20.6.8). On the one hand, the meaning of the IP is clear, though redundant, both in Homeric and in post-Homeric usages: the IP *kata-* ‘downward’ contributes to expressing the downward movement implied by the act of sitting. On the other hand, the semantic contributions of the EP *pro-* can be better detected in Post-Homeric usages, regardless whether spatial (‘sit one before the other’ → ‘sit in public’) or temporal (‘sit before’), than in the Homeric ones. Indeed, the presence of *pro-* only makes sense in the wider context of the passage shown in (20):

(20) *klaggēdōn prokathizóntōn,* smarageī dé
tē leimōn hōs tōn énthea pollā
PTC meadow.NOM so DEM.GEN.PL tribe.NOM.PL many.NOM.PL
neōn ápo kai klisiáōn es pedión
ship.GEN.PL away_from and hut.GEN.PL (in)to plain.ACC
*prokhéonto* Skamándrion
pour_forth.IMPF.3PL.M/P of_S.ACC
‘…while (various types of birds) are perching with a clang noise, the meadow resounds. In the same way, their many tribes were pouring forth from ships and huts into the plain of Scamander.” (*Il.2.463*)

In (20), the Achaeans, spreading forth (*pro-khéō*) into the plain of Scamander, are compared to a whole flock of birds, which is driven forward by single birds that keep
perching in front \(\text{pro-kath-izō}\) of the rest of birds. The preverb \text{pro-}, occurring both in \text{pro-kath-izōntōn} and in \text{pro-khéonto}, contributes to drawing the parallel between birds and Achaeans’ forward motion.

Furthermore, when working with inherently limited corpora, such as that of Ancient Greek, one must keep in mind that a gap in attestations does not necessarily correspond to an actual absence in the grammar or in the lexicon (cf. Introduction; Joseph & Janda 2003: 15-16). In particular, if a certain composite attests to compositional meanings in its post-Homeric usages, whereas it lacks them in the Homeric poems, this does not imply that compositional meanings are a later development. Simply, it could be the case that Homeric texts – by accident – do not preserve those compositional usages.

2.1.1. \textit{Imbert’s (2008) and Zanchi’s (2014) composites}

In her dissertation, Imbert (2008: 95, 196–198) collected 98 examples of multiple preverbs, whereas here I included as many as 138 passages. Imbert’s corpus is smaller than mine for the following reasons. First, she overlooked two composites, i.e. \text{ep-en-taníō} ‘bind tightly to’ and \text{para-kata-lékhomai} ‘lie down beside’. Then, Imbert excluded the composite \text{pro-pro-kulíndomai} ‘keep rolling before’, simply because two different local particles must occur in front of a verbal stem according to her definition of multiple preverbation.

Second, Imbert (2008: 232–236) left out four composites, because they do not conform to the semantic constrains on preverb ordering that she set up: \text{an-eph-állomai} ‘leap upon after’, \text{ek-kat-eph-állomai} ‘leap down against from’, \text{kat-eph-állomai} ‘leap down against’, and \text{pro-kat-hízō} ‘perch forth’. Imbert explains that a diachronic analysis is required to avoid such apparent inconsistency in preverb ordering, but that she intends to limit her work to the synchronic level. My analysis comprises all of these composites, on the one hand, as Imbert’s exclusion appears to be an ad hoc solution for safeguarding her semantic constraints on preverb ordering; on the other hand, because a diachronic account is arguably essential to analyze Homeric texts, which constitute an inherently diachronic corpus (cf. Introduction).
In fact, the composites *an-eph-állomai* ‘leap upon after’, *ek-kat-eph-állomai* ‘leap down against from’, and *kat-eph-állomai* ‘leap down against’ are problematic, but in other respects than those that Imbert pointed out. There is no general agreement as to assigning them to the verb *hállomai* ‘leap’ (< PIE *sel*- ‘loosen, leap’) or to the verb *pállomai* ‘swing, dash oneself’ (< PIE *pelh₁*- ‘knock (or whip) something into shape’). These two analyses result in two different segmentations: *an-eph-állomai, kat-eph-állomai, and ek-kat-eph-állomai*, with two and three preverbs, respectively (Chantraine 1953: 63, 854; Beekes 2010: 1148) vs. *ana-pállomai, kata-pállomai, and ek-kata-pállomai*, with one and two preverbs, respectively (Fränkel 1923: 278 ff.; Laumann 1950: 60 ff.; Geiss 1957: 62 ff.). After Harðarson (1993: 196–198) and LIV² (257), I opted for *hállomai* ‘leap’, also in the light of some Homeric parallel passages containing *hállomai* ‘leap’ in combination with *ex+GEN* (*Il.6.103; cf. ek-kat-eph-állomai), kat(á)+GEN (*Il.18.616; cf. ek-kat-eph-állomai and kat-eph-állomai)*, and *epi+DAT* (*Il.20.353, 21.174, *Od.22.80; cf. kat-eph-állomai and an-eph-állomai*). However, the ordering of such multiple preverbs raise some issues, as discussed in Section 6.

Imbert (2008: 199) further left out all composites containing two preverbs that elsewhere occur as double prepositions or double adverbs, i.e. *ap-ex* ‘away out of’ (< *apo-+ ex*), *di-ex* ‘out through’ (< *dia- + ex*), *par-ex* ‘out beside’ (< *para- + ex*), and *hup-ex* ‘out from under’ (< *hupo- + ek*). These also contradict her semantic constraints on preverb ordering. Differently also from Zanchi (2014), I included all of them in this study, as all of these formations are still analyzable, and can tell much about the ongoing processes of univerbation of multiple preverbs (see further Sections 2.3 and 4.3).¹¹

Differently from Imbert (2008) and Zanchi (2014), I excluded the composite *epapeiléō* ‘threaten’, as the segmentation containing two preverbs (*ep-ap-eiléō*) turned out to be wrong. This composite only contains one preverb, i.e. *epi-*. The remaining verb is a denominative formation from *apeilé* (mostly pl.) ‘boastful promises, threats’, made up by an *a-copulativum* and the root *(s)pelH* ‘speak in public’ (LIV²: 576 fn. 2 on *a-peiléō*

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¹¹ It is revealing that Imbert (2008) ignores the fact that *amphi-peri-, apo-pro- and peri-pro- also occur as double prepositions and/or double adverbs in Homer (see Section 2.3). Indeed, these sequences do not contradict her semantic constraints on preverb ordering, and thus she does not discuss them.
‘promise, threaten’). The position of the augment is revealing in this case: the augmented forms of this verb (epēpelēs’(en), Il.1.319, 14.45) show up the augment (in bold, resulting from the contraction of \( e \) and \( a \)) between the putative EP and IP, whereas augment almost systematically occurs between the IP and the verbal stem elsewhere (see Section 3.3). Similarly, I also left out the verb ex-apatāō ‘deceive, beguile’, containing the preverb ex- and a denominative verb from apatē ‘trick, fraud’ of uncertain etymology (DELG: 95; Beekes 2010: 113–114).^\(^{12}\)

2.2. *Verbal roots modified by multiple preverbs*

Table 20 shows the 43 simplex verbs modified by multiple preverbs and their meanings, as well as their PIE roots and their meanings. Moreover, their frequencies are provided, i.e. the number of composites containing each root. In addition, the rightmost column specifies the verb type. For my purposes, a coarse-grained semantic classification of verbs suffices: motion and location verbs are regarded so as to include, beside motion or location verbs proper (e.g. érkhomai ‘come, go’), manner of motion verbs (e.g. bainō ‘walk’), posture verbs (e.g. lékhomai ‘lie’), and verbs of caused motion (e.g. bállō ‘throw’).^\(^{13}\)

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^\(^{12}\) I am aware of the fact that other non-univerbated sequences of the type #P…P…V# are also attested (cf. e.g. Il.12.213, 14.168, Od.17.139, 23.16). However, as remarked in Section 1.2.2.4, Hellenistic editors were inclined to univerbation, which was consistent to their variety of Greek. Thus, I see no reasons to treat the preverbs occurring in those sequences as univerbated units, as even Hellenistic editors decided not to univerbate them with the following verb.

^\(^{13}\) Cf. fn. 23, Chapter 3.
<table>
<thead>
<tr>
<th>Simplex verbs</th>
<th>Meaning</th>
<th>PIE roots</th>
<th>Meaning</th>
<th>Frequency</th>
<th>Verb type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ágō</strong></td>
<td>carry, bring</td>
<td><em>h₂eǵ</em> (LIV²: 255)</td>
<td>drive, carry</td>
<td>3</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>aléomai</strong></td>
<td>flee, avoid</td>
<td><em>h₂eǵy</em> (LIV²: 278)</td>
<td>stay away, keep away</td>
<td>1</td>
<td>motion (Source)</td>
</tr>
<tr>
<td><strong>-ánomai</strong></td>
<td>refuse</td>
<td>?uncertain</td>
<td>communication</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>bainō</strong></td>
<td>walk, go, come</td>
<td><em>gʰ-em</em> (LIV²: 209)</td>
<td>go, come (somewhere)</td>
<td>7</td>
<td>manner of motion</td>
</tr>
<tr>
<td><strong>bálō</strong></td>
<td>throw</td>
<td><em>gʰ-elh₂</em> (LIV²: 208)</td>
<td>meet, throw</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>díō</strong></td>
<td>put to flight</td>
<td><em>dejʰ₂</em> (LIV²: 107)</td>
<td>chase away</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>dúnō, diū</strong></td>
<td>cause to sink, sink</td>
<td><em>dgeh₂</em> (LIV²: 129)</td>
<td>sink</td>
<td>3</td>
<td>motion/ caused motion</td>
</tr>
<tr>
<td><strong>édon</strong></td>
<td>see</td>
<td><em>yejd</em>- (LIV²: 665)</td>
<td>see, catch sight of</td>
<td>2</td>
<td>perception</td>
</tr>
<tr>
<td><strong>émī</strong></td>
<td>go, come</td>
<td><em>h₁e∫</em> (LIV²: 232)</td>
<td>go, walk</td>
<td>2</td>
<td>motion</td>
</tr>
<tr>
<td><strong>etrómaí</strong></td>
<td>ask</td>
<td><em>h₁re∫h₂</em> (LIV²: 251)</td>
<td>ask</td>
<td>1</td>
<td>communication</td>
</tr>
<tr>
<td><strong>eláounō</strong></td>
<td>drive, set in</td>
<td><em>h₁elh₂</em> (LIV²: 235)</td>
<td>drive to</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>érkhomai</strong></td>
<td>come, go, walk</td>
<td><em>h₂er-, h₂ergh</em>- (LIV²: 238–239)</td>
<td>reach, climb</td>
<td>1</td>
<td>motion</td>
</tr>
<tr>
<td><strong>hareō</strong></td>
<td>take</td>
<td><em>ser</em>- (LIV²: 535)</td>
<td>take, grasp</td>
<td>2</td>
<td>removing</td>
</tr>
<tr>
<td><strong>hálomai</strong></td>
<td>leap</td>
<td><em>selse</em>- (LIV²: 527)</td>
<td>loosen, leap</td>
<td>3</td>
<td>motion</td>
</tr>
<tr>
<td><strong>(h)jallō</strong></td>
<td>send forth</td>
<td><em>selse</em>- (LIV²: 527)</td>
<td>loosen, leap</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>hīemī</strong></td>
<td>send</td>
<td><em>h₁e∫h₂</em> (LIV²: 225)</td>
<td>throw</td>
<td>3</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>hīzō</strong></td>
<td>sit</td>
<td><em>sede</em>- (LIV²: 513)</td>
<td>sit</td>
<td>1</td>
<td>posture</td>
</tr>
<tr>
<td><strong>hikōnō</strong></td>
<td>come, reach</td>
<td><em>sejk</em>- (LIV²: 522)</td>
<td>reach, achieve</td>
<td>2</td>
<td>motion</td>
</tr>
<tr>
<td><strong>hiknēomai</strong></td>
<td>stand</td>
<td>*stehe₂- (LIV²: 590)</td>
<td>step to, stand</td>
<td>2</td>
<td>posture</td>
</tr>
<tr>
<td><strong>hrēō</strong></td>
<td>run, flow</td>
<td><em>srey</em>- (LIV²: 588)</td>
<td>flow, stream</td>
<td>1</td>
<td>manner of motion</td>
</tr>
<tr>
<td><strong>kalēō</strong></td>
<td>call</td>
<td><em>klet∫</em>- (LIV²: 361)</td>
<td>call</td>
<td>1</td>
<td>communication</td>
</tr>
<tr>
<td><strong>khēō</strong></td>
<td>pour</td>
<td><em>kʰey</em>- (LIV²: 179)</td>
<td>pour</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>kulindō</strong></td>
<td>roll</td>
<td>?uncertain</td>
<td></td>
<td>1</td>
<td>manner of motion</td>
</tr>
<tr>
<td><strong>lanthānomai</strong></td>
<td>forget</td>
<td><em>leh₂dʰ</em>- (LIV²: 401)</td>
<td>remain hidden</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td><strong>lépō</strong></td>
<td>leave</td>
<td><em>lejk²</em>- (LIV²: 406)</td>
<td>leave behind, move</td>
<td>1</td>
<td>motion (Source)</td>
</tr>
<tr>
<td><strong>lékhomai</strong></td>
<td>lie</td>
<td><em>leg</em>- (LIV²: 398)</td>
<td>lie down</td>
<td>1</td>
<td>posture</td>
</tr>
<tr>
<td><strong>liō</strong></td>
<td>loosen</td>
<td><em>legʰ</em>- (LIV²: 417)</td>
<td>loosen</td>
<td>2</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>néomai</strong></td>
<td>go, come, return</td>
<td><em>nes</em>- (LIV²: 454)</td>
<td>get away, return home</td>
<td>1</td>
<td>motion</td>
</tr>
<tr>
<td><strong>nizō</strong></td>
<td>wash</td>
<td><em>neig</em>- (LIV²: 450)</td>
<td>wash</td>
<td>1</td>
<td>removing</td>
</tr>
<tr>
<td>** állumī**</td>
<td>destroy</td>
<td><em>h₁elh₂</em> (LIV²: 298)</td>
<td>go on the ground</td>
<td>1</td>
<td>change of state</td>
</tr>
<tr>
<td><strong>pēgmunti</strong></td>
<td>fix in</td>
<td><em>peh₂g</em>- (LIV²: 461)</td>
<td>become fixed</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>phērō</strong></td>
<td>carry, bring</td>
<td><em>bʰer</em>- (LIV²: 76)</td>
<td>bring</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>phēugō</strong></td>
<td>flee, escape</td>
<td><em>bʰeugg</em>- (LIV²: 84)</td>
<td>flee, escape</td>
<td>3</td>
<td>motion (Source)</td>
</tr>
<tr>
<td><strong>stēphō</strong></td>
<td>put round</td>
<td><em>(s)tejʰ</em>- (LIV²: 589)</td>
<td>put round as a crown</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>strēphō</strong></td>
<td>turn constantly</td>
<td><em>streb</em>- (LIV²: 603)</td>
<td>spin</td>
<td>1</td>
<td>manner of motion</td>
</tr>
<tr>
<td><strong>sōizō</strong></td>
<td>save</td>
<td><em>(teut)</em></td>
<td>be strong</td>
<td>1</td>
<td>helping</td>
</tr>
<tr>
<td><strong>tanūō</strong></td>
<td>stretch</td>
<td><em>ten</em>- (LIV²: 626)</td>
<td>stretch, tighten</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td><strong>tēmō</strong></td>
<td>cut</td>
<td><em>temh₁</em>- (LIV²: 625)</td>
<td>cut</td>
<td>1</td>
<td>removing</td>
</tr>
<tr>
<td><strong>thēō</strong></td>
<td>run</td>
<td><em>dʰe∫</em>- (LIV²: 147)</td>
<td>run</td>
<td>1</td>
<td>motion</td>
</tr>
<tr>
<td><strong>tīnō</strong></td>
<td>pay a price</td>
<td><em>kʰe∫</em>- (LIV²: 377)</td>
<td>receive a penance, punish</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>tithemī</strong></td>
<td>put</td>
<td><em>dʰe∫h₂</em> (LIV²: 136)</td>
<td>put, make</td>
<td>2</td>
<td>putting</td>
</tr>
</tbody>
</table>
Most composites with multiple preverbs (47 out of 64) contain a motion or location verb. Most others can also be assimilated to motion/location verbs. The verb of perception εἴδον ‘see’ can be regarded as a verb of caused motion: one’s eyes can be directed toward or away from something. Verbs of putting and removing, such as hairéō ‘take’, can also be assimilated to verbs of caused motion (and thus to motion/location verbs). Verbs of washing, such as nízō ‘wash’, in turn, have a behavior similar to that of verbs of removing (cf. Luraghi & Zanchi forthc.).

The verb tínō ‘pay a price’ is a transfer verb, and can thus be paired to verbs of putting and removing, as well as to verbs of caused motion. Two remaining items are verbs of communication, i.e. eíromai ‘ask’ and kaléō ‘call’, which are similar to verbs of transfer in that they imply a transfer of information. Moreover, communication verbs, to some extent, show a behavior similar to that of verbs of putting and taking: for example, verbs of asking, as verbs of removing, allow for the ditransitive construction in Ancient Greek (Luraghi & Zanchi forthc.). Interestingly, two of the remaining verbs go back to PIE roots showing meanings close to that of motion or location verbs: lanthánomai ‘forget’ (mental activity) < *leh₂dh₁- ‘remain hidden’ (location verb) (LIV²: 401); őllumi ‘destroy, perish’ (change of state) < *h₃elh₁- ‘go on the ground’ (motion verb) (LIV²: 298).

Lastly, an-ainéō ‘refuse’ and sṓizō ‘save’ have no clear etymologies. The former is a communication verb, connected to the noun aînos ‘tale, proverb’, which in turn derives the verbs ainéō ‘tell, approve’, ep-ainéō ‘approve’, and di-ainéō ‘decree’, and must go back to an unattested verb *ainomai ‘say yes, state’ (DELG: 35–36; Beekes 2010: 39–40; for the meaning of this composite, see Section 4).¹⁴ The verb sṓizō ‘rescue’ is probably a denominative from sós ‘safe’ (DELG: 1084–1085; Beekes 2010: 1440–1441). It can be

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¹⁴ In two papers on preverb iteration in IE languages, Dunkel (1981a, 1981b) suggested a different etymology for an-ainomai, which is allegedly built on the iteration of ana-ana- ‘upward-upward’ + the suffix -io-. The iteration of preverbs here allegedly has the intensive value of ‘tossing the head repeatedly upward to say no’. In the same vein, Dunkel also argued that the Homeric verb apaphískō ‘cheat, beguile’ is to be segmented as ap-aph-iskō, a composite made up by the iterated preverb apo- and the root √iskh- ‘hold’ with metathesis of aspiration. Chantraine (1953: 96) and Beekes (2010:114) do not accept Dunkel’s proposal and Beekes invokes substrate origins for the verb apaphískō. As a matter of prudence, I also left out apaphískō from this investigation.
assimilated to verbs of removing or of caused motion, in that the saved entity (TR) is removed by another entity from a dangerous situation (LM). Another verb from Table 20 has no clear etymology, that is, kulindō ‘roll’, which might go back to a root *(s)kel- ‘bent, curved’ (cf. Gr. kullós ‘curved, lame’) combined with a suffix -nd- (cf. Gr. alindēō ‘make to roll’) (DELG: 599; Beekes 2010: 800).

2.3. *Attested combinations of preverbs*

Table 21 shows the 31 Homeric preverb combinations and their frequencies. In Table 21, frequency refers to the number of composites containing a certain combination. The most frequent combinations are ex-apo- (8 composites), hupo-ex- (5 composites), and para-ex- (10 composites). Interestingly, the first combination contains two preverbs that originally express Source. This is consistent with the fact that Source-preverbs seem to undergo earlier grammaticalization processes than Goal-preverbs (see Zanchi 2017; Dicky 2012 for a similar view on Slavic preverbs). In other words, the IP apo-, after univerbating and undergoing semantic shifts (Source > marker of completion), is no longer capable of expressing Source, and is thus later on supported by another Source-preverb, i.e. ex- (the opposition of ex-ap-óllumi ‘perish entirely out of’, mentioned at Section 2.1, vs. ap-óllumi ‘perish entirely’ is revealing in this respect).

The combination hupo-ex- also makes up a poetic double preposition, frequently used in Homer with the genitive, in the meaning of ‘from beneath’, but dismissed in Post-Homeric Greek. The highly lexicalized complex preposition paréx (< para- + ex-), instead, is frequently used in both Homeric and post-Homeric Greek, according to Chantraine (1953: 145 ff.). As a preposition, it takes the genitive (‘outside’) and the accusative (‘along the side of’). As an adverb, it means ‘out beside, out along, excepting’.

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15 This combination also manifests itself to be old in the light of its Latin cognate ex-po-, lexicalized in *exponō ‘put out, set out’* < *(ex-)*po-znō < *(ex-)*po-snō < *(ex-)*po-sinō (Dunkel 1981b: 230 fn. 29; De Vaan 2008: 479).

16 All the non-univerbated sequences mentioned in fn. 9 show the complex adverb paréx.
### Table 21. Homeric combinations of preverbs and their frequencies

<table>
<thead>
<tr>
<th>Exterior preverb</th>
<th>Medial preverb</th>
<th>Interior preverb</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>amphi-</em></td>
<td><em>peri-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>ana-</em></td>
<td><em>epi-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>apo-</em></td>
<td><em>ana-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>apo-</em></td>
<td><em>ex-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>apo-</em></td>
<td><em>pro-</em></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>dia-</em></td>
<td><em>ex-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>eis-</em></td>
<td><em>ana-</em></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><em>eis-</em></td>
<td><em>apo-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>eis-</em></td>
<td><em>kata-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>en-</em></td>
<td><em>kata-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>*ex-</td>
<td><em>ana-</em></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>*ex-</td>
<td><em>apo-</em></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>*ex-</td>
<td><em>hupo-</em></td>
<td><em>ana-</em></td>
<td>1</td>
</tr>
<tr>
<td>*ex-</td>
<td><em>dia-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>*ex-</td>
<td><em>kata-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>*ex-</td>
<td><em>kata-</em></td>
<td><em>epi-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>epi-</em></td>
<td><em>pro-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>epi-</em></td>
<td><em>ana-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>epi-</em></td>
<td><em>en-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>epi-</em></td>
<td><em>pro-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>huper-</em></td>
<td><em>ana-</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>hupo-</em></td>
<td><em>pro-</em></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><em>hupo-</em></td>
<td><em>ex-</em></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><em>kata-</em></td>
<td><em>epi-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>para-</em></td>
<td><em>kata-</em></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><em>para-</em></td>
<td><em>ex-</em></td>
<td><em>pro-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>para-</em></td>
<td><em>ex-</em></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><em>peri-</em></td>
<td><em>pro-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>pro-</em></td>
<td><em>kata-</em></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><em>pro-</em></td>
<td><em>pro-</em></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Beside these, other combinations of preverbs are also attested as double prepositions or double adverbs in Homeric Greek. This is the case for *amphi-* and *peri-*, (double preposition: *Il*.2.305, 23.191, *Od*.11.609; double adverb: *Il*.21.210; these are never written down as a single unit, and do not even constitute an entry in the LSJ). As for the combinations with *pro-*, *apo-pro-* can also have adverbial (‘afa off’, *Il*.16.669) and prepositional functions (‘away from’, cf. *Il*.7.334) in Homer, whereas *peri-pro-* only occurs as an expressive particle, meaning ‘very, especially’ (its usage is declining in Attic prose, according to Chantraine 1953: 146). The repeated preverb *pro-* is also found in prepositional (‘before’) and adverbial usages (‘on and on’, ‘thoroughly’) in Post-Homeric...
Greek. According to Chantraine (1953: 144), the repetition of pro- is exceptional and archaic. In fact, the equivalents for this preverb are occasionally repeated in other IE languages, notably in Hittite parâ parâ ‘more and more’ and Vedic prâpra ‘again and again’ (Dunkel 1981a: 214–219; on Vedic, cf. Chapter 3). The combination of epi-prô can also function as double preposition only in Post-Homeric Greek, with spatial meanings ‘right through, onward’. The combination di-ek- makes up a complex preposition, which occurs 13 times in Homer and retains its spatial value of ‘out of through’; after Homer, this preposition disappears. On the contrary, the double preposition ap-ék is not attested in Homer, nor is common in Post-Homeric Greek; when it is used, it shows the spatial meaning of ‘away out of’.

The existence of such complex prepositions/adverbs does not per se prevent preverbs from modifying verbal stems as independent units. One such case is the composite di-ex-eréomai ‘ask completely a number of questions’, shown in (21):

(21) allà tiē emè taûta diexeréesthe
    but why 1SG.ACC DEM.ACC.PL.N question_completely.IMPF.2PL
    hékasta
    each.ACC.PL
    ‘But why did you question me completely regarding all these things one by one?’
    (Il.10.432)

In (21), the preverbs dia- and ek- hardly behave as a single unit: the double preposition diék always retains spatial meanings if used as a whole. Instead, the analysis becomes straightforward by keeping them separate: ek- adds the actional meaning of ‘completion’ (cf. Chantraine 1953: 93), whereas dia- expresses the idea of arrangement, distinction, and distribution (cf. Chantraine 1953: 95, Section 4.4), which is also reinforced by the distributive adjective hékasta.
3. The form of the composites

3.1. Philological and metrical analyses of composites with multiple preverbs

As mentioned in Section 1.2.2.4, certain compounds handed down by the textual tradition are likely to rely on the alteration of a group that did not in fact constituted a single morphological unit. This intuition is confirmed both by the scrutiny of the textual variants reported by Homeric critical editions (e.g. Monro & Allen 1920), and by the metrical analysis of passages containing multiple preverbs.

Manuscripts attest to philological variants for 39 out of 138 relevant passages. In particular, scribes’ hesitations regard multiple preverbs in 24 out of 39 passages. More specifically, the textual tradition can vary in either of the following respects: (a) the univerbation of the EP, cf. example (17); (b) the replacement of a preverb with another one, cf. example (22); (c) the presence of two preverbs, cf. example (23); (d) the overall presence of preverbs, cf. example (24).

(22) a. Variant **hup-ek-leláthesthe** (Laurentianus 32, Ambrosianus 1015, Vaticanus 915, Vindoboniensis phil. 39, Baroccius 203, etc.)

   **ap-ek-leláthesthe**

   entirely-entirely-forget.AOR.2PL.MID PTC wonder.GEN

   ‘(You) totally forget (your) wonder.’ (Od.24.394)

b. Variant **ep-ek-leláthesthe** (Parisiensis 2681, Venetus 455)

(23) Variant **huper-bebaös** (Laurentianus 32, 6 a. 1465, Ambrosianus 1057, Estensis 123, Parisiensis 2767, Vaticanus 27, Vaticanus 1318, etc.)

   **oudoû ep-em-bebaös**

   threshold.GEN on-in-stand.PTCP.PRF.NOM high_roofed.GEN bedroom.GEN

   ‘Standing upon the threshold of the high-roofed bedroom…’ (Il.9.582)

(24) Variant **húpaith’(a) épheren** (Venetus 453, Mus. Brit. Burney 86 a. 1059)

   **enth’ Aías mèn hup-ex-épheren sákos**

   thence A.NOM PTC under-out_of-carry.IMPF.3SG shield.ACC
‘Then Aias move his shield aside from (him).’ (II.8.268)

The metrical analysis reveals that a metrical pause is to be assumed in slightly less than the half of the occurrences (62 out of 138). Such metrical pauses allegedly restore original word boundaries in either of the following positions: (a) between the EP and the remaining composite IP=V; (b) between the EP=IP and the simplex verb; (c) between the EP=MP and the remaining composite IP=V. The frequencies of (a), (b), and (c) are provided in Table 22, as well as the composites instantiating each type of assumed split. In Table 22, the symbol ## indicates the position of the assumed split, while = marks the univerbation of the remaining elements.

Table 22. Types of split brought about by assumed metrical pauses

<table>
<thead>
<tr>
<th>Position of word boundaries</th>
<th>Token Frequency</th>
<th>Composites</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) EP=MP##IP=V</td>
<td>10</td>
<td>hup-ek-pro-thēō, hup-ek-pro-rēō, hup-ek-pro-pheūgō, hup-ex-ana-duōmair, par-ek-pro-pheūgō</td>
</tr>
<tr>
<td>TOTAL</td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

Interestingly, a split can be assumed between the EP and the IP=V for most composites. This restored word boundary suggests a path of formation whereby the EP has started gravitating toward a preceding composite with only one preverb. Instead, positions (b-c) are only possible in the presence of an elsewhere attested double preposition, i.e. a stable collocation (amphi peri) or a univerbated composite made up by two prepositions (e.g. diék, hupék, parék). By contrast, positions (b-c) allegedly suggest that the EP and the MP/IP have stacked onto the remaining composite as a single unit.
3.2. **Sandhi phenomena**

The juxtaposition of preverbs and verbal stems results in various consonant and vowel clusters. Their behavior follows the rules of external *sandhi* whenever they mismatch from those of internal *sandhi* (cf. the Vedic data in Chapter 3, Section 3.1). Therefore, for example, when the juxtaposition of preverbs and verbal stems produces the meeting of two vowels, those undergo elision, which is typical of external *sandhi*, rather than contraction, which pertains internal *sandhi* (Alonso Déniz 2014a, 2014b, and references therein). This is shown in (25):

(25) \( \text{apo-} + \text{ana-} + *\text{ainomai} \rightarrow \text{ap-an-ainomai} \) ‘refuse completely’ (cf. example (19))

vs. contraction:

\[
\begin{align*}
    a + o & \rightarrow \bar{o} & \text{e.g. } \text{aidóa} & \rightarrow \text{aidô} \\
    a + a & \rightarrow \bar{a} & \text{e.g. } \text{géraa} & \rightarrow \text{gérā}
\end{align*}
\]

The only exception to this principle is instantiated by *pro- ‘forth’. This preverb usually does not undergo elision: compare \( \text{apo-pro-airéō} \) ‘take away from’ vs. \( \text{ap-an-ainomai} \) ‘refuse completely’, in which the final \( o \) of \( \text{apo-} \) has dropped. In addition, *pro- occasionally undergoes crasis, that is, the contraction applied to words belonging to the same phrase: e.g. \( \text{prò ékhôn} \rightarrow \text{proúkhôn} \) ‘excelling’. However, one can also occasionally find elision in compounding, although it usually occurs word-externally: e.g. \( \text{oudè heîs} \rightarrow \text{oudēs} \) ‘no one’.

3.3. **The position of preverbs with respect to inflectional affixes**

As happens in Vedic (cf. Chapter 3, Section 3.2), Homeric preverbs interact with other pieces of preverbal morphology. In Homeric Greek, preverbal morphology comprises reduplication and augment. Preverbs usually occur more externally than either (Schwyzer & Debrunner 1950: 646 ff.; Chantraine 1945: 309 ff.).
Reduplication contributes to the formation of certain present stems – cf. ar-ar-iskō ‘fit together’ with total reduplication (< *h2er-, LIV²: 269) and gi-gnomai ‘become’ (< *gēnh2-, LIV²: 163–164) with partial reduplication – and of the perfect stems (cf. lé-luka, the perfect of lūō ‘loosen’). The phonological shape of reduplication is consistent with that of the reduplicated verbal root: either the entire verbal root is iterated, or reduplication consists of the initial consonant of the verbal root and of a front short vowel i or e. Therefore, not surprisingly, reduplication is the innermost piece of verbal morphology: even in the pluperfect, which features both reduplication and augment, the latter occurs externally with respect to reduplication (e.g. e-lé-lukē, the pluperfect of lūō ‘loosen’).

The augment instead marks distance in time in association with the secondary verbal endings and, in Homeric Greek, is optionally used in imperfect, indicative aorist and pluperfect tenses. The augment possibly goes back to an independent particle (*h₁e- ‘then, at that time’; e.g. Beekes 2011: 252). In Ancient Greek, it has the shape of a short e-, and usually occurs between the preverb and the verbal stem (Post-Homeric exceptions to this rule are found in Schwyzer & Debrunner: 656; Chantraine 1945: 313). In composites with multiple preverbs, augment is the innermost element of preverbal morphology, as shown in example (26) (augment is highlighted in bold):

(26) eis-an-é-bē-s-an

to.EP-upward.IP-PST-walk-AOR-PST.3PL
‘they went upward to’ (II.6.74)

In my sample, there is only one exception to this otherwise strict rule: 18

---

17 If the initial consonant of the root is aspirated, reduplication contains the corresponding non-aspirated consonant (Grassmann’s Law).

18 The segmentation in (27) draws on the assumption that ap-an-ainomai relies on an unattested simple verb *ainomai ‘say yes, state’. This reconstruction is however disputed, as remarked in Section 2.2 (see especially fn. 14).
The form in (27) belongs to the verb *ap-an-ainomai ‘refuse completely’, and seems to feature double augment: the former e- occurs between the EP and the IP, while the latter between the IP and the verbal stem. However, although double augment is attested since ancient times, it still appeared much later than the Homeric poems (400–350 BC+; Schwyzner & Debrunner 1950: 656). In fact, the form *apēnēnanto is better explained as a matter of poetic diction: only 10 verses above II.7.185, a metrically equivalent and regular verbal form, that is, esēmēnanto (AOR.3.PL.MID from sēmainō ‘show by a sign’), occurs in the same colon as *apēnēnanto, and in equivalent metric position (so-called Hermann’s bridge). The two cola are compared in (28)a-b:

(28)  

a. ἡσὴ ἐπαθ’, ὧν δὲ κλέρον esēnēnanto ἱκάστος (II.7.175)  

b. οἱ δ’ου γιγνόσκοντες apēnēnanto ἱκάστος (II.7.185)

What does the positioning of augment suggest as regards the morphological status of preverbs? First, preverbs were probably not considered part of the verb, as they occur more externally than the usual outermost piece of verbal morphology, i.e. the augment.¹⁹ Second, as prosodic (Section 1.2.1), philological (Section 1.2.2.4), and syntactic (Section 5) evidence confirms, multiple preverbs have the status of clitics in Homeric Greek (for similar considerations on Vedic and Classical Sanskrit, see Whitney 1955[1879]: 354 ff.; Papke 2010: 9, 94; Chapter 3).

¹⁹ The robust cross-linguistic tendency according to which inflectional affixes are the farthest from the root is usually referred to as relevance or scope principle, on which see e.g. Bybee 1985; Rice 2000.
4. The semantics of multiple preverbs

4.1. Preverbs with spatial, abstract and actional meanings

From a semantic standpoint, (multiple) preverbs are polysemous elements: either they retain their original spatial meaning in some composites; or they develop further spatial meanings, abstract meanings, and actional meanings in other composites. As suggested by the semantic distinction just set out, actional meanings, and especially telic ones, boast a special status among other abstract meanings developed by originally spatial preverbs. On the one hand, preverbs with spatial and abstract meanings still pertain the lexicon. On the other hand, preverbs developing actional meanings are closer to grammar, and in this respect, they have undergone grammaticalization processes. The ability of adding an endpoint to events is responsible for the subsequent developments of preverbs into markers of perfectivity (especially in Slavic languages, cf. Chapter 5) and/or into markers of transitivity (rarely, also in Homeric Greek, cf. Section 5.4; Viti 2008a, 2008b). Importantly, the basic semantic contribution of preverbs can undergo semantic bleaching, once they gain new meanings.

Multiple preverbs modifying a verbal stem can behave similarly or differently in this respect. For example, in (29) and (30), both preverbs retain spatial meanings and develop actional meanings, respectively.

(29) **Spatial meanings:** *di-éx-eimi* ‘go out through’

| Skaiás, | tēi | ár’ | émelle |
| S(PL.F).ACC | DEM.DAT.F | PTC | be likely to.IMPF.3SG |
| *di-ex-imai* | *pedíon=de* |
| through-out-go.INF.PRS | plain.ACC=to |

‘…the Scaean gate, and through that way (Hector) was likely to go out (of Troy) to the plain.’ (*Il.*6.393)
In (29), the two preverbs, *ek-* and *dia-* profile two different portions of the trajectory covered by Hector, who is going out (*ek*) of Troy (Source), through (*dia*) the Scaean gate (Path), forth to the open plain (*pedíon=de*) (Goal). The Source-participant referred to by *ek-* is implicit, though inferable from the context. The Path-participant is instead explicitly mentioned by means of the accusative plural *Skaiás* and of the adverb *tēi* ‘through that way’, to which the preverb *dia-* establishes an anaphoric reference. As for (30), the EP *apo-* arguably reinforces the idea of completion already expressed by the IP *ek* in *ek-lanthánomai* ‘forget utterly’ (a compound that is also attested in Homer; cf. *Il.2.600, Od.7.220*, etc.).

By contrast, there are composites in which one of the preverbs retains a lexical usage, while the other develops actional meanings. Neither the exterior nor the interior position is associated with either of such meanings, as demonstrated by examples (31) and (32):  

\[(31)\] **Actional EP vs. spatial IP**: *ek-dia-báinō* ‘pass over’

\[
\begin{array}{llll}
\text{táphron} & d' & \text{ek-dia-bántes} & \text{oruktên} \\
\text{trench.ACC} & \text{PTC} & \text{entirely-through-go.PTCP.AOR.NOM.PL} & \text{dug.ACC}
\end{array}
\]

‘As (they) had passed over the dug trench, (they) seated.’ (*Il.10.198*)

\[(32)\] **Spatial EP vs. actional IP**: *ex-ap-óllumi* ‘perish, vanish utterly out of’

\[
\begin{array}{llllll}
\text{all'} & \text{háma} & \text{pántes} & \text{Ilíou} & \text{exapoloíat'} \\
\text{but} & \text{together} & \text{all.NOM.PL} & \text{I.GEN out_of-utterly-perish.OPT.AOR.3PL}
\end{array}
\]

---

20 As we will see in Section 5.3, preverbs can contribute to building textual cohesion.

21 Cf. fn. 22, Chapter 2.
‘But let all perish out of Ilios, (uncared for and blotted out).’ (*II.6.59–60)

In (31), the IP *dia-* means ‘through’, whereas the EP *ek-* arguably expresses the idea of completion. This interpretation for *ek-* is backed up by the comparison between examples (31) and (33).

(33) *táphron epotrúnōn* *dia-bainémen*

| trench.ACC | urge.PTCP.PRS.NOM | through-walk.INF.PRS |

‘(Hector went through the throng and looked for his comrades), urging (them) to cross the trench.’ (*II.12.50)

In (31), the event of passing over is completed, so the composite with *ek-* is used in a perfective context. By contrast, in (33), the composite lacking *ek-* occurs in an order, which is an inherently imperfective context.

In (32), the EP *ek-* retains its Source meaning, which is further specified by the genitive *Ilíou* ‘Ilios’, whereas the IP *apo-* strengthens the idea of completion implied by the event of dying. It is worth remembering that the reconstructed meaning for the root *h3elh1-* (*> Gr. *óllumi*) is ‘go on the ground’ (cf. Table 20), i.e. that of a Goal-oriented motion verb. This original meaning has possibly played a role in the early development of *apo-* ‘away from’ as a telic marker. As leaving a Source (*apo-* ‘away from’) is a sub-event implied by the event of reaching a Goal (*óllumi* ‘go in the ground’), *apo-* happened be a good candidate for being reanalyzed as a telic marker. Its semantic contribution as a Source-marker would have been redundant (in the same vein, see Neri 2007: 80; in the literature on Slavic, this is the so-called Vey-Schoonevel effect or subsumption, on which see Chapter 5).

As happens to their prepositional counterparts, Greek (multiple) preverbs are polysemous elements, and can develop abstract meanings that are not actional (i.e. 22 Neri (2007) assumed a telic value for the PIE preverb *pe/o-*, based on the comparison between Gr. *apo-óllumi*, Lat. *ab-oleō* ‘destroy, kill’ (containing the preverb in the full grade), and OHG *fallan* ‘fall’, Arm. *p’lanim* ‘fall’, Lit. *puólu* ‘fall’, and perhaps Hitt. (*)*palla- ‘fall’ (containing the preverbs in the zero grade).
grammaticalized). The preverb *apo-* ‘away from’ is one such: beside the grammaticalized telic usages outlined above, it can mean ‘back’, as in the composite *ex-apo-néomai* ‘return back out of’. In addition, it shows a pseudoreversative meaning in the composite *ex-apo-dúnō* ‘put off’, in which it reverses the meaning of the simple verb *dúnō* ‘put on’. The preverb *apo-* is regarded as pseudoreversative (and not as simply reversative), because it cannot build an opposite out of every simplex verb, as do the English prefix *un-* and the Vedic preverb *ví* ‘apart, asunder’ (Delbrück 1888: 466). Rather, it does so when its “semantics happens to contradict the semantics of the base verb” (Sturm 2014: 9, who identified pseudoreversative meanings for the Vedic cognate of *apo-*., i.e. *ápa* ‘away, forth’, as well as for other Vedic preverbs): the Source-oriented preverb *apo-* conflicts with the semantics of the base verb *dúnō* ‘put on’.

Interestingly, a single combination of preverbs may result, as a whole, in a specific meaning. Specifically, iterated preverbs develop the actional meaning of iterativity. This development is iconic: moving more than once in the same way or toward the same direction implies iterating that movement (accordingly, reduplication is a typologically widespread means of intensification; Kajitani 2005; Fischer 2011a). In Homeric Greek, the only example of iteration proper is offered by *pro-pro-kulindomai* ‘keep rolling in front of’ (on *pro-pro-*, see Section 2.3). However, the composite *amphi-peri-strōpháō* ‘keep turning about all ways’ can also be seen as containing preverb iteration: as pointed out by Chantraine (1953: 129-130) and confirmed by Luraghi (2003: 256), the meaning of *amphi-* ‘on both sides’ eventually happened to converge with that of *peri-* ‘around’. Therefore, from a semantic standpoint, *AROUND* is iterated in *amphi-peri-strōpháō* ‘keep turning around all ways’, resulting in an iterative meaning.

4.2. Same (combinations of) preverbs, different meanings

As anticipated for *apo-* (Section 4.1), preverbs are polysemous elements, which undergo multiple semantic shifts. Some interesting cases in point are *ana-* ‘upward’, *hupo-* ‘under’,

23 Papanastiossou (2011) offers a comprehensive semantic analysis of the preverb *apo-*, enhanced by numerous examples.
and \textit{dia}- ‘in two spaces’ (cf. Table 26). The preverb \textit{ana}- originally means ‘upward’ and implies motion along an upward trajectory. It further develops the spatial meaning of ‘upon’, which only profiles the endpoint (Goal) of an upward motion, as shown by the composite \textit{ex-up-an-istēmi} ‘stand upon (after being grown) from underneath’ in (34):

\begin{equation}
\text{(34) smôdix \quad metaphrénou \quad ex-up-an-éstē}
\end{equation}

\begin{align*}
\text{weal(F).NOM \quad back.GEN \quad from-beneath-upon-stand.PTCP.AOR.NOM.F}
\end{align*}

‘a weal, (grown) from underneath the skin of the back, and standing upon’ (\textit{Il.2.267})

In (34), a weal is described, which, after growing from \((ex-)\) underneath \((h)up(o)\)- the skin of the back \((metaphrénou)\), is standing upon \((an(a))\) it.

In addition, \textit{ana}- shows the meaning of ‘refusal’ in the composite \textit{ap-an-ainomai} ‘disown, reject’. Despite some issues regarding the etymology of this composite (on which, see fn. 14), as pointed out by Chantraine (DELG: 35–36), this usage is likely to be analogically established after the couple \textit{neuō ‘nod’ vs. ana-neuō ‘nod upward > refuse’}. The development of \textit{ana-neuō} is related to the fact that, from ancient times until nowadays in Greece, as well as in the whole Balkans and in Southern Italy, the widespread gesture for refusal is nodding upward, sometimes just the raising of the eyebrows, with an optional dental or alveolar click (Joseph 2000; Hauge 2002; Gil 2011; Friedman & Joseph forthc.). In \textit{ap-an-ainomai} ‘disown, reject’, the idea of refusal is then reinforced by the EP \textit{apo}-, which implies complete, total rejection.\footnote{In addition, as shown by Chantraine (1953:91) and confirmed by Papanastassiou (2011:101), the preverb \textit{apo}- in and of itself can mean ‘refusal’ in combination with verbs of saying (cf. \textit{eîpon ‘say’ vs. ap-eîpon ‘deny’}). In this light, the composite \textit{ap-an-ainomai} would represent another instance of semantic iteration of preverbs (cf. Section 4.1 above).} Furthermore, \textit{ana}- shows a pseudoreversative meaning in combination with verbs of sinking: \textit{dúomai ‘go into, sink’ vs. ex-anan-dúomai ‘sink upward from > emerge from’}. Lastly, in the composite \textit{ex-anan-lūō ‘set quite free from’}, \textit{ana}- develops the meaning of ‘escaping out of control’, according to the following cluster of metaphors: HAVING CONTROL OR FORCE IS UP, BEING SUBJECT TO CONTROL OR FORCE IS DOWN (Lakoff & Johnson 1980: 15).
The preverb *hypo-* ‘under, beneath’ develops one non-basic spatial meaning, two abstract meanings, and one actional meaning. The non-basic spatial meaning is exemplified by the composite *hup-ek-pro-théō* ‘run forth from *behind*, outstrip’, and results from the analogical equation ‘AVOVE’ : ‘BELOW’ = ‘BEFORE’ : ‘BEHIND’, which is also valid for the Homeric preposition *hupó* (Luraghi 2003: 226). As Luraghi puts it, “there are many similarities between the position ‘beneath’ and the position ‘behind’ a referent, among others, the fact that both being beneath and being behind imply being away from the visible field.” This provides a ground for the further metaphorical shift into ‘secretly’ (BENEATH → BEHIND → INVISIBLY → SECRETLY), undergone by *hupo*- especially in combination with verbs of escaping, such as *hup-ek-pro-pheúgō* ‘flee away secretly from’. In addition, *hupo-* undergoes a semantic shift connected with the same set of metaphors outlined above for *ana-* , i.e. HAVING CONTROL OR FORCE IS UP, BEING SUBJECT TO CONTROL OR FORCE IS DOWN (Lakoff & Johnson 1980: 18): *hup-ek-sóizō* ‘save (by drawing) away from under the control of’. Once again, this is a shared development between the preverb *hypo-* and the preposition *hupó* (Luraghi 2003: 227). Lastly, as shown by the composite *hup-ex-ana-diúomai* ‘start emerging gradually from’, the preverb *hypo-* can also bring ingressive meanings and the notion of gradualness (cf. Chantraine 1953: 137), which can be explained by the following metaphor: BENEATH → INFERIOR IN QUANTITY → AT THE BEGINNING OF.

Another interesting development is that of the preverb *dia-* , whose etymology is related to the Proto-Indo-European numeral for ‘two’ (DELG: 276; LIPP II: 145 ff.). Accordingly, this preverb has the original meaning of ‘in two pieces, in two places.’ As TIME is often described in terms of SPACE (Lakoff & Johnson 1980: 267), *dia-* also came to mean ‘in two times’. This temporal meaning then offers the basis for the developing of the distributive meaning, shown in the composite *di-ex-eréomai* ‘ask completely a number of questions’ (see example (21) above).

Interestingly, the same sequence of preverbs can also show different meanings, and these differences sometimes provide hints on the process of univerbation undergone by composites. A case in point is the sequence *apo-pro-* , featured by *apo-pro-̱ēmi* ‘send forth
away’ (35), on the one hand, *apo-pro-airéō* ‘take away from’ and *apo-pro-témnō* ‘cut off from’ (36), on the other hand.\(^{25}\)

\[
\begin{array}{lllllll}
\text{(35)} & \text{tôn} & \text{dè} & \text{tétarton} & \text{apo-pro-éēke} & \text{pólin=de} \\
\text{DEM.ACC} & \text{PTC} & \text{fourth.ACC} & \text{away-forth-send.AOR.3SG} & \text{city.ACC=to} \\
\end{array}
\]

‘Instead, (he) had sent the fourth away to the city.’ (*Od*.14.26)

\[
\begin{array}{lllllll}
\text{(36)} & \text{oú} & \text{tí} & \text{moi} & \text{étēs} & \text{sítou} \\
\text{NEG} & \text{INDF.ACC} & \text{1SG.DAT} & \text{dare.AOR.2SG} & \text{bread.GEN} \\
\text{apo-pro-elôn} & \text{dómenai} \\
\text{away-forth-take.PTCP.AOR.NOM} & \text{give.INF.AOR} \\
\end{array}
\]

‘(You who now, while sitting at another’s table,) do not dare to take away a piece of bread and give (it) to me.’ (*Od*.17.456–457)

In *apo-pro-ḯēmi* ‘send forth away’, shown in (35), the semantic contribution of each preverb is recognizable: *apo-* indicates a generic separation from a Source, whereas *pro-* means ‘forth’ indicating Path. The full expression of Goal is then left to the phrase *pólin=de* ‘to (the) city’. By contrast, in (36), the meaning of *pro-* is bleached: only the EP *apo-* is crucial to understand the meaning of the composite *apo-pro-airéō* ‘take away’, which is a synonym to the composite containing only *apo-* i.e. *aph-airéō* ‘take away’ (cf. *Od*.14.455). This suggests that the two preverbs are likely to modify the verbal base as a single unit. In support of this analysis, the composite *pro-airéō* is not attested in Homeric Greek (while it means ‘bring forth’ in later authors), the double preposition *apopró* ‘away from’ is used in Homer, and a metrical pause can be assumed so as to split the EP=IP from the simplex verb (cf. Table 22).

Even the same composite can show various degrees of compositionality, if used in different contexts. This is the case of *eg-kata-títhemi*, which means ‘put downward inside’ in (37), but ‘put upon, put around’ in (38).

\(^{25}\) As *apo-pro-airéō* ‘take away from’ and *apo-pro-témnō* ‘cut off from’ have similar behaviors, I only exemplify one of them in (36).
(37)  tê in-eg-ká-t-theto d’ -ká-t-theto àtên thumôi thumôi ou prôs-thên heôï teôi
DEM.ACC PTC guilt.ACC NEG before POSS.3SG.DAT

in-downward-put.AOR.MID.3SG soul.DAT baneful.ACC

‘But before, (Helen) did not put the baneful guilt downward inside her soul.’
(Od.23.223–224)

(38)  tê in-eg-ká-t-theo teôi nun toûton himânta kólpôi
PTC now DEM.ACC strap.ACC POSS.2SG.DAT

kólpôi poikîlon
bosom.DAT colored.ACC

‘Here you are! Put around your bosom this colored strap!’ (Il.14.219–220)

In (37), the metaphorical trajectory covered by the emotion of guilt (TR) is described as
going downward (kata-) into (en-) Helen’s soul (LM), which is a metaphorical Location
conceptualized as a container. In (38), instead, the TR, a strap (himânta), does not cover
any downward trajectory inside Hera’s bosom (LM); instead, it is simply put around it.
Thus, the semantic contributions of en- and kata- are less clear in passage (38), in which the
composite probably occurs echoing the passage in (37). Examples (37) and (38) in fact
contain two quasi-formulaic expressions, i.e. heôï egkátttheto thumôi and teôï egkátttheo
kólpôi, which are metrically equivalent and equally made up by a possessive adjective, the
composite, and a dative noun meaning either ‘soul’ or ‘bosom’ (the latter being conceived
as the location of the former).

4.3. Different degrees of compositionality

As anticipated in Section 4.2, composites that contain multiple preverbs show different
degrees of semantic compositionality. The exact numbers for fully, partially and non-
compositional composites are difficult to provide. On the one hand, the same composite can
be more or less transparent, as explained for eg-kata-títhemi ‘put downward inside, put
around’ above. On the other hand, the semantic contribution of certain preverbs, though still detectable, is redundant.

Out of 64 composites, I regard 23 as being fully compositional, and 6 as non-compositional. These are shown in Table 23 and in Table 24, respectively.

Table 23. Homeric fully compositional composites

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
</tr>
</thead>
</table>
| apo-pro-
\-iēmi | send forth away (see example (35))* |
| di-
\-éx-eimi | go out through (see example (29)) |
| di-
\-ex-
\-eréomai | ask completely a number of questions (see example (21)) |
| eis-
\-ana-
\-bainō | go upward to |
| eis-
\-an-
\-ágō | lead upward to |
| eis-
\-an-
\-eidon | look upward to |
| eis-
\-án-
\-eimi | go upward to |
| eis-
\-kat-bainō | go downward to > pass over |
| ek-
\-kat-
\-eidon | look downward from |
| ek-
\-kat-
\-ep-
\-állomai | leap down against from |
| ek-
\-pro-
\-kaléomai | call forth from |
| ex-
\-ana-
\-bainō | go upward out of |
| ex-
\-an-
\-iēmi | send upward out, emit |
| ex-
\-apo-
\-tínō | pay back in full |
| ex-
\-up-
\-an-
\-ístēmi | stand up from under (see example (34)) |
| epi-
\-pro-
\-iēmi | send forth (to) |
| hup-
\-ek-
\-phérō | carry out from under |
| hup-
\-ek-
\-pro-
\-thēō | run forth from behind |
| hup-
\-ek-
\-pro-
\-réō | flow forth from beneath |
| hup-
\-ek-
\-sṓizō | save (by drawing) away from under the control of |
| hup-
\-ex-
\-ágō | carry out from under (out of danger into safety) |
| hup-
\-ex-
\-aléasthai | flee out from under |
| kat-
\-eph-
\-állomai | leap down against |
| huper-
\-kata-
\-bainō | go downward over |
| para-
\-kata-
\-bállō | throw down beside |

* This composite can also mean ‘let fall’.

Table 24. Homeric non-compositional composites

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
</tr>
</thead>
</table>
| amphi-
\-peri-
\-strōpháō | keep turning about all ways |
| ap-
\-an-
\-ainomai | disown, reject |
| ek-
\-dia-
\-bainō | pass over (see example (31)) |
| ep-
\-ana-
\-ithēmi | shut |
| pro-
\-pro-
\-kulindomai | keep rolling in front of |
As one may expect, fully compositional composites contain motion verbs or verbs that can be assimilated to motion verbs. I already discussed most of the non-compositional composites included in Table 24 (see Section 4.1 and Section 4.2).

The role of preverbs in the remaining one, \(ep-ana-tithēmi\) ‘shut’, is not trivial to figure out, and can be understood only by means of a scrutiny of the Homeric texts. The composite \(ep-ana-tithēmi\) is made up by \(epi\)- ‘on’, \(ana\)- ‘upward’, and \(tithēmi\) ‘put’. The combination of these, however, does not result in the compositional meaning of putting upon, but in that of shutting, as shown in (39). This semantic shift only makes sense in the light of the passage in (40).

(39) \(aūtis\ epanthēmenai sanīdas pukinōs araruías\)

\(\text{again} \ \text{shut.INF.AOR} \ \text{shutter.ACC.PL} \ \text{firmly} \ \text{fit.together.PTCP.PRF.ACC.PL}\)

‘Shut again the shutters firmly fit together!’ (Il. 21.535)

(40) \(lithon d’ ep-éthēke thūrēisi\)

\(\text{stone.ACC} \ \text{PTC} \ \text{on-put.AOR.3SG} \ \text{door.DAT}\)

‘(Athena) put a stone against the entrance (of the cave).’ (Od. 13.370)

In (40), the composite \(epi-tithēmi\) ‘put on’, which lacks the IP \(ana\)-, takes the direct object \((lithon \ ‘stone’\) of the entity (TR) that Athena puts \(éthēke\) against the entrance of a cave (LM) to shut it. The prepositionless dative \((thūrēisi \ ‘to (the) entrance’) encodes the Goal of this caused motion. In (39), instead, the closing entity is omitted, and the direct object of the entity being closed only occurs, that is, \(sanīdas\ ‘shutters’, in the accusative case. Originally, both \(epi\)- and \(ana\)- in \(ep-ana-tithēmi\) possibly contribute to profiling the endpoint of the motion event of putting something against something else to be shut.\(^{26}\) Later on, once \(ep-ana-tithēmi\) undergoes lexicalization, it spreads to events of closing that imply no caused motion.

\(^{26}\) This motion implies a rotation from the vertical to the horizontal axis, which Luraghi (2003: 299-300, 2006) also observed for the preposition \(epi\) and for other prepositions expressing verticality, such as \(katā\) ‘downward’ and \(hupēr\) ‘over’ (Luraghi 2003: 206, 222; on \(hupēr\), see also Zanchi 2016).
I consider partially compositional the majority of Homeric composites with multiple preverbs (34 out of 64), which are displayed in Table 25.

**Table 25. Homeric partially compositional composites**

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>amphi-peri-stéphomai</td>
<td>put around as a crown</td>
</tr>
<tr>
<td>an-eph-allomai</td>
<td>leap upon after</td>
</tr>
<tr>
<td>ap-ek-lanthánomai</td>
<td>forget entirely</td>
</tr>
<tr>
<td>apo-pro-airéō</td>
<td>take away from</td>
</tr>
<tr>
<td>apo-pro-témnô</td>
<td>cut off from</td>
</tr>
<tr>
<td>eg-kata-pégnumi</td>
<td>thrust firmly in</td>
</tr>
<tr>
<td>eg-kata-títhemi</td>
<td>put upon/around, store up</td>
</tr>
<tr>
<td>eis-aph-ikánô</td>
<td>arrive at, come to</td>
</tr>
<tr>
<td>eis-aph-iknéomai</td>
<td>arrive at, come to</td>
</tr>
<tr>
<td>ek-pro-leipô</td>
<td>forsake</td>
</tr>
<tr>
<td>ex-ana-duomai</td>
<td>emerge from</td>
</tr>
<tr>
<td>ex-ana-liô</td>
<td>set quite free from</td>
</tr>
<tr>
<td>ex-apo-bainô</td>
<td>step out of</td>
</tr>
<tr>
<td>ex-apo-diomai</td>
<td>chase away out of</td>
</tr>
<tr>
<td>ex-apo-dúnô</td>
<td>put off</td>
</tr>
<tr>
<td>ex-ap-óllumi</td>
<td>perish utterly out of</td>
</tr>
<tr>
<td>ex-apo-néomai</td>
<td>return back out of</td>
</tr>
<tr>
<td>ex-apo-nízô</td>
<td>wash thoroughly</td>
</tr>
<tr>
<td>ex-ap-árgo</td>
<td>lead past</td>
</tr>
<tr>
<td>ex-ap-élaunô</td>
<td>drive past</td>
</tr>
<tr>
<td>ex-ap-érkhomai</td>
<td>slip past, pass by, overstep</td>
</tr>
<tr>
<td>peri-pro-khéomai</td>
<td>be poured all around</td>
</tr>
<tr>
<td>pro-kath-ízô</td>
<td>perch forth (of birds)</td>
</tr>
</tbody>
</table>

A number of such composites show redundancy of some kind. Either the meaning of the preverbs overlaps with one another (41); or the meaning of one of the preverbs, usually the IP, is redundant as against that of the verbal stem to which it attaches (42).
(41) Composites containing preverbs with overlapping meanings
   a. amphi-peri-stéphomai around-around-put_as a crown
   b. ap-ek-lanthánomai totally-totally-forget

(42) Composites containing a redundant preverb
   a. an-eph-állomai up-after-leap
   b. ep-an-istēmi after-up-stand
   c. ex-apo-néomai return back out of
   d. pro-kath-ízō forth-downward-sit > perch forth (of birds)
   e. peri-pro-khéomai around-all-be_poured
   f. hup-ek-pro-pheúgō secretly-away-forth-flee
   g. hup-ek-pheúgō under-away-flee
   h. eis-aph-iknéomai to-arrive

I already discussed the semantic overlap between amphi- and peri- (cf. Section 4.1). As for ap-ek-lanthánomai ‘forget entirely’, the two preverbs share the telic and grammaticalized meaning of ‘totally’. Examples (42)a-h display composites containing a preverb that shows semantic solidarity with the verb. In (42)a-b, the meaning of ana- ‘upward’ is implied by the events of leaping (hállomai) and standing (up) (histēmi), as is the meaning of kata- ‘downward’ implied by the event of sitting, shown in (42)d (cf. also para-kata-lékhomai ‘lie down beside’).\(^{27}\) In addition, the meaning of way back conveyed by apo- is inherent to the verb néomai ‘return’, as shown in (42)c.

   Similarly, in (42)e, the idea of covering and intensification brought about by pro- is inherent to the act of pouring (cf. also ek-pro-leípō (lit.) ‘out_of-forth-leave’, the composite describing Achean soldiers’ overwhelming (pro-) runoff out of (ek-) the Trojan horse against their enemies). The preverb pro- expressing Path is also redundant in combination with the verb pheúgō ‘escape’ (42)f, as the event of escaping implies a Path to follow on the run. In fact, pro- is omitted in hup-ek-pheúgō (42)g, in which the preverb ek- can be in turn seen as redundant: the event of escaping also implies an entity to escape from.

\(^{27}\) The combination of kata- + hízō early started being treated as a non-composite unit, as shown by forms such as e-káthize:IMPF.3SG (Xen.+), whereby the augment e- occurs externally with respect to the preverb (Joseph 2017).
Interestingly, in *eis-aph-iknéomai* ‘arrive at, come to’ (42)h, the EP *eis-* indicating Goal is added to a motion verb already implying a Goal-participant. The composite *aph-iknéomai* ‘arrive’ contains a preverb, *aph- (apo-)* ‘away from’, that underwent semantic bleaching at a preceding stage. The root for *hiknéomai*, that is, *seik- ‘reach, achieve’ (*LIV*²: 522), has an inherent Goal component. As reaching a Goal subsumes the previous event of leaving a Source, the Source-preverb *apo-* early became redundant and was reanalyzed as a marker for telicity (cf. the discussion on *ex-ap-óllumi* in (32)).

Non-compositionality does not always originate from redundancy. In (43), for example, the EP *ex-* is added to a preceding composite, whereby the semantic contribution of the IP *ana-* reverses the meaning of the simplex verb (*dúomai* ‘sink’ vs. *ana-dúomai* ‘emerge’):

\[(43) \text{[ex-[ana-dúomai]] ‘[from-[emerge]]’}\]

\begin{verbatim}
poliês halös ex-anadûsai
grey.GEN sea.GEN from-emerge_from.PTCP.AOR.NOM.PL.F
\end{verbatim}

‘(The seals sleep close together,) as they had emerged from the grey sea.’

*(Od.4.405)*

Interestingly, *ex-ana-dúomai* ‘emerge from’, shown in (43) is likely to have influenced the formation of the composite *ex-apo-dûnô* ‘put off’, shown in (44).

\[(44) \text{ex-apo-dûnô ‘put off’}\]

\begin{verbatim}
heímata d’ exapédune
clothing.ACC.PL PTC put_off.IMPF.3SG
\end{verbatim}

‘(He) put off the clothes, (which heavenly Calypso had given him.)’ *(Od.5.372)*

The simplex verb *dûnô* can also mean ‘put on’ and is reversed by the addition of *apo-‘away from’, resulting in ‘put off’. As far as the EP *ex-* is concerned, however, in (43), it clearly contributes to pointing to a Source-participant, which is further specified by the genitive case (*poliès halös* ‘of (the) grey sea’), whereas it has a bleached meaning in (44).
A telic interpretation is difficult for it, as the composite occurs in the imperfect. Although, in principle, it might mean generic separation, my guess is that \textit{ex-} in \textit{ex- apo-dúnō} is added by analogy with \textit{ex-ana-diúomai}: both composites contain the same verbal root, an interior pseudoreversative preverb, and the exterior \textit{ex-}. In addition, \textit{ex-apo-} in itself is the most frequent combination of preverbs (cf. Table 21).

4.4. \textit{Summarizing the meanings of preverbs in multiple preverb combinations}

Table 26 summarizes the meanings of Homeric multiple preverbs. Each meaning is exemplified by a composite.

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{amphi-}</td>
<td>around</td>
<td>\textit{amphi-peri-stéphomai} ‘put round as a crown’</td>
</tr>
<tr>
<td>iteration</td>
<td>\textit{amphi-peri-strōpháō} ‘keep turning around all ways’</td>
<td></td>
</tr>
<tr>
<td>\textit{ana-}</td>
<td>upward</td>
<td>\textit{eis-ana-bainō} ‘go upward to’</td>
</tr>
<tr>
<td>upon</td>
<td>\textit{ex-up-an-istēmi} ‘stand upon (being grown) from underneath’</td>
<td></td>
</tr>
<tr>
<td>(implied movement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>refusal</td>
<td>\textit{ap-an-ainomai} ‘disown, reject’</td>
<td></td>
</tr>
<tr>
<td>pseudoreversative up as having control</td>
<td>\textit{ex-ana-diúomai} ‘emerge from’</td>
<td></td>
</tr>
<tr>
<td>\textit{apo-}</td>
<td>away from</td>
<td>\textit{apo-pro-ē̇mi} ‘send forth away, let fall’</td>
</tr>
<tr>
<td>back (again)</td>
<td>\textit{ex-apo-néomai} ‘return back out of’</td>
<td></td>
</tr>
<tr>
<td>pseudoreversative completion</td>
<td>\textit{ex-apo-dúnō} ‘put off’</td>
<td></td>
</tr>
<tr>
<td>\textit{dia-}</td>
<td>through</td>
<td>\textit{di-ē̇x-eimi} ‘go out through’</td>
</tr>
<tr>
<td>distributive</td>
<td>\textit{di-ex-eréomai} ‘ask completely a number of questions’</td>
<td></td>
</tr>
<tr>
<td>\textit{eis-}</td>
<td>into</td>
<td>\textit{eg-kata-pē̇gumai} ‘thrust firmly in’</td>
</tr>
<tr>
<td>(in)to</td>
<td>\textit{eg-kata-tithemai} ‘put upon/around, store up’</td>
<td></td>
</tr>
<tr>
<td>tightly</td>
<td>\textit{ep-en-tanismi} ‘bind tightly to’</td>
<td></td>
</tr>
<tr>
<td>\textit{ex-}</td>
<td>out of</td>
<td>\textit{di-ē̇x-eimi} ‘go out through’</td>
</tr>
<tr>
<td>from</td>
<td>\textit{ek-kat-eidon} ‘look down from’</td>
<td></td>
</tr>
<tr>
<td>pseudoreversative completion</td>
<td>\textit{ex-apo-dúnō} ‘put off’</td>
<td></td>
</tr>
<tr>
<td>\textit{epi-}</td>
<td>upon</td>
<td>\textit{an-eph- állomai} ‘leap upon after’</td>
</tr>
<tr>
<td>to</td>
<td>\textit{ep-en-taniō} ‘bind tightly to’</td>
<td></td>
</tr>
<tr>
<td>against</td>
<td>\textit{ek-kat-eph- állomai} ‘leap down from’</td>
<td></td>
</tr>
<tr>
<td>after (Stimulus)</td>
<td>\textit{ep-an-istēmi} ‘stand up after (someone’s words)’</td>
<td></td>
</tr>
<tr>
<td>\textit{huper-}</td>
<td>over (Resultative)</td>
<td>\textit{huper-kata-bainō} ‘go downward over’</td>
</tr>
</tbody>
</table>
5. The syntactic status of multiple preverbs

This Section addresses the issue as to whether multiple preverbs can select the case taken by the verbs onto which they attach, thus affecting their argument structure.

According to Imbert (2008), EPs are relational in nature: they are clitics that syntactically function as adpositions. Along this line, Imbert further argues that multiple preverbs developed from previous post-positions. Imbert’s analysis is backed up by a number of Homeric occurrences (53 out of 138), in which the second argument of the composite (ARG in (45) below) immediately precedes it. What is more, this argument is inflected in the same case as that required by the EP, when it functions as a preposition. This results in the following ambiguous construction:

(45) [ARG] [EP IP V] vs. [ARG EP] [IP V]

By contrast, as I argued in Zanchi (2014), my account follows Boley’s position (2004: 52) on the issue. In Homeric Greek, one can find some evidence suggesting that preverbs (Boley’s place words) were originally clear additions to what we regard as the basic sentence, whose meaning could be also expressed by means of a verb and a concrete case. Therefore, if we think of grammaticalization as a process involving increasingly
obligatorification (cf. Lehmann 1995[1982]), then Homeric multiple preverbs are – at least not always – fully grammaticalized yet, as they are not always obligatory.

In what follows, I will show that preverbs are still movable (Section 5.1), or even syntactically optional (Section 5.2). Furthermore, I will highlight passages that do not raise ambiguous interpretations, as the argument occurs in a position or has a form that cannot be selected by the EP (Section 5.3). In Section 5.4, I will show that the addition of preverbs has occasionally the side-effect of centralizing a verbal argument (i.e. preverbs can function as applicatives). Lastly (Section 5.5), I will discuss unambiguous examples in which preverbs developed from previous adverbs, as the composites take no arguments.

5.1. Movable preverbs

Constructions involving multiple preverbs are often semantically equivalent to constructions involving a preverb (the IP) and an adverb or an adposition.

(46) a. Construction with multiple preverbs

ēélios  dè  ouranoû  ex-ap-ólōle,

sun.NOM  PTC  heaven.GEN  out_of-utterly-perish.PRF.3SG

‘The sun has perished out of heaven.’ (Od.20.356)

b. Construction with the IP and (quasi-) prepositional phrases

hōs  éris  ék=te  theôn  ék=t’

oh_that  strife.NOM  out_of=and  god.GEN.PL  out_of=and

anthrṓpōn  ap-ólōito

man.GEN.PL  utterly-perish.OPT.FUT.3SG

‘Oh! May strife perish utterly from among gods and men!’ (Il.18.107)

In (46)b, ék does not occur in preverbal position, but it precedes twice its genitive modifiers, namely theôn ‘gods:GEN’ and anthrṓpōn ‘men:GEN’. It is separated from the genitives by the enclitic coordinative particle =t(e) ‘and’, which suggests its free-standing
status. Also, the adverbial status of ἐκ is backed up by the fact that it bears the accent and hosts an (en)clitic coordinative particle.

Arguably, in passages such as (46), the IP apo- is not sufficient to assign a spatial orientation to the composites.28 Thus, in such passages, a further spatial modification – in the form of a preverb, an adposition, or an adverb – is mandatory. The comparison of examples (47)a-b is also instructive in this respect:

(47)  a. Passage containing ek-  

| netmēsēse | d’ | Apóllōn | Pergāmou |
| feel_resentment.AOR.3SG | PTC | A.NOM | P GEN |

ek-kat-idōn

out_of-downward-look.PTCP.AOR.NOM

‘But Apollo, looking down from Pergamus, had indignation.’ (Il.4.507)

b. Passage lacking ek- (and containing eph’(i) instead)

eph’ hippopólōn

Thrēikôn kath-orōmenos

on herding_horses.GEN.PL T.GEN.PL downward-look.PTCP.PRS.NOM.M/P

aiān

land.ACC

‘[…] as he looked upon the land of the Thracian horsemen.’ (Il.13.4)

In (47)a, the EP ek- imposes a Source-orientation onto the verb kat-eidōn ‘look downward’. By contrast, in (47)b, the composite kath-orāō ‘look downward’ has a Goal-orientation, suggested by the adverb epī ‘on(to)’, occurring in initial position.29


28 I discussed the early semantic bleaching undergone by apo- in combination with óllumi in Section 4.1, cf. especially fn. 22.

29 The composites kat-eidōn and kath-orāō contain two different roots for seeing (i.e. *u̯ ei̯ d- ‘see, catch sight of’ and *ser ‘keep an eye on’; LIV²: 665-667, 532), which in Ancient Greek merged into the same paradigm.
down from against’, *kat-eph-állomai* ‘leap down against’, and *huper-kata-bainō* ‘go downward over’ (Zanchi 2014: 121–133).

5.2. **Optional preverbs**

With other composites, such as *ex-ana-diúomai* ‘emerge from’, EPs can even be omitted without violating the grammar and altering the meaning of the sentence:

(48)  

a. **Construction with multiple preverbs** (cf. (43))

<table>
<thead>
<tr>
<th>poliēs</th>
<th>halòs</th>
<th><strong>ex-ana-diúosai</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>grey.GEN</td>
<td>sea.GEN</td>
<td>out_of-emerge.PTCP.AOR.NOM.PL.F</td>
</tr>
</tbody>
</table>

‘(The seals sleep close together), after emerging out of from the grey sea.’ (*Od*.4.405)

b. **Construction without the EP**

<table>
<thead>
<tr>
<th>karpalímós</th>
<th>d’</th>
<th>anédu</th>
<th>poliēs</th>
<th>halòs</th>
</tr>
</thead>
<tbody>
<tr>
<td>quickly</td>
<td>PTC</td>
<td>emerge.AOR.3SG</td>
<td>grey.GEN</td>
<td>sea.GEN</td>
</tr>
</tbody>
</table>

“And (Thetis) quickly arose from the grey sea.” (*Il*.1.359)

Arguably, the construction in (48)b is allowed, as the orientation of *ana-diúomai* ‘emerge’ in combination with a noun phrase referring to the ‘grey sea’ and inflected in the genitive case (*poliēs halòs*) is unambiguous: it is common knowledge that entities can emerge out of the sea, whereas cannot emerge ‘into’ the sea.

Homeric poems offer more of such passages: I refer to Zanchi (2014: 123–132) for the thorough discussion of the composites *eis-aph-iknéomai* ‘arrive at, come to’, *eis-ana-bainō* ‘go upward to’, *eis-kata-bainō* ‘go downward to’, *eg-kata-pégnumi* ‘thrust firmly in’, and *epi-pro-ḱēmi* ‘send forth (to)’. 
5.3. \textit{Non ambiguous constructions}

In other occurrences, such as (49)a-b, the lack of adjacency between the EP and the argument makes it difficult to assume any binding syntactic relation between them.

(49) a. Post-verbal argument

\[
\begin{array}{llllll}
\text{kai} & \text{ex-ap-ébēsan} & \text{hetaïroi} & \text{nēós} \\
\text{and} & \text{ouf} & \text{of-away} & \text{from-walk} & \text{AOR.3PL} & \text{comrade.NOM.PL} & \text{ship.GEN} \\
\end{array}
\]

‘And (the) comrades stepped out of the ship.’ (\textit{Od}.12.306–307)

b. Non-immediately preverbal argument

\[
\begin{array}{llllllll}
\text{tôi} & \text{d'} & \text{ará} & \text{par-kat-élékto} & \text{gúnē} \\
\text{DEM.DAT} & \text{PTC} & \text{PTC} & \text{beside-down-lie} & \text{AOR.3SG.MID} & \text{woman.NOM} \\
\end{array}
\]

‘A woman, (whom he brought from Lesbos,) lay next to him.’ (\textit{Il}.9.664)

According to Imbert’s (2008: 209 ff.) explanation, in occurrences such as (49)a-b, the argument and the EP are no longer syntactically related. However, such an explanation commits Imbert to assuming either postpositions for Proto-Indo-European, which is far from being undisputed (cf. Chapter 2, Section 1.3), or a non-economic path of development, including an intermediate postpositional stage in between two distinct adverbial stages:

(50) (PIE) *adverb > \textbf{postposition} > adverb > preverb/preposition

In the light of (49)a-b, it is simpler to assume no postpositional stage between the adverbial origin and the preverbal development.

Similarly, in passages such as (51), a syntactic relation holding between the EP and the argument can be excluded, as the form of the argument and the form required by the EP do not match:
In (51), the prepositional phrase *eni stēthessi* ‘in my breast(s)’ expresses the Goal-participant taken by the composite *peri-pro-khutheis* ‘be poured all around’, but cannot be select by the EP *peri*-.* Notably, these occurrences challenge Imbert’s claims that EPs are relational in nature, as not all multiple preverb composites take prepositional arguments (*contra* Imbert 2008: 212).

5.4. Multiple preverbs as transitivizing morphemes

The composite *ex-apo-nízō* ‘wash thoroughly’ (a Homeric hágax) features the following construction:

(52) *toû* pódas *exapénizen*

DEM.GEN foot.ACC.PL wash_thoroughly.IMPF.3SG

‘(And the old woman took a bright-shining pot,) thoroughly washed his feet, (and poured much water in.)’ (*Od*. 19.387)

The passage in (52) tells about Odysseus’ old nurse who recognized him, while washing his feet. The composite *ex-apo-nízō* is transitive and takes the direct object *pódas* ‘feet’. The EP ek- highlights the actional notion of completeness, already inherent to *apo-nízō* ‘wash off completely’ (Chantraine 1953: 97), rather than being an applicative marker: the composite *apo-nízō* ‘wash off’, which only contains the IP *apo-* , is also transitive. As
shown in (53)a-b, *apo-nízō* (and its Homeric and Attic-Ionic variant *apo-níptō*, analogically built after the future and the aorist forms; cf. DELG: 754) can take the accusative either of the washed entity (53)a, or of the removed substance (53)b:

(53)  

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<tr>
<td>tēn</td>
<td>apo-nízousa</td>
<td>phrasámēn</td>
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</tr>
<tr>
<td>DEM.ACC</td>
<td>away_from.wash.PTCP.PRS.NOM</td>
<td>perceive.AOR.1SG.MID</td>
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<tr>
<td>‘While washing it [Odysseus’ scar], I recognized it.’ (<em>Od</em>.23.75–76)</td>
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b. Accusative of the removed substance

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</tr>
<tr>
<td>apo-nípsantes</td>
<td>mélana</td>
<td>bróton</td>
<td>ex</td>
<td>ōteilēōn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>away_from.wash.PTCP.AOR.NOM.PL</td>
<td>black.ACC</td>
<td>blood.ACC</td>
<td>out_of</td>
<td>wound.GEN.PL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘As (they) had washed the black blood from the wounds …’ (<em>Od</em>.24.189)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The example (53)b contains the same elements as the composite *ep-apo-nízō*, though arranged in a different order: in (53)b, the EP *ek*- functions as a preposition, and retains its Source-meaning, which is bleached in (52), resulting in a lexicalized composite.³⁰

Furthermore, the same construction alternation shown for *apo-nízō* is also featured by the simplex verb *nízō* ‘wash’, which alternatively takes the accusative of the thing washed (e.g. *Il*.16.230; cf. (53)a), or of the removed substance (e.g. *Il*.11.830; cf. (53)b). Hence, the transitive construction featured by *ex-apo-nízō* (52) is arguably not the final step of the lexicalization process undergone by the composite. To put it differently, the addition of *ex*- and *apo-* has nothing to do with the extension of the transitive construction to *ex-apo-nízō* (*contra* Imbert 2008: 206 ff.).

By contrast, there are composites whereby the addition of preverbs has the effect of centralizing a previously peripheral argument (cf. Chapter 2; Peterson 2007 on applicatives). In examples (54)a-b, the addition of *pro-* and *dia-* builds transitive verbs out of intransitive manner of motion verbs, i.e. *théō* ‘run’ and *bainō* ‘walk’. The centralized participants are the Goal- and the Path-participants, respectively.

³⁰ To be more precise, in (53), the preposition *ek* also partially deviates from the etymological meaning of *ek*: it has no longer elative value, but only a generic ablative meaning.
In (54)a-b, the Homeric preverbs *pro-* and *dia-* seem to function as applicatives, i.e. ‘a means some languages have for structuring clauses which allow the coding of a thematically peripheral argument or adjunct as a core-object argument. Such constructions are signaled by overt verbal morphology’ (Peterson 2007: 1).³¹

5.5. *Composites taking no second argument*

A number of Homeric composites containing multiple preverbs take no second arguments. This does not necessarily imply that preverbs have developed into actional markers, but simply suggest that preverbs in principle might not call for further spatial specifications. In fact, some composites that retain their compositional and spatial meaning, such as *hup-ek-pro-réō* ‘flow forth from beneath’, take no second argument:

³¹ Horrocks (1981: 44) assigns a similar function to the preverb *pros-* in *pros-eîpon* ‘address’ (< ‘to-say’); his remark however meets counterexamples (cf. Chapter 2, examples (9)–(10)). Viti (2008a) thoroughly investigates the similarities between Homeric preverbs and applicatives, focusing on their common ability of introducing topical arguments. Viti (2008a) regards topicality as the key for understanding the subsequent development of preverbs into markers of telicity (cf. Section 5.5).
In (55), the text tells about the abundant water of a spring, welling up from beneath (*hup-ek-*) and flowing all around (*pro-*). The preverbs profile each component of the Trajectory covered by the flowing water. Arguably, they do not need further specifications, as how water springs from beneath the ground is part of the common encyclopedic knowledge presumably shared by speakers.

Drawing a link to common, non-salient (i.e. topical) pieces of information is what preverbs in (55) share with preverbs in (56) below:

(56)  

hoi  
DEM.NOM.PL  
d’  
PTC  
ep-an-éstēsan  
at-up-stand.AOR.3PL  
peíthontō  
obey.IMPF.3PL.M/P  
te  
and  
poiméni  
herdsman.DAT  
laôn  
people.GEN.PL  

‘(As soon as he spoke in this manner, he was the first going away from the assembly,) they stood up at (his words) and obeyed the herdsman of people.’  

(II.2.84–85)

In Section 4.2, I already discussed the redundancy of the IP *ana- in this composite. Interestingly, the addition of the EP *epi- establishes an anaphoric reference to the previous context: the Achaeans did not stand up on their own initiative, but after Nestor’s words. As Chantraine (1953: 106) highlights, *epi-* often underlines the feeling that comes from an event, which is also the function that *epi-* seems to have in (56). Thus, in (56), *epi-* contributes to textual cohesion, a function that has been assigned to Hittite and Homeric preverbs by Boley (2004: 56–58) and to Vedic preverb repetitions by Klein (e.g. 1987, 2007).

In other composites from my sample, multiple preverbs show similar behaviors: e.g. *an-ep-állomai ‘leap upon after’ (see example (58)), *di-ér-eimi ‘go out through’(29), and *ep-en-tanūō ‘bind tightly to’. Another clear context in which a preverb serves textual cohesion is example (20), containing the composite *pro-kath-izō ‘perch forth’. As I pointed out in Section 2.1, *pro- has the function of providing precise textual cues for the comparison between Achaeans’ and birds’ forward movement.
6. Preverb ordering

Table 27 summarizes the positioning of Homeric preverbs. Not all preverbs allow for both interior and exterior positioning; moreover, not all virtually possible combinations of preverbs are attested. This might be a matter of gap in the attestations, or suggest that there are constraints, or tendencies, driving the univerbation of preverbs.

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Exterior</th>
<th>Medial</th>
<th>Interior</th>
</tr>
</thead>
<tbody>
<tr>
<td>amphi-</td>
<td>2 (100%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ana-</td>
<td>1 (7%)</td>
<td>-</td>
<td>13 (93%)</td>
</tr>
<tr>
<td>apo-</td>
<td>3 (23%)</td>
<td>-</td>
<td>10 (77%)</td>
</tr>
<tr>
<td>dia-</td>
<td>1 (50%)</td>
<td>-</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>eis-</td>
<td>7 (100%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ek-</td>
<td>18 (44%)</td>
<td>6 (15%)</td>
<td>17 (41%)</td>
</tr>
<tr>
<td>en-</td>
<td>1 (33%)</td>
<td>-</td>
<td>2 (67%)</td>
</tr>
<tr>
<td>epi-</td>
<td>6 (67%)</td>
<td>-</td>
<td>3 (33%)</td>
</tr>
<tr>
<td>huper-</td>
<td>1 (100%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>hupo-</td>
<td>10 (91%)</td>
<td>1 (9%)</td>
<td>-</td>
</tr>
<tr>
<td>kata-</td>
<td>1 (11%)</td>
<td>1 (11%)</td>
<td>7 (78%)</td>
</tr>
<tr>
<td>para-</td>
<td>13 (100%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>peri-</td>
<td>1 (33%)</td>
<td>-</td>
<td>2 (67%)</td>
</tr>
<tr>
<td>pro-</td>
<td>2 (14%)</td>
<td>-</td>
<td>12 (86%)</td>
</tr>
</tbody>
</table>

6.1. Imbert’s (2008) constraints on preverb ordering

Bybee (1985: 33–35) highlights that an order and relevance principle rules the order of affixes on stems. Such a principle implies that the more an affix is relevant to the stem, the closer it will be to it (cf. Section 3.3). Taking inspiration both from Bybee’s work and from Craig’s (1993) and Grinevald’s (2003) studies on the affix order of directional in Jakaltek Popti’ (Mayan family, Guatemala), Imbert (2008: 236 ff.) came up with synchronic semantic constraints determining the ordering of preverbs in Homeric composites.

Imbert arranged the preverbs in three slots, the leftward numbering starting from the verb stem, as shown in Table 28. These slots are not interchangeable: a preverb of the slot [-3] cannot be more internal than a preverb of the slot [-1]; nor overlapping: two preverbs
belonging to the same slot cannot co-occur. In line with Papke (2010: 68), I rename the three slots as follows:

- [-1] **Orientation/Trajectory.** Preverbs belonging to this slot determine how the TR is oriented on its trajectory (vertical or horizontal orientation) and express median types of motion (Path).

- [-2] **Location.** Preverbs belonging to this slot localize the TR with respect to the LM during a motion event; they establish the action at a point of space.

- [-3] **Direction.** Preverbs belonging to this slot determine the relation of the trajectory with respect to the LM.

### Table 28. Imbert’s synchronic semantic constraints on preverb ordering

<table>
<thead>
<tr>
<th>Direction</th>
<th>Location</th>
<th>Orientation/Trajectory</th>
<th>Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>eis</em> ‘(in)to’</td>
<td><em>apo</em> ‘off’</td>
<td><em>ana</em> ‘up, back’</td>
<td><em>v</em></td>
</tr>
<tr>
<td><em>ek</em> ‘out of’</td>
<td><em>en</em> ‘in, into’</td>
<td><em>kata</em> ‘down’</td>
<td></td>
</tr>
<tr>
<td><em>epi</em> ‘at, onto’</td>
<td><em>para</em> ‘beside’</td>
<td><em>pro</em> ‘forth’</td>
<td></td>
</tr>
<tr>
<td><em>amphi</em> ‘on both sides’</td>
<td><em>peri</em> ‘around’</td>
<td><em>dia</em> ‘through’</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>huper</em> ‘above’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>hupo</em> ‘under’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>parek</em> ‘out beside’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>hupek</em> ‘out from under’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall, the closer the preverb to the verbal stem, the higher its relevance to the determination of the trajectory and of the TR. Conversely, the farther the preverb from the verbal stem, the higher its relevance to the determination of the LM and of how trajectory relates to it.

### 6.2. Issues as to Imbert’s approach

To my understanding, Imbert’s approach to preverb ordering raises a number of issues. To begin with, a purely synchronic account is not appropriate for analyzing Homeric poems, which constitute an inherently diachronic corpus (cf. Introduction).

Moreover, her commitment to this synchronous account forces her to *a priori* get rid of a number of composites, i.e. those containing double prepositions whose second
member is *ek*. When they are univerbated to verbal stems, these combinations result in an interior *ek*, whereas this preverb is supposed to occupy the outermost slot [-3]. Imbert’s treatment of double prepositions, however, is not consistent: she does not even discuss composites containing *apo-pro-, amphi-peri-, and peri-pro*, although they can also occur as double prepositions in Homer, simply because these sequences do not contradict her constraints (see fn. 11, Section 2.3). In addition, as argued in Section 2.3, the existence of double prepositions does not imply that the preverbs univerbated as a double unit: for example, we have seen that *ap-ek-lanthánomai* (30), and *apo-pro-ἰēmi* (35), *di-ἐx-eimi* (29), and *di-ἐx-eréomai* (21) can be better analyzed as containing an EP and an IP, than as containing a double preverb.

Imbert also *a priori* excludes *pro-kat-hίzō* ‘perch forth’, as it contains two preverbs belonging to the [-1 Figure Orientation and Median Path] slot. This analysis underestimates the polysemy of Greek preverbs: in *pro-kat-hίzō*, *pro-* does not indicate Path, but the final Location in which the birds complete their trajectory (cf. example (20)). In this respect, it is more consistent to her [-3 Path/Ground relation] slot.

Furthermore, Imbert (2008) does not sufficiently take into account the interaction between verbs, preverbs, and cases in describing spatial relations. For example, in (57), the EP *ἐp-* does not establish a Path/Ground relation (slot [-3]), as it is supposed to do. Rather, the described spatial relation is static and does not imply any trajectory at all (i.e. Path in Imbert’s terms):

(57) *oudoû* *ep-em-bebaôs* *hupsērephéos* *thalámoio*  
threshold.GEN on-in-walk.PTCP.PRF.NOM high_roofed.GEN bedroom.GEN  
‘Standing upon the threshold of the high-roofed bedroom.’ (*Il*. 9.582; cf. (23))

In (57), the composite *ep-em-bainô* is in the perfect and has the resultative meaning of ‘stand upon’. Thus, a resultative stative verb takes the adpositionless genitive (*oudoû*) of
Location. The spatial relation in (57) does not imply motion, and thus *epí-* indicates Location (as preverbs of the [-2] slot do), rather than Motion.32

Imbert (2008) also excluded the composites *an-eph-állomai* ‘leap upon after’ (58), *kat-eph-állomai* ‘leap down against’ (59), and *ek-kat-eph-állomai* ‘leap down from against from’ (60) for methodological reasons. In fact, if the segmentation resulting in *hállomai* is correct, which is not undisputed (see Section 2.1.1), then the interior position of *epí-* poses problems for Imbert’s constraints.

(58) *hōs* *eîd’*, *hōs* *an-ep-álto*, *kài*
as *see.AOR.3SG* so *up-after-spring.AOR.SG.MID* and
*eukhómenos* *épos* *ēüda*
pray.*PTCP.NOM.M/P* *word.ACC* *speak.IMPF.3SG*
‘As soon as (Achilles) saw (him), so (he) leapt up at (his sight) and, praying, said a word.’ (*Il.*20.424)

(59) *étoî* *hó* *g’* *ex* *hippōn*
truly *DEM.NOM* *PTC* *out_of* *horse.GEN.PL*
*kat-ep-álmenos* *antíos* *éstē*
down-against-leap.*PTCP.AOR.NOM.MID* *set_against* *stand.AOR.3SG*
‘(Oïleus) verily leapt down from his chariot and stood and faced him.’ (*Il.*11.94)

(60) *ouranoû* *ek-kat-ep-álto* *di’* *aithéros.*
heaven.GEN *from-down-against-leap.AOR.3SG.MID* *through* *ether.GEN*
‘(Athena) lept down from heaven through ether.’ (*Il.*19.351)

In (58), *epi-* arguably refers to the Stimulus-participant, who was seen by Hector and triggered Hector’s hostile leaping. In (59) and (60), *epi-* also carries a hostile sense, pointing to the enemy to be faced by the leaping hero or deity. In (58)–(60), *epi-* seems to contradict Bybee’s order and relevance principle, as the interior preverb is possibly less

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32 In line with this interpretation, the prepositional phrase *ep’oudō* ‘upon the threshold’ (*epi*+GEN) always occurs with stative verbs such as *histēmi* ‘stand’ (e.g. *Od.*1.104) or *hézomai/hízō* ‘sit’ (*Od.*4.718, 10.62, 17.339).
coherent to the semantics of the verb ‘leap’ than the exterior one. However, Bybee’s principle by definition applies to affixes, whereas Homeric preverbs partially retain their clitic status (cf. Section 1.2). Thus, ana- and kata- might simply retain much of their adverbal original usage, which is in fact documented for both elsewhere in Homer (Chantraine 1953: 90, 112). Lastly, in none of the above examples, epi- is specified by a further noun- or prepositional phrase indicating Stimulus or Goal. Conversely, in (60), the semantic contribution of kata- (Path) is spelled out by the prepositional phrase di’aithéros ‘through ether’, whereas that of ek- (Source) by the adpositionless genitive ouranoû ‘from the heaven’. In this respect, the preverb ordering is not surprising for (60).

6.3. **An integrated account for preverb ordering**

My account of preverb ordering integrates Bybee’s order and relevant principle with other cognitive and historical kinds of explanations.

**The ‘redundancy’ principle.** As far as developments of preverbs are concerned, Bybee’s relevance should be renamed and described as semantic overlapping or redundancy. Those preverbs whose meaning is subsumed by the semantics of the verbal stem that they modify are likely to attach closer to it. Ultimately, they might also be reanalyzed as part of the verb, or as actional markers.

**The ‘lower salience’ principle.** Preverbs whose semantic contribution is not further specified by a noun or prepositional phrase tend to attach more internally. These are likely to be Path- and Source-preverbs, as the Path and the Source components are arguably less salient to the expression of spatial relations. Their low salience, or high topicality, also explain their tendency to be re-analyzed as markers for completion (cf. Viti 2008a, 2008b). Each of these two principles contributes to clarifying why apo- (Source), kata-, ana-, pro- (Path) preferably select the interior position.

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For each preverb, its development. The two principles outlined above do not override the fact that each preverb’s meaning or path of development can be relevant to its positioning (this might sound obvious, but can prevent us from the temptation of overgeneralization; see also Boley 2004: 23). For example, why does the Source-preverb *ek*- have a weaker tendency to select the interior position with respect to *apo*-? A possible answer is that *ek*- bears a heavier semantic content than *apo*:- whereas *apo*- indicates a generic separation, *ek*- also carries an elative nuance. It nevertheless develops telic usages on grounds related to metaphor. EVENTS can be thought of as LOCATIONS, and in particular as CONTAINERS: both EVENTS and CONTAINERS imply physical or temporal boundaries. Furthermore, moving out of a CONTAINER-EVENT implies that such an EVENT is over. As a telic marker, then, *ek*- can modify composites containing another preverb attached at a preceding stage: e.g. *apo-nízō* ‘wash off’ vs. *ex-apo-nízō* ‘wash off thoroughly’; *apo-tínō* ‘pay back’ vs. *ex-apo-tínō* ‘pay back in full’; *dia-bainō* ‘go through’ vs. *ek-dia-bainō* ‘pass over’.

Other two preverbs select the exterior position: *eis*- ‘(in)to’ and *para*- ‘besides’. The former is a relatively recent formation, not spread to all Greek dialects (*en*- ‘in’ + *s* ‘modal ending’ > *eis* with compensatory lengthening; DELG: 326; LIPP II: 226 and references therein). As such, it retains a clear spatial meaning. The preverb *para*- instead is known for his exceptional ‘adverbial’ character (Luraghi 2003: 131), which is consistent with its preference for the exterior positioning.
5 Multiple preverbs in Old Church Slavic

1. Preverbs in Old Church Slavic

1.1. State of the art: the Slavic prefixes

Verbal preverbs are a major topic in Slavic linguistics. Within this field of study, such uninflected items are usually called ‘prefixes’ due to their affixal status (cf. Chapter 2; Section 1.2 in this Chapter). Slavic preverbs have been widely investigated both from a diachronic and from a synchronic perspective, both within cognitive and formal-oriented theoretical frameworks.

From a diachronic viewpoint, most studies devoted to Slavic preverbs are concerned with understanding the steps and the reasons for their development from spatial adverbs, which used to be their primary function, into ‘bounder perfectives’ in modern Slavic languages (in Bybee & Dahl’s terms 1989; cf. Section 1.2.2). Up to now, many scholars have attempted to show whether, in which manner, at which diachronic stage, and to which extent Slavic preverbs retained their original spatial meanings, gained new lexical, abstract, and actional meanings, and possibly underwent fully grammaticalization processes into purely aspectual markers of perfectivity. Another major topic of investigation is the interaction of the new derivational ‘Slavic-style aspect’ (in Dahl’s 1985 terms), coded by means of perfectivizing preverbs and imperfectivizing suffixes, with the aspectual system inherited from Proto-Indo-European, which was based on verbal stem alternations (cf., among many others, Meillet 1924; van Wijk 1929; Kuryłowicz 1929; Vaillant 1939, 1946; more recently, see Dickey 2012; Eckhoff & Haug 2015; Ruvoletto 2016 on Old Russian; Wiemer & Seržant forthc., and references therein).

From a synchronic perspective, the preverbs of modern Slavic languages have been dealt with in different ways. On the one hand, a good number of cognitively-oriented studies aim to build semantic maps for Slavic preverbs, that is, organized networks (also
called ‘schemas’) in which all concrete, abstract, and aspectual meanings of linguistic polysemous items are directly or indirectly connected to a prototypical meaning in a motivated way (cf. Chapter 1, fn. 11; Lakoff 1987; Langacker 1987; Luraghi 2003; Tyler & Evans 2003). Most work in this regard has been done on East and West Slavic: see Janda & Šarić (2009), who report all the relevant references published before 2009; Le Blanc (2010); Nesset et al. (2011); Janda & Lyashevskaya (2013). As regards South Slavic languages, cognitive-oriented studies on preverbs are also available (cf. e.g. Klikovac 2004, 2006; Lazarevska-Stančevska 2004; Tchizmarova 2005, 2006; Belaj 2008; Šarić 2008, 2010, 2012 and references therein).

Most importantly, a number of these studies try to identify lexical content in the so-called ‘empty prefixes’ (named as such, e.g. in Avilova 1959, 1976; Tixonov 1964, 1998; Forsyth 1970; Švedova et al. 1980; Čertkova 1996), which are usually regarded as being purely aspectual, i.e. grammatical (e.g. Le Blanc 2010; Janda 2012; Janda & Lyashevskaya 2013; Janda et al. 2013; Dicky & Janda 2015). The idea that the putative purely perfectivizing prefixes might not be lexically empty dates back to Vey and van Schooneveld’s work (Vey 1952; van Schooneveld 1958), and has recently been backed up by new statistical evidence. In particular, works by Janda and her associates show that certain Russian preverbs have unique semantic profiles, and exhibit strong inclinations to combine with verbs that belong to specific semantic classes. Furthermore, Janda argues that preverbs’ semantic profiles usually make reference to a spatial path, thus emphasizing the linkage between preverbs and their cognate prepositions, which occasionally retain concrete meanings lost by preverbs.¹ Nevertheless, most scholars, especially if formally-

¹ An exception to this otherwise valid rule seems to be the preverb po-, which has lost its spatial profile in Russian. This preverb productively only adds the abstract meanings of perfectivity, as in po-xudet’ ‘lose weight’, and delimitation, as in po-pisat’ ‘write for a while’, whereas its cognate preposition po still exhibits the spatial meanings of ‘on, over, along’. Scanty remnants of the original spatial SURFACE-CONTACT (Path) meaning of po- are found in the composites po-kryvat’ ‘cover’, po-sejat’ ‘sow’, po-xromirovat’ ‘chrome’, and po-nikelirovat’ ‘nickel’ (see Shull 2003: 147–172 for further details). Preverbs such as Russian po-, which synchronically have little to do with the spatial meanings of their cognate prepositions, are named ‘orphan prefixes’ (i.e. orphan preverbs) by Dicky (2012). Interestingly, however, po- continues spatial
oriented, still support the view that certain preverbs simply function as purely perfectivizing morphemes.

On the other hand, many formally-oriented works on modern Slavic preverbs are concerned with classifying them, according to their semantic and syntactic behaviors, into (a) ‘lexical/ internal’ and (b) ‘super-lexical/ external’ preverbs, and with identifying their combination rules in multiple preverberation or stacking.\(^2\) Beside lexical and super-lexical preverbs, some scholars suggested that there exists another separate class of preverbs, (c) the ‘empty’ preverbs mentioned above (cf., among others, Babko-Malaya 1999; Filip 1999, 2003; Ramchand 2004; Romanova 2004; Svenonius 2004a, 2004b; Tatevosov 2008, 2009). Briefly, these classes of preverbs show the following distributional and semantic differences. (a) The lexical preverbs display directional and non-compositional meanings. In addition, they are able to derive a new lexical item, and to modify the argument structure of the simplex verb onto which they attach, usually, but not exclusively, by adding new arguments (e.g. Blg. *dam* ‘give’ vs. *pro-dam* ‘sell’). (b) By contrast, the super-lexical preverbs are considered to have predictable and actional (or quantizing) meanings, such as ‘begin’ (ingressive), ‘finish’ (egressive), ‘for a while’ (delimitative), ‘for many times’ (accumulative, distributive), and they do not modify the argument structure of the simplex verb onto which they attach (Blg. *pre-glăštam* ‘swallow up’, *pre-pročitam* ‘read again’; Rus. *za-pisat* ‘start writing’). (c) Lastly, the preverbs with a pure perfectivizing role perfectivize an imperfective verb, without adding any semantic modification (Rus. *na-pisat*’ (PFV) ‘write’ vs. *pisat*’ (IPFV) ‘write’).\(^3\) In contrast with cognitively-oriented scholars, who regard preverbs as polysemous items, these authors claim that different preverbs with the same phonological content show non-related lexical, super-lexical and pure

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\(^2\) Tatevosov (2008), on the basis of the distributional behavior of Russian completive *do*- and repetitive *pere*-, argues for the existence of a third group of preverbs, which he names ‘intermediate prefixes’.

\(^3\) Janda (2007) suggested the labels (a) ‘Specialized perfectives’ for verbs combining with lexical preverbs, (b) ‘Complex Act Perfectives’ for verbs combining with super-lexical preverbs, and (c) ‘Natural Perfectives’ for verbs combining with pure perfectivizing preverbs.
perfectivizing usages. As a combinatorial rule in multiple preverbation or preverb stacking, it is stated that, whenever two preverbs stack onto a single verbal stem, the innermost should be a lexical one, whereas the outmost a super-lexical one, as in (1)a-b:

(1)  

a. *Lexical usage of the preverb* ot-

\[ \text{ot-kry-tj} \]  \[ \text{ot-kry-tj} \]  \[ \text{ot-kry-va-tj} \]

*cover-INF\text{PV}  \text{away-cover-INF}\text{PV}  \text{away-cover-IPFV-INF}\text{FPV}  \text{open}

‘cover’  ‘open’  ‘open’

b. *Super-lexical usage of the preverb* po-

\[ \text{po-ot-kry-va-tj} \]

\[ \text{DSTR-away-open-IPFV-INF}\text{FPV} \]

‘open *one after another*’

(adapted from Romanova 2004: 255)

As mentioned, multiple preverbs in modern Slavic languages have received some attention: to the above-cited studies, the paper by Istratkova (2004) should be added. Istratkova (2004) focuses on Bulgarian, which is a language allowing for the exceptional stacking of as many as seven preverbs, as shown by example (2):

(2)  

\[ \text{za-iz-po-na-raz-pre-prodavam (IPFV)} \text{vs. prodam ‘sell’ (< dam ‘give’)} \]

\[ \text{start-completely-little_by_little-cumulation-to_many-again-sell} \]

‘start selling again everything to many little by little’

(adapted from Istratkova 2004: 311)

Multiple preverbs are far less productive in other Slavic languages than they are in Bulgarian: Russian, for instance, usually combines two preverbs, although combinations of three preverbs are also attested (Istratkova 2004: 306).

By contrast, investigations devoted to multiple preverbs in ancient Slavic languages are scarce, and usually rely only on data taken from dictionaries (e.g. Fil’ 2011). The recent paper by Zanchi & Naccarato (2016) aims to partially fill this gap: it examines the
semantics of Old Church Slavic and Old Russian multiple preverbs by using corpus-based
data semi-automatically extracted from the TOROT Treebank (Haug & Jøhndal 2008;
Eckhoff & Berdicevskis 2015).

1.2.  The status of preverbs in Old Church Slavic

1.2.1.  The morphological status of preverbs and their meanings

Especially since Kuryłowicz (1964: 171–178), it is generally acknowledged that Indo-
European preverbs developed from previous free-standing adverbs with spatial meanings,
which were originally able to modify both nouns and verbs (cf. Chapter 2; on Slavic in
particular, see Vaillant 1966: 467 ff.; 1977: 109 ff.; Arkadiev 2015: 201 ff.). Later on, these
adverbial items increasingly became bound to the verbs or nouns that they modified, and
thus underwent the well-known functional bifurcation into preverbs and adpositions. A
number of ancient Indo-European languages such as Vedic (cf. Chapter 3), Homeric Greek
(cf. Chapter 4), and possibly Archaic Old Irish (cf. Chapter 6), attest to a linguistic stage in
which preverbs still showed proclitic behavior (cf. further Chapter 2). In other words,
preverbs could be separated from the modified verbal stem by means of non-lexical and
lexical material (this is the so-called ‘tmesis’; cf. Chapter 2, and references therein).

As far as we know, proclitic behavior is not documented for preverbs in any Slavic
text, and thus Old Slavic preverbs are generally said to exhibit the morphological status of
prefixes, that is, of bound morphemes (Vaillant 1966: 467; Wiemer & Seržant forthc.). By
contrast, Baltic, the most closely related branch to Slavic, preserves scanty traces of the
preceding proclitic behavior, as shown in (3):

(3)  a. Standard Lithuanian  b. Old/non-standard Lithuanian
    per-si-kel-ti ap-mi-šviesk akis
    through-REFL-raise-INF up/on/to-me-illuminate eyes
    ‘to move (to another place)’  ‘illuminate my eyes (lit. the eyes on/to me)’
(adapted from Wiemer & Seržant forthc.; Rosinas 1995: 10 f.)
c. Multiple preverbs and reflexive pronouns in Lithuanian

\[ \text{su-si-pa-žin-ti} \quad \text{prī-si-pa-žin-ti} \]

with-\text{REFL-along-V-INF} \quad \text{at-REFL-along-V-INF}

‘to become acquainted with’ \quad ‘to confess, avow’

(adapted from Nevis & Joseph 1992: 96)

In (3)a-c, the reflexive and the first personal enclitic pronouns intervene between the preverb(s) and the verbal stem, thus splitting the EPs from the remaining elements of the phrase. This is similar to what happens in Old Irish, on which see Chapter 6. To sum up, the free positioning that we have observed for Vedic and Homeric preverbs (Chapters 4 and 5) is no longer allowed in the earliest attested Slavic languages, in which preverbs are advanced in their univerbation process, and seem to show distinct behaviors from those of the corresponding prepositions.

However, as Vaillant (1977: 30) points out, Old Church Slavic exceptionally contains passages in which a construction with a preverbed verb and a bare case freely alternates with an equivalent construction containing the simplex verb and a prepositional phrase. Vaillant quotes the constructions \textit{do-iti+GEN} (preverbed verb + bare case) and \textit{iti do+GEN} (simplex verb + prepositional phrase). As discussed in Section 5.1, even in the relatively small sample of multiple preverbs, one can find such examples, in particular with the composites \textit{prěd(ъ)-po-lagati} ‘distribute to’ and \textit{vъs-pri-imati} ‘receive in return’.

Though the univerbation process of preverbs was advanced in Old Church Slavic, the meaning brought about by preverbs was still detectable and primarily spatial (cf. Vaillant 1966: 470 ff.), as exemplified in (4).

(4) Old Church Slavic preverbs with spatial meanings

\begin{itemize}
  \item \textit{iti} ‘go’ \textit{iz(ъ)-iti} ‘go out’
  \item \textit{ob-iti} ‘go around’
  \item \textit{ot(ъ)-iti} ‘go away’
  \item \textit{po-iti} ‘go along a surface’, ‘depart from’
  \item \textit{prě-iti} ‘go over, across’
  \item \textit{vъn-iti} ‘go into’
\end{itemize}
However, there are also a good number of composites to which preverbs add lexical, but non-spatial, meanings (Aitzetmüller 1991: 150 ff.), as shown in (5)a-e:

(5) Old Church Slavic preverbs with lexical but non-spatial meanings

<table>
<thead>
<tr>
<th>Preverb ‘Basic Meaning’</th>
<th>Simple Verb</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. na- ‘onto’</td>
<td>rešti ‘say, tell’</td>
<td>na-rešti ‘announce, designate’</td>
</tr>
<tr>
<td>b. otъ- ‘away from’</td>
<td>dati ‘give’</td>
<td>otъ-dati ‘give back’</td>
</tr>
<tr>
<td>c. sъ- ‘with, down from’</td>
<td>tvoriti ‘make’</td>
<td>sъ-tvoriti ‘prepare’</td>
</tr>
<tr>
<td>d. vъz- ‘upward’</td>
<td>dati ‘give’</td>
<td>vъz-dati ‘give back’</td>
</tr>
<tr>
<td>e. za- ‘behind’</td>
<td>byti ‘be, become’</td>
<td>za-byti ‘forget’</td>
</tr>
</tbody>
</table>

In a number of the above composites, the semantic contributions of preverbs are quite clear: both otъ- and vъz- mean ‘back, in return’ in examples (5)b and (5)d. Similarly, it is easy to understand how the lexicalized meaning of za-byti ‘forget’ developed from ‘behind-be’ (5)e. By contrast, the semantic analysis is less straightforward for other composites: in (5)a and (5)c, the exact semantic contributions brought about by na- and sъ- are more difficult to detect (possibly, na- refers to the Area-participant, whereas sъ- brings about the idea of togetherness, linked to the event of preparing something).

In other composites, where the meanings of preverbs are particularly difficult to identify, traditional grammars usually describe preverbs are mere completion or perfectivity markers (Vaillant 1966: 471 ff.; Aitzetmüller 1991: 154 ff.). Preverbs that are explicitly ascribed a telic/perfective function follow: na- (na-plъniti ‘fill up’ vs. plъniti ‘fill’), otъ- (otъ-pěti ‘finish a song’ vs. pěti ‘sing’), pro- (pro-slъziti ‘burst into tears’ vs. slъziti ‘cry’), u- (u-bitи ‘kill’ vs. bitи ‘hit’), and za- (za-klatи ‘slaughter’ vs. klatи ‘kill’). Alongside telicity, other types of actional meanings can be expressed by preverbs: for example, both pro- and

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4 As correctly pointed out by Viti (2008a: 395–396) and frequently remembered throughout this work, the terms completion/telicity and perfectivity were interchangeably used by less recent scholars who discussed the actional values of preverbs. Nowadays, however, terminology has been fixed, and it is generally agreed that the so-called completion/telicity pertains the lexical aspect, whereas perfectivity belongs to the category of grammatical aspect (cf. Chapter 1). As discussed in Section 1.2.2, it is still under discussion whether in Old Church Slavonic the system of ‘bounder perfectives’ was at its onset, under construction, or fully developed. Thus, for the sake of prudence, I speak here of completion/telicity markers, and not of perfectivity markers.
vъz- show an ingressive meaning in pro-glagolati and vъz-glagolati ‘start talking’, as well as u- in u-źbrěti ‘catch sight of’. Delimitative meanings were also attested: po- functions as a delimitative marker in the composite sъ-po-źiti ‘live for a while with’ (cf. Section 4.2).

1.2.2. The development of Slavic preverbs

1.2.2.1. A glimpse into the contemporary system of ‘bounder perfectives’

Modern Slavic languages exhibit a fully developed system of grammatical or viewpoint aspect (for further discussion on the distinction between grammatical and lexical aspect, see Chapter 1, Section 3.2). This grammatical category is regularly expressed, in Slavic languages, by means of both preverbal (6)a and postverbal (6)b morphology:

(6) a. Simple verb:IPFV → preverbal:PFV
   Polish łowi-ć → z-łowi-ć
   catch-INF P-catch-INF

b. Preverbal:PFV → secondary suffixation:IPFV
   Polish na-mówi-ć → na-mówi-a-ć
   P-persuade-INF P-persuade-SFX-INF
   (∅-mówić ‘say, tell’)
   (adapted from Wiemer & Seržant forthc.)

As exemplified in (6)a, preverbs, besides adding new lexical meaning to the simplex verbs onto which they attach, are systematically employed to perfectivize imperfective simplex verbs. In some cases, as shown in (6)b, the meaning of the new compound verb turns out to greatly differ from that of the corresponding simple verb after the addition of the preverb, and thus the latter no longer constitutes an adequate imperfective counterpart. Therefore, a new imperfective verb is built via secondary suffixation.

As mentioned in Section 1.2.1, preverbs were originally free-standing spatial adverbs, which later on underwent grammaticalization processes into bounder perfectives. On the other hand, imperfectivizing suffixes mostly go back to ancient Indo-European
suffixes used to build various actional formations semantically close to imperfectivity, such as iteratives, habituals, or duratives (as a cover term for these, Wiemer & Seržant forthc. adopt the label ‘marked unbounded verbs’). Later on, the semantic markedness of these suffixes gradually bleached, and such suffixes ended up functioning as unmarked option for expressing any type of unbounded events, including progressives, iteratives, habituals, and other values related to imperfectivity (cf. Section 3).  

Typologically speaking, the aspectual system outlined above complies with the so-called bounder perfective type, whereby perfective markers arise from adverbs such as *up, down, over, and through*, which attach onto verbs to create a sense of completion (Bybee & Dahl 1989; Bybee et al. 1994). Bounder perfectives are not typologically unusual. Many languages employ previous spatial adverbs to express telicity: cf. English *eat up*, German *aufessen* ‘eat up’. Italian also exploits particle-verb locutions to convey telic meanings, especially with the Source-particle *via* ‘away’: e.g. *volare* ‘fly’ vs. *volare via* ‘fly away’; *passare* ‘pass’ vs. *passare via* ‘fade away’ (Iacobini & Masini 2006). Interestingly, Breu (1992) and Arkadiev (2015) described Slavic, Hungarian, Yiddish, and Caucasian languages as a linguistic area in which preverbs are employed to develop a rudimentary aspectual system. What is typologically exceptional within Slavic is the paradigmaticization of the system of bounder perfectives (Bybee & Dahl 1989: 86). Moreover, the so-called Slavic-style aspect is infrequent for three further reasons: (i) its relative independence from time reference; (ii) its derivational character; (iii) its usual, though not strict, association with telicity (Dahl 1985: 84-85; Eckhoff & Haug 2015: 191).

1.2.2.2. The reasons and timings of the grammaticalization of Slavic preverbs

The link between the lexical, the subsequent actional, and eventually aspectual usages of preverbs primarily lies in the fact that preverbs, as spatial markers, are able to add an inherent endpoint to the spatial events expressed by verbs (Maslov 1959; Bermel 1997: 466; Shull 2003; Wiemer & Seržant forthc., among others; cf. also Viti 2008a, 2008b on

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5 The only surviving postverbal affixes related to bounded events are the nasal suffix *-nu* and the archaic infix *-*n-. In Polish, for example, the cognate *-nq* suffix is used for semelfactive formations.
Homeric Greek preverbs). So, for example, whereas istringstream ‘go’ can have both telic and atelic readings, its composite counterparts (cf. (4)) can only be understood as telic. Subsequently, preverbs also came to function as bounder markers for more abstract events: their spatial meanings bleached, and in parallel their distribution broadened.

The addition of an inherent endpoint to spatial and then to non-spatial events is a straightforward explanation for the development of Goal-preverbs into actional markers. However, in a number of languages, preverbs etymologically related to Source seem to have formerly acquired a telic function, as shown by Dickey (2012) for Slavic, and by Zanchi (2017) for Ancient Greek (in addition, as Iacobini & Masini 2006 show, a special actional function is ascribed to the Italian Source-particle via ‘away’). To explain the developments of Source-preverbs, an additional explanation comes into play. EVENTS can be metaphorically thought of as LOCATIONS: departing from an event (i.e. from a location) implies that such an event is completed. Dicky (2012: 84), instead, attempted to provide a different, but compatible, explanation, speculating that “the combination of the original source meaning combined with a new abstract goal meaning produces a semantic potential including both the beginning of an action and its endpoint, i.e. the complete profile of an action.”

A crucial factor contributing to the reanalysis of spatial preverbs as actional markers is the overlap between their meaning and the meaning of the verbal stem onto which they stack, which makes the spatial reading redundant. For example, compare istringstream ‘go’ with po-corpus ‘go along a surface’: the spatial contribution brought about by po- ‘along a surface’ to istringstream is redundant, as the act of going already implies the presence of a surface along which the TR moves (Dickey 2007). This overlap, known either as ‘Vey-Schooneveld effect’ (Vey 1952; van Schooneveld 1958) or as ‘subsumption’ (Poldauf 1954), arguably triggered the reinterpretation of the preverb as a default telic marker, as the actional reading is the only possible salient piece of information added by the preverb, given the redundancy of the spatial addition (Zaliznjak & Šmelev 2000; Dickey 2007; Plungjan 2011: 319; Janda et al. 2013; Arkadiev 2015; Wiemer & Seržant forthc.).

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6 The Vey-Schooneveld effect is cursorily mentioned within studies dealing with languages different from Slavic (cf. Rovinskaja 2001; Panov 2012 on Latin, cited after Ruvoletto 2016).
Later on, the telic reading triggered by the preverb became conventionalized, as an effect of the opposition between the composite and its non-preverbed counterpart. Subsequently, the extension of preverbs (or at least of some of them) to verbs denoting atelic activities, i.e. events that do not entail an inherent endpoint, represents a further step toward their grammaticalization, and crucially maximizes the distribution of preverbs as bounders (Lehmann 2004). Occasionally, preverbs add boundaries to atelic events in Old Church Slavic already, for example in the composite  \textit{sъ-po-žiti} ‘live \textbf{for a while} with someone’, in which the prefix \textit{po-} seems to have the only function of establishing temporal limits to the activity of living with someone (see Section 4.2). Table 1, adapted from (Wiemer & Seržant forthc.), summarizes the development just set out:

\begin{table}[h]
\begin{center}
\begin{tabular}{|c|c|}
\hline
(0) spatial/non-spatial meaning & lexical modification \\
\hline
(1) telic meaning & actional modification \\
\hline
(2) conventionalized telic meaning & \\
\hline
(3) limitation (perfective reading on atelic events) & aspectual modification \\
\hline
\end{tabular}
\end{center}
\end{table}

This grammaticalization process did not give rise to a single marker of perfectivity in modern Slavic languages. In Russian, for example, \textit{pro-}, \textit{za-}, \textit{s-} (and other preverbs to a lesser extent) mark telic perfective verbs, whereas \textit{po-} perfectivizes atelic verbs; in Bulgarian, \textit{iz-}, \textit{o-}, \textit{na-}, \textit{s-} (ordered on a frequency scale) mark perfectivity on telic predicates, whereas \textit{po-} does the same for atelic ones (Dickey 2012). Such an abundance of markers of perfectivity is one of the reasons why a number of scholars doubt, though from different perspectives, as to whether the development of Slavic preverbs into bounder perfectives should be regarded as a proper grammaticalization process (cf. Chapter 1; Campbell 2001; Newmeyer 2001; Joseph 2004). In their view, the grammaticalization of Slavic preverbs results as an epiphenomenon from a series independently motivated semantic changes.

Another issue is the exact timing of the steps displayed in Table 1. Several scholars believe that the Slavic system of grammatical aspect was already developed in the Old Church Slavic period, and verbs were already organized in pairs of perfectives ~
imperfectives (van Schooneveld 1951; Dostál 1954; Eckhoff & Janda 2014). According to other scholars, instead, the Slavic-style aspect of aspectual pairs has not developed earlier than the Old Russian period (Borodič 1953; Bermel 1997; Lazorczyk 2010), thus implicitly arguing that the Old Church Slavic affixational system expressed lexical rather than grammatical aspect. Other investigations take an intermediate position: the aspectual system was established, but only at its onset and not widespread across all verb classes (Amse-De-Jong 1974; Forsyth 1972; see also Růžička 1957 on Old Russian).

According to Wiemer & Seržant (forthc.), the steps outlined in Table 29 occurred with the following timings: step (0) is assumed to have come about in Early Common Slavic (before 300 AD), steps (1) and (2) in Common (300–700 AD) and Early Slavic (Old Church Slavic and Old Russian times), and step (3) in Late Slavic (= Modern Slavic). The above-mentioned Old Church Slavic compound sъ-po-žiti `live for a while with someone’, containing a delimitative po-, could be itself a timid signal of an early beginning of step (3), which then dramatically developed during the 16th century (Dickey 2007). In parallel, (Eckhoff & Haug 2015) contributed to a description of the advancement of stages (1-2) with their corpus-based study on Codex Marianus and Codex Zographensis. In these texts, they observed a significant correlation between preverbed verbs (without imperfectivizing suffixes) and perfective contexts, and between suffixed stems and imperfective contexts (see Section 3).

1.3. The ongoing development of Slavic prepositions

Old Church Slavic is a prepositional language. However, secondary postpositions are sporadically also attested (Vaillant 1977: 109, 134 ff.). These are derived from nouns, and accordingly take the genitive case: GEN+radi, GEN+děļja, and GEN+cěšta `because of’ (cf. Lat. GEN+causā, and GEN+gratiā; in Modern Slavic languages, these postpositions came to be preposed: cf. Rus. dlja togo, BCS radi toga `because of than’).

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7 The present Section is primarily based on Vaillant (1977: 21 ff.), and Lunt (1965: 143-153).

1.3.1. The scanty relics of the former adverbial status of prepositions

As mentioned in Section 1.2.1, Old Church Slavic prepositions are advanced in their grammaticalization process. Nevertheless, they still exhibit a number of features that point to their former adverbial status. To begin with, though prepositions usually immediately precede the noun that they take, and with which they constitute a single accentual unit, one can find exceptions to this rule (Vaillant 1977: 110). One such exception is the locution vъ…město ‘in…(the) place’, in which the noun město regularly occurs displaced from the preposition vъ (Vaillant 1977: 135; e.g. vъ ryby:GEN město:ACC ‘in the place of a fish’). In addition, prepositional phrases could be split by relative, anaphoric and demonstrative pronouns (i prěbyvajo:IND.PRS.1SG vъ nego:3SG.GEN ljubьve:LOC ‘I remain in his (of him) love’, Mar. Jn 15.10), as well as by genitive or by other types of nominal modifiers (vъ efremъ:ACC naricaemъ:PTCP.PRS.P.ACC gradъ:ACC ‘in the village called Ephraim’, Mar. Jn 11.54). However, rather than constituting actual examples of discontinuous syntax, such putative splits are arguably due to scribes’ desire of retaining the Greek word order and are especially frequent in Codex Suprasliensis. Interestingly, in a few passages, Slavic scribes
restored the usual Slavic word order, and thus one might run into different variants for the same locution, as shown in (7)a-b:

(7)  
   a. Continuous prepositional phrase (Mar. Lc 9.27)  
       \[ \text{otь stojе́stiichь sъde} \]  
       from stand.PTCP.PRS.GEN.PL here
   
   b. Discontinuous prepositional phrase (Mar. Mk 9.1)  
       \[ \text{otь sъde stojе́stiichь} \]  
       from here stand.PTCP.PRS.GEN.PL

   ‘among those standing here’ (adapted from Vaillant 1977: 110)

Furthermore, as exemplified in (8)a-b, with coordinated nouns, the repetition of preposition is frequent, but not compulsory in Old Church Slavic, as well as in most ancient Indo-European languages (Vaillant 1977: 11):

(8)  
   a. Repetition (Mar. Lc. 2.44)  
       \[ i \text{ iskaаšete ego vь roždenii i vь znani} \]  
       and seek.IMPF.3DU 3SG.GEN in birth.LOC and in knowledge.LOC

   ‘Then they began looking for him among relatives and among friends.’
   
   b. Coordination reduction (Mar. Mt 5.45)  
       \[ ěko slъньce svoe sъěatь na zъly i blagy \]  
       so_that sun.ACC POSS.3SG.ACC raise.PRS.3SG on evil.ACC.PL and good.ACC.PL

   ‘For he makes his sun rise on the evil and (on) the good.’

Example (8)b instantiates a type of the so-called coordination reduction, i.e. a coordination between two coordinants one of which is not a constituent (in other words, a type of coordination involving ellipsis; see Haspelmath 2007a; Luraghi forthc. d). In (8)b, the ellipsis of the preposition na ‘on’ occurs. Both discontinuity (7)b and coordination reduction (8)b are typical features related to non-configurationality (Luraghi 2010),
contributing to suggesting that prepositions were quite advanced, but not yet fully
developed, in Old Church Slavic.

In addition, prepositions could take different cases. The Old Church Slavic cases
that could accompany verbs were the accusative, genitive, dative, instrumental, and
locative cases. A number of prepositions could take as many as three cases (Vaillant 1977:
145 ff.): e.g. za ‘behind’, and sъ ‘with, downward’ take the accusative, the genitive, and
the instrumental cases; po (etym.) ‘surface-contact (Path), ablative (Source)’ instead
takes the accusative, the dative, and the locative cases.8 There are contexts in which case
alternation is undoubtedly meaningful: the accusative ~ locative alternation expresses Goal
~ Location in combination with na ‘up’ and vъ ‘in’, and so does the accusative ~
instrumental alternation with nadъ ‘up’, podъ ‘down’, and prědъ ‘before, in front of’.9

1.3.2. The residual usages of the prepositionless cases

Prepositionless cases were still able to express spatial and non-spatial meanings only to a
very limited extent in Old Church Slavic.10

The prepositionless accusative, besides marking the direct object of transitive verbs
(unless negated), can express extension in time (Duration) or in space (Measure, rather than
Path). The prepositionless accusative is also taken by a number of composite motion verbs,

8 Originally, po- used to mean ‘surface contact’ and ‘ablative’ (Dickey 2012). This preverb goes back to
Proto-Indo-European *(á)po, cf. Goth. afar ‘away from’, Ancient Gr. apó ‘away from’, Lat. ab ‘away from’,
pōnere ‘put, place’ (< *po-sinere), Ved. ápa ‘back’ (LIPP II: 66 ff.). It is still productive with spatial
meanings in Croatian, Slovene and West-Slavic (cf. fn. 1; Dickey 2011, 2012). Elsewhere, it developed
actional meanings including resultative, delimitative, ingressive, distributive and attenuative. Considering its
complex semantic development, I chose to assign po- its etymological meaning ‘surface-contact, ablative’
within this work.

9 For a thorough overview of the usages of prepositions in Old Church Slavic, I refer to the traditional
151 ff.), as well as to the comparative study by Thomason (2006).

10 For an exhaustive examination of the usages of Old Church Slavic cases, see Vaillant (1977: 22–108), and
Lunt (1965: 143 ff).
preverbed with do-, na-, o(bъ)-, po-, prě-, pro- (e.g. do-iti ‘arrive at’, more often +GEN; na-xoditi ‘come upon’; o(bъ)-xoditi ‘go around’; po-xoditi ‘walk onto (a surface)’; prě-xoditi ‘go around’, pro-iti ‘walk through’).

Prepositionless genitive can also express different spatial roles with several preverbed verbs, containing do-, iz, otъ-, prědъ-, sъ-, u-, za- (do-iti ‘arrive at’ (Goal); iz-iti ‘go out of’ (Source); ot-iti ‘go to’ (Goal); prědъ-xoditi ‘walk in front’ (Goal); sъ-vlěšti ‘strip of’ (Source-like participant); u-běžati ‘escape from’ (Source); za-blǫditi ‘be far from’ (Location)). Moreover, it systematically expresses the direct object with negated verbs or in partitive contexts, as opposed to the accusative case, which in its turn expresses complete affectedness of the object participant (Vaillant 1977: 74 ff.). The ablatival usage of genitive is extremely limited: the genitive case only indicates Source with a number of quasi-adverbial expressions taken by a few verbs, such as běžati ‘run’ and osvoboditi ‘liberate’ (Hewson & Bubenik 2006: 179). Source is usually expressed by iz+GEN, sъ+GEN, or otъ+GEN (Thomason 2006: 127 ff., 135 ff.).

The dative case is employed to express the indirect object, as well as the direct object with certain verbs, such as pomošti ‘help’, zaviděti ‘envy’, and dosaditi ‘annoy’, involving two human participants. Its use as a Goal marker is only residual in Old Church Slavic (cf. Mar. Mt 14.11, 17.19), but flourishing until the 15th century in Old Russian. Instead, the dative case is more often accompanied by the preposition kъ to express the Goal-participant (Vaillant 1977: 86; Lunt 1965: 148; Thomason 2006: 138 ff.).

The instrumental case can express Instrument, Means, Cause and Agent (with passive verbs). It is not usually employed for the Comitative-participant, which is usually encoded by sъ+INS (Vaillant 1977: 91–93). Besides functioning as second argument with a very limited number of verbs, such as obilovati ‘be glad of’ it occasionally expresses Path and Duration.

The prepositionless locative is only residual in Old Church Slavic, but more widespread in Old Russian. It possibly survives in a few Old Church Slavic quasi-adverbial locative and Time expressions, such as zimě ‘in winter’ and polu nošti ‘at midnight’ (Lunt 1965: 147). The prepositionless locative is taken as a second argument by a number of simple verbs (e.g. kosnǫti sę ‘touch’), and by several composites preverbed with pri-
ložiti ‘add’, also +DAT, *na*+ACC; *pri*-bližiti ‘approach’) and other preverbs, such as *na*- and *sъ-* (*na*-ležati ‘be upon, press’; *sъbyti* *се* ‘take place’) (Vaillant 1977: 102 ff.; Lunt 1965: 147–148).

2. Multiple preverbs in numbers

2.1. Composites with multiple preverbs

Old Church Slavic composites with multiple preverbs were extracted automatically, as the Old Church Slavic section of TOROT is already provided with word-formation annotation.11 From the extracted data, I excluded the composites containing the negative prefix *ne*-, as the negation does not belong to the so-called category of Indo-European ‘adverbs/preverbs/adpositions’ (Cuzzolin et al. 2006), whose members show at least one of the following features:

(i) Proto-Indo-European etymology going back to a deictic/local adverb;
(ii) basic spatial meaning;
(iii) subsequent functional bifurcation into adpositions/preverbs in the daughter languages.

The composites excluded in this way are the following: *iz*-*ne*-mošti ‘become unable, weak, ill’, *ne*-do-konjčati ‘not complete’, *ne*-do-mysliti, *ne*-do-myšljati ‘be in doubt’, *ne*-do-stati ‘lack’, and *ne*-na-viděti ‘hate’. These composites are nevertheless interesting: (a) in *iz*-*ne*-mošti, the negative prefix occurs internally, while the exterior preverb *iz*- seems to provide the composite with an ingressive meaning (*iz*- ‘ingressive’ + *ne* ‘negation’ + √mog- ‘be able’). (b) The composites *ne*-do-myšljati ‘be in doubt’ and *ne*-do-stati ‘lack’ are only used in combination with the negative prefix (but cf. the -i-present *do-mysliti* ‘consider, understand’ from the same root √mysl- ‘think’). (c) The composite *ne*-na-viděti ‘hate’

11 Courtesy of Hanne M. Eckhoff, to whom I express my deep gratitude.
shows a non-compositional meaning that can be compared with that of its ingressive counterpart \textit{vъz-ne-na-viděti} ‘conceive a hatred, come to hate’ (cf. Sections 3.4 and 4.2).

<table>
<thead>
<tr>
<th>COMPOSITE</th>
<th>MEANING</th>
<th>Marianus</th>
<th>Zographensis</th>
<th>Suprasliensis</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>is-po-vědati</td>
<td>confess, explain</td>
<td>6</td>
<td>6</td>
<td>50</td>
<td>62</td>
</tr>
<tr>
<td>is-po-věděti</td>
<td>confess, explain</td>
<td>6</td>
<td>9</td>
<td>36</td>
<td>51</td>
</tr>
<tr>
<td>is-po-vědovatě</td>
<td>confess, explain</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>is-pro-vřěšti</td>
<td>overturn, destroy</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>iz-ob-rěstě</td>
<td>find out</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>iz-ob-rětatě</td>
<td>find out</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>o-pro-vřěšti</td>
<td>overturn</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>prědr-po-lagati</td>
<td>distribute to</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>pri-ižděti (-iz-žiti)*</td>
<td>spend in addition</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>pri-ob-rěstě</td>
<td>acquire</td>
<td>8</td>
<td>6</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>pro-po-vědati</td>
<td>proclaim, predict</td>
<td>19</td>
<td>22</td>
<td>40</td>
<td>81</td>
</tr>
<tr>
<td>pro-po-věděti</td>
<td>proclaim, predict</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>pro-po-vědovatě</td>
<td>announce, proclaim</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>sъ-po-žiti</td>
<td>live for a while</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>sъ-prě-byvati</td>
<td>remain together</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>sъ-vъ-kupiti</td>
<td>gather together</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>sъ-vъ-kupljati</td>
<td>unify, copulate</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>vъs-po-měnǫti</td>
<td>start remembering, remind</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>vъs-pri-imati</td>
<td>receive in return</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>vъs-pri-jeťi</td>
<td>receive in return</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>vъz-ne-na-viděti</td>
<td>come to return</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>za-po-vědati</td>
<td>order</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>za-po-věděti</td>
<td>order</td>
<td>6</td>
<td>7</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>88</td>
<td>81</td>
<td>193</td>
<td>363</td>
</tr>
</tbody>
</table>

*The following phonological rule comes into play here: $z + \ddot{z} \rightarrow \ddot{z}d$ (Lunt 1965: 44).

This selection process yielded 23 lemmas and 363 occurrences for Old Church Slavic composites, which are displayed in Table 30, together with their frequencies in each Codex contained in the TOROT Treebank (as discussed in Section 3, however, a number of such composites are organized in aspectual pairs or triplets). As Table 30 shows, Codex Suprasliensis alone attests to more than the half of occurrences of multiple preverbs (193 out of 363). Moreover, it contains six composites that do not occur in the other two manuscripts. These are is-po-vědovatě ‘explain, tell’, iz-ob-rěstě ‘find out’, iz-ob-rětatě ‘find out’, sъ-po-žiti ‘live for a while with someone’, sъ-prě-byvati ‘remain together with’, and
sъ-vъ-kupljati ‘unify, copulate’. As the language of the *Codex Suprasliensis* is usually regarded as being more recent than the Slavic variety attested by the translations of the Gospels (Lunt 1965: 9), these data might suggest that multiple preverbs have become more widespread in the later variety of language, and that the composites listed above are more recent than the remaining ones (with the caveat that, when working with inherently limited corpora, such as the Old Church Slavic Codices, a gap in the attestation does not necessarily correspond to an actual absence in the grammar or in the lexicon; Joseph & Janda 2003: 15–16). Interestingly, in cases of polysemous composites, *Codex Suprasliensis* usually attests to a more lexicalized meaning, as one may expect from its more recent dating. This is shown by examples (9) and (10):

(9)  
\[
\begin{array}{llll}
\text{i} & \text{dъsky} & \text{trъžъnikъ} & \text{i} \\
\text{and} & \text{table.ACC.PL} & \text{merchant.GEN.PL} & \text{and} \\
\text{prodajоštihъ} & \text{golоби} & \text{ispovrъže} \\
\text{sell.PTCP.PRS.GEN.PL} & \text{dove.ACC.PL} & \text{overturn.AOR.3SG} \\
\end{array}
\]

‘(He) overturned the tables of the merchants and the benches of those selling doves.’ (Mar. Mk 11.15)

(10)  
\[
\begin{array}{llllll}
\text{ó} & \text{glasa} & \text{silо} & \text{adъ} & \text{ispovrъgъši} \\
\text{PTC} & \text{sound.GEN} & \text{power.VOC} & \text{hell.ACC} & \text{destroy.PTCP.PST.VOC} \\
\end{array}
\]

‘O power of the word, (you) destroying death, …’ (Supr. 27.200)\(^{12}\)

While in (9) from *Codex Marianus*, the composite *is-pro-vrěšti* is used in a semi-compositional way, in example (10) from the *Codex Suprasliensis*, its usage is more lexicalized (cf. Section 4.3). In (9), Jesus destroys merchants’ tables by literally throwing (√vrěg-) them forward (*pro-*) completely (*iz(ъ)*), i.e. by overturning them. By contrast, in (10), the event of destroying (*is-pro-vrěšti*) affects a metaphorical Patient (*adъ:*ACC ‘hell > death’), and is performed by a metaphorical Agent (*glasa:*GEN *silо:*VOC ‘power of word’).

\(^{12}\) Examples from *Codex Suprasliensis* are numbered as in the TOROT Treebank.
Table 31 contains those composites that are attested in later (South) Slavic languages (here, I reported only Bulgarian), as well as their Old Church Slavic and Bulgarian meanings.\(^\text{13}\)

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
<th>Bulgarian</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>is-po-vêdati</td>
<td>confess, explain</td>
<td>iz-po-vjadam (PFV)</td>
<td>confess, profess</td>
</tr>
<tr>
<td>is-po-vêdovati</td>
<td>confess, explain</td>
<td>iz-po-vjadvam (IPFV)</td>
<td>confess, profess</td>
</tr>
<tr>
<td>iz-ob-rêsti</td>
<td>find out</td>
<td>iz-ob-retja (PFV)</td>
<td>invent, devise</td>
</tr>
<tr>
<td>iz-ob-rêtati</td>
<td>find out</td>
<td>iz-ob-retjavam (IPFV)</td>
<td>invent, devise</td>
</tr>
<tr>
<td>o-pro-vrêšti</td>
<td>overturn</td>
<td>o-pro-vergavam (IPFV)</td>
<td>o-pro-vergaja (PFV)</td>
</tr>
<tr>
<td>prêdъ-po-lagati</td>
<td>distribute to</td>
<td>pred-po-lagam (IPFV)</td>
<td>suppose, assume</td>
</tr>
<tr>
<td>pri-ižditi (iz-žiti)</td>
<td>spend in addition</td>
<td>pri-iždam (IPFV)</td>
<td>arrive, rise</td>
</tr>
<tr>
<td>pro-po-vêdovati</td>
<td>predict, proclaim</td>
<td>pro-po-vjadvam (IPFV)</td>
<td>preach</td>
</tr>
<tr>
<td>vъs-po-menõti</td>
<td>start remembering, remind</td>
<td>vӑz-po-minavam (IPFV)</td>
<td>remember</td>
</tr>
<tr>
<td>vъs-pri-imati</td>
<td>receive in return</td>
<td>vӑz-pri-emam (IPFV)</td>
<td>perceive, apprehend</td>
</tr>
<tr>
<td>vъs-pri-jõti</td>
<td>receive in return</td>
<td>vӑz-pri-ema (PFV)</td>
<td>perceive, apprehend</td>
</tr>
<tr>
<td>vъz-ne-na-vidêti</td>
<td>come to hate</td>
<td>vӑz-ne-na-vidja (PFV)</td>
<td>come to hate</td>
</tr>
<tr>
<td>za-po-vêdati</td>
<td>order</td>
<td>za-po-vjadam (PFV)</td>
<td>order, command</td>
</tr>
</tbody>
</table>

As expected, a number of composites retaining a concrete meaning in Old Church Slavic develop more abstract meanings in Bulgarian. Three cases in point are o-pro-vrêšti ‘overturn’ (11), prêdъ-po-lagati ‘distribute to’ (12), and vъs-pri-jõti ‘take, receive, have back’ (13).

(11) \( t \quad \text{dъsky} \quad \text{o-pro-vrъže} \)

and \( \text{table.ACC.PL} \quad \text{over-forth-throw.AOR.3SG} \)

\(^{13}\) The time gap that divides Old Church Slavic from Bulgarian is wider than that separating R̥g-Vedic from Classical Sanskrit (Chapter 3) and Homeric Greek from Classical Greek (Chapter 4). In spite of that, Bulgarian composites are reported here, as they allow for enlightening comparisons, as shown in what follows.
‘(And he poured out the coins of the money-changers) and overturned (their) tables.’ (Mar. Jn 2.15)

(12) i daeše oučenikomь svoitь da prědь-po-lagajǫtъ
and give.IMPF.3SG disciple.DAT.PL his.DAT.PL so_that distribute_to.PRS.3PL
‘And (he) gave (them) to his disciples to distribute (them) to (the people).’
(Zogr. Mk 8.6)

(13) i ašte vъ zaimъ daate otь nichьže čaate
and if in loan.ACC give.PRS.2PL from REL.GEN.PL.hope.PRS.2PL
vъs-prijetи. kaē vamtь chvala estь
in_return-receive.INF.PRS what.NOM 2PL.DAT credit.NOM be.PRS.3SG
‘And if you give a loan (to those) from whom you hope to receive back, which credit do you have?’ (Mar. Lc 6.34)

The context of (11) is similar to that of (9) above. The effects of Jesus’ anger are described: Jesus overthrows the merchants’ tables in front of the temple. The elements building the composite o-pro-vrěšti profile different components of tables’ movement: o(bъ)- describes its endpoint (‘over’), whereas pro- the medial Path of movement (‘forward’); √vrěg- means ‘throw’. In Bulgarian, the same elements make up a lexicalized composite meaning ‘refute, disprove’. The semantic shift can be easily explained: e.g. refuting/disproving an argument can be seen as metaphorically overthrowing it.

In (12), Jesus gives food to his disciples, so that they can distribute it to the people around. The elements of the composite are prědh- ‘in front of’ + po- ‘distributive’ + √lag-/log- ‘put’. In Bulgarian, the same composite predpolagam has gained the shifted meaning of supposing, assuming (cf. also Rus. predpolagat’ ‘suppose, assume’): its meaning is no longer spatial, nor compositional. Once more, this semantic shift is not surprising: for example, the English verb to put also shows a similar development in such expressions as As Wackernagel puts it (on this composite, see also Sections 4.2 and 5.1).

In (13), the composite vъs-pri-jeti ‘receive in return’ is employed to describe the event of getting a repayment: the elements building the composite are vъz(ъ)- ‘in return’ + pri- ‘resultative’ + mъ- ‘take’. In Bulgarian, the idea of repayment is no longer implied by
the composite, which simply means ‘perceive, apprehend’: the semantic contribution of \( vьz(ы) \) has bleached.

2.2. **Verbal roots modified by multiple preverbs**

In my sample, only 10 Old Church Slavic verbal roots allow for multiple preverbs. Table 32 shows these Old Church Slavic roots and their meanings, as well as their Proto-Indo-European roots and their meanings. Moreover, Table 32 provides their frequencies, i.e. the number of composites containing each root, and the verb types in the rightmost column (verbs’ classification is a simplified version of Levin’s (1993), which suffices for my purposes; cf. fn. 23, Chapter 3).

<table>
<thead>
<tr>
<th>OCS</th>
<th>Meaning</th>
<th>PIE root</th>
<th>Meaning</th>
<th>Frequency</th>
<th>Verb Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \acute{v}by- )</td>
<td>be</td>
<td>*( bь)eh( \acute{y} ) (LIV(^2): 98)</td>
<td>grow, come into being, become</td>
<td>1</td>
<td>location</td>
</tr>
<tr>
<td>( \acute{v}kup- )</td>
<td>buy</td>
<td>?uncertain</td>
<td>?uncertain</td>
<td>2</td>
<td>transfer</td>
</tr>
<tr>
<td>( \acute{v}log- )</td>
<td>lay</td>
<td>*( leg )h (LIV(^2): 398)</td>
<td>lie down</td>
<td>1</td>
<td>posture</td>
</tr>
<tr>
<td>( \acute{v}min- )</td>
<td>think</td>
<td>*( men ) (LIV(^2): 435)</td>
<td>come to think</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td>( \acute{v}rёt- )</td>
<td>meet, find</td>
<td>*( reh)j( \acute{y} ) (LIV(^2): 501)</td>
<td>meet, find\run\</td>
<td>3</td>
<td>obtaining\motion</td>
</tr>
<tr>
<td>(Vaillant 1966: 184–185)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \acute{v}vёd- )</td>
<td>know</td>
<td>*( wej)d (LIV(^2): 665)</td>
<td>see, catch sight of</td>
<td>8</td>
<td>mental activity</td>
</tr>
<tr>
<td>( \acute{v}vid- )</td>
<td>see</td>
<td>*( wej)d (LIV(^2): 665)</td>
<td>see, catch sight of</td>
<td>1</td>
<td>perception</td>
</tr>
<tr>
<td>( \acute{v}vrёg- )</td>
<td>throw</td>
<td>*( perg )g (LIV(^2): 689)</td>
<td>throw</td>
<td>2</td>
<td>caused motion</td>
</tr>
<tr>
<td>( \acute{v}om- )</td>
<td>take</td>
<td>*( h)j( \acute{e}m ) (LIV(^2): 236)</td>
<td>take away</td>
<td>2</td>
<td>removing</td>
</tr>
<tr>
<td>( \acute{v}ži- )</td>
<td>live</td>
<td>*( gё)( \acute{j}eh)j (LIV(^2): 215)</td>
<td>live</td>
<td>2</td>
<td>existence</td>
</tr>
</tbody>
</table>

As Table 32 shows, composites containing a motion or a location verb proper are only a few (\( sъ-\)prё\( \acute{b}y\)vati ‘remain together with’, \( o-pro-vrё\)\( \acute{y} \)sti ‘overthrow’, and \( is-pro-vrё\)\( \acute{y} \)sti ‘overturn, turn upside down, destroy’). This in itself suggests an advanced lexicalization for Old Church Slavic composites. As Arkadiev (2015: 217) remarks, the pattern of multiple preverbs was not productive in ancient Slavic languages, and was employed when the IP was lexicalized (cf. Sections 4.3 and 6).

A number of verbs of Table 32 can be assimilated to location verbs, including posture verbs (\( \acute{v}log-/lag- ‘lay’), and verbs of existence (\( \acute{v}ži- ‘live’). Also, other verbs can
be treated as motion verbs, such as perception verbs (√\textit{vid}- ‘see’), given that eyes can be directed toward or away from a certain LM, and verbs of removing, such as √\textit{bm}- ‘take away’. As for the two roots indicating a mental state, i.e. √\textit{věd}- ‘know’ and √\textit{min}- ‘think’, the former goes back to the same Proto-Indo-European root as √\textit{vid}- ‘see’, that is, *\textit{yejď}- ‘see, catch the sight of’ (perception verb > verb of mental state) (LIV\textsuperscript{2}: 665); the latter leads back to a Proto-Indo-European root indicating a mental state itself, i.e. *\textit{men}- ‘come to think’ (LIV\textsuperscript{2}: 435).

The root √\textit{rět}- ‘meet, find’ has no direct reflexes even in Baltic and is difficult to be given an etymology (Vaillant 1966: 184-185). In possibly belongs to the group of stems containing vowel lengthening (< CS*\textit{rēt}-, cf. CS*\textit{sēd}- ‘sit’ < *\textit{sed}-; Vaillant 1966: 78 ff.). If this is the case, then it might be a derivation from the Proto-Indo-European root *\textit{ret}- ‘run’, which exhibits a verbal reflex in Old Irish \textit{reithid} ‘run’, as well as noun reflexes in Lithuanian \textit{rātas} ‘wheel’, Latin \textit{rota} ‘wheel’, Sanskrit \textit{rāthah} ‘wagon’, and Old Church Slavic \textit{rota} ‘oath’ (possibly, the semantic shift originates from the \textit{circle} in front of which one takes an oath). Baltic also documents \textit{ritū}, \textit{risti} ‘run’, while Old Church Slavic \textit{ristati} ‘run’, which in this view must belong to the reduced grade of *\textit{ret}-, that is, *\textit{rit}-. However, according to LIV\textsuperscript{2} (501), a sure connection to the root *\textit{ret}- cannot be proved for -rěsti. Thus, a further root *\textit{reh₁t}- is assumed in the LIV\textsuperscript{2}, with the meaning of meeting and finding and reflexes only in Slavic preverbed verbs. Accordingly, the Lithuanian verb \textit{ritū}, \textit{risti} ‘run’ is ascribed to another root, i.e. *\textit{yrejt}-, which shows reflexes only in Germanic and Baltic (LIV\textsuperscript{2}: 700). Whatever its etymology, the meaning of *\textit{rět}- can be assimilated to that of a motion verb. Either it is a motion verb proper (< *\textit{ret}-), or it is a verb of obtaining (< *\textit{reh₁t}-), whose semantics is similar to that of verbs of taking.

Lastly, there is no sure Indo-European etymology for the root √\textit{kup}- ‘buy’. The Old Church Slavic verb \textit{kupiti} ‘buy’ is a probable borrowing from German (Germ. \textit{kaufen} ‘buy’ < OHG \textit{koufōn}), which in turn is likely to be a borrowing from the Latin \textit{caupō} ‘tradesman’. The origin of the Latin word is dubious itself, as well as its connection with the Greek \textit{kápēlos} ‘retail dealer’ (the Greek vocalism does not match with that of its Latin putative counterpart; \textit{kápēlos} is said to have a Mediterranean origin by DELG: 494 and De
Vaan 2008: 100). In any case, the Old Church Slavic lemma *kupiti* is a transfer verb and, as such, it can be associated to verbs of caused motion.

2.3. **Attested combinations of preverbs**

Old Church Slavic preverbs that occur in multiple preverbation are the following: *iz(ь)*- ‘out of’, *na*- ‘on(to)’, *o(ьб)*- ‘around’, *po*- ‘surface contact, ablativity’, *прě*- ‘across’, *прěдь*- ‘in front of’, *pri-* ‘at’, *pro-* ‘through’, *sъ*- ‘with’, *vъ*- ‘in’, *vъз(ь)*- ‘up’, *за*- ‘behind’. Table 33 shows the attested combinations of preverbs. In the rightmost column, frequency refers to the number of composites containing each combination. None among these combinations has an overwhelming frequency with respect to the others, nor does it make up a double preposition in Old Church Slavic. No preverb is iterated.

<table>
<thead>
<tr>
<th>Exterior preverb</th>
<th>Interior preverb</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>из(ь)</em>-</td>
<td><em>о(ьб)</em>-</td>
<td>2</td>
</tr>
<tr>
<td><em>из(ь)</em>-</td>
<td><em>по-</em></td>
<td>3</td>
</tr>
<tr>
<td><em>из(ь)</em>-</td>
<td><em>про-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>о(ьб)</em>-</td>
<td><em>про-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>прěдь</em>-</td>
<td><em>по-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>при</em>-</td>
<td><em>из(ь)</em>-</td>
<td>1</td>
</tr>
<tr>
<td><em>при</em>-</td>
<td><em>о(ьб)</em>-</td>
<td>1</td>
</tr>
<tr>
<td><em>про-</em></td>
<td><em>по-</em></td>
<td>3</td>
</tr>
<tr>
<td><em>съ</em>-</td>
<td><em>по-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>съ</em>-</td>
<td><em>прě-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>съ</em>-</td>
<td><em>vъ-</em></td>
<td>2</td>
</tr>
<tr>
<td><em>vъз(ь)</em>-</td>
<td><em>на-</em></td>
<td>1*</td>
</tr>
<tr>
<td><em>vъз(ь)</em>-</td>
<td><em>по-</em></td>
<td>1</td>
</tr>
<tr>
<td><em>vъз(ь)</em>-</td>
<td><em>при-</em></td>
<td>2</td>
</tr>
<tr>
<td><em>за</em>-</td>
<td><em>по-</em></td>
<td>2</td>
</tr>
</tbody>
</table>

*The composite attesting to this combination, i.e. *vъз-ne-na-viděti* ‘come to hate’, also contains the negative prefix *ne*.

2.4. **The Greek counterparts of Old Church Slavic composites**

Table 34 displays the Greek counterparts of Old Church Slavic composites with multiple preverbs.
Table 34. The Greek counterparts of Old Church Slavic composites

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
<th>Greek equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>is-po-vědati</td>
<td>confess, explain</td>
<td>omologéō, ex-omologéō, di-ēgéomai</td>
</tr>
<tr>
<td>is-po-věděti</td>
<td>confess, explain</td>
<td>omologéō, ex-omologéō, ex-agoreúō, ex-ēgéomai, an-aggéllō</td>
</tr>
<tr>
<td>is-po-vědovati</td>
<td>confess, explain</td>
<td>omologéō</td>
</tr>
<tr>
<td>is-pro-vrěšti</td>
<td>overturn, destroy</td>
<td>ana-stréphō, kata-stréphō, diarrégnumi</td>
</tr>
<tr>
<td>iz-ob-rěsti</td>
<td>find out</td>
<td>ex-eurískō</td>
</tr>
<tr>
<td>iz-ob-rětati</td>
<td>find out</td>
<td>ex-eurískō</td>
</tr>
<tr>
<td>o-pro-vrěšti</td>
<td>overturn</td>
<td>ana-trépō</td>
</tr>
<tr>
<td>přeh-po-lagati</td>
<td>distribute to</td>
<td>para-túthēmi</td>
</tr>
<tr>
<td>pri-ižditi (iz-žiti)</td>
<td>spend in addition</td>
<td>dapanāo, pros-dapanāo</td>
</tr>
<tr>
<td>pri-ob-rěsti</td>
<td>acquire</td>
<td>(ana)-ktáomai, kerdainō, pro-xenizō</td>
</tr>
<tr>
<td>pro-po-vědati</td>
<td>predict, proclaim</td>
<td>kērúttō, pro-ana-kērúttō, euaggelízomai</td>
</tr>
<tr>
<td>pro-po-věděti</td>
<td>predict, proclaim</td>
<td>kērúttō</td>
</tr>
<tr>
<td>pro-po-vědovati</td>
<td>predict, proclaim</td>
<td>kērúttō</td>
</tr>
<tr>
<td>sъ-po-zžiti</td>
<td>live for a while with</td>
<td>sun-ana-stréphomai</td>
</tr>
<tr>
<td>sъ-pré-bvavati</td>
<td>remain together with</td>
<td>sun-ana-stréphomai</td>
</tr>
<tr>
<td>sъ-νb-kupiti</td>
<td>gather together</td>
<td>epi-sun-ágō, sun-áptō, enóō</td>
</tr>
<tr>
<td>sъ-νb-kupljiati</td>
<td>unify, copulate</td>
<td>sun-áptō, sum-mégnumi, mégnumi</td>
</tr>
<tr>
<td>vъs-po-menżti</td>
<td>start remembering, remind</td>
<td>ana-mimnēskō, hupo-mimnēskō, hupómnēsin lambānō</td>
</tr>
<tr>
<td>vъs-pri-imati</td>
<td>receive in return</td>
<td>apo-lambānō, ap-ékhō</td>
</tr>
<tr>
<td>vъs-pri-ježti</td>
<td>receive in return</td>
<td>lambānō, ana-lambānō, apo-lambānō, ap-ékhō</td>
</tr>
<tr>
<td>vъz-ne-na-viděti</td>
<td>come to hate</td>
<td>miséō</td>
</tr>
<tr>
<td>za-po-vědati</td>
<td>order</td>
<td>en-téllomai, dia-tássō, pros-tithēmi, ep-aggéllomai</td>
</tr>
<tr>
<td>za-po-věděti</td>
<td>order</td>
<td>en-téllomai</td>
</tr>
</tbody>
</table>

The term counterpart must be taken with caution and holds a different significance for Codices Marianus and Zographensis, on the one hand, and for Codex Suprasliensis, on the other hand. The Gospels of the Codices Marianus and Zographensis allow for a more direct comparison with their Greek parallels, though the original Greek source text has not survived the funnel of time. A good approximation of the Greek text is provided by Von Tischendorf (1869–1872), and is available in the TOROT (here referred to as GNT, Greek New Testament). By contrast, the Greek sources of the Codex Suprasliensis either are reflected to a lesser extent in their Slavic translation, or are missing altogether. Zaimov & Capaldo (1982) nevertheless attempted to collect these sources, based on a single Greek manuscript, and amending it, either by removing certain Greek passages with no Slavic counterparts, or by integrating other passages from different Greek manuscripts (see also
Their effort resulted in a combined Greek text, which can be now accessed on the website of the *The Codex Suprasliensis Project*. Despite this issue of the Greek sources, the language of the *Codex Suprasliensis* is usually said to have been influenced by the Greek original to a greater extent than the refined translations of the Gospels contained in the *Codices Marianus* and *Zographensis* (Lunt 1965: 7–9).

As bold emphasizes in Table 34, only four Old Church Slavic composites exhibit Greek counterparts containing multiple preverbs: i.e. *pro-po-vědati* ‘proclaim, predict’ ~ *pro-ana-kērūttō* (not exclusive), *sъ-po-žiti* ‘live, stay for a while with someone’ ~ *sun-ana-strēphomai*, *sъ-prē-byvati* ‘remain together with’ ~ *sun-ana-strēphomai*, and *sъ-vъ-kupiti* ‘gather, tie together’ ~ *epi-sun-ágō* (not exclusive). The composites *sъ-po-žiti* and *sъ-prē-byvati* only occur in *Suprasliensis*; the Greek multiple preverb counterparts for *pro-po-vědati* and *sъ-vъ-kupiti*, that is, *pro-ana-kērūttō* and *sun-ana-strēphomai*, are only attested in the Greek sources of *Suprasliensis* (in passages corresponding to Supr. 337.2, 341.27 ff.). As a matter of fact, the Greek composite *epi-sun-ágō* does occur in the GNT, but it corresponds to Slavic composites different from *sъ-vъ-kupiti*, such as *sъ-bъrati* ‘gather’. These data might back up the general assumption that *Codex Suprasliensis* has to a greater extent undergone Greek interference than *Marianus* and *Zographensis*: only in *Codex Suprasliensis*, one finds Greek equivalents containing multiple preverbs.

All in all, Old Church Slavic composites with multiple preverbs cannot be regarded as calques from Greek (see also Section 6.2). Nor does the Slavic usage of preverbs point to a single translation equivalent. For example, the EP *vъz-* means ‘in return, in exchange, back’ in the pair *vъs-pri-imati* and *vъs-pri-jeťi* ‘receive in return’, as shown in (14), which directly continues the passage in (13).

\[(14)\]  
\begin{align*}
\text{ibo} & \text{ i } \text{ grēšьnici} & \text{ grēšьnikomь} & \text{ vъ} & \text{ zaimь} & \text{ dajǫtъ.} \\
\text{indeed and} & \text{ sinner.NOM.PL} & \text{ sinner.DAT.PL} & \text{ in} & \text{ loan.ACC.PL} & \text{ give.PRS.3PL} \\
\text{da} & \text{ vъs-priimоть} & \text{ ravъno} & \text{ so that} & \text{ in_return-receive.PRS.3PL} & \text{ equal.ACC} \\
\text{so that in return} & \text{ receive.PRS.3PL} & \text{ equal.ACC} \\
\text{‘Even sinners lend to sinners, to get} & \text{ back} & \text{ the same amount.’} & \text{(Mar. Lc 6.34)}
\end{align*}
This preverb can either correspond to *apo-* (etym.) ‘away from’ or *ana-* (etym.) ‘upward’ in the Greek sources. Attested equivalents for these Old Church Slavic composites are *apo-lambánō, ap-ékhō*, on the one hand, and *ana-lambánō*, on the other hand. It is also unlikely that *vъz-* acquired the meaning of ‘in return’ as a calque from the Greek preverb *ana-*-, on the basis of the fact that both *vъz-* and *ana-* mean ‘upward’ in their spatial usages. The preverb *vъz-* shows this meaning in several composites, whose Greek equivalent does not contain *ana-*: e.g. OCS *vъz-dati* ~ Gr. *apo-dídōmi* ‘give back’; OCS *vъz-vratiti* ~ Gr. *apo-stréphō* ‘turn back’.

By contrast, there are Old Church Slavic usages of preverbs that suggest Greek influence. One case in point is *iz-* in the composites *iz-ob-rěsti, iz-ob-rětati* ‘find out’, which translate the Greek *ex-eurískō* ‘find out’ (only in *Codex Suprasliensis*). As discussed in Section 2.2, the bare root *vablyt* ‘meet, find’ is not attested without preverbs, thus the IP-verb altogether corresponds to the Greek simple verb *eurískō* ‘find’ (see also Section 6.2). Then, the addition of the preverbs *iz-* (*eurískō*) and *ex-*(Ancient Greek) further brings about the actional nuance of completion (cf. also Eng. *find ~ find out*, in which Eng. *out* has originally the same spatial usage as OCS *iz-* and Gr. *ex-* ‘out of’). As a matter of fact, Old Church Slavic *iz-* and Gr. *ex-* are also etymologically related (IEW: 292–293; LIPP II: 204 ff.).

However, cognacy is not necessary for two preverbs to develop parallel uses. The phonetically similar (but not etymologically related) preverbs *sv-* (OCS) and *sun-* (Gr.) are similarly used to convey the idea of togetherness in *sv-νβ-kupiti, sv-νβ-kupljati ~ sun-áptō, sum-meígnumi* ‘gather together’, and in *sv-po-žiti, sv-prě-byvati ~ sun-ana-stréphreō* ‘live for a while with’, ‘remain together with’.

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14 Though this is far from receiving a demonstration from the data provided here, I would nevertheless suggest that the Bulgarian preference for perfectivizing *iz-* over *po-*-, for example, which is the favorite perfectivizing preverb in Russian (Dickey 2007), has possibly been driven by the Greek influence. Since Homeric times (cf. Chapter 4), *ex-* frequently occurs in exterior position, and carries telic meanings.
3. The form of composites

Unlike their Vedic and Homeric Greek counterparts (cf. Chapters 3 and 4), Old Church Slavic preverbs are undoubtedly bound morphemes. Their morphological status is thus not under discussion. For this reason, this Section does not aim to assess the univerbation/non-univerbation of composites. Rather, it deals with their form from another angle: the interactions between preverbs and the secondary imperfectivizing suffixes, which is a particularly relevant matter for the development of the Slavic-style aspect (cf. Section 1.2).

3.1. The actional suffixes of multiple preverb verbs

As displayed in Table 35, a number of multiple preverb composites can be grouped in couples (or even triples) of verbs containing different suffixes (rows from 10 to 15). Suffixes (a)-(b) are explicit markers for bounded events. By contrast, suffixes from (e) to (h) are primary and secondary markers for unboundedness, and more or less directly go back to a Proto-Indo-European suffix *-a-, marking various types of durative events (for a thorough discussion of the origins and the developments of such suffixes, see Wiemer & Seržant forthcoming and references therein). The zero in (c) and the -ě- suffix in (d) do not express (un)boundedness: (c) constitutes an unproductive verb class including about 50 verbs of everyday activities (Lunt 1965: 131–135); (e) class mostly includes intransitives expressing a state (Lunt 1965: 116–118).

As demonstrated by Eckhoff & Haug (2015), the system of viewpoint aspect, which we know from Modern Slavic, was already quite developed in the Old Church Slavic of Codex Marianus and Codex Zographensis. In particular, Eckhoff & Haug (2015) showed what follows:

(i) preverbed and unsuffixed verbs hardly occur as imperfectives, that is, in the imperfect, in the present infinitive, and in the present participle.

(ii) verbs occurring the in the imperfective contexts listed at (i) are explicitly imperfective: they contained one suffix among (e)-(h). Thus, as Eckhoff & Haug (2015) argue, in Old Church Slavic, there was already evidence for secondary imperfectivization.
Table 35. The actional suffixes of multiple preverb composites

<table>
<thead>
<tr>
<th></th>
<th>(a) -i-</th>
<th>(b) -uq-</th>
<th>(c) -Ø-</th>
<th>(d) -ē-</th>
<th>(e) -(j)a-/jaj-</th>
<th>(f) -aj-</th>
<th>(g) -ova-/</th>
<th>(h) -va-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>bound, causative</td>
<td>bounded</td>
<td>everyday activities</td>
<td>intransitive, stative</td>
<td>unbounded, ipfv</td>
<td>unbounded, iterative, durative</td>
<td>unbounded, ipfv</td>
<td>unbounded, ipfv, iterative</td>
</tr>
<tr>
<td>1.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>-</td>
<td>vs-s-po-menči</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>-</td>
<td>-</td>
<td>pri-číti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>-</td>
<td>-</td>
<td>s-s-po-čiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>-</td>
<td>-</td>
<td>iz-pro-vrčiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>-</td>
<td>-</td>
<td>o-pro-vrčiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>prēč-po-logati</td>
<td>-</td>
<td>-</td>
<td>s-s-pre-hvati</td>
</tr>
<tr>
<td>8.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>-</td>
<td>-</td>
<td>za-po-věčiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10.</td>
<td>-</td>
<td>-</td>
<td>iz-po-věčiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>-</td>
<td>-</td>
<td>pro-po-věčiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12.</td>
<td>-</td>
<td>-</td>
<td>pri-ob-rči</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>13.</td>
<td>-</td>
<td>-</td>
<td>iz-ob-rčati</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.</td>
<td>-</td>
<td>vs-s-pri-jeti</td>
<td>-</td>
<td>vs-s-pri-imati</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>15.</td>
<td>s-s-vs-kupiti</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>vs-s-vs-kupičati</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
This new system, which was developed already, though not spread throughout the whole lexicon, coexisted alongside with the inherited alternations of Proto-Indo-European, whereby different verbal stems were employed to express different asceptual values. In Sections 1.3, 3.2, and 3.3, I examine Old Church Slavic multiple preverb verbs in light of Eckhoff & Haug’s (2015) study.

3.2. The alternations involving the suffix -(j)a-

Within multiple preverb verbs, there are three pairs involving the suffix -(j)a-: iz-ob-rěsti ~ iz-ob-rětati ‘find out’, sъ-vъ-kupiti ~ sъ-vъ-kupljati ‘gather together’, and vъs-pri-jëti ~ vъs-pri-imati ‘receive in return’. The former two pairs work as expected by Eckhoff & Haug (2015): iz-ob-rěsti and sъ-vъ-kupiti attest no imperfective forms, whereas iz-ob-rětati and sъ-vъ-kupljati behave the opposite.\(^\text{15}\)

Data are more complicated for the latter pair, i.e. vъs-pri-jëti ~ vъs-pri-imati ‘receive in return’. The -jëti composite, which is supposed to be the perfective element of the pair, does occur in the infinite present (Mar., Zogr. Lc 6.34, Supr. 1.297, 43.166, 48.650). The Slavic infinite present translates the Greek infinite present, which is doubtlessly imperfective. Thus, a non-explicitly imperfective form occurs in an imperfective context, though an explicitly imperfective form would be available. In addition, the -imati composite, which is instead explicitly marked for imperfectivity via the -(j)a- suffix, occurs once in the past participle. As Slavic past participles translate Greek aorist participles, it means that an imperfective form occurs in a perfective context. The latter mismatches are attested only in Codex Suprasliensis: this manuscript is younger than Marianus and Zographensis. Thus, such forms possibly represent an innovation, whereby the emergent viewpoint aspect has partially emancipated from its actional origins lying in telic bounders.

However, the -jëti and -imati forms are also used interchangeably in the translations of the Gospels in a couple of passages. In Mt 6.5 and Mt 6.16, Codex Marianus attests to

\(^{15} \text{It must be mentioned that we are dealing here with very low frequencies: iz-ob-rěsti x4, iz-ob-rětati x1, sъ-vъ-kupiti x4, and sъ-vъ-kupljati x2 (cf Table 30).}\)
the -(j)a- form, whereas Zographensis the suffixless form. The context for one of these passages is shown in (15)a:

(15)Mt 6.5–6

a. (And when you pray, do not be like the hypocrites, for they love to pray standing in the synagogues and on the street corners to be seen by others.)

truly say.PRS.1SG 2PL.DAT that receive_in_return.PRS.3PL

reward.ACC POSS.REFL.3PL.ACC

‘Truly I tell you that they have received back their reward already.’

b. (But when you pray, go into your room, close the door and pray to your Father, who is unseen.)

and father.NOM POSS.2SG.NOM see.PTCP.PRS.NOM in secret.LOC

back-give.PRS.3SG DAT.2SG openly

‘And your Father, the one seeing in secret, will reward you openly.’

The present of vъs-pri-ђeti or vъs-pri-imati translates the Greek present ap-đkhousin.PRS.3PL ‘get in return’. Here (and in similar passages), Jesus is expressing an atemporal precept: he is warning not to perform good actions in public to be rewarded by people's consensus. Rather – Jesus warns – one should privately behave to receive God's compensation in the future. In a similar context, Mt 6.2, Marianus also hands down the -ђeti form, unmarked for the imperfective aspect. To sum up, four passages (i.e. Mar. Mt 6.2, Zogr. Mt 6.2, 6.6, 6.5) contain a present form that is not explicitly marked for imperfectivity and has however no future meaning.

Interestingly, going ahead until Mt 6.6 (15)b, one notes that the subsequent verb of giving back, i.e. vъz-dati in the present tense, which is unmarked for imperfectivity, does
have a future value. Accordingly, it always translates the future \textit{apo-dósei:FUT.3SG} ‘give back’ of the GNT. In light of this, it might be the case that Slavic translators were uncertain as to how to render the Greek opposition between the present and the future in Old Church Slavic. These hesitations possibly have produced the inconsistencies outlined above.

3.3. \textit{The triplets containing speech verbs}

Further interesting cases are the couple/triplets \textit{za-po-věděti} \textit{~} \textit{za-po-vědati} ‘order’, \textit{is-po-věděti} \textit{~} \textit{is-po-vědati} \textit{~} \textit{is-po-vědovati} ‘confess, explain’, and \textit{pro-po-věděti} \textit{~} \textit{pro-po-vědati} \textit{~} \textit{pro-po-vědovati} ‘predict, proclaim’. The verbs containing the -\textit{ova-} suffix are extremely rare, and occur as variants for the -\textit{aj-} forms in \textit{Zographensis}, as shown in (16):

\begin{verbatim}
(16) MK 5.20
\textit{i} načěť propovědati [Zogr.]

\textit{propovědati} [Mar.]
\end{verbatim}

and \textit{begin.AOR.3SG} \textit{tell_openly.INFPRS}

‘And (he) began to tell…’

The -\textit{vědati} forms, though explicitly unbounded via the -\textit{aj-} suffix, are occasionally used in the aorist and in the past participle, i.e. in perfective contexts.\textsuperscript{16} By contrast, the -\textit{ě-} forms, which are unmarked for unboundedness, are never used in the imperfect, in the present participle and infinite, i.e. in imperfective contexts.

The aorists and the past participles of the unbounded form are mostly attested in \textit{Suprasliensis} (Supr. 3.510, 4.481, 7.120, 10.3, 16.93, 16.97, 16.402, 23.214, 25.440, 28.289, 29.162, 31.11, 31.239, 31.343, 32.90, 32.377, 45.12, 45.206, 46.189, 46.465). However, similar aorists of imperfectives are not unknown to \textit{Codex Marianus} as well (\textit{Mt 15.4, 28.20}). In the same passages, \textit{Zographensis} instead uses the -\textit{ě-} verb, as shown in (17):

\begin{verbatim}
\textit{16} Eckhoff & Haug (2015: 218–221) also found these, as well as other speech and though verbs occurring in the aorist, though explicitly imperfect.
\end{verbatim}
(17) Mt 28.20

...oučěšte je bljusti věsě eliko

Teach.PTCP.PRS.NOM.PL 3PL.ACC watch.INF.PRS all.ACC.PL REL.INDF

zapovědach [Mar.] vam ř
zapověděch [Zogr.] order.AOR.1SG 2PL.DAT

‘Teaching them to observe all things, whatever I commanded you.’

Note further that the composites po-věděti ~ po-vědati ‘tell’, lacking the EP, attests to the same mismatches outlined above: po-vědati unexpectedly occurs in perfective contexts in Zographensis (Lc 8.47, 14.21, 18.37), where Marianus instead hands down po-vědati. To sum up, the composites containing -vědati, though explicitly unbounded, seem not to have specialized for imperfective contexts.

3.4. The perfectivizing value of věz-?

It is much harder to detect aspectual pairs based on the alternation of a preverbed verb (perfective) with a non preverbed one (imperfective) than to detect pairs and triplets of the types in Sections 3.2 and 3.3 (Lunt 1965: 92). As a matter of fact, in Old Church Slavic, the addition of any preverb virtually also determines alterations in meaning (cf. Section 4). By contrast, actual aspectual pairs imply both similarity in form and identity in meaning.

However, even in the small sample of multiple preverb verbs, such pairs exist. The composite věz-ne-na-viděti ‘come to hate’, in which věz- has an ingressive value (cf. Section 4.2), and which is explicitly perfective due to the presence of this preverb, does not occur in imperfective contexts. In parallel, ne-na-viděti ‘hate’ is unmarked for boundedness, and accordingly can be used both in perfective and imperfective contexts.

Another composite containing the ingressive věz- only occurs in perfective contexts, i.e. věs-po-měnǫti ‘start remembering, remind’. This verb however also contains the suffix -nǫ-, which explicitly marks bounded events, and thus perfectivity. Indeed, the composite po-měnǫti ‘remember’, which lacks věz-, also selects only imperfective contexts.
Accordingly, it has an unbounded counterpart in *po-minati* ‘remember’, which only shows up in imperfective contexts.

### 4. The semantics of multiple preverbs

#### 4.1. Preverbs with spatial, abstract and actional meanings

From a semantic standpoint, Old Church Slavic preverbs show different developments. Either they become polysemous elements, gaining new lexical meanings more or less straightforwardly connected with their basic spatial meaning; or they lose part of their lexical content, and in parallel acquire actional meanings, which are ultimately responsible for their subsequent grammaticalization into bounder perfectives (cf. Section 1.2).

In Old Church Slavic, however, the system of the viewpoint aspect was still under construction, as discussed in Sections 1.2.2 and 3: thus, one can easily observe the semantic linkage between the lexical and the actional meanings of preverbs (cf. Section 4.2; see also Ruvoletto 2016 for a comparable analysis on the Old Russian preverbs of the *Povest’ vremennykh let*). A preverb can attest both developments outlined above, as shown by means of *po-* in what follows. The preverb *po-* ‘surface-contact (Path), ablativity (Source)’ lexically modifies the simplex verbal stem in *pro-po-vědětǐ*: vědětǐ ‘know’ ~ *po-vědětǐ* ‘tell’ (< ‘cause to know’) ~ *pro-po-vědětǐ* ‘proclaim’ (< ‘tell openly’), ‘predict’ ‘(tell in advance’). By contrast, *po-* shows an actional delimitative meaning in *sъ-po-žītǐ* ‘live for a while with’.

Neither lexical nor actional meanings are associated with a specific position with respect to the verbal base: both EPs and IPs can exhibit lexical and actional meanings. It is worth pointing out this in light of the whole body of literature on modern Slavic multiple preverbs, which I briefly reviewed in Section 1.1. In formally-oriented studies on multiple preverbs, the so-called ‘internal’ and ‘external’ preverbs are distinguished based on various syntactic and semantic criteria, including preverbs’ ability of developing actional or quantizing meanings. In particular, external preverbs are said to be associated with
predictable actional meanings, whereas internal preverbs with unpredictable lexical meanings. In Old Church Slavic, however, multiple preverbs appear to constitute a quite different phenomenon (cf. Arkadiev 2015: 217; Section 6). For example, going back to pro-po-věděti ‘announce, foretell’ and sv-po-žiti ‘live for a while with’, one can observe that po- occurs internally within both composites. Nevertheless, this preverb brings about lexical content to the former composite, but actional content to the latter.

The comparison between pro-po-věděti ‘predict, proclaim’ and similar composites, i.e. is-po-věděti ‘confess, explain’ and za-po-věděti ‘order’, provides further pieces of evidence supporting the fact that the EPs can carry lexical content, as shown in (18):

\[(18) \text{věděti } \rightarrow \text{po-věděti } \rightarrow \begin{cases} \text{a. iz-po-věděti ‘confess, explain’} \\
\text{b. pro-po-věděti ‘proclaim, predict’} \\
\text{c. za-po-věděti ‘order’} \end{cases}\]

‘know’ ‘tell’

The contribution of each EP is undoubtedly lexical in (18)a-c. The EP iz- (18)a metaphorically means ‘out of’ in iz-po-věděti: ‘tell out of’ > ‘confess, declare’ (interestingly, this composite also occasionally takes the prepositionless genitive in Euch. 68a13; cf. Vaillant 1977: 71). The preverb pro- ‘in front of’ (18)b provides the temporal indication ‘before’, or the meaning ‘openly’, due to the following metaphorical shifts: BEFORE IS IN FRONT OF and OPENLY IS IN FRONT OF, respectively (cf. also Section 4.2). The semantics of za- (18)c is more difficult to describe, but still detectable: in passages where za-po-věděti is used in the sense of ‘forbid’, the EP za- brings the idea of a metaphorical limit that cannot be overcome. In this respect, it is quite revealing that, in Mk 7.36, Codex Zographensis employs the composite za-prěščati ‘impose bans’, whereas Codex Marianus attests to za-po-vědati. Accordingly with the sense of ‘metaphorical obstacle’ just outlines, za- is also preverbed to several more concrete simplex verbs. In these formations, its obstacle meaning is clearer: cf. za-tvoriti, za-klěpsti and za-ložiti ‘close’ (‘put an obstacle against (a door)’), as well as za-kryti ‘cover, hide’ (‘put an obstacle against (one’s sight)’) (on the role of za- in Old Russian, cf. Böttger 2004; Tomelleri 2012; Ruvoletto 2016: 108 ff.).
The behavior of *iz-* also shows that both EPs and IPs can carry lexical and actional content. As an EP, *iz-* shows a lexical non-compositional meaning in the above-mentioned *iz-po-věděti*: ‘tell out of’ > ‘confess, declare’. As an actional preverb, it can give a sense of completeness occurring both externally and internally: compare *pri-iz-diti* ‘spend in addition’ (< ‘in_addition-completely-live on/by’; see Section 4.3) and *is-pro-vrěšti* ‘overturn, destroy’ (< ‘completely-forth-throw’; see Section 4.3).17

Interestingly, in my sample, no composites contain two actional preverbs stacked onto the same verbal stem. This could sound unexpected given the later development of modern Slavic languages, including Bulgarian, in which several actional preverbs can stack onto the same verb (cf. example (2)). In the composite *vъs-po-měnǫti*, which means ‘start remembering’, both preverbs might be interpreted as ingressive, and thus be suspected of being actional. A closer investigation, however, reveals that they in fact do a quite different job. The ingressive IP *po-* lexically modifies the root √min- ‘think’: *po-√min- means ‘start thinking > remember’ (*po-* elsewhere shows ingressive meanings: *po-iti*, besides ‘go along a surface’, can also mean ‘start going > depart from’).18 The EP *vъz-* instead focuses one’s attention to the starting point of the event of remembering; hence, it is purely actional: *po-měnǫti* ‘remember’ ~ *vъs-po-měnǫti* ‘start remembering, remind’.

17 Further pieces of evidence supporting a telic reading for *iz-* in *is-pro-vrěšti* are provided by the comparison between this composite and the following verbs: (a) *iz-vrěšti* ‘cast out of’, in which *iz-* clearly retains its basic spatial usage in most contexts; (b) *o-pro-vrěšti* ‘overturn’, which occurs in the same context as *is-pro-vrěšti* in Mar. Zogr. In 2.15 (cf. (11)). As such composites contain two different EPs, *iz-* ‘out of’ and *o(b)-* ‘around’, that have two different basic spatial meanings, and nevertheless occur in the same context, the EPs must be bleached into telic markers. In Bes. 34, 238αβι10 and 238ββ4, another composite occurs, i.e. *vъs-pro-vrěšti* ‘overturn’, with a different EP *vъs-* (etym.) ‘upward’ but the same meaning as *is-pro-vrěšti* and *o-pro-vrěšti*.

18 In *po-měnǫti*, the preverb *po-* contributes, with the suffix -nǫ-, which marks bound events, to assigning limits to the action of thinking (√min-, unbound event). The fact that it also carries lexical content is backed up by the secondary imperfective *po-minati* being built on this verb (see Section 3.2).
4.2. Same preverbs, different meanings

As anticipated for po- and iz- in Section 4.1, preverbs are polysemous morphemes, which have undergone multiple semantic shifts. In this Section, I discuss a number of interesting cases in point, i.e. po- ‘surface-contact (Path), ablativity (Source)’, pri- ‘beside’, pro- ‘in front of’, and νθ- ‘upward’ (cf. Table 37 for a summary).

The preverb po- originally indicates Path (‘surface-contact’) and ablativity (Source), and is etymologically related to Vedic ápa ‘away from’, Ancient Greek apó ‘away from’, and old Irish ó, úa ‘from’ (REW: 292–293; Watkins 2000: 5; LIPP II: 66 ff.). In combination with other preverbs, po- never retains its basic spatial usages, though it behaves so elsewhere in Old Church Slavic (cf. po-iti ‘go along a surface, depart from’).

The preverb po- develops the following abstract meanings:

(i) ingressive (νθ-po-męņoći ‘start remembering, remind’);
(ii) delimitative (st-po-žiti ‘live for a while with’);
(iii) distributive (prěd-po-lagatì ‘distribute to’);
(iv) causative (pro-po-věděti ‘predict, proclaim’).

On meaning (i), discussed in Section 4.1, it should be added that it goes back to the ablative spatial meaning of po-, according to the following metaphor: EVENTS CAN BE THOUGHT OF AS LOCATIONS; the starting point of a non-spatial event (ingressive) can be thought of as a starting point of a spatial event (Source).

The delimitative meaning of po-, on which see Section 4.1, is instead related to the Path component of the spatial meaning of po-: focusing on a Path can carry the implication of focusing on its starting- and end-points (i.e. its limits). Then, the spatial Path is reinterpreted as a metaphorical Path, i.e. as an EVENT.

The distributive sense of po- is shown in example (19) (cf. also Sections 1.2.1, 1.3, and 2.1):

(19) и daěše oučenikомъ svoитъ da prěd-po-lagajǫtъ

‘And (he) gave (them) to his disciples to distribute (them) to (the people).’
(Zogr. Mk 8.6 = (12))

In (19), po- focuses reader’s attention upon the movement of disciples, who go through the crowd to distribute, person by person, food to people. This abstract meaning is also grounded on the Path meaning of po-: covering a Path can imply covering all intermediate steps that make up the Path itself, as represented in Figure 4 (on the origin of distributive po-, see also Dickey 2012: 92; cf. the usages of the Ancient Greek katá, Luraghi 2003: 197 ff.).

**Figure 4.** The link between Path and distributive meanings of po-

![Diagram showing the link between Path and distributive meanings of po-]

Lastly, the preverb po- seems to function as a quasi-causative formation in po-věděti ‘tell’ and related composites with (cf. (18)). Compare examples (20) and (21) below:

(20)  
```
blǫdite ne vědšte kʼnigъ ni
```
be_wrong.PRS.2PL NEG know_PTCP.PRS.NOM.PL scripture.GEN.PL neither

*sily bžiję (=božiję)*

force-GEN of_G.GEN

‘You are in error because you do not know the Scriptures or the power of God.’
(Mar. Mt 22.29)

(21)  
```
povědešę že emu ėko isъ (=Isusъ) nazarěnіνъ mimochodíтъ
tell.AOR.3PL PTC 3SG.DAT that J.NOM of_N.NOM pass_by.PRS.3SG
```

‘(They) told him that Jesus of Nazareth was passing by.’ (Mar. Lc 18.37)

In (20), the simple verb vědetи ‘know’ takes the direct object kʼnigъ ‘of the scriptures’, playing the semantic role of Theme, which is in the genitive case because of the occurrence of the negation ne (Lunt 1965: 146). Example (21), instead, contains the speech verb po-
vědeti ‘tell’, which is a trivalent verb taking a direct object playing the semantic role of Theme (the completive clause introduced by ěko ‘that’), and an indirect object playing the role of Addressee (the dative emu ‘to him’). Thus, the preverb po- seems to function as a causative derivation: po- + vědeti ‘know’ results in po-vědeti ‘make one know > tell’. The preverb po- arguably adds a participant (the Addressee) to the described event. This function is semantically consistent with the distributive meaning of po-, which can be understood as introducing Recipients (the preposition po+LOC can also express Recipient in a distributive sense; cf. Thomason 2006: 123). Then, the link between Addressees and Recipients is easy to draw: an Addressee, as a Recipient, receives certain non-concrete entities, such as news, words, or pieces of information.19

The preverb pri- also displays interesting semantic shifts from its basic spatial meaning of ‘beside’. First, it has acquired the spatial + actional meaning that I named ‘beside + resultative’ based on Ruvoletto (2016: 72 ff.). This meaning entails gaining something through an active effort (hence, the resultative component), as shown by the comparison between pri-ob-rěsti ‘acquire, earn’ (22)a ~ ob-rěsti ‘find’ (22)b:

19 The causative-like ability of po- still remains unexplored, and deserves further investigation, given that there are other pairs of verbs in which po- appears to have a similar function (e.g. moštǐ ‘be able’ ~ po-moštǐ ‘help’ (< ‘cause to be able’)). At first sight, it can be observed that there are other languages in which the addition of a Recipient-like participant results in a causative-like formation, as shown in examples (a) and (b):

(a) non-standard Engl. learn someone something = teach someone something
(Morris 1981: 744)
cf. also the one who first noticed it to me
(cognition verb → communication verb; Croft 2017)

(b) archaic (i) / current non-standard (b) Italian
i. E dolce un canto le imparava
and sweet INDF song 3SG.DAT learn.IMPF.3SG
‘And, she (Aphrodite), sweet, was teaching her (Sappho) a poem.’
(G. Carducci, Juvenilia, 19th cent.)
ii. Chi ti ha imparato a rispondere così?
who 2SG.DAT AUX learn.PTCP.PST.PASS to answer.INF.PRS that_way
‘Who taught you to answer that way?’ (Google search)

257
(22) a. šedъ že priemy. d (=пѧть) talanъtъ děla
258
go.ПTCP.PST.NOM but receive.ПTCP.PST.NOM five.АСС.F talent.ГEN.PL do.АOR.3SG
о nichъ. i priobrěte droughojo d (=пѧть) talantъ.
about 3PL.LOC and acquire.АOR.3SG other.АСС.F five.АСС.F talent.ГEN.PL
‘He who had received the five talents went at once and traded with them, and he
made five talents more.’ (Mar. Mt 25.16)

b. i abie въходěsta въ nojо
d.Нorm.IMP.NOM.DU suddenly enter.ПTCP.PRS.NOM.DU in 3SG.ACC
obrešteta žrěbecъ privęzanъ.
ПTCP.PRS.2DU foal.ACC tie_down.ПTCP.PST.ACC.PASS
‘(Go to the village ahead of you,) and just as you enter it, you will find a colt tied
there.’ (Mar. Mk 11.2)

The event described in (22)a implies active participation of the Agent, who invests money
in order to gain some more. By contrast, in (22)b, the Agent finds the colt (žrěbecъ:АСС) by
simply entering the village, with no additional effort. The meaning just outlined typically
occurs with verbs entailing an idea of approaching, such as the mentioned pri-ob-rěsti
‘acquire, earn’, and въs-pri-imati въs-pri-јети ‘receive in return’, as well as many others
(cf. e.g. pri-zvatи ‘invite, call’, pri-vleči ‘attract, conquer’).

As remarked by Ruvoletto (2016: 72 ff.) for Old Russian, pri- ‘beside’ instead
develops the meaning of ‘in addition’ with verbs lacking such an idea of approaching. So
happens with pri-иž-diti ‘spend in addition’, as shown in (23):

(23) priležи entъ. i eže ašte
take_care_of.IMP.PRS.2SG LOC.3SG and REL.ACC.N ever
pri-iždivešи azъ egda въz-vраštо
in_addition-spend.PRS.2SG 1SG.NOM when back-turn.PRS.1SG
sę въzdamъ ti
REFL.3SG.ACC back-give.PRS.1SG 2SG.DAT
‘Take care of him. And whatever you spend in addition, I will give you back when I come back.’ (Mar. Lc 10.35)

In this context, the Greek source text shows *pros-dapánáō* ‘spend beside, spend in addition’, in which the preverb *pros* means ‘in addition’, as it frequently does in other composites as well (e.g. *pros-ktáomai* ‘gain and add’, *pros-dídōmi* ‘give in addition’, which interestingly has an exact Slavic counterpart in *pri-dati* ‘give in addition’). Another good example for the correspondence OCS *pri-* ~ Gr. *pros-* ‘in addition’ is provided by the couple *pri-ložiti/ pri-lagati* ~ *pros-títhēmi* ‘put beside, add’. In (23), the EP *pri-* of *pri-iž-diti* ‘spend in addition’ might also draw an anaphoric reference to the locative *emь* ‘him’, taken by the preceding composite *pri-leži:IMP*, which also contains *pri-* (cf. Section 1.3.2 on the usages of prepositionless locatives). In this respect, *pri-* may also be regarded as a clue of textual cohesion.

The preverb *pro-* shows only lexical meanings in multiple preverb composites. In the composite *is-pro-vrēšti*, when used in the meaning of ‘overturn’, *pro-* still retains a spatial meaning:

(24) \[ i \quad dъsky \quad trъžъnikъ \quad i \quad sědališta \]

\[ prodajǫštixъ \quad golǫbi \quad isprovrъže \]
sell.PTCP.PRS.Gen.Pl. dove.Acc.Pl. overturn.Aor.3SG

‘(He) overturned the tables of the merchants and the benches of those selling doves.’ (Mar. Mk 11.15 = (9))

The lexical contribution brought about by *pro-* is detectable, though not completely clear: this preverb etymologically means ‘forward’ (< *pr-ő* with the allative ending -ő; cf. LIPP II: 636), while in Old Church Slavic it acquires the spatial meaning of ‘through’ (Path, perlative). In (24), *pro-* arguably emphasizes the movement of the tables, overturned by Jesus. Thus the preverb *pro-* somewhat contributes to describing the motion caused on the
tables, even though the direction of this motion is not completely clarified by the addition of the preverb.\textsuperscript{20}

Interestingly, the preverb \textit{pro-} gains different meanings in different contexts that contain the composite \textit{pro-po-vědati}, as shown in (25)a-b:

(25) a. \textit{pro-} ‘before’ (Mar. Mk 1.7)

\begin{verbatim}
 i pro-povědaše glę. gređetě krěplei
and fore-tell.IMPF.3SG say.PTCP.PRS.NOM come.PRS.3SG stronger.NOM
mene vň slěđë mene…
1SG.GEN in trace.ACC 1SG.GEN
\end{verbatim}

‘And (John) proclaimed, saying: “After me (one who is) greater than I comes, …’

b. \textit{pro-} ‘openly’ (Mar. Mk 1.45)

\begin{verbatim}
op ţe iš-edę načęť
DEM.NOM but away-go.PTCP.PST.NOM begin.AOR.3SG
pro-povědati m½nogo. i pronositi slovo.
openly-tell.INF.PRS much and make_known.INF.PRS word.ACC
\end{verbatim}

‘(“See that you say nothing to anyone, but go, show yourself to the priest and offer for your cleansing what Moses commanded, for a proof to them.”) But he went out and began to talk openly about it, and to spread the word.’

In (25)a, John the Baptist is foretelling (\textit{pro-} ‘fore-’) Jesus’ future coming. In (25)b, a leper, after being healed by Jesus’ hand, is strongly recommended not to tell anyone about this miracle. But (Ţe) the leper disobeys at Jesus’ recommendation, proclaims (\textit{pro-po-vědati}), and divulges (\textit{pro-nositi}) the miracle that Jesus has done.

The multiple preverb \textit{vъz-} ‘upward’ shows both lexical and actional semantic developments. At example (14), I already discussed its meaning ‘in return, in exchange’. It can be added here that this semantic shift can be connected with the usage of the

\textsuperscript{20} Old Russian also attests to \textit{iš-pro-vrěšti}, as well as a very similar composite, i.e. \textit{iž(b)-pro-metati} ‘throw out, devastate’, containing the same preverbs (\textit{iž(b)-}, \textit{pro-}) and the root √\textit{met}-, which is semantically close to √\textit{vrěg}- ‘throw’ (Zanchi & Naccarato 2016).
corresponding preposition \textit{vъz+ACC} ‘in exchange for’ (Vaillant 1977: 114 ff.; Thomason 2006: 144 ff.).

The preverb \textit{vъz-} ‘upward’ can further develop an ingressive meaning, as is clearly shown by comparing \textit{ne-na-viděti} ‘hate’ and \textit{vъz-ne-na-viděti} ‘come to hate’ in example (26):

\begin{center}
\begin{tabular}{llllllll}
  (26) & \textit{ašte} & \textit{mirъ} & \textit{vasъ} & \textit{nena} & \textit{viděti} & \textit{vědite} & \textit{ěko} \\
 & if & world.NOM & 2PL.GEN & hate.PRS.3SG & know.IMP.PRS.2PL & that \\
 & \textit{mene} & \textit{prěžde} & \textit{vasъ} & \textit{vъz-} & \textit{nena} & \textit{vidě} & \\
 & 1SG.GEN & prior_to & 2PL.GEN & start & hate.AOR.3SG \\
\end{tabular}
\end{center}

‘If the world hates you, know that it came to hate me before you.’ (Mar. Jn 15.18)

The same passage shows the two composites occurring side by side: \textit{ne-na-viděti} ‘hate’ lacks the ingressive component brought about by \textit{vъz-}. The ingressive \textit{vъz-} is particularly frequent with mental verbs (e.g. \textit{vъs-po-męnǫti} ‘start remembering, remind’), and verbs of emotion (e.g. \textit{vъz-ljubiti} ‘start loving’, \textit{vъs-chotěti} ‘start wishing’, \textit{vъs-tužiti} ‘start suffering’), but is also attested for other types of verbs (e.g. \textit{vъz-glagolati} ‘start speaking’). Though \textit{vъz-} has problematic etymological origins (in LIPP II: 823 ff., Dunkel connects it with Ved. \textit{úd} ‘upward’ and OIr. \textit{oss-fuss-} ‘up, off’ (contra REW: 333)), its basic meaning is ‘upward’. The link between its basic spatial usage and its actional ingressive meaning can be easily drawn through the interplay of the following metaphors (cf. Figure 5). (a) \textbf{MORE IS UP, LESS IS DOWN} (Lakoff & Johnson 1980: 15–16), based on the fact that by adding more of a certain substance to a recipient or of physical objects to a pile, the level of the substance or the height of the pile goes up. (b) \textbf{EVENTS} can the thought of as \textbf{PILES}. (c) \textbf{GOING UPWARD (vъz-)} along a pile means \textbf{GOING FROM THE STARTING POINT TOWARD THE CULMINATION} of an \textbf{EVENT}.\raisebox{2pt}{261}
Interestingly, in Old Church Slavic, not only different preverbs can be associated with different meanings, but the converse situation is also attested: for example, as shown by (27) and (28), the delimitative meaning of Duration can be brought about by both po- and prě-. Arguably, the same metaphor outlined above for the delimitative po- comes into play with prě-: THE DURATION OF AN EVENT IS THE EXTENSION OF A PATH. The preverb prě-, like po-, has also an original spatial meaning indicating Path ‘across’.

(27) i tretiiі dьнь vьstavъ iz mтьtvichъ. jав
and third.ACC day.ACC arise.PTCP.PST.NOM out.of dead.GEN.PL appear.AOR.3SG
svoitъ oučenikомъ. rek’še styimъ (=svjетимъ)
his.DAT.PL disciple.DAT.PL say.PTCP.PST.NOM holy.DAT.PL
apslomъ (=apostolomъ) mьnogомъ iže po istině
apostle.DAT.PL many.DAT.PL REL.NOM.PL after truth.DAT
vёrovavnъšiimъ vь ňь.
believe.PTCP.PST.DAT.PL in 3SG.ACC
sъ-po-živъ sъ ňimi
with-for_while_live.PTCP.PST.NOM with 3SG.INS
‘And, after rising on the third day from among the dead, (he) appeared to his own disciples (and) spoke with the holy apostles and with many (others) believing in him in truth, and (he) lived for a while with them.’ (Supr.1.52)

(28) sъ-prě-byvaatъ sъ člky (=člověky) aky člověkъ
with-for_a_while-be.with.PRS.3SG with man.INS.PL as man.NOM
The Duration of the event of ‘remaining with’ is further specified by means of the locution věšte trii desętъ lětъ ‘for more than thirty years’ in (28). In addition, the durative reading of prě- is backed up by the fact that byvati contains the suffix -va-, which marks durative and iterative events (cf. Section 3.1). In (27), instead, the Duration is omitted. Given that the Greek equivalent for sь-po-žiti is sun-ana-stréphomai (cf. Table 34), one might wonder whether po- means ‘back’ (iz mrъtvyichъ:GEN ‘from among the dead’), as ana- does in the Greek composite. However, this interpretation is unlikely, given the occurrence of passages such as (29):

(29) iže malo po-živъ oumirajetъ
REL.NOM a_few for_a_while-live.PTCP.PST.NOM die.PRS.3SG
‘…(one) who dies after having lived for such a little while.’ (Supr. 258.12)

In (29), the meaning of po- is clearly delimitative: the composite po-žiti ‘live for a while’ is further specified by the adverb malo ‘for a little while’.

4.3. Different degrees of compositionality

Table 36 displays the semantic analysis of Old Church Slavic composites. To determine whether the composites are fully (+), partially (-/+ or non-compositional (-), I take into account the meaning of the simple verbal root, as well as the meaning of each preverb attaching to it. This semantic analysis can be occasionally very hard to perform: the same composite can display different degrees of compositionality in different contexts. One such composite is is-pro-vrěšti, which means ‘overturn’ in (24) above, but ‘destroy’ in (30):
In (30), a metaphorical Agent, the ‘power of the word’, causes the destruction of a metaphorical Patient, the ‘death’: such a Patient, differently from the tables of example (24), cannot be overturned. The Greek equivalents for iz(ъ)-pro-vrěšti are either ana-strēphō or kata-strēphō ‘turn upside down, overturn’, when the Slavic composite is employed in its partially compositional usage, like in (24).21 The Greek source-text instead

21 The Greek composites ana-strēphō and kata-strēphō both include a preverb expressing telicity, i.e. ana-(etym.) ‘upward’ and kata- (etym.) ‘downward’. Importantly, the etymological spatial usages of these preverbs are opposite. As they are nevertheless translated by means of the same Slavic composite, they must be semantically bleached in these contexts, and have mere actional properties. Interestingly, such preverbs already show actional – but opposite – meanings in Homeric Greek: ana- can indicate the beginning of an event, whereas kata- its completion (Chantraine 1953: 90, 112).
contains *dia-rrĕgnumi* ‘break through/asunder’, when *iz(ъ)-pro-vrĕsti* is non-compositional.\(^{22}\)

Another case in point is the composite *za-po-vĕdĕti*, which shows two slithy different meanings, that is, ‘forbid’ in (31)a and ‘order’ in (31)b:

(31) a. ‘impose bans, forbid’

\[
\text{zapovĕdĕ} \quad \text{imʻ} \quad \text{isъ} \quad \text{glę.} \quad \text{nikomouže ne}
\]

*forbid.AOR.3SG 3PL.DAT J.NOM say.PTCP.PRS.NOM nobody.DAT NEG*

\[
povĕdite \quad \text{viděniĕ.}
\]

*tell.IMP.2PL vision.GEN*

‘Jesus instructed them: “Tell no one the vision”.’ (Mar. *Mt* 17.9)

b. ‘order’

\[
\text{nъ} \quad \text{da} \quad \text{razouměatъ} \quad \text{mirъ} \quad \text{ěko} \quad \text{ljublju} \quad \text{otca.}
\]

*but may understand.PRS.3SG world.NOM that love.PRS.1SG father.GEN*

\[
i \quad \text{ěkože} \quad \text{zapovĕdĕ} \quad \text{tyňě} \quad \text{otcъ.} \quad \text{tako} \quad \text{tvorjо}
\]

*and as order.AOR.3SG 1SG.DAT father.NOM so make.PRS.1SG*

‘But the world may learn that I love the Father and do exactly what my Father has commanded me.’ (Mar. *Jn* 14.31)

In (31)a, Jesus provides his disciples with instructions on what should *not* be done. In (31)b, instead, Jesus says to follow his father’s instructions (lit. ‘what his Father ordered’).

\(^{22}\) In Old Russian, besides displaying both the partially compositional and the non-compositional usages outlined above, this composite is also frequently used in a fixed expression with the meaning of ‘killing oneself’, as shown in (i).

( i ) \text{i} \quad \text{tu} \quad \text{isprovrъže} \quad \text{životъ} \quad \text{svoi} \quad \text{zъlě.}

*and there transform.AOR.3SG life.ACC his.ACC miserably*

‘And there (he) killed himself miserably.’ (Usp. Sbor. *The Tale of Boris and Gleb* 659)

Within the idiom shown in (i), the composite *iz(ъ)-pro-vrĕsti* seems to retain a less lexicalized meaning with respect to example (29), i.e. ‘transform, take out of’. It is the whole expression that is lexicalized (Zanchi & Naccarato 2016: 374; Dmitrij Sičinava, p.c.).
As mentioned in Section 4.1, the semantics of \( za- \) is less perspicuous in (31)b than it is in (31)a, where the preverb provides the idea of adding a metaphorical obstacle, that is, of posing a limit to one’s behavior. The meaning of \( za- \) in (31)b can still be understood, however, if one also thinks of giving orders as the act of dictating certain behavioral limitations that cannot be surpassed.

As shown in Table 36, only a few composites with multiple preverbs retain their fully compositional meanings: these are \( prědpo-lagati \) ‘distribute to’ (> Blg. \( prědpolagam \) ‘suppose, assume’; cf. Table 31), \( sp-po-žiti \) ‘live for a while with, and \( sp-prěbyvati \) ‘remain together with’. The vast majority of composites are either only partially compositional or non-compositional at all. In partially compositional composites, it is often the case that the EP retains a more distinct semantics with respect to the remaining composite, as represented through examples in (32)a-f:

(32)  
a. ‘spend in addition’: \( pri-[iž-diti] \) ‘in addition-[spend]’ → \( iž-diti \) ‘out_of-live’
b. ‘gather together’: \( sb-[vň-kupiti] \) ‘with-[gather]’ → \( vň-kupiti \) ‘in-buy’
c. ‘find out’: \( iž-[ob-rěsti] \) ‘out-[find]’ → \( ob-rěsti \) ‘around-meet’
d. ‘receive in return’: \( vňs-[pri-imati] \) ‘in return-[receive]’ → \( pri-imati \) ‘result-take’
e. ‘start remembering’: \( vňs-[po-menšoti] \) ‘start-[remember]’ → \( po-menšoti \) ‘start-think’
f. ‘come to hate’: \( vňz-[ne-na-viděti] \) ‘start-[hate]’ → \( ne-na-viděti \) ‘neg-against-see’

By contrast, the semantic contribution of the IP is unclear (32)a-b, redundant (32)c-d, or lexicalized (32)e-f. In (32)a, for example, the telic meaning provided by the IP \( iž- \) and the semantics of the whole composite can only be understood interpreting the simplex verb \( žiti \) as ‘live on/by’, rather than as simply ‘live’ (cf. \( žiti \) ‘live on/by’ in Bes. 36.273bβ; 274a; cf. OIr. \( ar-\text{̣}ber- \) ‘live, eat, use, employ’ for a verb showing a similar polysemy). The fact that \( iž- \) assigns the act of living by/on a culmination also emerges from example (33):

(33) \( iž-divšju \) \( že \) \( emou \) \( vňšě... \)
completely-live_on.PTCP.PST.DAT but 3SG.DAT whole.ACC
‘After he had spent everything, (there was a severe famine in that whole country and he began to be in need).’ (Mar. Lc 15.14)

In (33), the composite *iž-diti* ‘completely-live on/by’ > ‘spend’ takes the direct object *věsě:ACC*, which backs up the interpretation assigned to *iž-* in this context. The fact that the subject participant ends up his maintenance is also supported by how the passage continues: ‘…there was a severe famine in that whole country and he began to be in need’.

In (32)c-d, the spatial meanings of the IPs overlap with the meaning of the simple verbs: ‘meet’ (*vrē-t*) can be said to imply the spatial component of ‘around’ (*obn-*), as well as ‘take’ (*vbn-*) the spatial component of vicinity or approximation (*pri-*). Due to this overlap – i.e. the so-called Vey-Schooneveld effect (cf. Section 1.2.2.2) – the preverbs are reanalyzed as telic and resultative markers.

As for *vṇz-ne-na-viděti* ‘come to hate’ (32)f, the semantic contribution brought about by the IP *na-* ‘against’ is both lexicalized (‘look against > hate’) and redundant, as the negatively oriented meaning of ‘against’ might also be provided by the negative prefix *ne-. The preverb *na-* can also mean ‘against’ as a preposition: *na+ACC* can mean ‘against’ in Stimulus expressions, such as *na mę li gněvajete sé?* ‘Are you angry with me?’ (Mar. Jn 7.23) (Thomason 2006: 132) (Frigione 2015: 33).23

In other partially compositional composites, the meaning of completeness brought about by the EP also results in a lexicalized formation:

---

23 Interestingly, Old Church Slavonic attests to another composite with the same root that is used to express negative feelings, i.e. *za-viděti* ‘be envious’. Compare also the Latin compound *in-vidēt*, containing the prefix *in-* ‘against’ and the same root for seeing, which is metaphorically employed for ‘having negative feelings’, ranging from being envious to being hostile. In Latin, there is another composite containing a different root for seeing (*PIE *spek̑-* ‘see, look at’ > Gr. *sképtomai* ‘look about carefully’, Lat. *speciō* ‘look, look at’, Ved. *pāśyati* ‘(he) sees, looks at’; cf. LIV2: 575–576) and developing a meaning connected with negative feelings, i.e. *dē-spiciō* ‘look down upon > despise, disdain, disregard’ (Prof. Pierluigi Cuzzoli, p.c.). Hittite also shows a similar compound: the root *au*(s)-, *u*(wa)- ‘see, look, watch, behold, observe, inspect, read’ (PIE *h₁eṷ-* ‘see, catch sight of’; LIV2: 243), when modified by the adverb/preverb *parā* ‘(as a preverb) forth, ahead, along; away, off, out, over’, results in *parā au*(s)- ‘overlook, disregard, pay no attention to’ (Puhvel 1984: 234 ff., 2011: 106; Prof. Silvia Luraghi, p.c.).
The composites in (34) are still analyzable as partially compositional, as they retain the spatial component of movement, which pertains both the IP pro- ‘forth’, and the root √vrēg- ‘throw’. As for non-compositional composites, their semantic developments have been already discussed through Sections 4.1–4.2.

4.4. Summarizing the meanings of preverbs in multiple preverb combinations

Table 37 summarizes the different meanings of Old Church Slavic multiple preverbs. The most relevant semantic shifts have been discussed through Sections 4.1–4.3. Each meaning is exemplified by a composite.

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>iz-</td>
<td>metaphorical ‘out of’</td>
<td>is-po-vědětí ‘confess, explain’</td>
</tr>
<tr>
<td></td>
<td>telic</td>
<td>is-pro-vrěšti ‘overturn, destroy’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pri-iz-diti ‘spend in addition’</td>
</tr>
<tr>
<td>o(bn)-</td>
<td>spatial ‘around’- telic</td>
<td>o-pro-vrěšti ‘overturn’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iz-ob-rěsti ‘find out’</td>
</tr>
<tr>
<td>na-</td>
<td>upon - against</td>
<td>něz-ne-na-vidětí ‘come to hate’</td>
</tr>
<tr>
<td>po-</td>
<td>delimitative</td>
<td>sv-po-žiti ‘live for a while with’</td>
</tr>
<tr>
<td></td>
<td>ingressive</td>
<td>něs-po-menoti ‘start remembering, remind’</td>
</tr>
<tr>
<td></td>
<td>distributive</td>
<td>prěd-po-lagati ‘distribute to’</td>
</tr>
<tr>
<td></td>
<td>causative (&lt; distributive)</td>
<td>is-po-vědětí ‘confess, explain’</td>
</tr>
<tr>
<td>pré-</td>
<td>extension in time</td>
<td>sv-prě-byvati ‘remain together with’</td>
</tr>
<tr>
<td>prědš-</td>
<td>beside, in front of</td>
<td>prědš-po-lagati ‘distribute to’</td>
</tr>
<tr>
<td>pri-</td>
<td>in addition, in excess</td>
<td>pri-iz-diti ‘spend in addition’</td>
</tr>
<tr>
<td></td>
<td>resultative (&lt; ‘beside’ position)</td>
<td>pri-ob-rěšti ‘acquire’</td>
</tr>
<tr>
<td></td>
<td>(smth. generated through an action)</td>
<td>něs-pri-jeti ‘receive in return’</td>
</tr>
<tr>
<td>pro-</td>
<td>in front (Path)</td>
<td>is-pro-vrěšti ‘overturn, destroy’</td>
</tr>
<tr>
<td></td>
<td>before, in advance</td>
<td>pro-po-vědati ‘predict’</td>
</tr>
<tr>
<td></td>
<td>openly (&lt; in front of)</td>
<td>pro-po-vědětí ‘proclaim’</td>
</tr>
<tr>
<td>sb-</td>
<td>with (comitative)</td>
<td>sv-po-žiti ‘live for a while with’</td>
</tr>
<tr>
<td></td>
<td>togetherness</td>
<td>sv-po-kupiti ‘gather together’</td>
</tr>
<tr>
<td>vb-</td>
<td>in</td>
<td>sv-vb-kupiti ‘gather together’</td>
</tr>
<tr>
<td>Preverb</td>
<td>Meaning</td>
<td>Preverb</td>
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<tr>
<td>---------</td>
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<td>---------</td>
</tr>
<tr>
<td>(v)z(h)-</td>
<td>back, in return</td>
<td>(v)z(h)-pri-(j)e(t)i</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v)s-pri-(i)m(a)t(i)</td>
</tr>
<tr>
<td>ingressive</td>
<td></td>
<td>(v)z-ne-na-(v)id(e)ti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v)s-po-(m)(e)n(o)t(i)</td>
</tr>
<tr>
<td>causative</td>
<td></td>
<td>(v)s-po-(m)(e)n(o)t(i)</td>
</tr>
<tr>
<td>za-</td>
<td>metaphorical obstacle</td>
<td>za-po-(v)(e)d(e)t(i)</td>
</tr>
</tbody>
</table>

5. **The syntax of multiple preverb composites**

As discussed in Sections 1.2 and 4.3, in Old Church Slavic, preverbs are much more advanced either in their grammaticalization process into markers of actionality or in their lexicalization process within non compositional composites than they are in Vedic (Chapter 3) and in Homeric Greek (Chapter 4). Accordingly, their meanings and behavior differ widely from those of the corresponding prepositions already (cf. Dickey’s 2012 ‘orphan prefixes’). In parallel, prepositions are also quite grammaticalized and prepositionless cases have already lost their ability of expressing semantic roles to a great extent (cf. Section 1.3).

These issues are addressed here from the standpoint of multiple preverbs. In next Section (5.1), I discuss a few relics of a previous more fluid situation, whereby preverbs and prepositions used to behave the same. Then (Section 5.2), I show passages in which multiple preverbs are repeated outside the preverbal context as prepositions. Lastly (Section 5.3), I present data suggesting that the semantic modifications brought about by preverbs occasionally have the byproduct of altering verb argument structures.

5.1. **The alternative constructions to multiple preverbs:**

*scanty relics of a preceding stage*

In a few passages, composites showing no lexicalization or a low degree of lexicalization can be replaced by an equivalent construction in which the compound contains only the IP, whereas the EP occurs outside the composite as a preposition.

Compare, for instance, examples (35) and (36):
The situation described in (35) and (36) is almost the same: Jesus is giving his disciples some food to be distributed to people around. In (35) from Zographensis, прěдъ- ‘in front of’ functions as a preverb, and the Recipient is not explicitly mentioned, though recoverable from the previous context. By contrast, in (36) from Marianus, прěдъ functions as a preposition and explicitly expresses the Recipient together with the instrumental case (nimi).

Another case in point is the composite въs-pri-imati/ въs-pri-jēti ‘receive in return’, as shown by example (37) in contrast with (38):

(37) ibo i grěšnici grěšnikomъ vъ zaimъ dajǫtъ.
indeed and sinner.NOM.PL sinner.DAT.PL in loan.ACC.PL give.PRS.3PL

das въs-priimотъ ravnъno
so_that in_return-receive.PRS.3PL equal.ACC

‘Even sinners lend to sinners, to get back the same amount.’ (Mar. Lc 6.34 = (14))

(38) i otъ isplъněniě ego my vъsi
and from fullness.GEN 3SG.GEN 1PL.NOM all.NOM

prijęchomъ blagoděť vъz blagoděť
receive.AOR.1PL grace.ACC in_exchange_of grace.ACC

‘From his abundance we have all received one gracious blessing in exchange of another.’ (Mar. Jn 1.6)
Similarly to what described for (35) and (36), a construction with multiple preverbs alternates with a construction containing a composite with only one preverb and a prepositional phrase, i.e. \( v\overline{\varepsilon} + \text{ACC} \) (differently from (35) and (36), though, the two passages are not equivalent). The multiple preverb composite of (37) occurs 30 times (cf. Table 30), whereas the construction in (38) is also attested in Codex Suprasliensis 411.18 and 446.3. As for (35) and (36), the participant recovered by the EP is usually omitted in case of multiple preverbs, but expressed in the construction with the prepositional phrase.

To be sure, there is one exception to this tendency. In (39) below, containing the multiple preverb composite \( v\overline{\varepsilon}s\text{-}pr\text{-}im\text{-}mati \) ‘receive in return’, the Substitute is explicit, and expressed by the prepositionless dative \( d\overline{\ell}om\overline{\nu}\text{:DAT} \) ‘deeds’. Crucially, however, it is not expressed by means of the prepositionless accusative, as one might expect given the presence of \( v\overline{\varepsilon}z\text{-} \).

\[
(39) \quad \text{dostoinaa bo } d\overline{\ell}om\overline{\nu} \quad \text{na}ju \quad v\overline{\varepsilon}s\text{-}priemlev\overline{\nu}.
\]

worthy.ACC.PL because deed.DAT.PL 1PL GEN.DU in\_return-receive.PRS.1DU

‘For we are receiving the due reward of our deeds.’ (Mar. Lc 23.41)

In (39), the prepositionless dative \( d\overline{\ell}om\overline{\nu} \) functions as a Cause expression (cf. Vaillant 1977: 83 ff.) and translates a heavy Greek construction that contains a relative clause (\( \acute{a}x\!i\!a \ g\acute{a}r \ h\!\!o\!n\ epr\acute{a}x\!a\!m\!e\!n \ a\!p\!o\!l\overline{\beta}\!\!\alpha\!\!\mu\!\!\alpha\!\!\nu\!\!\nu\!\!n\!\!\nu\!\!\mu\!\!\n\), GNT Lc 23.41).

What do examples (35)–(36) and (37)–(38) have in common? Out of the two variants above, the one with the EP usually omits a participant, i.e. the Recipient and the Substitute, respectively (but cf. (39)). These participants are however recoverable from the previous context. As Viti (2008a, 2008b) argued for Ancient Greek preverbs, one among the reasons why preverbs have developed into markers of telicity is their ability of introducing topical referents. These are typically known participants, and as such are likely to be conceptualized as \textit{entire} in space and \textit{complete} in time. Here lies the link between topicality and telicity (cf. Chapter 2).
5.2. Preverb repetition

As briefly discussed in Section 1.3, preverbed verbs can occasionally take the case required by the corresponding prepositions. This never happens with composites containing multiple preverbs. Instead, in a number of examples, the EP shows up both inside and outside the composite, i.e. it is repeated as a preposition, though not being semantically bleached.

For example, this frequently happens in the presence of sь- ‘with’ in Old Church Slavic. The composites sь-po-žiti ‘live for a while with’ (Supr.1.52), sь-prě-hyvati ‘remain with’, and sь-vъ-kupljiati ‘gather, unite’ (Supr.1.208) take prepositional phrases constituted by sь ‘with’ and the instrumental case, expressing the Comitative. An example with sь-vъ-kupljiati ‘gather, unite’ is shown in (40):

(40) i sьvъkouplĕq sь nĭmĭ...
    and gather.PTCP.PRS.NOM REFL.ACC with 3PL.INS
    ‘And after gathering together with them...’ (Supr.1.208)

The repetition of (40) is probably due to the fact that, in Old Church Slavic, prepositionless cases retain their concrete usages only to a limited extent, and thus can only express semantic roles under specific conditions. In particular, the prepositionless instrumental is rarely used to express a Comitative-like participant, e.g. in expressions such as ženĕj (PTCP.PRS.NOM) sĕ (REFL.ACC) puštenojo (INS) (Lc 16.18) ‘he who married a divorced woman’ (Lunt 1965: 150–151; Hewson & Bubenik 2006: 179).

Preverb repetition of the type in (40) however is not obligatory in Old Church Slavic. With composites containing only a single preverb, for instance, two constructions are occasionally allowed: the one, containing a preverb (otь- ‘from’) repeated outside the composite as a preposition (otь sebe ‘from yourself’) (41)a; the other, showing the corresponding simplex verb (vр֜zi ‘throw’) and the expected prepositional phrase (otь tebe ‘from you’) (41)b.
(41)  a. Preverb repetition (Zogr. Mt 5.29)

\[
\begin{align*}
& i \quad \text{otь-вързі} \quad \text{otь} \quad \text{себе} \\
& \text{and} \quad \text{away-throw.IMP.2SG from REFL.2SG.GEN}
\end{align*}
\]

b. Simplex verb + prepositional phrase (Mar. Mt 5.29)

\[
\begin{align*}
& i \quad \text{вързі} \quad \text{оть} \quad \text{тебе} \\
& \text{and} \quad \text{throw.IMP.2SG from 2SG.GEN}
\end{align*}
\]

‘(And if your right eye causes you to stumble, pluck it out) and cast it from you.’

Alternations of this type are not uncommon: other relevant examples with the same verbal base *врěши* ‘throw’ are e.g. Mar. ~ Zogr. Lc 17.2; Mar. ~ Zogr. Mk 11.23. These pieces of evidence, again, support a view according to which preverbs used to have a freer positioning than that we observe in the earliest Old Slavic texts documented by the textual traditions.

5.3. Preverbs as modifiers of verb argument structure

Old Church Slavic preverbs occasionally modify the meaning of simplex verbs so as to result in composites with a different argument structure or taking a different case. These argument structure alterations however are better regarded as byproduct of the lexical modifications brought about by preverbs (Vaillant 1977: 35). As discussed in Section 4.2, this function is particularly remarkable for the preverb *po-*. This preverb, in its causative-like sense (cf. Section 4.2), is able to build a trivalent communication verb (*po*-вěдěти ‘tell’) out of a bivalent verb of mental state (věděти ‘know’).

Elsewhere, the semantic modifications brought about by preverbs do not alter the cases taken by the simplex verbs. Compare the two Old Church Slavic verbs *видěти* ‘see’ and *въз(ь)-не-na-видěти* ‘begin to hate’. Both these verbs can take the accusative or the genitive case as a second argument (cf. Section 1.3.2); examples (42) and (43) show a second argument in the genitive case – *чєсо* ‘what?’ and *врага svoega* ‘his enemy’.  

\[\text{24}\]

\[\text{24}\] In the present Old Church Slavonic corpus, *въз(ь)-не-na-видěти* ‘come to hate’ only takes masculine animate direct objects in the genitive case and that masculine animate nouns show genitive-accusative
As expected (Vaillant 1977: 60; Lunt 1965: 145), in (42) the perception verb *viděti* ‘see’ takes the genitive case expressing Stimulus (occasionally, this verb also takes the accusative case). The addition of preverbs in this context does not change the cases required by the verb (i.e. genitive or accusative), as the resulting compound *vъz(ъ)-nе-nаviděti* ‘begin to hate’ (43) also requires a Stimulus-participant.

6. Preverb ordering

Table 38 summarizes the positioning of Old Church Slavic preverbs. As is also valid for Vedic (Chapter 3), Homeric Greek (Chapter 4), and Old Irish (Chapter 5), not all possible preverb orders are attested. This Section offers some hints on why certain sequences of preverbs occur in the data and some others are lacking.

> syncretism. Therefore, one may wonder whether *vraga svoego* and other similar forms should be better interpreted as accusatives, rather than as genitives. The interpretation as accusatives however is unlikely, as *nenaviděti* ‘hate’ can take neuter genitive direct objects (e.g. Mar. *Mk* 13.13, *Mt* 10.22, etc.). One may also wonder whether the genitive object taken by *vъz(ъ)-nе-na-viděti* and *nenaviděti* cannot be due to the presence of the negation *ne* as a prefix (cf. Section 1.3.2). However, this scenario is also unlikely, as *nenaviděti* ‘hate’ is a lexicalized compound, in which the semantic addition given by the negation is not detectable anymore (accordingly, *naviděti* is not attested). Furthermore, other verbs of emotion (and more generally, verbs requiring a Stimulus-participant) take the genitive case (see Vaillant 1977: 56–65).

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6.1. Preverb ordering: the account of Modern Slavic

A number of formally-oriented works on Modern Slavic preverbs aim to identify rules of preverb stacking (cf. Section 1.1). In particular, the following predictions have been made:

(i) whenever two preverbs modify a single verbal stem, the innermost should be lexical one (Babko-Malaya 1999);  
(ii) whenever more than two preverbs stack onto the same verbal stem, the innermost only is lexical (e.g. Istratkova 2004: 306 on Bulgarian). These authors generally do not admit the presence of two lexical preverbs stacked onto the same verbal stem, and even composites that survived till modern times are usually not cited in these works (cf. Table 31).  

The Old Church Slavic multiple preverbs that I described throughout this chapter seem to represent a different phenomenon from the multiple prefixation of Modern Slavic languages. To begin with, in Old Church Slavic, actional preverbs can occur internally, as happens to delimitative po- and prě- in the composites sъ-požiti ‘live for a while with’ and sъ-prě-byvati ‘remain together with’. In parallel, in the same composites, the position of the lexical preverb sъ- ‘with’ is external. Admittedly, the composites that show this anomalous

---

25 See however Svenonius (2004b: 242), who quotes the Slovenian verb iz-pod-riniti ‘drive from under’, which contains two lexical preverbs, and as such is regarded as problematic.
ordering did not survive in Bulgarian. Also, they are suspected of being calques of the Greek composite *sun-ana-stréphomai* ‘live together with’ (cf. Section 2.4).

Thus, what differentiates multiple preverbalation in Old Church Slavic between that in Modern Slavic, is that in Old Church Slavic, two lexical preverbs are allowed to stack onto the same verbal base, as shown in (44) (= (18)):

\[
\begin{align*}
(44) & \quad \text{věděti} \rightarrow \text{po-věděti} \rightarrow \begin{cases}
a. \text{iz-po-věděti} \quad \text{‘confess, explain’} \\
b. \text{pro-po-věděti} \quad \text{‘proclaim, predict’} \\
c. \text{za-po-věděti} \quad \text{‘order’}
\end{cases} \\
\text{‘know’} & \quad \text{‘tell’}
\end{align*}
\]

Besides the composites in (44), in which the two preverbs are clearly lexical, there are also verbs in which one of the two preverbs seems to be actional, but nevertheless able to modify the lexical content of the simplex verb. One such instance is *věs-po-meněti* ‘start remembering’, in which the IP *po-* has an ingressive value that changes the meaning of the bare root √*min*- ‘think’: *po-* + √*min*- ‘ingressive’ + ‘think’ → ‘remember’ (and not ‘start thinking’). Another relevant case is *pri-iz-žiti* ‘spend in addition’: *iz-* + √*ži*- ‘completely’ + ‘live on/by’ → ‘spend’ (and not ‘live completely on/by’). Note further that, in *pri-iz-žiti*, the EP is clearly lexical: it means ‘in addition’. Nevertheless, it occurs more externally than *iz*.

These ambiguous cases, in which a quasi-actional preverb still modifies at a lexical level the simplex verb onto which it attaches, can shed light on the possible link between the lexical (and synchronically idiosyncratic), and the quantizing (and synchronically predictable) meanings of preverbs. Furthermore, accordingly, there are composites for which it is hard to draw a clear-cut distinction between lexical and actional usages. For example, does *prědъ-po-lagati* mean ‘distribute to’ by means of *po-* being a lexical preverb, or by means of ‘put (lagati) repeatedly (po-) in front of (prědъ-)? The fuzziness of the type just described for *po-* backs up the assumption that the homophonous lexical and super-lexical preverbs are not distinct linguistic items; rather, preverbs are polysemous morphemes that have undergone two parallel paths of development: either lexicalization or grammaticalization into bounder perfectives.
As a matter of fact, a few Old Church Slavic composites already seem to instantiate a preverb ordering that resembles the modern pattern: accordingly, they display purely actional preverbs in the outermost position. In vъz-ne-na-viděti ‘come to hate’, for example, vъz- functions as an ingressive actional marker, and occurs externally (possibly, vъz- functions as a perfectivizing preverb; cf. Section 3.4).

6.2. An integrated of preverb ordering

My account of preverb ordering is partly diachronic and partly regards as crucial the fact that Old Church Slavic texts are translated from Greek sources. The diachronic side finds motivations in the fact that, for most composites, the EP seems to constitute a later addition to an existing composite lexicalized at a preceding stage. This explanation is consistent with the fact that Old Church Slavic EPs seem to retain a more distinct semantics than IPs (cf. Section 4.3). In addition, it is consistent with the ‘redundancy principle’, according to which preverbs whose semantics is closer, i.e. subsumed, by the semantics of the verbal stem are likely to attach closer to it.

This intuition is backed up by the fact that the Slavic sequences IP-VB frequently translate a Greek unpreverbed verb. This is clear at least for the composites displayed in Table 39. In addition, given that the simplex verb *rěsti is not attested, and thus that ob-rěsti is lexicalized, the composite pri-ob-rěsti ‘acquire’ can also be included in the list in Table 39. The EP pri- has been possibly attached at a later stage to ob-rěsti ‘find’, providing it with a resultative semantics: pri- + ob-rěsti ‘resultative’ + ‘find’ → ‘acquire’. In this case, however, pri-ob-rěsti ‘acquire’ seems to be lexicalized as a whole: it corresponds to Greek ktáomai or kerdánō ‘obtain’ in most passages. In addition, the semantics of pro-po-vědeti ‘proclaim, predict’, za-po-vědeti ‘order’, and iz-po-vědeti ‘confess, explain’ also suggests that all these composites are derived from the preverbed speech verb po-vědeti ‘tell’, rather than from the cognition verb vědeti ‘know’. Semantically, the generic speech verb po-vědeti ‘tell’ arguably constitutes the intermediate stage between the cognition verb vědeti ‘know’, and the specific speech verbs pro-po-vědeti ‘proclaim, predict’, za-po-vědeti ‘order’, and iz-po-vědeti ‘confess, explain’.

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<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
<th>Greek equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>is-po-veděti</td>
<td>confess, explain</td>
<td>ex-omologēō</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex-agoreūō</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ex-ĕgōomai</td>
</tr>
<tr>
<td></td>
<td></td>
<td>an-aggellō</td>
</tr>
<tr>
<td>iz-ob-rěstí</td>
<td>find out</td>
<td>ex-eurískō</td>
</tr>
<tr>
<td>prědъ-po-lagati</td>
<td>distribute to</td>
<td>para-tūthēmi</td>
</tr>
<tr>
<td>pri-ižditi (iz-žiti)</td>
<td>spend in addition</td>
<td>pros-dapanāō</td>
</tr>
<tr>
<td>sъ-vъ-kupiti</td>
<td>gather together</td>
<td>sun-áptō</td>
</tr>
<tr>
<td>vъs-po-měnоти</td>
<td>start remembering, remind</td>
<td>ana-mimmēskō,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hupo-mimmēskō,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hupómmēsin lambānō</td>
</tr>
<tr>
<td>vъs-pri-jęti</td>
<td>receive in return</td>
<td>ana-lambānō</td>
</tr>
<tr>
<td></td>
<td></td>
<td>apo-lambānō</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ap-ēkhō</td>
</tr>
<tr>
<td>za-po-vědatи</td>
<td>order</td>
<td>en-tēllomai</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dia-tăssō</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pros-tithēmi,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ep-aggēllomai</td>
</tr>
</tbody>
</table>
6 Multiple preverbs in Old Irish

1. Preverbs in Old Irish

1.1. State of the art

Traditional grammars of Old Irish include a section devoted to preverbs, which are called either ‘preverbs’ or ‘prepositions’ (VKG II: 242 ff.; GOI 495 ff.; Vendryes 1923: 231ff.; Lewis & Pedersen 1961[1937]: 245 ff.). Notably, because of their preverbal position, traditional grammars also address other preverbal morphemes, including the negation, the interrogative particles, and the relative preverbs, as ‘preverbs’. A major concern of such grammars is discussing preverbs’ accentual and positional properties (cf. Section 1.2.1.1), and the related formal changes that they undergo (cf. Section 3.1). In addition, traditional grammars usually offer an exhaustive catalogue of Old Irish lexical (i.e. word-forming) preverbs and their allomorphs, associated with their basic meanings and examples illustrating their usages in nominal and verbal composition.

Verbal bases are frequently modified by one or more preverbs in Old Irish, in which a single verbal root can constitute the basis for several composites. For example, alongside with the simplex verb gairid ‘call’, the root ñgari- functions as a basis for the following composites: ad·gair (ad-ñgari-) ‘summon’, ar·gair (air-ñgari-) ‘forbid’, con·gair (com-ñgari-) ‘cry out’, fris·gair (frith-ñgari-) ‘answer, reply’, in·gair (in(de)-ñgari-) ‘call in’, do·gair (to-ñgari-) ‘summon’, ad·togair (ad-to-ñgari-) ‘recall’, and others (for a total of 20 composites; cf. KPV: 331-332; Mc Cone 2006: 177). Given this relative abundance of

1 In morphological segmentations, I consistently used preverbs’ first allomorph cited in GOI (495 ff.), though the Milan and the Priscian Glosses databases occasionally employ different forms (e.g. they alternate aith- ~ athi-, air- ~ ar- ~ are-). The databases also contain inconsistencies as for the underlying form of certain verbal roots (e.g. ñben- ~ ñbina- ~ ñbena-, ñswizd- ~ ñseth-). In this case, I chose and consistently kept the most frequent allomorph occurring in the databases (to facilitate the reader, all allomorphs are displayed in Table 43).
multiple preverbs, most grammars also touch upon the issue of preverb ordering and its motivations, as well as the complex matters of the semantic contributions brought about by accumulated preverbs, and of the difficult segmentation of Old Irish multiple preverb composites (cf. Sections 3, 4, 6; VKG II: 302 ff.; GOI 495; Lewis & Pedersen 1961[1937]: 267). Notably, multiple composition must have been a very ancient Celtic phenomenon: there is evidence for sequences of two preverbs in British (dyrlllyddu (to-ro-√sel-) ‘merit’), as well as sporadic hints for that in Gaulish (Rossiter 2004: 9).

Moreover, a specific section of mentioned grammars is dedicated to non-lexical preverbs that play a grammatical role within the Old Irish verbal system: these are the so-called perfective preverbs (occasionally also referred to as ‘augments’ or ‘temporal preverbs’, e.g. by McCone 2006; and by Lewis & Pedersen 1961[1937]: 251 ff.), that is, ro-, ad-, com-, and less widespread others. The preverb ro- is paradigmaticized to indicate completion in the past, and potentiality in the future (cf. Section 1.2.3; VKG II: 261 ff.; GOI: 339 ff.; Vendryes 1923: 241 ff.; Lewis & Pedersen 1961[1937]: 251 ff.). Within the Old Irish catalogue, another grammaticalized preverb is the so-called empty (i.e. meaningless) no-, which serves the function of contributing to forming certain Old Irish verbal forms or filling certain positional gaps under particular morphosyntactic conditions (cf. e.g. GOI: 348; Lewis & Pedersen 1961[1937]: 259).

As in other Indo-European languages, (a number of) the same morphemes that function as preverbs can also behave as prepositions (‘position C’ in GOI): accordingly, traditional grammars also contain sections dedicated to the prepositional usages of Old Irish preverbs in combination with nominal morphological cases (cf. Section 1.2.2; VKG II: 72 ff.; GOI: 496 ff.; Vendryes 1923: 142 ff.; Lewis & Pedersen 1961[1937]: 162 ff.).

To sum up, preverbs play a prominent role within the Old Irish verbal system. On the one hand, they productively build new composite verbs; on the other hand, a number of preverbs are grammaticalized as markers of perfectivity. In addition, they are crucial to the morphological distinction between absolute and conjunct personal endings (cf. e.g. GOI: 350). Therefore, a number of works also deal with preverbs and accumulation of preverbs, while investigating wider issues as to the rise and the diachronic syntax of the Old Irish verbal complex.
McCone’s (1997, 2006) monographies belong with this group, in that they explore the role of multiple preverbs in the origins and development of the Old Irish and Insular Celtic verbal complex. McCone (1997: 89-90) is notorious for his attempt at drawing a positional hierarchy ruling the relative order of preverbs that may be simultaneously added to a verb in primary (i.e. the first layer of) composition. To primary composition, which follows this hierarchy, McCone opposes a more recent stage of composition, that is, the so-called secondary composition, which consists of adding a further preverb among the still productive ones (i.e. com-, eter-, fo-, frith-, and imm-) to an already existing and lexicalized composite, even disregarding the hierarchy.

Though McCone’s hierarchy works reasonably well, once one puts aside calques from Latin (cf. Section 6), McCone (2006) himself later discarded the idea of a clear-cut distinction between primary and secondary composition, especially in the light of Rossiter’s (2004) results. Rossiter’s (2004) dissertation shows that the removal of the EP predominantly results in an actually attested Old Irish composite. These data contributed to backing up the hypothesis of a single process as regards the formation of composites in Old Irish, and specifically a step by step accretion or recomposition (cf. Section 2.3 and 6).

McCone (1997, 2006) also pursues the broader goal of investigating the rise of the VSO pattern in Old Irish, as well as the rise of the differentiation between absolute and conjunct inflections in the light of both comparative and areal considerations.² In fact, preverbs are related to both issues. Though there is no general agreement on the exact mechanism(s) behind the generalization of the VSO pattern in Old Irish, this development, divergent from the rest of Indo-European, is possibly related to the following co-factors: (a) the tendency of Indo-European clitics to occupy the second position (Wackernagel’s Law); (b) Vendryes’ restriction (Vendryes 1911, 1912; Dillon 1943), whereby Old Irish second-position clitics tend to be hosted by specific elements, i.e. the simplex verbs, the first preverb of a composite, and the so-called conjunct particles. As a consequence, simplex verbs and preverbs were allegedly attracted toward the first position by second-position

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² The VSO character of Celtic languages is explored in a language contact perspective in Morris-Jones (1899), Pokorny (1949), Wagner (1959, 1964), Hewitt (2009), Matasović (2012a, 2012b), Mikhailova (2012). In recent decades, VSO languages also raised typologists’ interest (Carnie & Guilfoyle 2000; Carnie et al. 2005).
clitics. Later on, the verbal bases of the composites also underwent a leftward shift, due to the
tendency toward univerbation between preverbs and verbal bases (Watkins 1963). Lastly, the initial position was generalized even in clauses without second-position clitics (cf. also Eska 1994; Adger 2000; Doherty 2000; McCone 2006: 61 ff.; Eska 2007; and references therein).

The growth of the unmarked VSO pattern relates to other open issues regarding the
Old Irish verbal complex, notably the dichotomy between the absolute and the conjunct
endings. Conjunct endings always occur with composite verbs, after the preverbs ro- and
no-, and after a number of other preverbal particles; absolute endings are employed
elsewhere. What does this dichotomy have to do with preverbs? A number of scholars from
Boling (1972) and Cowgill (1975) onward argue that the absolute flexion could not but be
generated by the assumption of a second-position particle with the shape *=es and of
uncertain etymology, which prevented the apocope of -i that instead characterizes the
conjunct flexion. Nowadays, some scholars either accept the asseverative particle *=es but
reject the apocope of -i (Kortland 1979, 1982, 1994), or viceversa (Mc Cone 1979; 1982,
both parts of Cowgill’s theory, but assume a different shape for the reconstructed particle,
i.e. *et(i) ‘and’ (Schrijver 1994, 1997; Schumacher 1999; KPV; Eska 2012). More recently,
an innovative hypothesis has been put forward by Budassi (2017), which also comprises an
explanation for the rise of relative endings (which are also morphologically distinct from
declarative ones in Old Irish). Instead of a single discourse particle, Budassi assumes a
whole set of clitic pronouns either with deictic or with anaphorical function. These
pronouns later on allegedly underwent univerbation and grammaticalization as absolute and
relative endings, respectively. Whatever the solution to this puzzle is, it must take into
account the following facts related to the phonology and the syntax of preverbs: (a) the lack
of a regular lenition occurring after the proclitic first preverb of initial composite verbs (cf.
Section 3); possibly, lenition is blocked by the presence of the assumed second position
particle; (b) verbal forms occurring in tmesis (#PE...V#) and in Bergin’s (#...PV#)
construction show the conjunct flexion (cf. Section 1.2.1.3).
Along with these comprehensive works, a number of papers touch upon different aspects relating to a single Old Irish preverb. These papers mainly focus on etymological, phonetic, or syntactic aspects, and usually only cursorily address the semantic and functional properties of Old Irish preverbs (e.g. Russell 1988, and references therein, on *uss*- ‘up, off’; Stifter 2014, and references therein on *to*- ‘to, toward’; Dedio & Widmer forthc., and references therein, on *imm*- ‘about, mutually’).3

1.2. The status and functions of Old Irish preverbs

1.2.1. The morphosyntactic status of Old Irish word-forming preverbs

1.2.1.1. The accentual properties of Old Irish preverbs

Usually, composite verbs bear the accent on the second element of the composition: these are the so-called ‘deuterotonic’ forms of composites. This means that, with composites containing only one preverb, such a preverb occurs before the accent, that is, in ‘pretonic’ or ‘prenuclear’ (in Anderson’s 2016 terms) position, and the verb base is accented. With multiple preverb composites, instead, the EP still remains before the accent, but it is the first of the MPs or the IP that bears the accent. With deuterotonic forms, the EP occurring before the accent behaves as a separate unit. Accordingly, it can be split from the rest of the composite by a personal pronoun (Section 1.2.1.2; GOI: 27 ff., 351 ff., 534 ff.; Vendryes 1923: 232; Lewis & Pedersen 1961[1937]: 69, 245 ff.; McCone 1997: 1–8).

However, though the EP is usually pretonic, it does bear the accent under certain morphosyntactic conditions, e.g. in the imperative, after certain conjunctions and particles, (occasionally) in relative clauses (cf. (1)), and in the archaic constructions whereby the verb occurs in the last position (Section 1.2.1.3; GOI: 28 ff.). The accented position is called *nuclear* by Anderson (2016). The form of composites showing these behavioral properties are called *prototonic*. In prototonic forms, the EP bearing the accent becomes a fully-fledged part of the rest of the verb.

3 Within the main text, Old Irish preverbs are consistently translated as in GOI (495 ff.).
In (1), the same composite *do·indnaig* (*to-in(de)-√aneg*) ‘give, bestow, grant’ is shown in deuterotonic and prototonic forms: accordingly, the EP *to-* surfaces as *du-* and *t-* (cf. Section 3):

(1) a. The composite *do·indnaig* in deuterotonic position
7 duindainsed da [dam] inna-huli-se
and give.SBJV.PST.3SG to.1SG.DAT ART.ACC.PL-all.ACC.PL.N-DEM
‘…and who could give me all these things.’ (Ml.78b18)

b. The composite *do·indnaig* in prototonic position

\[ \text{tinnagat } \text{ní } \text{ass-a-nucht } \text{di } \text{mainib} \]
give.PRS.3PL INDF.ACC out_of-POSS.3PL-bosom.DAT of possession.DAT.PL
‘…who give some treasures out of their bosom.’ (Ml.93a20)

1.2.1.2. The morphological status of preverbs

In Old Irish, the lexical (i.e. word-forming) preverbs stacked onto a single verbal base show different statuses according to their position relative to the verbal base. In particular, the EP is usually a clitic, whereas the MPs and the IP are affixes (cf. further Kuryłowicz 1964: 174). This emerges from the position of the accent and from the fact that second position clitics can intervene in between the EP and the remaining composite. In the so-called deuterotonic forms (cf. Section 1.2.1.1) with two or more preverbs, the accent falls onto the first preverb after the EP (2).

(2) The position of the accent in deuterotonic multiple preverb composites

<table>
<thead>
<tr>
<th>OLD IRISH TEXT</th>
<th>TRANSLATION</th>
<th>SEGMENTATION</th>
<th>LOCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ad décider</em>:SBJV.PRS.2SG</td>
<td>‘you may look’</td>
<td><em>ad-di-in(de)-√kwis-</em></td>
<td>ML.43a19</td>
</tr>
<tr>
<td><em>dufórban</em>:PRS.3SG</td>
<td>‘it comes’</td>
<td><em>to-for-√ben-</em></td>
<td>ML.61a22</td>
</tr>
<tr>
<td><em>fiúcbat</em>:PRS.3PL</td>
<td>‘they leave’</td>
<td><em>fo-ad-√gabi-</em></td>
<td>ML.80a10</td>
</tr>
</tbody>
</table>

In addition, Old Irish syntax allows for infixed pronouns with different functions including the following: (a) direct objects; (b) various types of dative participants with the
verb ‘to be’; (c) first and second person subjects with passive verbs; (d) Goal after motion verbs; (e) (rarely) indirect objects in dative (GOI: 255 ff.; Lewis & Pedersen 1961[1937]: 196 ff.). These infixed pronouns are always attached to the element that immediately precedes the accent, be it a lexical preverb (3) or a preverbal element of other type (4).

(3) \( \text{at-[t]} = \text{chom-aing} \quad \text{fri=} \quad \text{agitofel} \)
\[ \text{P-3SG.N=P-strike.PRS.3SG against=} \quad \text{A.ACC} \]
‘He struck it against Achitophel.’ (Ml.24c16)

(4) \( \text{dia-ndam} = \text{chon-dlec} \quad \text{frit-su} \)
\[ \text{if-1SG=P-compare.SBJV.PRS.1SG against-2SG.ACC} \]
‘If I compare myself to you…’ (Ml.91d8)

Kuryłowicz (1964: 174ff.) relates the status of Old Irish EP and the particular productivity of multiple composition in Old Irish in the following way. Multiple preverbs are particularly productive, as they do not constitute an ambiguous structure: the preverb farthest from the verbal stem (the EP) is clearly separated from the rest of the composite. Albeit in differing terms, Kuryłowicz argues in favor of a process of formation that McCone later called ‘recomposition’ or ‘accretion’ (McCone 2006: 180): “a process of step by step accretion entailing the prefixing of a single extra preverb to an already existing simple or compound verbal form” (cf. further Sections 2.3 and 6). Accordingly, for example, on \( \text{gairid} \) ‘call’, the composites \( \text{in-gair} \) ‘herd, tend, protect’, \( \text{do-ingair} \) ‘call (by a name)’, and \( \text{for-dingair} \) ‘signify, express’ are successively built.

Deviations from the pattern outlined above either contain the preverbs \( \text{imm-} \) ‘about, mutually’ or \( \text{ro-} \) in their grammaticalized function, or can be explained through Latin influence (GOI: 30, 256). Example (5) shows the composite \( \text{imm-aig} \) ‘drive around’, which contains the preverb \( \text{imm-} \) ‘about, mutually’, and is preceded by the conjunction \( \text{an} \) ‘when’. Accordingly, one would expect to infix the personal pronoun after the conjunct particle (cf. example (4)). Surprisingly, the infix pronoun occurs after both the conjunctive particle and the preverb \( \text{imm-} \). GOI (256) points out this anomalous positioning of \( \text{imm-} \) only for passages in which this preverb serves a reciprocal construction and means ‘mutually’. Thus,
the pattern exemplified in (5) is possibly analogical from the examples in which imm-
functions as a reciprocal.4

(5)  [a]n-im-da=[a]ig  dia
    when-around-3PL=drive.PRS.3SG  God.NOM
    ‘…when God drives them around’ (Ml.66d18)

In (6), instead, the infix pronoun follows the grammaticalized preverb ro- in its
perfectivizing function (glossed as AUG), as is also described in GOI (256):

(6)  acht ni-ru-m=chom-ar-lecis  se  namma
    but  NEG-AUG-1SG=P-P-permit.PRF.2SG  EM.1SG  only
    ‘But only, you have not allowed me (to be captured)!’ (Ml.76d5)

The *Milan Glosses* allow for other anomalous formations. In (7), two lexical preverbs show
the status of clitics:

(7)  Two preverbs in pretonic position:
    ad-cuimtig ‘build up, build to’(*ad-com-uss-ding-* )
    ol  ad-com=rótaig
    because  P-P=build_to.PRF.3SG
    ‘Because it built up.’ (Ml.35b13)

In (7), the presence of ad- is arguably influenced by the corresponding Latin source text,
which contains ad-strueret:SBJV.IMPF.3SG ‘build near, add’ (cf. also eDIL.ie/406). Note that
the composite con-utasig (*com-uss-ding-*) ‘build, construct’, containing only the MPs and

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4 The corresponding Latin text presents the expression deo inminente:ABL ‘with God’s command’. Though
imm-aig ‘drive around’ is not a literal translation of Latin in-mineo (lit.) ‘bend/lean toward’, the Old Irish
preverb imm- possibly echoes Latin in-m-.
the IP, is also attested in the *Milan Glosses* and is almost equivalent to *ad·cuimtig* ‘build up, build to’.

1.2.1.3. Syntactic patterns with the verb in non-initial position

As touched upon in Section 1.1, the usual position for the Old Irish verbal complex is clause-initial (8):

(8) \[ ni= \text{guid} \quad \text{digail} \quad du= \text{thabairt} \quad \text{foraib} \]
\[ \text{NEG=} \text{pray.PRS.3SG} \quad \text{punishment.ACC} \quad \text{to=} \quad \text{inflict.DAT.SG} \quad \text{on.3PL} \]

‘He does not pray that punishment is inflicted upon them.’ (Ml.42a4)

Old Irish is almost consistently a VSO language. However, verb-final/verb-medial patterns also occasionally occur in Old Irish poetry and rhythmic prose, both involving and not involving tmesis, i.e. the displacement of (a) preverb(s) from the verb it(they) modify(ies) (cf. Bergin 1938; Greene 1977; Binchy 1979–1980; Watkins 1963; Eska 2007, and references therein). Quite strikingly, these non-initial verbal complexes take conjunct endings, when simplex (cf. Section 1.1), and prototonic stress, when composite (cf. examples (10)a-b; Section 1.2.1.1). The tmesis pattern is exemplified in (9), the so-called Bergin’s Rule pattern in (10):

(9) a. Tmesis pattern (*ad-\ desea ‘look at’) (adapted from Watkins 1963: 32)
    \[ ad- \quad \text{cruth} \quad \text{cain} \quad -\text{eichither} \]
    \[ \text{P} \quad \text{form.NOM} \quad \text{fair.NOM} \quad \text{see.FUT.3SG.PASS} \]

    ‘Fair form will be seen.’

b. Usual preverbal position (*ad-\ desea ‘look at’)
    \[ noch \quad ni= \quad \text{ac-cam} \quad i\text{-sint-saltair} \quad \text{in} \]
    however \quad \text{NEG} \quad \text{P-see.PRS.1PL} \quad \text{in-DAT.N-P.DAT} \quad \text{ART.ACC} \\
    \[ fers \quad n\text{-isin} \]
    \[ \text{verse.ACC} \quad \text{that.ACC} \]
‘However we do not see that verse in the Psalter.’ (Ml.111d1)

(10) a. Bergin’s Rule pattern with verb in final position (adapted from Eska 2007: 255)

\[ ar = \text{mind} \quad n-axal \quad n-acallad \]

\[ 1\text{PL.GEN}= \text{hero.NOM} \quad \text{apostle.ACC} \quad \text{converse.IMPF.3SG.PROT} \]

‘Our hero used to converse with the apostle.’ (ACC §82)

(corresponding deuterotonic form = \textit{ad-gládad})

b. Bergin’s Rule pattern with verb in medial position

(adapted from Eska 2007: 255)

\[ lāithe \quad gailēoin \quad gabsat \quad inna= \]

\[ \text{warrior.NOM.PL} \quad \text{G.GEN} \quad \text{take.PRET.3PL} \quad \text{in.3PL.GEN} \]

\[ lāmaib \quad lāigne \]

\[ \text{hand.DAT.PL} \quad \text{spear.ACC.PL} \]

‘The warriors of the Galēon took spears in their hands.’ (CGH 1.9)

(corresponding absolute form = \textit{gabsait})

In (9), the composite \textit{ad-√kwis}– ‘look at’ is split by the subject \textit{cruth caín} ‘fair form’, whereas in (9) \textit{ad-} (i.e. its allomorph \textit{ac-}) occurs close to the verbal base. In (10), the composite \textit{ad-gládathar} ‘address, speak to’ is not ‘split’, but does not occur in its usual position: it is preceded by its subject \textit{(ar=mind)} and its second argument \textit{(n-axal)}. In (10), the simple verb \textit{gaibid} ‘take’ stands in medial position: it is preceded by the subject participant, but followed by the second argument and the Goal-participant.

A controversial issue is the actual significance of the orders shown in (9) and (10) for the reconstruction of the prehistoric clausal configuration of Irish. Tmesis and Bergin’s Rule constructions can be regarded as literary artifacts, aimed to produce allitterations or particular cadences in poetry and rhythmic prose (Wagner 1976; Greene 1977; Breatnach 1984). Indeed, for example, splitting \textit{ad-} from -\textit{cichither} produces a sequence of three allitterating words in (9). Alternatively, these orders can be considered as petrified relics of a pre-literary stage of the language, in which the positional properties of the Old Irish verbal complex were closer to the orders – mainly verb-final, but also verb-medial – found in other ancient Indo-European languages such as Hittite, Vedic, and Homeric Greek (e.g.
Watkins 1963; McCone 1979; Ahlqvist 1980; Hamp 1982; MacCoistdealbha 1998; Eska 2007). A few scholars, who support the antiquity of tmesis and Bergin’s Rule constructions, have not very convincingly attempted to reduce these patterns to verb-second constructions (Koch 1987; Doherty 1999, 2000). They accordingly regard Old Irish as a residual V2 language, and not a residual verb-final/verb-medial language. This reconstruction is however unlikely, as several Old Irish passages contain more than a single clausal constituent occurring before the verb (cf. examples at (10) in Eska 2007: 258 ff. and the related discussion).

1.2.2. The prepositional function of Old Irish preverbs

A number of Old Irish preverbs can also occur outside the preverbal complex as prepositions. GOI (495 ff.) assigns to preverbs the following positions:

A. under or after the accent (cf. Section 1.2.1.1), that is, in close composition with nouns and verbs (preverbs have the morphological status of affixes);
B. before the accent in front of a verb or another preverb (clitic status, cf. 1.2.1.1);
C. before the accent in front of an inflected noun (clitic status);
D. before a suffixed personal pronoun (cf. example (11)).

Positions C and D above are those in which preverbs function as prepositions. Not all preverbs can occur in all the above positions. According to GOI, a number of them only occur in A and B, that is, they cannot function as prepositions: ad- ‘to, toward’ (co is used instead of ad in C and D); aith- ‘re-, ex-’; cét- ‘with’ (only in close composition, i.e. position A); -ne- ‘down’ (only A); -uss- ‘up, off’; ro- ‘forth’ (cf. Section 1.2.3); to- ‘to, toward’.5 Others are only employed in positions C and D, that is, they can only function as prepositions: al ‘beyond’ (obsolescent according to GOI: 500); amal ‘as, like’; cen ‘without’; co ‘to, till’ (replaced by ad in A and B); do, du ‘to’;6 fiad ‘in the presence of’;inge ‘except’ (only C); (h)is ‘underneath’; la ‘with, along’; ó, úa ‘from, by’; oc ‘at’; ós

5 On the etymology of the preverb to-, and its etymological relation with the preposition do ‘to’, see Stifter (2014).
6 Cf. fn. 5.
'above, over'. Moreover, *echtar* ‘outside, without’ never participates in verbal composition (i.e. it cannot occur in position B). These data are summarized in Table 40 and in Table 41.

| Table 40. Old Irish preverbs and their positions (GOI)* |
|---|---|---|---|---|
| **PREVERB** | **MEANING** | **A** | **B** | **C** | **D** |
| 1. ad (aud, as) | to, toward, up to | + | + | - | - |
| 2. air (er, ir, ar, are, aur, etc.) | before, for, on account of, around | + | + | \(+^L(ACC, DAT)\) | + |
| 3. aith- (aid, ath, ad, aud, ed, id) | re-, ex- | + | + | - | - |
| 4. com (cum, coim(m), cot, co, cu) | with | + | + | \(+^N(DAT)\) | + |
| 5. di (de, dí, di, do) | of, from, between | + | + | \(+^L(DAT)\) | + |
| 6. ess (es, é, a, as, ass, as(s)a, ad, at) | out of | + | + | (DAT) | + |
| 7. eter (etar) | between, among | + | + | (ACC) | + |
| 8. fo (fu, fa, -f-, -b-) | under | + | + | \(+^L(ACC, DAT)\) | + |
| 9. for (fur, far) | on, over | + | + | \(+^L(ACC, DAT)\) | + |
| 10. frith (frid, fres, fris(s), fri) | against | + | + | (ACC) | + |
| 11. larm (iar, iarmi) | after | + | + | \(+^N(DAT)\) | + |
| 12. imm (imb, im, imp) | about, mutually | + | + | \(+^L(DAT)\) | + |
| 13. in (ind, en, ini, inde) | in, into | + | + | \(+^N(ACC, DAT)\) | + |
| 14. ne | down | + | - | - | - |
| 15. os(s) (uss) | up, off | + | + | (DAT) | - |
| 16. re (ri, rem) | before, pre- | + | + | \(+^N(DAT)\) | + |
| 17. ro (ru) | *forth, intensive | + | + | - | - |
| 18. sech | past, beyond | + | + | (ACC) | + |
| 19. tar (dar, taim, tarm) | across, over | + | + | (ACC) | + |
| 20. to (do, ta, t, te, tu, t) | to, toward | + | + | - | - |
| 21. tri, tre, trem | through | + | + | \(+^L(ACC)\) | + |

*The apices L and N indicate initial mutations. Rare mutations are reported between brackets (cf. n. 9. for). Preverbs are cited as in GOI.

1. Often mixed with aith-, ess-, and in(de)-. It often replaces in(de)- (Lewis & Pedersen 1961[1937]: 260).
6. The preverb ad- occasionally substitutes ess- (Pokorny 1914: 120–121).
19. The preverbal usage of sechmo- ‘past, beyond’ is limited to motion verbs (GOI: 530); in sechmo-ella (sechmo-in(de)-

*ell-) ‘pass by, pass, neglect’, it is combined with 

*ell- ‘put in motion’, resulting in compositional and spatial (*pass by*), as well as in non-compositional and abstract (*neglect*) meanings.

21. Cf. Stifter (2014); Table 41, n. 5. In combination with other LPs: to+fo → tô, tua, to+for → tôr, túar (Pokorny 1914: 124).
### Table 41. Preverbs featuring positions C and D only

<table>
<thead>
<tr>
<th>ADNOMINAL PREPOSITION</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. al (ol &lt; oll) (+ACC)</td>
<td>beyond</td>
</tr>
<tr>
<td>2. amal (+ACC)</td>
<td>as, like</td>
</tr>
<tr>
<td>3. cen (+ACC)</td>
<td>beyond, without</td>
</tr>
<tr>
<td>4. co, cu, (+ACC)</td>
<td>to, till</td>
</tr>
<tr>
<td>5. do, du (+DAT)</td>
<td>to, for</td>
</tr>
<tr>
<td>6. fiad (+DAT)</td>
<td>in the presence of</td>
</tr>
<tr>
<td>7. inge (+ACC)</td>
<td>except</td>
</tr>
<tr>
<td>8. (h)ís (+DAT)</td>
<td>underneath</td>
</tr>
<tr>
<td>9. la (+ACC)</td>
<td>beside, with, among</td>
</tr>
<tr>
<td>10. ó, aí</td>
<td>from, by</td>
</tr>
<tr>
<td>11. oc (+DAT)</td>
<td>at</td>
</tr>
<tr>
<td>12. ós (+DAT)</td>
<td>above, over</td>
</tr>
<tr>
<td>13. sechtar (+ACC)</td>
<td>out of, outside</td>
</tr>
</tbody>
</table>

4. In A and B, co is replaced by ad- (Table 40, n.1). It is also used as a conjunction co\^l\ ‘so that’ (GOI: 502).

5. In A and B, it is replaced by to- (Table 40, n. 21, GOI: 506 after Holmer cited therein; McCone 1997); do and to are discussed together in Pokorny (1914: 124) and in Lewis & Pedersen (1961[1937]: 266).

13. Cf. also echtar ‘outside, without’ occurring as a prefix in nominal compounds, and as a preposition+ACC.

In (11), the two-fold usage of preverbs is exemplified by means of frith ‘against’: in (11)a, the form fris contains a suffixed personal pronoun in the accusative case, and thus functions as a prepositional phrase; (11)b, frith- functions as EP of the composite fris-tabair ‘set against, oppose’.

(11) **The two-fold usage of frith-, fris-, fri ‘against’**

a. **Prepositional function:** do-beir (to-\^ber-)+fris\_ACC  
   con-ducthar nomen fri-s.  
   until-bring.SBJV.PRS.SG.PASS name.NOM against-ACC.3SG.M/N  
   ‘(The possession is indefinite…) until a name is put against it.’ (Sg.200b13)

b. **Preverbal function:** fris-tabair (frith-to-\^ber-)  
   hua-nd-í fris-tarat  
   from-ART.DAT-DEICT against-set.PRF.3SG
‘In that he opposed…’ (Ml.51d3)

On the diachrony and usage of Old Irish cases and prepositions, I refer to Windisch (1879), Moore (1882: 65 ff.), GOI (495 ff.), Vendryes (1923: 136 ff.), Lewis & Pedersen (1961[1937]: 161 ff.), and Hewson & Bubenik (2006: 228 ff.). Very briefly, Old Irish retains the nominative, accusative, genitive, dative, and vocative cases out of the eight-fold Proto-Indo-European reconstructed case system. Old Irish cases can mostly be observed as resulting in phonetic shifts that affect vowels and syllable structure, along with palatalization and mutation of consonants. Proto-Indo-European instrumental, ablative, and locative all merged into the dative case. Accordingly, the dative is combined with various prepositions to express the senses previously assigned to the three merging Proto-Indo-European cases. Prepositionless dative is obsolescent in Old Irish, in which only a few petrified instrumental datives can be found as adverbs (cf. (20); aithieriuch ‘again’; cf. Vendryes 1923: 141). The accusative, combined with different prepositions, is instead employed to indicate Goal. A few motion verbs take a prepositionless accusative expressing Goal: e.g. the simplex verb téit (√tēg-) ‘go’ (Ml.62b20), and the composites do·icc (to-√icc-) ‘come to, approach’ (Ml.41d9, 123c3) and ro·icc (ro-√icc-) ‘come, attain, reach’ (Ml.9d20, 55d2) (Vendryes 1923: 139).7 The genitive, as expected, being a strictly adnominal case, is used with prepositions or prepositional locutions stemming from noun phrases (i.e. secondary prepositions of nominal origin such as ar cuit ‘on account of’, in degaid ‘beside’, fri lorg ‘behind’; cf. Vendryes 1923: 137). Old Irish prepositions govern the case that they precede; accordingly, they usually select only one case. However, case alternation marginally retains its significance with prepositions governing both the accusative and the dative case: accusative-dative alternation distinguishes Goal from Location (cf. Chapter 5, Section 1.3.2 on OCS).

Peculiar of Old Irish are the so-called conjugated prepositions (GOI: 272 ff.; Lewis & Pedersen 1961[1937]: 199 ff.; Vendryes 1923: 277 ff.), whose endings stand for personal

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7 The simplex verb téit (√tēg-) ‘go’ can also take a Path-participant expressed by a prepositionless accusative (Ml.28c19).
pronouns. One relevant example is provided in (11): the preposition fri is followed by a suffixed accusative singular third person pronoun -s.

1.2.3. The preverbs ro-, no-, and the other grammatical preverbs of Old Irish

Alongside with the lexical or word-forming preverbs, Old Irish preverbal morphemes can also serve more grammatical functions (GOI: 339ff.; Vendryes 1923: 241 ff; Lewis & Pedersen 1961[1937]: 251 ff.). A few preverbs, variably called ‘verbal particles’ (GOI), ‘temporal preverbs’ (Lewis & Pedersen 1961[1937]), or ‘augments’ (McCone 2006: 190) work as aspectual markers. These temporal preverbs can be prefixed to express various meanings connected with perfectivity or potentiality. For example, they can be added (i) to the preterite to express the perfect (the most frequent use); (ii) to the imperfect to denote an action completed multiple times in the past; (iii) to the present indicative and subjunctive to describe general actions to be completed before another action can take place; (iv) to the present subjunctive with potential value.

Among the perfectivizing preverbs, the most paradigmaticized is ro- (etym.) ‘forward, forth’ (< *pr-ô, cf., among others, AG pró, OCS pro-, Ved. prá; see LIPP II: 637), which can be added to nearly all simplex and composite Old Irish verbs. Other reasonably frequent preverbs supplying the function of ro- are ad- (etym.) ‘to, toward’ and com- (etym.) ‘with’. The preverb ad- is mostly used with composite verbs containing lexical com- ‘with’ (e.g. conaitecht:PRF.3SG ‘(he) asked’ from com-di-√sag- ‘ask, seek, demand’), whereas com- mostly, but by no means exclusively, with roots ending in -g- (e.g. √org- ‘slay, kill’). Furthermore, a few perfectivizing preverbs (di-, ess-, in(de)-, to-) only occur in combination with specific verbal roots, possibly on account of their basic meaning. For example, ess- ‘out of’ (<*égh-s, cf., among others, AG ex-, Lat. ex-, OCS iz-; see LIPP II: 204 f.) perfectivizes two verbs for drinking (√ib-, √lu-), as ‘drink out of’ can easily be understood as ‘drink completely’: e.g. ibis: PRET.3SG ‘drank’ vs. as-ib:PRF.3SG

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8 The perfectivizing ro- can exceptionally be used with composites containing lexical com- (cf. in Ml.102d5, co[n]runes:PRF.3SG from con-nessa ‘condemn, spurn, trample under foot’).

The preverb *no-* (<<*nū* ‘now’; cf. among others Hitt. *nu*, Ved. *nū*, Cypr. *nu*), always unaccented, works as a host (traditionally called ‘auxiliary’, e.g. in GOI) in a number of contexts: it functions as a dummy preverb used with simplex verbs to host infix pronouns, and to construct relative clauses. In addition, it is added to simplex verbs in those verbal tenses that require the conjunct forms, and consequently a prnuclear constituent, including the imperfect, the secondary future, and the past subjunctive. In three verbal forms, specifically *ro-cluinethar* ‘hear’, *ro-finnadar* ‘discover’, and *ro-laimethar* ‘dare’, *ro-* seems to be as empty as *no-*, in that it adds neither grammatical nor lexical meanings to the verbal bases.

These developments remind of the fully grammaticalized Slavic-style aspect system of ‘bounder perfectives’ (Bybee & Dahl 1989; Bybee et al. 1994; see further Chapter 5). What are the reasons for these similar developments? A first motivation is semantic broadening: spatial preverbs are able to add an inherent endpoint to spatial – and then also to non-spatial – events (e.g. Shull 2003; Wiemer & Seržant forthc.): thus, *ro-* is particularly appropriate to add telic meanings given its basic spatial semantics ‘through to the end’ (McCone 1997: 117; Rossiter 2004: 22; Dalle Ceste 2014: 145 ff.). However, this explanation does not work for Source-preverbs such as Old Irish *ess-* ‘out of’ or for preverbs with an original Comitative meaning such as *com-* ‘with’.9 Here, conceptual metaphor comes into play: (a) EVENTS CAN BE CONCEPTUALIZED AS LOCATIONS; as a consequence, departing from an event implies that the event is ended up (Zanchi 2017); (b) COMPLETION CAN BE THOUGHT OF AS TOGETHERNESS. Metaphor (a) explains the development of *ess-* ‘out of’, whereas metaphor (b) accounts for the employment of *com-* as a marker of perfectivity. In addition, in the case of *ess-* perfectizing verbs of drinking, it is the specific combination of these two elements that might result in a telic reading: one usually drinks a liquid *out of* a container, thus the meaning of the preverb is implied, or subsumed, by the meaning of drinking. Therefore, the redundancy of the expression ‘drink

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9 Source-preverbs are also common telic markers in Slavic and other IE languages (cf. Dickey 2012; Zanchi 2017).
out of” might trigger a new salient reading, that is, the actional meaning of completeness (so-called Vey-Schooneveld effect; cf. Chapter 5; Chapter 7, Section 2.3).10

2. Multiple preverbs in numbers

2.1. Composites with multiple preverbs

As mentioned in the Introduction, this study of Old Irish multiple preverb composites is limited to the Milan and the Priscian Glosses. The choice is motivated both by methodological and by practical reasons. On the one hand, given the overabundance of multiple preverb composites in Old Irish, these two corpora suffice for my comparative purposes; in addition, these Old Irish collections of glosses offer an obvious Latin text as a counterpart, which is crucial to understand the process of formation of multiple preverb composites (Section 2.4). On the other hand, these two collections of Glosses are available online in electronic format (Griffith & Stifter 2007–2013; Bauer & Schumacher 2014). The text provided online can be easily downloaded and queried, as the contained glosses are tagged for morphology and syntax, as well as fully translated and paired to the Latin text that they explain, comment, or translate. These corpora allow for queries starting both from specific lemmas and from specific morphemes, including preverbs and verbal bases. Multiple preverb composites have been manually extracted, starting from Anderson’s (2016) full catalogue of Old Irish composites.11 Out of Anderson’s list, I selected those verbs occurring in the relevant texts, using the Milan and the Priscian Glosses databases.

This selection process yieldel 178 composites, which are displayed in Table 42 together with their segmentation and their frequency in the Milan and in the Priscian

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10 A number of verbs express perfective meanings by means of suppletive stems. In most cases, these suppletive stems contain a preverb, frequently do-, a Goal-preverb (GOI: 345; McCon 1997: 92; Rossiter 2004: 18).

11 My deep gratitude goes to Cormac Anderson, who provided me with the source data of his dissertation during my stay in Jena, before his dissertation was completed.
The segmentation is necessary for Old Irish composites, as the surface form of Irish preverbs undergoes considerable changes according to the position that preverbs occupy (cf. Section 3). Segmentations of Table 42 follow the morphological analyses contained in the Milan and Priscian Glosses databases; I signal through an asterisk those composites for which the eDIL and/or Anderson (2016) suggest a different segmentation.

The number of Old Irish composites (178), if compared to Homeric Greek (64) and to Old Church Slavic (23), is considerably high: this confirms Lewis & Pedersen’s (1961[1937]: 267) remark according to which Old Irish has gone further in the development of multiple composition than any other ancient Indo-European language. A limited corpus of Old Irish per se counts a number of composites that even surpasses that of Vedic (OIr. 178 vs. Ved. 114). In addition, Old Irish attests to a number of composites with a relatively high frequency (e.g. a frequency higher than 10 is shown by 30 out of 178 composites): these data are different from the Vedic situation (Chapter 3), in that Old Irish composites frequently seem to constitute conventionalized formations. Furthermore, the number of occurrences is far higher than the number of composites (1240 vs. 178): this also backs up the assumption that multiple preverb composites occupy an established position within the Old Irish lexicon. This analysis also finds a confirmation in the accentual properties (cf. Section 1.2.1.1) and in the non-compositional semantics (cf. Section 4.3) of Old Irish composites.

### Table 42. Old Irish composites with multiple preverbs (Milan and Priscian Glosses)*

<table>
<thead>
<tr>
<th>Composite</th>
<th>Segmentation</th>
<th>Meaning</th>
<th>Milan</th>
<th>Priscian</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>do-futhraccair</td>
<td>di-fo-tre-\acc-*</td>
<td>desire, wish</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>con-osna</td>
<td>com-uss-\anā-*</td>
<td>cease, stop, desist, remain, end in</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>fo-fiusna</td>
<td>fo-uss-\anā-</td>
<td>perturb, disturb</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>do-indnaig</td>
<td>to-in(de)-\aneg-*</td>
<td>give, bestow, grant, hand over</td>
<td>16</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>imm-comairc</td>
<td>imm-com-\arc-*</td>
<td>question, ask, inquire of</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>ar-dibdai</td>
<td>air-di-\bāđi-</td>
<td>submerge, drown, sink, wreck</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>do-aithbig</td>
<td>to-aith-\beg-*</td>
<td>dissolve, break up</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>airdbidi</td>
<td>air-di-\ben-*</td>
<td>be destroyed, cut off</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>foindarbaide</td>
<td>fo-in(de)-ad-ro-uss-\ben-*</td>
<td>be relegated, be subjected</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>in-ārbain</td>
<td>in(de)-ad-ro-uss-\ben-*</td>
<td>drive out, expel</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>do-eipen</td>
<td>to-ess-\ben-*</td>
<td>excise, cut (out of, off)</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

[12] In the entire corpus of multiple preverb composites compiled from DIL and contained in her dissertation (Rossiter 2004: 172 ff.), Rossiter included as many as 483 multiple preverb composites.
<table>
<thead>
<tr>
<th>Stem</th>
<th>Meaning</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>do-forban</td>
<td>come, arrive, happen to, reach</td>
<td>11 2 13</td>
</tr>
<tr>
<td>ad-cuimben</td>
<td>cut, strike, wound, lacerate</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ar-diben</td>
<td>cut off, sly, destroy</td>
<td>0 1 1</td>
</tr>
<tr>
<td>etar-diben</td>
<td>destroy</td>
<td>8 1 9</td>
</tr>
<tr>
<td>imm-diben</td>
<td>excise, circumcise</td>
<td>0 1 1</td>
</tr>
<tr>
<td>do-fuithen</td>
<td>cut, cut down, cut out, destroy</td>
<td>6 2 8</td>
</tr>
<tr>
<td>do-immdiben</td>
<td>cut away, shorten</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ad-tairbir</td>
<td>bring back, deliver again</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ad-opair</td>
<td>sacrifice, offer up</td>
<td>6 0 6</td>
</tr>
<tr>
<td>fo-tabair</td>
<td>place under</td>
<td>4 0 4</td>
</tr>
<tr>
<td>frit-tabair</td>
<td>set against, oppose</td>
<td>1 1 2</td>
</tr>
<tr>
<td>imm-tabair</td>
<td>carry around, surround</td>
<td>1 0 1</td>
</tr>
<tr>
<td>remi-epir</td>
<td>say beforehand, say previously</td>
<td>11 1 12</td>
</tr>
<tr>
<td>do-adhair</td>
<td>display, show, bring forward, offer</td>
<td>4 0 4</td>
</tr>
<tr>
<td>do-airbir</td>
<td>bend, bend down, incline, lower</td>
<td>3 2 5</td>
</tr>
<tr>
<td>do-opair</td>
<td>take away, deprive, defraud</td>
<td>0 1 1</td>
</tr>
<tr>
<td>do-eprainn</td>
<td>flow, trickle, gush</td>
<td>1 2 3</td>
</tr>
<tr>
<td>do-airchain</td>
<td>propheys, foretell</td>
<td>11 1 12</td>
</tr>
<tr>
<td>do-inchain</td>
<td>chant, utter</td>
<td>1 0 1</td>
</tr>
<tr>
<td>fo-acain</td>
<td>sing to, accompany in song</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ar-foichlea</td>
<td>look after, take care of, attend</td>
<td>1 0 1</td>
</tr>
<tr>
<td>imm-timchella</td>
<td>surround</td>
<td>15 0 15</td>
</tr>
<tr>
<td>do-imchella</td>
<td>surround, encompass</td>
<td>4 0 4</td>
</tr>
<tr>
<td>do-fjuanchid</td>
<td>descend</td>
<td>2 0 2</td>
</tr>
<tr>
<td>remi-escaid</td>
<td>stretch forth</td>
<td>1 0 1</td>
</tr>
<tr>
<td>con-érchloï</td>
<td>stir up, disturb, drive away, agitate</td>
<td>3 0 3</td>
</tr>
<tr>
<td>con-imchloï</td>
<td>change</td>
<td>0 1 1</td>
</tr>
<tr>
<td>as-rocholi</td>
<td>define, determine</td>
<td>7 0 7</td>
</tr>
<tr>
<td>do-rochoïn</td>
<td>despair of</td>
<td>8 0 8</td>
</tr>
<tr>
<td>do-aithchuirered</td>
<td>return</td>
<td>3 1 4</td>
</tr>
<tr>
<td>do-acrâdi</td>
<td>exasperate, provoke</td>
<td>5 0 5</td>
</tr>
<tr>
<td>do-aithchuen</td>
<td>buy back, redeem</td>
<td>3 0 3</td>
</tr>
<tr>
<td>ar-condla</td>
<td>share</td>
<td>0 1 1</td>
</tr>
<tr>
<td>con-fodla</td>
<td>share jointly, divide, apportion</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ad-cuimtig</td>
<td>build to, build up</td>
<td>1 1 2</td>
</tr>
<tr>
<td>ar-utactig</td>
<td>build up, restore, refresh</td>
<td>4 0 4</td>
</tr>
<tr>
<td>con-utaig</td>
<td>build, construct, build up, emblesh</td>
<td>4 2 6</td>
</tr>
<tr>
<td>do-aidlea</td>
<td>come to, approach, visit, touch</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ad-comlai</td>
<td>joint, unite</td>
<td>2 0 2</td>
</tr>
<tr>
<td>do-ella</td>
<td>turn aside, deviate, bend, decline</td>
<td>7 7 14</td>
</tr>
<tr>
<td>fo-acomla</td>
<td>subjoin</td>
<td>1 0 1</td>
</tr>
<tr>
<td>fo-inleá</td>
<td>wander, rove</td>
<td>1 0 1</td>
</tr>
<tr>
<td>sechmo-ella</td>
<td>pass by, pass, neglect</td>
<td>5 2 7</td>
</tr>
<tr>
<td>do-inola</td>
<td>gather, collect, assemble</td>
<td>4 1 5</td>
</tr>
<tr>
<td>ar-fóin</td>
<td>accept, receive, assume, take</td>
<td>26 10 36</td>
</tr>
<tr>
<td>as-toasci</td>
<td>express</td>
<td>1 2 3</td>
</tr>
<tr>
<td>ar-coat</td>
<td>prevent, injure</td>
<td>4 0 4</td>
</tr>
<tr>
<td>as-indet</td>
<td>declare, tell, set forth</td>
<td>45 4 49</td>
</tr>
<tr>
<td>fo-tuidchet</td>
<td>subdue</td>
<td>1 0 1</td>
</tr>
<tr>
<td>remi-aïsnet</td>
<td>tell beforehand, predict</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-adbath</td>
<td>show, manifest, set forth</td>
<td>46 13 59</td>
</tr>
<tr>
<td>do-diát</td>
<td>lead down, lead, bring</td>
<td>4 3 7</td>
</tr>
<tr>
<td>con-fóira</td>
<td>provide</td>
<td>2 0 2</td>
</tr>
<tr>
<td>remi-fóiráe</td>
<td>provide previously</td>
<td>1 0 1</td>
</tr>
<tr>
<td>Irish Word</td>
<td>Meaning</td>
<td>Frequency</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>ar-ingaib</td>
<td>avoid, flee from</td>
<td>1 0 1</td>
</tr>
<tr>
<td>con-oicaib</td>
<td>lift up, raise, exalt</td>
<td>16 0 16</td>
</tr>
<tr>
<td>as-ingaib</td>
<td>exceed, surpass, go beyond</td>
<td>13 4 17</td>
</tr>
<tr>
<td>fo-acain</td>
<td>leave</td>
<td>6 0 6</td>
</tr>
<tr>
<td>imm-ingaib</td>
<td>avoid, shun, evade</td>
<td>17 2 19</td>
</tr>
<tr>
<td>do-fargaib</td>
<td>raise up, produce, cause</td>
<td>6 4 10</td>
</tr>
<tr>
<td>do-fíasascaib</td>
<td>express, characterize</td>
<td>0 1 1</td>
</tr>
<tr>
<td>do-(r)uain</td>
<td>commit, transgress</td>
<td>12 0 12</td>
</tr>
<tr>
<td>do-focail</td>
<td>rise</td>
<td>1 0 1</td>
</tr>
<tr>
<td>as-(c)ongair</td>
<td>proclaim, give notice</td>
<td>4 0 4</td>
</tr>
<tr>
<td>for-congair</td>
<td>command, order</td>
<td>12 6 18</td>
</tr>
<tr>
<td>for-dingair</td>
<td>signify, express</td>
<td>1 3 4</td>
</tr>
<tr>
<td>imm-freccair</td>
<td>correspond, answer, encounter</td>
<td>2 0 2</td>
</tr>
<tr>
<td>in-togair</td>
<td>call on, invoke</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-accair</td>
<td>declare, tell</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-araingr</td>
<td>promise</td>
<td>17 1 18</td>
</tr>
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<td>do-ogtell</td>
<td>purchase</td>
<td>1 0 1</td>
</tr>
<tr>
<td>imm-accaldathar</td>
<td>converse together</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-eclainm</td>
<td>pick out, select</td>
<td>2 0 2</td>
</tr>
<tr>
<td>fóidinti</td>
<td>be sufficient</td>
<td>1 0 1</td>
</tr>
<tr>
<td>imm-fogainti</td>
<td>be construed with (grammar)</td>
<td>2 1 3</td>
</tr>
<tr>
<td>ar-neget</td>
<td>pray</td>
<td>1 0 1</td>
</tr>
<tr>
<td>remi-uicesed</td>
<td>choose beforehand, pre-elect</td>
<td>1 0 1</td>
</tr>
<tr>
<td>con-rícc</td>
<td>meet, encounter, join</td>
<td>6 0 6</td>
</tr>
<tr>
<td>con-táirci</td>
<td>confer</td>
<td>1 0 1</td>
</tr>
<tr>
<td>fo-tairci</td>
<td>substitute, supply</td>
<td>2 0 2</td>
</tr>
<tr>
<td>for-cúmaing</td>
<td>happen, occur, be made, be brought about</td>
<td>8 4 12</td>
</tr>
<tr>
<td>imm-airicc</td>
<td>be appropriate to</td>
<td>23 0 23</td>
</tr>
<tr>
<td>ad-cúmaing</td>
<td>strike, cut, happen</td>
<td>6 0 6</td>
</tr>
<tr>
<td>do-diri</td>
<td>cause, effect, induce, bring about</td>
<td>22 0 22</td>
</tr>
<tr>
<td>do-ecmaing</td>
<td>strike, hit a mark</td>
<td>2 9 11</td>
</tr>
<tr>
<td>ad-deítsi</td>
<td>regard, look at</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-étáil</td>
<td>look at, behold, see</td>
<td>9 2 11</td>
</tr>
<tr>
<td>etar-deítsi</td>
<td>introspect</td>
<td>1 0 1</td>
</tr>
<tr>
<td>imm-accaim</td>
<td>look after, regard, examine, consider</td>
<td>4 0 4</td>
</tr>
<tr>
<td>remi-decáit</td>
<td>provide for, foresee</td>
<td>3 0 3</td>
</tr>
<tr>
<td>do-incaí</td>
<td>look, gaze at</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-farcaí</td>
<td>look down on, guard, fence around</td>
<td>0 1 1</td>
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<tr>
<td>frís-accaí</td>
<td>look forward to, expect, hope</td>
<td>23 2 25</td>
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<tr>
<td>ar-asáile</td>
<td>be opened</td>
<td>20 1 21</td>
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<tr>
<td>con-airléici</td>
<td>permit, allow, let go</td>
<td>28 0 28</td>
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<td>do-atáile</td>
<td>fondle, caress, pacify</td>
<td>3 0 3</td>
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<tr>
<td>do-fúasailci</td>
<td>loosen, relax</td>
<td>5 4 9</td>
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<td>as-cúindligi</td>
<td>disrupt</td>
<td>1 0 1</td>
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<tr>
<td>fo-álgi</td>
<td>lay low, prostrate, throw down</td>
<td>3 3 6</td>
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<tr>
<td>imm-folngai</td>
<td>cause, produce, make, affect</td>
<td>45 8 53</td>
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<tr>
<td>remi-folngai</td>
<td>bear beforehand, anticipate</td>
<td>3 0 3</td>
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<tr>
<td>as-comlaí</td>
<td>depart, escape, set out, start</td>
<td>1 2 3</td>
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<tr>
<td>comforoithmitti</td>
<td>be commemorated</td>
<td>1 0 1</td>
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<tr>
<td>do-romnathar</td>
<td>forget</td>
<td>8 0 8</td>
</tr>
<tr>
<td>for-aithminedare</td>
<td>call to mind, commemorate, remember</td>
<td>9 1 10</td>
</tr>
<tr>
<td>do-aithmenadair</td>
<td>call to mind, commemorate, remember</td>
<td>2 2 4</td>
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<tr>
<td>imm-ruimdeithar</td>
<td>sin, transgress</td>
<td>8 0 8</td>
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<tr>
<td>Latin</td>
<td>English</td>
<td>Frequency</td>
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<td>--------------------</td>
<td>-------------------------------------------------------------------------</td>
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<tr>
<td>do-inmlig</td>
<td>promulgate, proclaim, announce</td>
<td>2 0 2</td>
</tr>
<tr>
<td>do-fonaig</td>
<td>wash, wash away</td>
<td>2 3 5</td>
</tr>
<tr>
<td>do-imnna</td>
<td>command, enjoin</td>
<td>1 0 1</td>
</tr>
<tr>
<td>con-eraing</td>
<td>go astray</td>
<td>1 1 2</td>
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<tr>
<td>con-túairc</td>
<td>strike, pound</td>
<td>4 0 4</td>
</tr>
<tr>
<td>do-essuirg</td>
<td>smite, slay</td>
<td>1 0 1</td>
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<tr>
<td>fris-túairc</td>
<td>thump, blunt</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-fúairc</td>
<td>crush, grind, beat, pound</td>
<td>18 1 19</td>
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<tr>
<td>do-immoirc</td>
<td>press, compress, chastise</td>
<td>9 2 11</td>
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<td>for-comai</td>
<td>keep, preserve, retain</td>
<td>1 10 11</td>
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<tr>
<td>con-tetaratt</td>
<td>comprise, comprehend</td>
<td>0 2 2</td>
</tr>
<tr>
<td>fo-timnithirid</td>
<td>subminister, fumigate</td>
<td>0 3 3</td>
</tr>
<tr>
<td>for-déret</td>
<td>pass through, go over</td>
<td>2 0 2</td>
</tr>
<tr>
<td>for-dirtar</td>
<td>remain, remain over</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-airnndret</td>
<td>run about, roam over</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-etaratt</td>
<td>comprehend, grasp, overtake</td>
<td>2 0 2</td>
</tr>
<tr>
<td>do-farmórat</td>
<td>follow, come after, go after</td>
<td>1 1 2</td>
</tr>
<tr>
<td>ad-éiirig</td>
<td>repeat, reiterate, change, emend</td>
<td>5 0 5</td>
</tr>
<tr>
<td>do-éirig</td>
<td>abandon, forsake</td>
<td>9 1 10</td>
</tr>
<tr>
<td>as-éirig</td>
<td>rise again, arise</td>
<td>2 0 2</td>
</tr>
<tr>
<td>du-dúirg</td>
<td>be enticed, be excited</td>
<td>1 0 1</td>
</tr>
<tr>
<td>ad-tóirnide</td>
<td>prick again</td>
<td>0 1 1</td>
</tr>
<tr>
<td>fris-tóirnide</td>
<td>mark off, trace (a limit)</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-fóirnide</td>
<td>express, signify, denote</td>
<td>5 18 23</td>
</tr>
<tr>
<td>con-dieig</td>
<td>ask, seek, demand</td>
<td>20 0 20</td>
</tr>
<tr>
<td>iarm-foich</td>
<td>seek after, inquire about</td>
<td>3 1 4</td>
</tr>
<tr>
<td>imm-tsca</td>
<td>struggle together</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-foscart(a)</td>
<td>remove, put aside</td>
<td>2 0 2</td>
</tr>
<tr>
<td>con-oscaigi</td>
<td>move, change, remove, shake, upset</td>
<td>15 10 25</td>
</tr>
<tr>
<td>do-róscail</td>
<td>stand forth, distinguish oneself</td>
<td>31 11 42</td>
</tr>
<tr>
<td>remderscaigthi</td>
<td>be pre-distinguished</td>
<td>1 0 1</td>
</tr>
<tr>
<td>di-fúschi</td>
<td>di-us-s	extbackslash{s}ag-</td>
<td></td>
</tr>
<tr>
<td>in-coisig</td>
<td>signify beforehand</td>
<td>0 1 1</td>
</tr>
<tr>
<td>do-díuschi</td>
<td>awake, arouse</td>
<td>0 1 1</td>
</tr>
<tr>
<td>ar-neáit</td>
<td>expect, await</td>
<td>10 0 10</td>
</tr>
<tr>
<td>fo-coisela</td>
<td>take away, remove</td>
<td>2 1 3</td>
</tr>
<tr>
<td>do-fochtla</td>
<td>bring, drag over, draw over</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-assildi</td>
<td>assign, ascribe</td>
<td>14 2 16</td>
</tr>
<tr>
<td>fo-teissim</td>
<td>pour down, pour out</td>
<td>1 0 1</td>
</tr>
<tr>
<td>fo-uisim</td>
<td>be stored, be put away</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-eusim</td>
<td>shed, pour out</td>
<td>8 0 8</td>
</tr>
<tr>
<td>do-fuisim</td>
<td>bring, bring forth</td>
<td>11 8 19</td>
</tr>
<tr>
<td>con-tairissedar</td>
<td>remain constant, consist</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-airissedar</td>
<td>stand, stay, remain</td>
<td>5 0 5</td>
</tr>
<tr>
<td>fris-tairissedar</td>
<td>make a stand against, oppose</td>
<td>3 0 3</td>
</tr>
<tr>
<td>ad-roilli</td>
<td>deserve, be entitled to</td>
<td>25 1 26</td>
</tr>
<tr>
<td>ad-cosnai</td>
<td>make for, strive, seek</td>
<td>5 0 5</td>
</tr>
<tr>
<td>as-roinni</td>
<td>escape</td>
<td>1 0 1</td>
</tr>
<tr>
<td>fo-cosnai</td>
<td>steal, snatch away</td>
<td>1 0 1</td>
</tr>
<tr>
<td>imm-fresnai</td>
<td>contend, dispute, disagree, gainsay</td>
<td>2 0 2</td>
</tr>
<tr>
<td>con-tol</td>
<td>turn, convert, change</td>
<td>4 0 4</td>
</tr>
<tr>
<td>do-intai</td>
<td>turn back, return, translate</td>
<td>6 2 8</td>
</tr>
<tr>
<td>fris-tinfet</td>
<td>blow against</td>
<td>1 0 1</td>
</tr>
<tr>
<td>do-infet</td>
<td>blow, breathe, blow on, breathe on</td>
<td>2 0 2</td>
</tr>
</tbody>
</table>
The composites usually have similar meanings in the two series of glosses, which roughly date back to the 9th century (cf. Introduction). However, a number of composites exhibit more specialized meanings in the *Priscian Glosses*, due to the grammatical character of the Latin commented text, that is, Priscian’s *Institutiones Grammaticae*. Some cases in point are shown in (12). Relevant passages are provided for *con-osna* ‘stops, ends in’ in (13):

*(12)* **Composite** | **Meaning in Ml.** | **Meaning in Sg.**
--- | --- | ---
*con-osna* | stops | end in
*do-ella* | turns aside | inflect, decline
*do-fúasailci* | sets free | lose into constituent elements, solve a question

*(13)* a. **The meaning of *con-osna* in Ml. (Lat. *cessare*)**

*conosnái-ssiu*

stop.SBJV.PRS.2SG-EM.CL.2SG

‘may you cease’ (Ml.70c3)

b. **The meaning of *con-osna* in Sg. (no Latin equivalent)**

*air cheso in .us. conosna són*

for although in -*us* ends_in.PRS.3SG EM.ANA.CL.3SG.N

‘for although this ends in -*us*.’ (Sg.206a3)
2.2. Verbal roots modified by multiple preverbs

Table 43 contains the 43 Old Irish verbal roots modified by multiple preverbs. The simplex verb is provided for the roots that are also attested without preverb(s).\(^\text{13}\) In addition, Table 43 displays the meaning of these roots, and their PIE etymologies paired with the corresponding reconstructed meaning. Moreover, the frequency is counted for each root, that is, the number of composites containing that root. In the rightmost column of Table 43, the verb type is also indicated; as for the other languages of the sample (Chapters 3, 4, 5), a coarse-grained semantic classification of verb types suffices for the purposes of this study.

With respect to the other languages under investigation, Old Irish allows for multiple preverbs in combination with a wider range of verbal roots that also show a wider range of meanings, as is discussed in what follows. Location and motion verbs (e.g. √tēg- ‘go’) are regarded so as to include manner of motion verbs (e.g. √reth- ‘run’), verbs of caused motion (e.g. √ber- ‘bring’), and posture verbs (e.g. √sed- ‘sit’). In Old Irish, only 21 out of 66 verbal bases belong to this group. These data per se suggest an advanced lexicalization, which in turn implies the loss of spatial meanings and the semantic bleaching of Old Irish preverbs. The majority of the remaining verbal roots can be assimilated to motion and location verbs, including the following:

(a) transfer verbs and verbs of putting/removing, which are similar to verbs of caused motion (e.g. √ferā- ‘grant, supply’; √em- ‘take’);

(b) verbs of existence and of possession, which can be assimilated to location verbs (e.g. √tā- ‘exist’; √selbī- ‘have’);\(^\text{14}\)

(c) change of state and change of possession verbs, which can be paired with verbs of caused motion via verbs of putting/removing; this closeness is occasionally mirrored

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\(^{13}\) Among the primary verbs collected in the KPV, 10% only does not allow for composition, while about 17% is attested only in composition (cf. also McCone 2006: 177).

\(^{14}\) The semantic closeness of Location and possession can also be observed from the fact that, among the sources for Possessor expressions, Locations play a prominent role (Narrog 2014: 77, 80). Notably, in Old Irish, the possessive construction is built on a Location expression containing the existential verb attā and the preposition la (lit.) ‘beside’ (cf. Nuti 2010).
<table>
<thead>
<tr>
<th>Verbal root</th>
<th>Simple verb</th>
<th>Meaning</th>
<th>PIE root</th>
<th>Meaning</th>
<th>Frequency</th>
<th>Verb type</th>
</tr>
</thead>
<tbody>
<tr>
<td>acc-</td>
<td>in composition (KPV II: 267)</td>
<td>be inclined to</td>
<td>*h₁-enk- (LIV: 268)</td>
<td>bend, incline</td>
<td>1</td>
<td>mental state</td>
</tr>
<tr>
<td>anā-</td>
<td>anaid (KVG II: 455)</td>
<td>breathe &gt; stays, stays calm</td>
<td>*h₁-enk- (LIV: 267)</td>
<td>breathe</td>
<td>2</td>
<td>bodily process</td>
</tr>
<tr>
<td>aneg-</td>
<td>aingid (KVG II: 435)</td>
<td>saves, protects</td>
<td>*h₁-egH- *h₁-h₁ (LIV: 231, IEW: 45-47; Vand. A-77)</td>
<td>reach, lead</td>
<td>1</td>
<td>helping</td>
</tr>
<tr>
<td>arc-</td>
<td>in composition (KVG II: 457)</td>
<td>ask, beg</td>
<td>*prek- (LIV: 490)</td>
<td>ask</td>
<td>1</td>
<td>communication</td>
</tr>
<tr>
<td>bād-</td>
<td>bāidid (KVG II: 458)</td>
<td>sinks, destroys</td>
<td>*ẹh₁- (LIV: 205)</td>
<td>step</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>beg-</td>
<td>bongid (KVG II: 477)</td>
<td>breaks, reaps</td>
<td>*b¹-egH- (LIV: 84-85)</td>
<td>use, benefit</td>
<td>1</td>
<td>contact/impact</td>
</tr>
<tr>
<td>ben-</td>
<td>benaid (KVG II: 461)</td>
<td>cuts, beats</td>
<td>*b¹-egH- (LIV: 72)</td>
<td>hits</td>
<td>11</td>
<td>removing</td>
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<tr>
<td>borbrem-</td>
<td>bēirid (KVG II: 462)</td>
<td>pours, bears</td>
<td>*b¹-ur- (LIV: 76)</td>
<td>carry, bring</td>
<td>9</td>
<td>caused motion</td>
</tr>
<tr>
<td>can-</td>
<td>canaid (KVG II: 479)</td>
<td>sings</td>
<td>*kan- (LIV: 342)</td>
<td>sings, sounds</td>
<td>2</td>
<td>communication</td>
</tr>
<tr>
<td>cellá-</td>
<td>cellid (KVG II: 482)</td>
<td>go around</td>
<td>*kel (LIV: 322)</td>
<td>go around</td>
<td>3</td>
<td>motion</td>
</tr>
<tr>
<td>cid-</td>
<td>cid (KVG II: 490)</td>
<td>hides, conceals</td>
<td>*kəl- (LIV: 342)</td>
<td>turn</td>
<td>2</td>
<td>creation</td>
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<tr>
<td>clov-</td>
<td>cloid (KVG II: 493)</td>
<td>turns, conquers</td>
<td>*kəl- (Vend. C-77)</td>
<td>turn around</td>
<td>2</td>
<td>manner of motion</td>
</tr>
<tr>
<td>coil-</td>
<td>denom. from caseil (KVG II: 495)</td>
<td>thin, clear sign</td>
<td>*koiə-lo- (IEW: 610; Vend. C-6)</td>
<td>naked, miserable</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>com-</td>
<td>cainid (KVG II: 495)</td>
<td>laments</td>
<td>*kan- (IEW: 525f.; LIV: 342f.) borrowings of Goth. gainōn 'laments' (Vend. C-18)</td>
<td>howl</td>
<td>1</td>
<td>communication</td>
</tr>
<tr>
<td>cori-</td>
<td>in composition (KVG II: 498)</td>
<td>put, throw</td>
<td>*kəwH- (LIV: 533)</td>
<td>scatter</td>
<td>1</td>
<td>caused motion</td>
</tr>
<tr>
<td>crād-</td>
<td>crāidid (KVG II: 496)</td>
<td>torments</td>
<td>*uncertain (Vend. C-221)</td>
<td>-</td>
<td>1</td>
<td>mental activity</td>
</tr>
<tr>
<td>crīna-</td>
<td>crēnaiid (KVG II: 496)</td>
<td>buys, obtains</td>
<td>*kəgH- (LIV: 395)</td>
<td>exchange</td>
<td>1</td>
<td>change of possession</td>
</tr>
<tr>
<td>dāl- (dal-)</td>
<td>dālid (KVG II: 502)</td>
<td>portions out</td>
<td>*dəH- (LIV: 103)</td>
<td>divide</td>
<td>2</td>
<td>removing</td>
</tr>
<tr>
<td>ding-</td>
<td>dingid (KVG II: 505)</td>
<td>presses, thrusts</td>
<td>*d₄gH- (LIV: 381)</td>
<td>smear, model</td>
<td>3</td>
<td>change of state</td>
</tr>
<tr>
<td>ell-</td>
<td>in composition (KVG II: 509)</td>
<td>go, put in motion</td>
<td>*pəH- (LIV: 470)</td>
<td>approach</td>
<td>7</td>
<td>(caused) motion</td>
</tr>
</tbody>
</table>

Table 43. Old Irish verbal roots modified by multiple preverbs.
<table>
<thead>
<tr>
<th>Em-</th>
<th>in composition</th>
<th>take</th>
<th>*h'em- (LIV^2: 236)</th>
<th>take</th>
<th>1</th>
<th>removing</th>
</tr>
</thead>
<tbody>
<tr>
<td>faiz-(ftscx-ter)</td>
<td>faizcid (VKG II: 515)</td>
<td>presses, squeezes</td>
<td>*guedh- (LIV^2: 660)</td>
<td>drive</td>
<td>6</td>
<td>emission</td>
</tr>
<tr>
<td>ftd-</td>
<td>fteid (VKG II: 515)</td>
<td>brings, leads</td>
<td>*guedh- (LIV^2: 659)</td>
<td>friendship</td>
<td>2</td>
<td>transfer</td>
</tr>
<tr>
<td>far-</td>
<td>ferait (VKG II: 518)</td>
<td>grants, supplies</td>
<td>noun ger- (IEW: 1166)</td>
<td>grasp, take</td>
<td>9</td>
<td>removing</td>
</tr>
<tr>
<td>gab- (gaur-)</td>
<td>gabaid (VKG II: 527)</td>
<td>grasps, reaches, goes</td>
<td>*g'æHb- (LIV^2: 195)</td>
<td>sound, call</td>
<td>7</td>
<td>communication</td>
</tr>
<tr>
<td>gair- (gair-)</td>
<td>gairid (VKG II: 533)</td>
<td>calls</td>
<td>*g'ær- (LIV^2: 161)</td>
<td>yearn for, wait for</td>
<td>1</td>
<td>communication</td>
</tr>
<tr>
<td>gail-</td>
<td>gailaid (VKG II: 573)</td>
<td>pledges, promise</td>
<td>*g'æjd- (IEW: 486; LIV^2: 196)</td>
<td>sound, call</td>
<td>1</td>
<td>communication</td>
</tr>
</tbody>
</table>

| Glad- (gla’d-) | glad- (GLAD-) | deposit | talk | *g'hla’d- | sound, call | 1 | communication |

| Glenn- | in composition | examine | *g'lend- (LIV^2: 200) | see, catch sight of | 1 | perception |

| Gnt- (ghi-) | gntid (VKG II: 540) | does, makes | *g'ænh- (LIV^2: 163) | generate | 2 | creation |
| Guid- | guidid (VKG II: 550) | prays, asks | *g'ædë- (LIV^2: 271) | ask, wish | 1 | communication |
| Gus- | Gus- | choose | *g'æy-z- (LIV^2: 168) | cost | 1 | removing |

| Icc- | in composition | reach | *h'nek- (LIV^2: 282) | reach | 8 | motion verb |

| Kwis- (ct-) | in composition | sees | *h'æjz- (LIV^2: 381) | perceive, look | 8 | perception |

| Lct- (leic-) | leidid (VKG II: 562) | lets go, releases | *læk- (LIV^2: 406) | leave, take away | 4 | caused motion |
| Logt- | logid (VKG II: 572) | concedes, obtains | *le'g- (LIV^2: 398) | put, place | 2 | change of possession |
| Long- | in composition | causes | *le'g- (LIV^2: 416) | bend | 2 | creation |

| Lu- | luid, lotar | moves | *h'lejyd- (LIV^2: 248) | climb, grow | 1 | caused motion |

| Mani- (muni-) | munithir (VKG II: 580) | meditates | *men- (LIV^2: 435) | think | 4 | mental activity |
| Medi- | midithir (VKG II: 577) | weighs, measures | *med- (LIV^2: 423) | measure, look | 1 | measure |

| Mig- (meig-) | miigid (VKG II: 580) | milk | *h'meig- (LIV^2: 279) | milk | 1 | emission |
| Negar- | Negar- (VKG II: 585) | washes, washed | *h'neg- (LIV^2: 450) | wash | 1 | removing |

| No- | in composition | ?nod | *n'ey- (LIV^2: 455; KPV: 491) | nod | 1 | communication |

| Org- | origid (VKG II: 587) | kills, slays, strikes | *h'ærg- (LIV^2: 301) | die | 6 | contact/impact |
| Onw- (o-) | in composition | ?have | *h'æjo- (LIV^2: 274) | enjoy | 1 | possessing |

| Reth- | rethid (VKG II: 597) | runs | *ræt- (LIV^2: 274) | run | 7 | manner of motion |
| Rig- (reg-) | rigid (VKG II: 593) | stretches | *reg- (LIV^2: 503) | stretch | 4 | change of state |

| Rinda- (rinda-) | rindaíd (enum. from rind (VKG II: 603) | cuts, engraves | *h'ær- (IEW: 326-332) | rise, move | 3 | removing |

| Sag- (saig-) | saigid (VKG II: 606) | approaches, seeks out | *se'h-j- (LIV^2: 520) | follow a trail | 2 | motion |
*Verbal roots are sorted as in VKG II (441–658).
by their etymologies (e.g. PIE *legʰ- ‘put, place’ > OIr. √lōgī- ‘concede, obtain’ = verb of putting > change of possession verb; PIE *seh₁- ‘take, grab’ > OIr. √slī- ‘earn’ = verb of removing > change of possession verb); verbs of contact/impact, which can be regarded as a subtype of change of state verbs, in that the impact causes a change of state on a certain entity (e.g. √beg- ‘break’);
(d) creation verbs, which can also be associated to change of state verbs, in that the act of creating can be seen as turning a certain entity (TR) from non-existence into existence (e.g. √long- ‘cause’);
(e) perception verbs, which can be treated as caused motion verbs, in that eyes, as moving entities, can be directed toward or away from certain entities (e.g. √kwis- ‘see’);
(f) emission verbs, in which a substance is extracted/goes out of a certain entity (LM) (e.g. √mlig- ‘milk’), and communication verbs, in which word or utterances are seen as moving entities going from one to another speaker (e.g. √sech- ‘say’).

The remaining verbal bases include measure verbs, verbs indicating bodily processes or mental states/activities, and verbs of helping. As its etymology suggests, the only measure verb contained in Table 43 (i.e PIE *med- ‘measure, look after’ > √med-) can be grouped together with perception verbs: the act of measuring can be thought of as the act of looking carefully at a certain entity. The two roots expressing bodily processes both mean ‘breathe’: one of them, √anā-, develops the meaning of a posture verb, and comes to mean ‘stay, stay calm’; the other one instead can be seen as an emission verb with breath as a TR going out of a body (LM) (√swizd- ‘blow’).

Two verbal bases indicate mental states. The root √acc- ‘be inclined to’ can be regarded as indicating a metaphorical location verb, as is also suggested by its probable etymology: √acc- ‘be inclined to’ possibly go back to PIE *h₂enk- ‘bend, incline’, whose reconstructed meaning is more concrete (cf., in the same vein, the discussion contained in KPV: 207). In fact, the composite do-fithraccair ‘desire, wish’, is segmented differently by different authors. Different morphological analyses can also result in segmentations including different verbal roots, as shown in (14):
The segmentations of *do-futhraccair* ‘desire, wish’

a. *di-fo-*tracc-  
   VKG II: 653  
   eDIL (dil.ie/17715)  
   Milan Glosses database  
   < PIE *trenk- (LIV²: 649)

b. *di-fo-*tre-*acc-
   KPV: 207  
   < PIE *h₂enk- (LIV²: 268)

According to Pedersen (VKG II: 653), this composite belongs to a root *tracc-* that goes back to PIE *trenk-* (LIV²: 649), related to Gothic *þreihan* ‘push, force’. However, this analysis is problematic, as the attested form of the perfect does not match the expected perfect for *trenk- in Proto-Irish (GOI 112; McConé 1996: 124; KPV: 208). Thus, Schumacher (KPV: 207–208) suggests to further split -thracc- into -thr- and -ac-, in which -thr- is allegedly the elided form of an additional preverb *tri-* ‘through’.

The other verb indicating a mental activity, *crādi- ‘torment’, instead can be considered a metaphorical contact/impact verb, though this analysis cannot find an etymological confirmation, as the PIE root for this verb is uncertain. The last mental verb, *manī-*, indicates the activity of meditating: this verb cannot easily be boiled down to a motion/location verb, though the activity of thinking is possibly seen as the act of remaining in a certain mental state (that is in a certain metaphorical location). The only verb of helping belonging to my Old Irish sample, that is, *aneg- ‘save, protect’, can be assimilated to a transfer verb: saving or protecting is the act of bringing aid, protection, and salvation (accordingly, one of its probable PIE etymologies goes back to *h₁egH- ‘lead’).

Generally, multiple preverbs seem to attach frequently onto roots that not only express motion or location events proper (cf. Table 43):

- *ben-* ‘cut, beat’ (x11), *gabi-* ‘grasp’ (x8) → removing;\(^{15}\)
- *ber-* ‘bring’ (x9), *ell-* ‘put in motion’ (x7), *fēd-* ‘bring, lead’ (x6) → caused motion;
- *gari-* ‘call’ (x7) → communication;
- *kwis-* ‘see’ (x8) → perception;

\(^{15}\) The root *gabi-*, which gives the simplex verb *gaibid*, can mean ‘grasp’, but also ‘reach, go’. Cf. the semantic change undergone by the PIE root *sejk-* (LIV²: 522) ‘grasp, reach, achieve’ > AG *hiknēomai* ‘come’.
- √org- ‘kill, slay’ (x6) → contact/impact;
- √reth- ‘run’ (x7) → motion.

2.3. Attested combinations of preverbs

In Old Irish, there are as many as 116 combinations of multiple preverbs (more than twice the number of Vedic combinations; cf. Chapter 3). These are displayed in Table 44, together with their frequencies, that is, the number of composites instantiating each combination.

Table 44. Old Irish combinations of preverbs and their frequency*

<table>
<thead>
<tr>
<th>Preverbs</th>
<th>Meanings</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ad+com</td>
<td>toward+with</td>
<td>2</td>
</tr>
<tr>
<td>ad+com+uss</td>
<td>toward+with+up/off</td>
<td>1</td>
</tr>
<tr>
<td>ad+di+en</td>
<td>toward+of/from+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>ad+uss</td>
<td>toward+up/off</td>
<td>1</td>
</tr>
<tr>
<td>ad+ro</td>
<td>toward+forth</td>
<td>2</td>
</tr>
<tr>
<td>ad+to+air</td>
<td>toward+to+before/for</td>
<td>1</td>
</tr>
<tr>
<td>ad+to+fo</td>
<td>toward+to+under</td>
<td>1</td>
</tr>
<tr>
<td>air+com</td>
<td>before/for+with</td>
<td>2</td>
</tr>
<tr>
<td>air+di</td>
<td>before/for+of/from</td>
<td>3</td>
</tr>
<tr>
<td>air+fo</td>
<td>before/for+under</td>
<td>3</td>
</tr>
<tr>
<td>air+in</td>
<td>before/for+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>air+ne</td>
<td>before/for+down</td>
<td>1</td>
</tr>
<tr>
<td>air+uss</td>
<td>before/for+up/off</td>
<td>4</td>
</tr>
<tr>
<td>aith+com</td>
<td>re+with</td>
<td>1</td>
</tr>
<tr>
<td>aith+ess</td>
<td>re+out of</td>
<td>1</td>
</tr>
<tr>
<td>com+air</td>
<td>with+before/for</td>
<td>3</td>
</tr>
<tr>
<td>com+di</td>
<td>with+of/from</td>
<td>1</td>
</tr>
<tr>
<td>com+fo</td>
<td>with+under</td>
<td>2</td>
</tr>
<tr>
<td>com+imm</td>
<td>with+about</td>
<td>1</td>
</tr>
<tr>
<td>com+en</td>
<td>with+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>com+uss</td>
<td>with+up/off</td>
<td>4</td>
</tr>
<tr>
<td>com+ro</td>
<td>with+forth</td>
<td>1</td>
</tr>
<tr>
<td>com+to</td>
<td>with+to</td>
<td>2</td>
</tr>
<tr>
<td>com+to+ad+ro</td>
<td>with+to+toward+forth</td>
<td>1</td>
</tr>
<tr>
<td>com+to+air</td>
<td>with+to+before/for</td>
<td>1</td>
</tr>
<tr>
<td>com+to+eter</td>
<td>with+to+between</td>
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</tr>
<tr>
<td>com+for+aith</td>
<td>with+over+re-</td>
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</tr>
<tr>
<td>di+ess</td>
<td>of/from+out of</td>
<td>3</td>
</tr>
<tr>
<td>di+fo</td>
<td>of/from+under</td>
<td>1</td>
</tr>
<tr>
<td>di+fo+tre-</td>
<td>of/from+under+through</td>
<td>1</td>
</tr>
<tr>
<td>di+en</td>
<td>of/from+in(to)</td>
<td>3</td>
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<td>di+uss</td>
<td>of+up/off</td>
<td>4</td>
</tr>
<tr>
<td>di+ro</td>
<td>of/from+forth</td>
<td>2</td>
</tr>
<tr>
<td>di+ro+uss</td>
<td>of/from+forth+up/off</td>
<td>1</td>
</tr>
<tr>
<td>ess+com</td>
<td>out of+with</td>
<td>3</td>
</tr>
<tr>
<td>ess+com+di</td>
<td>out of+with+of</td>
<td>1</td>
</tr>
<tr>
<td>ess+ess</td>
<td>out of+out of</td>
<td>1</td>
</tr>
<tr>
<td>ess+in(de)</td>
<td>out of+in(to)</td>
<td>3</td>
</tr>
<tr>
<td>ess+ro</td>
<td>out of+forth</td>
<td>2</td>
</tr>
<tr>
<td>ess+to</td>
<td>out of+to</td>
<td>1</td>
</tr>
<tr>
<td>eter+di+en</td>
<td>between+of/from+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>eter+di</td>
<td>between+of/from</td>
<td>1</td>
</tr>
<tr>
<td>fo+ad</td>
<td>under+toward</td>
<td>3</td>
</tr>
<tr>
<td>fo+ad+com</td>
<td>under+toward+with</td>
<td>1</td>
</tr>
<tr>
<td>fo+com</td>
<td>under+with</td>
<td>2</td>
</tr>
<tr>
<td>fo+di</td>
<td>under+of/from</td>
<td>1</td>
</tr>
<tr>
<td>fo+in(de)</td>
<td>under+in(to)</td>
<td>2</td>
</tr>
<tr>
<td>fo+in(de)+ad+ro+uss</td>
<td>under+in(to)+toward+forth+up/off</td>
<td>1</td>
</tr>
<tr>
<td>fo+uss</td>
<td>under+up/off</td>
<td>2</td>
</tr>
<tr>
<td>fo+to</td>
<td>under+to</td>
<td>1</td>
</tr>
<tr>
<td>fo+to+ad+ro</td>
<td>under+to+toward+forth</td>
<td>1</td>
</tr>
<tr>
<td>fo+to+di+com</td>
<td>under+to+of/from+with</td>
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</tr>
<tr>
<td>fo+to+ess</td>
<td>under+to+out of</td>
<td>1</td>
</tr>
<tr>
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<td>under+to+about+of/from</td>
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</tr>
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<td>over+re-</td>
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</tr>
<tr>
<td>for+com</td>
<td>over+with</td>
<td>3</td>
</tr>
<tr>
<td>for+di</td>
<td>over+of/from</td>
<td>1</td>
</tr>
<tr>
<td>for+di+in(de)</td>
<td>over+of/from+in(to)</td>
<td>1</td>
</tr>
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<td>for+di+uss</td>
<td>over+of/from+up/off</td>
<td>1</td>
</tr>
<tr>
<td>frith+ad</td>
<td>against+toward</td>
<td>1</td>
</tr>
<tr>
<td>frith+to</td>
<td>against+to</td>
<td>2</td>
</tr>
<tr>
<td>frith+to+air</td>
<td>against+to+before/for</td>
<td>1</td>
</tr>
<tr>
<td>frith+to+fo</td>
<td>against+to+under</td>
<td>2</td>
</tr>
<tr>
<td>frith+to+in(de)</td>
<td>against+to+in(to)</td>
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</tr>
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<td>iarm+fo</td>
<td>before+under</td>
<td>1</td>
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<tr>
<td>imm+ad</td>
<td>about+toward</td>
<td>3</td>
</tr>
<tr>
<td>imm+air</td>
<td>about+before/for</td>
<td>1</td>
</tr>
<tr>
<td>imm+com</td>
<td>about+with</td>
<td>1</td>
</tr>
<tr>
<td>imm-di</td>
<td>about+of/from</td>
<td>1</td>
</tr>
<tr>
<td>imm+fo</td>
<td>about+under</td>
<td>2</td>
</tr>
<tr>
<td>imm+frith</td>
<td>about+against</td>
<td>2</td>
</tr>
<tr>
<td>imm+imm</td>
<td>about+about</td>
<td>2</td>
</tr>
<tr>
<td>imm+ro</td>
<td>about+forth</td>
<td>1</td>
</tr>
<tr>
<td>imm+to</td>
<td>about+to</td>
<td>2</td>
</tr>
<tr>
<td>imm+to+imm</td>
<td>about+to+about</td>
<td>1</td>
</tr>
<tr>
<td>in(de)+ad+ro+uss</td>
<td>in(to)+toward+forth+up/off</td>
<td>1</td>
</tr>
<tr>
<td>in(de)+com</td>
<td>in+with</td>
<td>3</td>
</tr>
<tr>
<td>in(de)+uss</td>
<td>in(to)+up/off</td>
<td>1</td>
</tr>
<tr>
<td>in(de)+to</td>
<td>in(to)+to</td>
<td>1</td>
</tr>
<tr>
<td>rem+di+en</td>
<td>pre+-of/from+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>rem+di+ro+uss</td>
<td>pre+-of/from+forth+up/off</td>
<td>1</td>
</tr>
<tr>
<td>rem+ess</td>
<td>pre+-out of</td>
<td>2</td>
</tr>
<tr>
<td>rem+ess+in(de)</td>
<td>pre+-out of+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>rem+fo</td>
<td>pre+-under</td>
<td>2</td>
</tr>
<tr>
<td>rem+uss</td>
<td>pre+-up/off</td>
<td>1</td>
</tr>
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<td>sechmo+in(de)</td>
<td>beyond+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>to+ad</td>
<td>to+toward</td>
<td>6</td>
</tr>
</tbody>
</table>
Out of 116 combinations, the vast majority (72) contains two preverbs; 37 contain three preverbs, and only seven as many as four preverbs. These data back up Lewis & Pedersen’s remark (1961[1937]: 267) that “accumulation of preverbs is exceedingly common in Celtic […] but groups of more than three preverbs are rare.” In the Milan and Priscian Glosses, for example, only one composite contains five preverbs, whereas the eDIL attests to three composites with five preverbs (cf. fn. 12 on Rossiter’s 2004 data sample). As shown in Table 44, most combinations (71 out of 115) are only instantiated in a single composite. Much fewer combinations (25 out of 115) are attested in two composites, and 12 combinations in three composites. Six combinations are contained in 4 composites, and only two combinations are instantiated in 5 and 6 composites.

Most combinations can be reduced to an actual Old Irish composite by removing preverbs in sequence (Rossiter 2004; McCone 2006: 179), as shown in (15):

<table>
<thead>
<tr>
<th>Preverb Combination</th>
<th>Simplified Form</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>to+ad+uss</td>
<td>to+toward+up/off</td>
<td>2</td>
</tr>
<tr>
<td>to+ad+ro</td>
<td>to+toward+forth</td>
<td>2</td>
</tr>
<tr>
<td>to+ad+to+ad</td>
<td>to+toward+to+toward</td>
<td>1</td>
</tr>
<tr>
<td>to+air</td>
<td>to+before/for</td>
<td>2</td>
</tr>
<tr>
<td>to+air+ro</td>
<td>to+before/for+forth</td>
<td>1</td>
</tr>
<tr>
<td>to+air+in(de)</td>
<td>to+before/for+in(to)</td>
<td>2</td>
</tr>
<tr>
<td>to+air+uss</td>
<td>to+before/for+up/off</td>
<td>1</td>
</tr>
<tr>
<td>to+aiith</td>
<td>to+re-</td>
<td>4</td>
</tr>
<tr>
<td>to+di</td>
<td>to+of/from</td>
<td>1</td>
</tr>
<tr>
<td>to+di+uss</td>
<td>to+of/from+up/off</td>
<td>2</td>
</tr>
<tr>
<td>to+ess</td>
<td>to+out of</td>
<td>5</td>
</tr>
<tr>
<td>to+eter</td>
<td>to+between</td>
<td>1</td>
</tr>
<tr>
<td>to+fo</td>
<td>to+under</td>
<td>4</td>
</tr>
<tr>
<td>to+fo+com</td>
<td>to+under+with</td>
<td>1</td>
</tr>
<tr>
<td>to+fo+in(de)</td>
<td>to+under+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>to+fo+uss</td>
<td>to+under+up/off</td>
<td>1</td>
</tr>
<tr>
<td>to+for</td>
<td>to+over</td>
<td>1</td>
</tr>
<tr>
<td>to+for+ess</td>
<td>to+over-out_of</td>
<td>1</td>
</tr>
<tr>
<td>to+for+ad</td>
<td>to+over+toward</td>
<td>1</td>
</tr>
<tr>
<td>to+iarm+fo</td>
<td>to+after+under</td>
<td>1</td>
</tr>
<tr>
<td>to+imm</td>
<td>to+about</td>
<td>2</td>
</tr>
<tr>
<td>to+imm+ad</td>
<td>to+about+toward</td>
<td>1</td>
</tr>
<tr>
<td>to+imm+di</td>
<td>to+about+off/from</td>
<td>1</td>
</tr>
<tr>
<td>to+in(de)</td>
<td>to+in(to)</td>
<td>4</td>
</tr>
<tr>
<td>to+in+ad</td>
<td>to+in(to)</td>
<td>1</td>
</tr>
<tr>
<td>to+in+com</td>
<td>to+in(to)+with</td>
<td>1</td>
</tr>
<tr>
<td>to+in(de)+uss</td>
<td>to+in(to)+up/off</td>
<td>2</td>
</tr>
<tr>
<td>to+uss</td>
<td>to+up/off</td>
<td>3</td>
</tr>
<tr>
<td>to+ro</td>
<td>to+forth</td>
<td>1</td>
</tr>
</tbody>
</table>
However, the removal of (one of the) preverbs does not always result in an actual composite verb, but rather in a nominal formation that points to the previous existence of the corresponding composite verb (cf. also VGK II: 450-658). As suggested by Rossiter (2004: 123) and confirmed by McCone (2006: 180), one such case is Old Irish comarc ‘outcry, invocation’, which arguably functioned as the base for the composites in (16), and in turn relies on the lost verbal composite *con-airc-.

(16) Composites based on a lost *con-airc-
   a. imm-comaire ‘question, ask, inquire of’
      (MI.27d4, 18a1, 18a3, 20b18, 63c9; Sg.197b10, 27a2, 197b10, 138a4)
   b. ad-comaire ‘ask, question’
   c. do-comaire ‘ask, request’
   d. fo-comaire ‘inquire’
   e. for-comaire ‘question, inquire’
   f. fris-comaire ‘ask questions of’

However, there are exceptions to the principle of reducibility outlined above. In particular, the following composites cannot be reduced: (sorted by root) con-osna (com-uss-√anā- ‘cease, stop, desist, remain, end in’, fo-fúasna (fo-uss-√anā-) ‘perturb, disturb’, ad-opair (ad-uss-√ber-) ‘sacrifice, offer up’, do-opair (to-uss-√ber-) ‘take away, deprive, defraud’, ad-cuitmig (ad-com-uss-√ding-) ‘build to, build up’, ar-utaing (air-uss-√ ding-) ‘build up, restore, refresh’, con-utaing (com-uss-√ding-) ‘build, construct, build up, embellish’, con-ocaib (com-uss-√gabi-) ‘lift up, raise, exalt’, do-focaib (to-uss-√gabi-) ‘rise’, do-ógell (dē-uss-√gell-) ‘purchase’, remi-uicsed (rem-uss-√gus-) ‘choose beforehand, pre-elect’, ar-osailci (air-uss-√lēcī-) ‘be opened’, do-airndret (to-air-in(de)-√reth-) ‘run about, roam over’, do-farmórat (to-farm-fo-√reth-) ‘follow, come after, goes after’, du-dúrig (to-di-uss-√rig-) ‘be enticed, be excited’, ar-neät (air-ni-√sed-) ‘expect, await’, con-oscaigi (com-uss-√scochī-) ‘move, change, remove, shake, upset’, di-fíuschi (di-
uss-√sech-) ‘arouse, excite, call into’, fo·uisim (fo-uss-√sem-) ‘be stored, be put away’,
dofuissim (to-uss-√sem-) ‘bring, bring forth’, and in·otat (in(de)-uss-√lēg-) ‘enter into’.

Notably, all mentioned composites belong to one of the three categories of exceptions to reducibility identified by Rossiter (2004: 89, 154–161) and McCone (2006: 181 ff.): (a) composites containing the IP -ne- ‘down’; (b) composites containing the IP -uss- ‘up, out’; (c) composites containing the EP to-. Cases (a)-(b) involve a Path-preverb whose meaning frequently comes to show semantic solidarity with the meaning of the verbal base onto which it attaches (e.g. -ne- ‘down’ overlaps with √sed- ‘sit’ in ar·neät (air-ni-√sed-) ‘expect, await’). As I discuss in Section 6.3, both Path-meaning and semantic solidarity are good reasons for internal placement and for the consequent reanalysis as part of the verbal base.

The case (c) is of a different sort: it involves the preverb to-, whose etymology and meaning motivate its non-reducibility. Etymologically, to- is probably the outcome of the merging of two Celtic homophonous preverbs: a preposition *to₁- ‘back, re-’, and a clausal connector *to₂- (Stifter 2014). The prehistory of to- as a clausal connector explains the fact that it strongly selects the exterior position (cf. Section 6), as well as its tendency to retain this position even after the addition of further preverbs. As shown by Rossiter (2004: 138), a further preverb occasionally appears to be infixed after rather than prefixed before to-: e.g. do·aithbeir (to-aith-√ber-) ‘take back’, which is possibly built after the extremely widespread do·beir ‘give’. In addition, as shown by Gillon (1962: 121–122), the semantic contribution brought about by to- is bleached in most composites in which it occurs. Consequently, the composites containing to- and those lacking it happened to become near synonyms: see, for example, from the Milan and Priscian Glosses, ad·opair (ad·uss-√ber-) ‘sacrifice, offer up’ and do·adbair (to-ad·uss-√ber-) ‘display, show, bring forward, offer’; ad·cumaing (in(de)-com-√icc-) ‘strike, cut, happen’ and do·ecmaing (to-in(de)-com-√icc-) ‘strike, hit a mark’; ad·muinethar (aith-√mani-) ‘remember, call to mind’ and do·aithmenadar (to-aith-√mani-) ‘call to mind, commemorate, remember’; di·fíuschi (di·uss-√sech-) ‘arouse, excite, call into’ and do·díuschi (to-di·uss-√sech-) ‘awake, arouse’. This might have made the competing composites without to- obsolete, and thus particularly prone to disappear: e.g. the composites do·indnaig (to-in(de)-√aneg-) ‘give, bestow, grant,
hand over’, *do-aithbig* (*to-aith-√beg*) ‘dissolve, break up’, *do-eipen* (*to-ess-√ben*) ‘excise, cut (out of, off)’, *do-inchain* (*to-in(de)-√can*) ‘chant, utter’, *do-aithchuiredar* (*to-aith-√cori*) ‘return’, *do-aithchren* (*to-aith-√crina*) ‘buy back, redeem’, *do-incai* (*to-in(de)-ad-√kwis*) ‘look, gaze (at)’, *do-forndea* (*to-fo-√rindā*) ‘express, signify, denote’, *do-intai* (*to-in(de)-√sow*) ‘translate, turn back, return’, and *do-infet* (*to-in(de)-√swizd*) ‘blow, breathe, blow on, breathe on’ cannot be reduced to the correspondent composites lacking *to-*.\(^{16}\)

Within the frame of an overall abundance of verbal composition in Old Irish, preverb iteration is also relatively more widespread than in the other languages under investigation. As expected, preverb iteration usually results in iterative or intensive meanings (cf. Rossiter 2004: 7):

(17) a. *as-éirig* (*ess-ess-√rig*) ‘rise again’ (Lat. *re-surgere*) (iterative)

   b. *imm-imaigb* (*imm-imm-√gabi*) ‘go around around’ → ‘avoid’ (intensive)\(^ {17}\)

In other composites, however, the meaning of preverb iteration is not so easy to assess:


   (Lat., among others, *circum-dare, amb-ire*);

   b. *do-atailci* (*to-ad-to-ad-√lēcī*) ‘fondle, caress, pacify’.

In (18)a, the occurrence of the EP *imm*- is possibly a calque of the Latin preverbs *circum-* or *ambi-*, which are sometimes contained in the Latin verbs glossed through *imm-timchella* (cf. Table 45, which contains all Latin counterparts of Old Irish composites). The semantic contribution brought about by the double repetition of *to-ad-* is obscure in (18)b, especially

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\(^{16}\) Needless to say, one can always find counterexamples to tendencies such as that outlined above: for example, by reducing the composite *do-forban* (*to-for-√ben*) ‘come, arrive, happen to, reach’, one obtains *for-√ben* that has the entirely different meaning of ‘strike, smite, cut’ (eDIL.ie/23375).

\(^{17}\) In (17), the usage of *imm- ‘around’ is similar to that of its English and Italian equivalents *around* and *intorno* in collocations such as *dance around* and *girarci intorno* (lit.) ‘turn around’, both developing the non-compositional meaning of ‘avoid’.  

in the light of the much more compositional meaning of *do-léici* (*to-ad-lēcī*) ‘let go, release’. As a matter of fact, preverb repetition is occasionally described as a meaningless means to avoid the stress shift whenever the deuterotonic form is required (GOI: 351). One such case is *fo-fúasna* ‘perturb, disturb’, which alternates with *fúasna* (*fo-uss-\nānā*; cf. Table 42). As relevant examples of meaningless preverb repetition, GOI also quotes the mentioned composites *imm-imgaib* (17)b and *imm-timchella* (18)a.

All in all, preverb iteration appears to constitute a recent phenomenon in Old Irish: it emerges from calquing from Latin; it serves mere morphosyntactic purposes; it indicates concepts that arguably became common after the introduction of Christianity in Ireland, i.e. 5th century AD (cf. Rossiter 2004: 7).

2.4. *The Latin counterparts of Old Irish composites*

Table 45 displays the Latin counterparts of Old Irish multiple preverb composites. Importantly, not all Old Irish composites are mirrored by an obvious Latin equivalent (158 out of 166 do so). Both the *Milan* and *Priscian Glosses* contain annotations of different types: a number of glosses only consist of a single word and seem to be direct translations of the Latin text; other glosses however either contain longer comments or elucidations on the main text or provide background information necessary to understand the main text. In the latter cases, the one-to-one correspondence to Latin can be impossible to draw.

<table>
<thead>
<tr>
<th>Composite</th>
<th>Meaning</th>
<th>Latin counterpart</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>com-uss-\nānā</em></td>
<td>cease, stop, desist, rest, remain</td>
<td><em>cessare, de-sistere, con-quiescere</em></td>
</tr>
<tr>
<td><em>fo-uss-\nānā</em></td>
<td>perturb, disturb</td>
<td><em>per-turbare</em></td>
</tr>
<tr>
<td><em>to-in(de)-\nāneg</em></td>
<td>give, bestow, grant, hand over</td>
<td><em>dis-tribuere, con-tribuere</em></td>
</tr>
<tr>
<td><em>imm-com-\nārc</em></td>
<td>question, ask, inquire of</td>
<td><em>per-contari, in-terrogare</em></td>
</tr>
<tr>
<td><em>air-di-\nādī</em></td>
<td>submerge, drown, sink, wreck</td>
<td><em>ex-tinguere</em></td>
</tr>
<tr>
<td><em>to-aith-\nābeg</em></td>
<td>dissolve, break up</td>
<td><em>ab-rogare</em></td>
</tr>
<tr>
<td><em>air-di-\nāben</em></td>
<td>be destroyed, cut off</td>
<td><em>inter-ficere</em></td>
</tr>
<tr>
<td><em>fo-in(de)-ad-ross-\nāben</em></td>
<td>be relegated, be subjected</td>
<td><em>sub-iacer</em></td>
</tr>
<tr>
<td><em>to-for-\nāben</em></td>
<td>drive out, expel</td>
<td><em>iacere, de-pellere, di-vertere, ex-cludere</em></td>
</tr>
<tr>
<td><em>to-ess-\nāben</em></td>
<td>come, arrive, happen to, reach</td>
<td><em>venire, per-venire, pro-desse, pro-ficiscere</em></td>
</tr>
<tr>
<td><em>air-di-\nāben</em></td>
<td>excise, cut (out of, off)</td>
<td><em>con-cidere</em></td>
</tr>
<tr>
<td><em>eter-di-\nāben</em></td>
<td>cut off, slay, destroy</td>
<td><em>inter-imere</em></td>
</tr>
<tr>
<td></td>
<td>destroy</td>
<td><em>inter-imere, per-imere, ex-terminare, inter-ficere</em></td>
</tr>
<tr>
<td>Latin Word</td>
<td>English Meaning</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>imm-di-uben-</td>
<td>excise, circumcise</td>
<td></td>
</tr>
<tr>
<td>to-fo-uben-</td>
<td>cut, cut down, cut out, destroy</td>
<td></td>
</tr>
<tr>
<td>ad-to-air-ber-</td>
<td>bring back, deliver again</td>
<td></td>
</tr>
<tr>
<td>ad-uss-ber-</td>
<td>sacrifice, offer up</td>
<td></td>
</tr>
<tr>
<td>to-fer-ber</td>
<td>place under</td>
<td></td>
</tr>
<tr>
<td>frith-to-ber-</td>
<td>set against, oppose</td>
<td></td>
</tr>
<tr>
<td>imm-to-ber-</td>
<td>carry round, surround</td>
<td></td>
</tr>
<tr>
<td>rem-ess-ber-</td>
<td>say beforehand, say previously</td>
<td></td>
</tr>
<tr>
<td>to-ad-uss-ber-</td>
<td>display, show, bring forward, offer</td>
<td></td>
</tr>
<tr>
<td>to-air-ber</td>
<td>bend, bend down, incline, lower</td>
<td></td>
</tr>
<tr>
<td>to-uss-ber-</td>
<td>take away, deprive, defraud</td>
<td></td>
</tr>
<tr>
<td>to-ess-brenn-</td>
<td>flow, trickle, gush</td>
<td></td>
</tr>
<tr>
<td>fo-ad-can-</td>
<td>sing to, accompany in song</td>
<td></td>
</tr>
<tr>
<td>to-air-can</td>
<td>prophesize, foretell</td>
<td></td>
</tr>
<tr>
<td>to-in(de)-can-</td>
<td>chant, utter (spell)</td>
<td></td>
</tr>
<tr>
<td>imm-to-imm-cestā-</td>
<td>surround</td>
<td></td>
</tr>
<tr>
<td>to-imm-cestā-</td>
<td>descend, encompass</td>
<td></td>
</tr>
<tr>
<td>to-fo-in(de)-cid-</td>
<td>stretch forth</td>
<td></td>
</tr>
<tr>
<td>rem-ess-cheid-</td>
<td>stir up, disturb, drive away, agitate</td>
<td></td>
</tr>
<tr>
<td>com-air-ceilow-</td>
<td>change</td>
<td></td>
</tr>
<tr>
<td>com-imm-ceilow-</td>
<td>define, determine</td>
<td></td>
</tr>
<tr>
<td>ess-ro-coil-</td>
<td>return</td>
<td></td>
</tr>
<tr>
<td>di-ro-coin-</td>
<td>despair of</td>
<td></td>
</tr>
<tr>
<td>to-aith-icori-</td>
<td>exasperate, provoke</td>
<td></td>
</tr>
<tr>
<td>to-ad-verad-</td>
<td>buy back, redeem</td>
<td></td>
</tr>
<tr>
<td>to-aith-icrina-</td>
<td>share jointly, divide, apportion</td>
<td></td>
</tr>
<tr>
<td>com-fο-cestāi-</td>
<td>build to, build up</td>
<td></td>
</tr>
<tr>
<td>ad-com-uss-ding-</td>
<td>build up, restore, refresh</td>
<td></td>
</tr>
<tr>
<td>com-uss-ding-</td>
<td>build up, build up, embellish</td>
<td></td>
</tr>
<tr>
<td>ad-com-vel-</td>
<td>joint, unite</td>
<td></td>
</tr>
<tr>
<td>di-en-yell-</td>
<td>turn aside, deviate, bend, decline</td>
<td></td>
</tr>
<tr>
<td>fo-ad-com-yell-</td>
<td>subjoin</td>
<td></td>
</tr>
<tr>
<td>fo-in(de)-yell-</td>
<td>wander, rove</td>
<td></td>
</tr>
<tr>
<td>sechmo-in(de)-yell-</td>
<td>pass by, pass, neglect</td>
<td></td>
</tr>
<tr>
<td>to-in(de)-uss-yell-</td>
<td>gather, collect, assemble</td>
<td></td>
</tr>
<tr>
<td>air-fo-em-</td>
<td>accept, receive, assume, take</td>
<td></td>
</tr>
<tr>
<td>ess-to-gasci-</td>
<td>express</td>
<td></td>
</tr>
<tr>
<td>air-com-ęd-</td>
<td>hinder, prevent, injure</td>
<td></td>
</tr>
<tr>
<td>ess-in(de)-ęd-</td>
<td>declare, relate, tells, set forth</td>
<td></td>
</tr>
<tr>
<td>to-di-com-ęd-</td>
<td>subdue</td>
<td></td>
</tr>
<tr>
<td>rem-ess-in(de)-ęd-</td>
<td>tell beforehand, previously, predict</td>
<td></td>
</tr>
<tr>
<td>to-ad-ęd-</td>
<td>show, manifest, set forth, demonstrate</td>
<td></td>
</tr>
<tr>
<td>to-di-ęéd-</td>
<td>lead down, leads, bring</td>
<td></td>
</tr>
<tr>
<td>com-fo-fera-</td>
<td>provide</td>
<td></td>
</tr>
<tr>
<td>rem-fo-fera-</td>
<td>prepare, provide previously</td>
<td></td>
</tr>
<tr>
<td>air-in(de)-gab-</td>
<td>avoid, flee from</td>
<td></td>
</tr>
<tr>
<td>com-uss-gab-</td>
<td>lift up, raise, exalt</td>
<td></td>
</tr>
<tr>
<td>ess-in(de)-gab-</td>
<td>exceed, surpass, go beyond</td>
<td></td>
</tr>
</tbody>
</table>

**Greek Words:**

- **ab-scidere, circum-cidere:** pytissare, suc-cidere, in-cidere, abs-cidere, ex-cidere, truncare
- **re-digere:** ob-ferre, con-secrare
- **sub-ducere:** ob-dare
- **circum-dare:** praec-dicere
- **ad-hibere:** re-digere
- **privare:** ad-fluere
- **suc-cinere:** praec-cinere, pro-fiteri, vaticinari, ad-nuntiare
- **in-cantare:** cingere, ac-cingere, circum-dare, amb-ire, tegere, vallare
- **amb-ire, vallare:** discendere
- **praec-tendere:** ex-agere, agere
- **cambiare:** de-cernere
- **dif-fidere, di-sperare, nutare:** re-dire, re-vertere
- **ex-asperare, ex-acerbare, asperare:** re-dimere
- **participare:** ad-STRUERE
- **ad-STRUERE:** re-ficere, ad-ficere
- **ad-STRUERE:** con-iumgere, iungere
- **de-viare, di-versari, de-clinare:** sub-icer
- **sub-icer:** evagari
- **praeter-ire, oblivisci, omittere, vacuare:** colligere, ad-plicare, locare, occupare
- **in-venire, ex-cipere, ac-cipere, sus-cipere:** ex-primere
- **necere, im-pedire:** ex-ponere, ex-plicare, ob-serere, ferre, al-ligare, ad-serere, in-ducere, re-ferre, re-plicare, con-serere, am-plicare, ex-primere, per-stringere, ad-ferre, e-licere, de-scribere, re-textere
- **sub-ducere:** prae-fari
- **o-stendere, o-stentare:** in-ducere, de-ducere
- **com-parare:** prae-stare
- **re-fugere:** iactare, sub-levare, ad-tollere, efferre, e-levare
- **ex-cedere, ex-cidere:**
for
fo
to
frither
di
com
imm
for
di
ess
rem
imm
ad
fo-di
air-ne
rem
ess
com
com-to-ad
fo-to-ad
frith
air
ad
com
ad
ess
for
ad
ad
ad
di
to
ad
com
ad

imm
im
fo
com
rem
imm
to
frith
ad
smite, slay
strike
smite, slay
strike
press, compress, chastise
keep, preserve, retain
comprise, comprehend
subminister, fumigate
pass through, go over

avoid, shun, evade
raise up, produce, cause
commit, transgress
proclaim, give notice
command, order
call on, invoke
declare, tell
promise
converse together
be sufficient
pray
choose beforehand, pre-elect
meet, encounter, join
confer
substitute, supply
happen, occur, be made
be appropriate to
strike, cut, happen
cause, effect, bring about, bring
strike, hit a mark
regard, look at
look at, behold, see
introspect
looks after, regard, examine, consider
provide for, force
look, gaze (at)
look forward to, expect, hope
open
permit, allow, let go
fondle, caress, pacify
loosen, relax
disrupt
lay low, prostrate, throw down
cause, produce, make, affect
bear beforehand, anticipate
depart, escape, set out, start
be commemorated
forget
call to mind, commemorate
call to mind, commemorate
sin, transgress
promulgate, proclaim, announce
wash, wash away
command, enjoin
strike, pound

suf-
fire
suf-

pro-
ferre
polliceri, pro-mittere, de-signare
ad-loquere
suf-

praecubere
ac-cedere
con-
ferre
sub-
rogare
factum esse, posse
con-
venire, com-
petere
pulsare, con-
tingere
ferre, af-
ferre, con-
ferre, de-
ferre, in-
ferre, per-
ferre, praec-

ac-
cidit
re-
spicere
intro-
spicere, re-
spicere, e-
spicere, sentire
intro-
spicere
cor-siderare
con-
sulere, praec-
videre
per-
spicere
ex-
pectare, praec-
sto-lari, a-
perire, sperare
pandere, aperire, re-
serare, patere
di-
mittere, ad-
mittere, per-
mittere
fovere, con-
fovere, de-
lenire
solvere, re-
solvere
di-
rumpere
con-
sternare
ef-
icere, ex-
inanire, nasci, ap-
parire
anti-
cipare, praec-
venire
pro-
ficiscere
com-
memorare
oblivisci
memini
commemorare
delinqui, peccare
elicet, promulgare
luere, ab-
luere, lavare
mittere
conere, con-
trire
con-
fundere
ob-
tondere
at-
tere, de-
tere, pro-
terere, triturare, pulsare
castigare, ar
tare, coartare, angere
servare, manere
com-
prehendere

praecubere
ac-cedere
con-
ferre
sub-
rogare
factum esse, posse
con-
venire, com-
petere
pulsare, con-
tingere
ferre, af-
ferre, con-
ferre, de-
ferre, in-
ferre, per-
ferre, praec-

ac-
cidit
re-
spicere
intro-
spicere, re-
spicere, e-
spicere, sentire
intro-
spicere
cor-siderare
con-
sulere, praec-
videre
per-
spicere
ex-
pectare, praec-
sto-lari, a-
perire, sperare
pandere, aperire, re-
serare, patere
di-
mittere, ad-
mittere, per-
mittere
fovere, con-
fovere, de-
lenire
solvere, re-
solvere
di-
rumpere
con-
sternare
ef-
icere, ex-
inanire, nasci, ap-
parire
anti-
cipare, praec-
venire
pro-
ficiscere
com-
memorare
oblivisci
memini
commemorare
delinqui, peccare
elicet, promulgare
luere, ab-
luere, lavare
mittere
conere, con-
trire
con-
fundere
ob-
tondere
at-
tere, de-
tere, pro-
terere, triturare, pulsare
castigare, ar
tare, coartare, angere
servare, manere
com-
prehendere

suf-

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As shown in Table 45, the EPs are often calques from Latin. By contrast, there are virtually no cases in which the interior preverb(s) is(are) copied from Latin. Rather, the reduced composite resulting from the deletion of the EP usually corresponds to a Latin simplex verb, as exemplified in (19):
(19) OIr. *imm-tabair* (*imm*-to-√ber-) ~ Lat. *circum*-dare ‘carries around’ (Ml.41c2)

cf. OIr. *do-beir* (to-√ber-) ~ Lat. *dare* ‘give’ (e.g. Ml.25b12; Sg.163a3, 209b26).

In Ml.41c2, the influence of the Latin *circum*-dare even overrides the tendency of *to-* to occur as EP (cf. Sections 2.3 and 6).

The most evident Latin calques, underlined in bold in Table 45, follow: OIr. *com-* ~ Lat. *con-* ‘with’; OIr. *eter-* ~ Lat. *inter-* ‘between, among’; OIr. *fo-* ~ Lat. *sub-* ‘under’; OIr. *frith-* ~ Lat. *ob-*, *contra-*, *ad-* ‘against’; OIr. *imm-* ~ Lat. *circum-*, *ambi-* ‘about’; OIr. *rem-* ~ Lat. *ante-* ‘before, pre-’. Less regular correspondences to Latin can also be identified, such as OIr. *ad-* ~ Lat. *ad-*; OIr. *di-* ~ Lat. *ex-*, *de-*, *ab-* (a single Old Irish Source-preverb corresponds to three different Latin Source-preverbs; however, cf. below for OIr. *ess-*); OIr. *for-* ~ Lat. *super-*; OIr. *ess-* ~ Lat. *ex-*, *de-*; OIr. *in(de)*-~ Lat. *in-*; and OIr. *to-~* Lat. *ad-*, *per-*, *pro-* (cf. Rossiter 2004: 21–97).

Interestingly, calquing from Latin occasionally finds an explicit explanation in the glosses. In (20), the meaning of a multiple preverb composite, used to translate the Latin corresponding composite *intro*-spicio, is obscure, and elucidated by means of a reduced composite and an adverb equivalent to the EP: specifically, *etar-décai* ‘introspect’ is glossed by *do-ecai* ‘look at’ and *ind=inmedonach* ‘internally’.

(20) .i. *etir décai*.  i. *doécai*  *ind=inmedonach*
i.e. inter-look_at.PRS.3SG i.e. look_at.PRS.3SG ART.DAT=internal.DAT
‘i.e. he intro-spects, i.e. he looks internally’ (Ml.61a8)

Calquing from Latin is by no mean mechanistic. To begin with, there are exceptions to the general principle that only Old Irish EPs are calqued from Latin. In a number of composites, a full sequence of Old Irish preverbs corresponds to a single Latin preverb. A case in point is *do-róscai* (*di-ro-uss-scochī*) (lit.) ‘from-forth-up-move’ → ‘stand forth, distinguish oneself’, whereby the combination *di-ro-uss-* altogether translates the Latin preverbs *ante-*, *e(x)-*, or *prae-* (Latin equivalents for this composites are Lat. *ante-cedere*,
ante-stare, e-minere, prae-esse, and prae-stare). In other glosses, an Old Irish preverb corresponds to a Latin adverb, as shown in (21). Interestingly, the correspondence between the EP *imm- and *mutuo is also paired by the direct equivalence of the Old Irish IP *ac-(ad-) with Latin *ad-.*

(21) Old Irish EP *imm*– ‘about, mutually’ ~ Latin ADV *mutuo* ‘mutually’

OIr. *immu-s-ac-aldat* (*imm-ad-*√*glādī*)

P-3PL.ACC-P-converse.PRS.3PL

Lat. *mutuo* sé *ad-locuntur*

mutually REFL.ACC to-speak.PRS.3PL

‘They converse together.’ (Ml.131c19)

With other composites, calquing from Latin affects the verbal base, but not the usage of preverbs, which is divergent (cf. KPV: 487):

(22) OIr. *do-inmlig* (*to-en-uss-*√*mlig-*) (lit.) ‘to-in(to)-up-*√*milk’

Lat. *pro-mulgare* ‘forth-*√*milk’

PIE *h₂melg-* ‘milk’ (LIV²: 279)

‘promulgate, proclaim, announce’

In (22), both Old Irish *√*mlig- and Lat. *√*mulg-* go back to the same PIE verbal root and are employed to make up a non-compositional composite with the meaning of ‘promulgate, proclaim, announce’. The preverbs attached to the verbal bases however are different in Old Irish and in Latin.

Moreover, even the EPs that have been classified as evident calques from Latin do not always have an obvious Latin counterpart. For example, in the composites *con-éitet* (*com-en-*√*lēg-*) ‘go with, accompany, agree with’ and *imm-tascra* (*imm-to-*√*scarā-*)

---

18 The Old Irish and Latin verbs in fact show a further similarity: OIr. *ad-glādathar* ‘converse together’ is usually a deponent verb (though, in (21) above, it takes active inflection), as is its Latin equivalent *ad-loquor* ‘converse’.

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‘struggle together’, the order of preverbs is not the usual one (in particular, it does not conform to McConne’s hierarchy of preverb ordering, on which see Section 6). Thus, one might suspect that the EPs imm- and com- are subsequent additions, given the fact that these Old Irish preverbs frequently correspond to Latin circum-/ambi- and con-. This is however not the case: there are no Latin counterparts for con·éitet ‘agree with’ in the Priscian Glosses (Sg.197b17, 203a22), in which this composite is employed to elucidate, and not to translate, the main Latin text. Nor does the Latin equivalent for imm-tascra ‘struggle together’ contain a preverb: it is luctare ‘wrestle, struggle’.

3. The form of composites

3.1. The allomorphy of Old Irish preverbs

The form of Old Irish preverbs undergoes considerable variations, depending on whether they occur before, under, or after the accent. As pointed out by Anderson (2016: 210 ff.), the phonological content of preverbs occurring in pretonic position (i.e. before the so-called ‘juncture’) generally seem to be impoverished with respect to the same preverbs occurring under the accent. As a result, a number of preverbs merge together when they occur in pretonic position. For example, the preverbs ad- ‘to, toward’, aith- ‘re-, ex-’, in(d)- ‘in(to)’, ess- ‘out of’, and us(s)- ‘up, off’ all can become at- in prenuclear position (GOI: 495), as shown in Table 46, Table 47, and Table 48, which collect all the attested allomorphs for the preverbs ad- ‘to, toward’, aith- ‘re-, ex-’, in(de)- ‘in, in(to)’, es(s)- ‘out of, off’, and us(s)- ‘up, off’.

As explained by McConne (1997: 4–5), pretonic position prevents a number of sandhi phenomena usually occurring at the boundaries between two preverbs, or between a preverb and a verb base. For example, in pretonic position, (a) vowels are not elided (e.g. to-air-√can- ‘foretell’ becomes -taircheta:PRF.3PL in prototonic forms, but remains du-aírcet:PRET.3SG in deuterotonic ones); (b) consonant clusters are not assimilated or
Table 46. Allomorphy of Old Irish preverbs: *ad*- and *aith*- (from Anderson 2016: 220)

<table>
<thead>
<tr>
<th>Cit.</th>
<th>Prenuclear</th>
<th>Nuclear</th>
<th>Orthography</th>
<th>Phonology</th>
<th>Notes</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ad</td>
<td>_D, _r</td>
<td><em>ad</em></td>
<td>_D<em>ad-</em></td>
<td>'to, towards'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>_R</td>
<td>'ā'</td>
<td>_D<em>ā</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_C</td>
<td>'a-'</td>
<td>_D<em>ā-</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aith</td>
<td>_d, at</td>
<td><em>all</em></td>
<td>_D<em>āth-</em></td>
<td></td>
<td>'re-, ex-'</td>
<td></td>
</tr>
</tbody>
</table>

Examples:
*ad*- *ad-rími* (Wb14d2) *ni-áirmi* (Wb13d17)
aith-*ad-geúin* (Wb. 12c13) *ni-n-aithgeúin* (Ml.52x00)

Table 47. Allomorphy of Old Irish preverbs: *in*- and *ind*- (from Anderson 2016: 218)*

<table>
<thead>
<tr>
<th>Cit.</th>
<th>Prenuclear</th>
<th>Nuclear</th>
<th>Orthography</th>
<th>Phonology</th>
<th>Notes</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>in</td>
<td>_t, _e</td>
<td>'e-'</td>
<td>_D<em>a</em>ā<em>ē</em></td>
<td></td>
<td>'in, into'</td>
<td></td>
</tr>
<tr>
<td>_D, _D</td>
<td>'i-'</td>
<td>_D<em>a</em>ā<em>ē</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_R, s</td>
<td>'e-'</td>
<td>_D<em>ā</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ind</td>
<td>_p, s</td>
<td>'ind', 'int-'</td>
<td>_D<em>ō</em>ā<em>ā</em>ē-</td>
<td></td>
<td>'in, into'</td>
<td></td>
</tr>
<tr>
<td>_D, _R</td>
<td>'ind-'</td>
<td>_D<em>ā</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*According to Thurneysen (GOI: 518 ff.), *in* and *ind* belong to a single lemma (contra VGK: 451 ff.)

Examples:
in(de)- *in-túaisi* (Wb. 13a11) *ellachtae* (Ml. 84a6)

Table 48. Allomorphy of Old Irish preverbs: *es(s)*- and *us(s)*- (Anderson 2016: 221)

<table>
<thead>
<tr>
<th>Cit.</th>
<th>Prenuclear</th>
<th>Nuclear</th>
<th>Orthography</th>
<th>Phonology</th>
<th>Notes</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>es</td>
<td>_D</td>
<td>'es-'</td>
<td>_D<em>ē</em>as-*</td>
<td></td>
<td>'out of, off'</td>
<td></td>
</tr>
<tr>
<td>_R</td>
<td>'ē'</td>
<td>_D<em>ē</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_C</td>
<td>'e-'</td>
<td>_D<em>ā</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_?</td>
<td>'as-'</td>
<td>_D<em>ā</em></td>
<td></td>
<td>rare</td>
<td></td>
<td></td>
</tr>
<tr>
<td>us</td>
<td>_D</td>
<td>'us-'</td>
<td>_D<em>ā</em>as-*</td>
<td></td>
<td>'off'</td>
<td></td>
</tr>
<tr>
<td>_R</td>
<td>'ō', 'uš', 'ū-'</td>
<td>_D<em>ē</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>_C</td>
<td>'o-', 'u-'</td>
<td>_D<em>ā</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples:
*ess*- *as-beir* (Wb. 4d23) *ni-eipir* (Wb. 25d4)
*us*- (no relevant examples) *con-úala*
eliminated (e.g. *ad-ro-\sqrt{slī}- ‘deserve, be entitled to’ becomes -áirilli in prototonic form, but remains *ad-roiilli in deuterotonic form). By contrast, in pretonic position, preverbs undergo a number of changes that generally characterize Old Irish proclitics (McCone 1997: 5): for example, (a) the voicing of a dental in contact with a proclitic vowel (e.g. *to-ess-\sqrt{sem}- ‘shed, pour out’ gives deuterotonic do-eissim, but prototonic -tessim); (b) the tendency of retracting the articulation of proclitic vowels (e.g. *u > o, cf. com-di-\sqrt{sag}- ‘ask, seek, demand’ gives deuterotonic con-dieig and prototonic -cuindig).

The switch to the prototonic forms also causes a number of changes that are triggered by the loss of stress undergone by the IP or by the verb base. Such changes include the following: (a) the shortening of long vowels in unstressed syllables (e.g. *in(d)-\sqrt{fēd}- ‘tell, relate, make known’ gives deuterotonic *in-fēt, but prototonic -*indet), (b) a divergent syncope due to the adding of an extra preverb and the consequent resyllabification (e.g. *com-uss-\sqrt{anā}- ‘cease, stop, desist, remain, end in’ gives deuterotonic con-*os*na, but prototonic -cum*sa, in which the asterisk indicates the position of the syncope). Syncope in turn triggers a number of further sandhi effects: for example, when it produces consonant clusters, the quality of those consonants undergoes assimilation. The sandhi effects, such as those described above, produce a wide range of allomorphs for Old Irish preverbs. Such allomorphs are thoroughly described in GOI (495 ff.) and investigated by Anderson (2016: 210 ff.), who provides tables similar to Table 46, Table 47, and Table 48 for the full catalogue of Old Irish preverbs.19

Importantly, these complex sandhi phenomena can obscure the morphological segmentation of composites, as anticipated commenting Table 42. For example, the composite *in-árban ‘drive out, expel’ is analyzed differently by different authors, as shown in (23):

\begin{equation}
\text{(23) The segmentation of the composite *in-árban ‘drive out, expel’}
\text{a. *in(de)-air-uss-\sqrt{ben}-
`in-before-up-cut’}
\end{equation}

\footnote{19 A number of apparent changes between deuterotonic and prototonic forms are merely orthographical (McCone 1997: 8; cf. also McCone’s useful Appendix on Old Irish spelling rules: McCone 1997: 267 ff.).}
(VKG II: 463; Anderson 2016)

b. \textit{in(de)-ad-ro-uss-\text{\textbackslash}ben-}  
   ‘in-to-forth-up-cut’  
   (KPV: 227; Milan and Priscian Glosses databases)

3.2. \textit{Augment and preverbs}

As in other ancient Indo-European languages, Old Irish lexical preverbs interact with other pieces of preverbal morphology. Differently from the other languages, however, in which the augment goes back to an anaphoric/deictic particle (cf. e.g. LIPP II: 179, and references therein), the Old Irish so-called ‘augments’ or ‘temporal preverbs’ (\textit{ro-}, rarely \textit{ad-} and \textit{com-}, and very rarely other preverbs; cf. Section 1.2.3) used to function only as lexical preverbs at a preceding stage, and as such used to be subject to the same positional constraints as lexical preverbs (McCone 2006: 204 ff.).

The most widespread among Old Irish augments is the preverb \textit{ro-}, which can occur either in a fixed or movable position. The so-called fixed \textit{ro-} is usually placed directly before the verbal root (GOI: 339), as shown in (24). The augments less frequent than \textit{ro-}, i.e. \textit{ad-} and \textit{com-}, also occur in this position (GOI: 344 ff.), as exemplified in (25). The augments occupy this position especially with strong verbs.

\begin{center}
(24) \text{\textit{ma-du-gneu inna-hui [huili] remi-a-r-burt}}  
\end{center}
\text{if-of-do.SBJV.PRS.1SG ART.ACC.PL-all.ACC.PL fore-out_of-AUG-say.PRF.1SG}

‘If I would do everything that I have said previously.’ (Ml.23c24)

\begin{center}
(25) \text{[\textit{du}]-da-im-chom-arr di-a-chomallad}  
\end{center}
\text{to-3PL.ACC-about-AUG-press.SBJV.PRS.1SG to-3SG.GEN-fulfilling.DAT}
\text{tri-fochaidi 7 ingraimmen}
\text{through-trial.ACC.PL and persecution.ACC.PL}

‘…who would constrain them to its fulfillment through tribulations and persecutions.’ (Ml.77a12)
With weak verbs, instead, the augment \( ro- \) is movable, in that it changes its positioning within the composite so as to invariably occur after the preverb or particle in pretonic position (GOI: 440), as shown in (26). In (26)a-b, the same composite occurs, that is, \( con\-osna \) (\( com\-uss-\( \sqrt{an\-a} \)\)) ‘cease, stop, desist, remain, end in’; in (26)a, \( ro\- \) is placed after the EP \( com\- ‘with’, whereas in (26)b it is positioned more externally then the EP, after the negative particle \( ní\).

(26) a. The augment \( ro\- \) after the EP \( com\- \\
co\-ro\-s-an [conrosan]
with-AUG-up-stop.PRF.3SG
‘That is stopped.’ (Ml.113c5)

b. The augment \( ro\- \) after the negation and before the EP \( com\- \\
ní \ ru\-chum-s-an-us-sa
NEG AUG-P-P-stop-PRF.1SG-EM.1SG
‘I did not stop’ (Ml.94b14)

The position of fixed \( ro\-\), which is undoubtedly the older of the two patterns (GOI: 340; Lewis & Pedersen 1961[1937]: 252), can be explained as follows. A first motivation for its placement is connected with the interaction between the preverbal origin of these augments and the process of accretion (cf. Sections 2.3, 4.3, and 6.1) that characterizes the growth of multiple preverb composites in Old Irish. In addition, McCone (2006: 207) suggests that a relevant role might have been played by “the possibility of attaching a preverb such as telic \( ro\- \) to certain others such as \( di\- \) ‘from’ or \( ess\- \) ‘out’ in order to bring out the completed nature of the action implied.” McCone backs up this suggestion based on the evidence that the sequences \( *eks\-ro\- \) and \( *di\-ro\- \) are known both in Old Irish nominal and verbal formations. Thus, they appear to make up stable pairs of preverbs (i.e. double preverbs) that could be added at once to a simplex verb.

McCone (2006) also argues that even the original fixed \( ro\- \) could be displaced from the position immediately preceding the verbal base under certain conditions, specifically in
presence of a restricted number of IPs, including -ne- ‘down’, and -uss- ‘up, off’, as exemplified in (27):

(27) a. The IP -ne- ‘down’ in the composite ar-neāt ‘expect, await’
   ci-d       ar-rú-naid
   even-be.SBJV.PRS.3SG P-AUG-down-expect.PRF.3SG
   ‘he even expected’ (Ml.68a6)

b. The IP -uss- ‘up, off’ with the composite con-oscaigi ‘move, change’
   com-ro-[o]s-caigis-siu
   P-AUG-up-move.PRF.2SG-EM.2SG
   ‘you have moved’ (Ml.21d7)

The relative positioning of the grammaticalized augment ro- and the IPs -ne- ‘down’ and -uss- ‘up, off’ contributes to backing up the hypothesis that -ne- and -uss- show an outstanding lexical intergration with the verbal bases onto which they attach. In the same vein, Lewis & Pedersen (1961[1937]: 252) observe that, in compounds such as those in (27), the last (i.e. the innermost) preverb “had become inseparable from the verb.”

4. The semantics of multiple preverbs

4.1. Preverbs with spatial, abstract, and actional meanings

As discussed in Sections 1.2.3 and 3.2, Old Irish possesses a number of fully grammaticalized preverbs, which either have perfectivizing function (i.e. ro-, ad-, com-), or work as hosts under certain morphosyntactic conditions (i.e. no-). Apart from these grammatical functions, Old Irish preverbs modify at a lexical level the verbs onto which they attach. This is also true for the preverbs that developed into perfective markers, as
shown in (28)-(30). For example, the paradigmaticized perfective preverb ro- only rarely brings about lexical contributions to the verb; however, lexical contributions are far more frequently brought about by the non-paradigmaticized perfective markers ad- and com- (cf. further the spatial meanings associated to ess- in examples (31) and (32)).

(28) **Lexical ro-**: do-róscai (di-ro-us-
\[\text{scōchī}\]-) ‘stand forth’ (Lat. *prae-stare*)

*duróscai*

stand_forth:PRS.3SG

‘it stands forth’ (Ml.113a9)

(29) **Lexical ad-**: imm-accaldathar (imm-ad-
\[\text{glādī}\]-) ‘address each other’

*immu-s-ac-aldat* (imm-ad-
\[\text{glādī}\]-)

P-3PL.ACC-P.converse.PRS.3PL

‘They converse together.’ (Ml.131c19 = (21))

(30) **Lexical usage of com-**: com-en-
\[\text{lēg}\]- ‘go with, agree with’ (Lat. *con-stare*)

*dús imbed* [do]=duaid \(\overset{\text{D}}{\text{aitsis}}\) \(\overset{\text{fa}}{\text{}}\)

whether be.SBJV.PST.3SG to \(\overset{\text{D}}{\text{DAT}}\) go_with.SBJV.PST.3PL or \(\overset{\text{D}}{\text{}}\)\(\overset{\text{PL}}{\text{DAT}}\)\(\overset{\text{POSS}}{\text{3SG}}\)=enemy.DAT.PL

‘Whether they should favor David or his enemies.’ (Ml.87c4)

In (28), the IP *ro-* means ‘forth’ within the composite *di-ro-us-
\[\text{scōchī}\]- (lit.) ‘of-forth-up-move’, which develops the non-spatial meaning of standing forth, being pre-eminent. The entire combination of the Old Irish preverbs *di-ro-us-* corresponds to Latin *prae-* ‘pre-, fore-’ (cf. Section 2.4). In (29), the IP *ad-* ‘to, toward’ introduces the Addressee of a communication verb (the root \[\text{glādī}\]- is exclusively employed with *ad-* occurring as IP,

---

20 This is not the case for no-, which is never used as a lexical preverb. Its origins explain its behavior. The preverb no- does not belong to the so-called category of Indo-European ADVS-PREVS-ADPS (in Cuzzolin et al.’s 2006 terms). It rather goes back to the PIE temporal adverb *nū ‘now’, which shows reflexes also functioning as sentence connectors, notably MW *neu* and Hitt. *nu* (GOI: 348; Lewis & Pedersen 1961[1937]: 259).
most likely due to the semantic solidarity between the preverb and the verbal base). In (30), the EP com- retains its basic meaning of togetherness, whereas the whole composite develops the non-compositional meaning of ‘agreeing with’ from the basic meaning of ‘going with’.

Preverbs can modify the verb adding different types of meanings: (a) spatial; (b) abstract, or (c) actional. A number of preverbs such as ess- ‘out of’ and fo- ‘under’ both retain their spatial meanings (31) and gain new but still spatial semantics (32):

(31) **Basic meanings of ess- ‘out of’ and fo- ‘under’**

a. *is-áilgen do-neprinn*
   
   be.PRS.3SG-mild.NOM flow.PRS.3SG
   
   ‘Gently it flows’ (Sg.145a4)

b. *lase fu=tabair*
   
   when under-place.PRS.3SG
   
   ‘When he places under…’ (Ml.40d2)

(32) **Non-basic spatial usage of ess- ‘out of’ and fo- ‘under’**

a. *ní=æscomlai*
   
   NEG=go.away.PRS.3SG
   
   ‘It does not go away’ (Sg.3a6)

b. *ní=zfītetar a-rrig foragabsat*
   
   NEG=know.PRET.3PL POSS.3PL-king.ACC leave_behind.PRF.3PL
   
   di=a=nës
   
   of=POSS.3PL=track.DAT
   
   ‘They do not know their king whom they had left behind them.’ (Ml.95a12)

In (31), the composites *do-eprainn (to-ess-\brenn-)* ‘flow, trickle, gush’ and fo-tabair (fo-to-\ber-) ‘place under’ contain the IP ess- and the EP fo- retaining their original spatial semantics. In (32), instead, the same preverbs develop the new spatial meanings of ‘away from’ and ‘behind’ in the composites as-comlai (ess-com-\lu-) ‘depart, escape, set out, start’, and fo-acaib (fo-ad-\gabi-) ‘leave behind’. The preverb ess- loses its elative
component in favor of a more generic ablative value; the preverb fo- comes to mean ‘behind’ based on the following frequent analogical equation: ‘ABOVE’ : ‘BENEATH’ = ‘BEFORE’ : ‘BEHIND’ (cf. Luraghi 2003: 226 on the cognate AG preposition hupó ‘under’; see also Chapter 4). Note further that ess- shows spatial semantics both as an EP and as an IP. This is a first suggestion that neither lexical nor actional meanings are associated to a specific positioning with respect to the verbal base.

Old Irish preverbs also gain various types of abstract but still lexical meanings more or less directly connected with their basic meaning. For example, both the preverbs air- and aith- can mean ‘again’, as shown by examples (33):

(33) Meaning ‘again’ expressed by air- ‘before, for’ and aith- ‘re-, ex-’

a. arutraing (air-us∑√ding-) ‘build, re-store, re-fresh’
    arutraing
    refresh.PRS.3SG
    ‘Which refreshes.’ (Ml.64c20; Lat. re-ficere)

b. ad·éirrig (aith-ess-√rig-) ‘re-peat, re-iterate, change, emend’
    is·airi aderrig-som
    be.PRS.3SG-for.3SG.N repeat.PRS.3SG-EM.3SG.M/N
    for=sa=nimchomarc fo=di
    on=ART.ACC.N=question.ACC under=two.ACC.DU.F
    ‘It is therefore that he repeats the question twice.’ (Ml.46a21; Lat. re-petitio)

How do these preverbs come to mean ‘again’? The basic meaning of air- is ‘before’: going back before an event can carry the implication of repeating such an event. The preverb aith-, instead, allegedly goes back to PIE *àto, áti ‘behind, again, away’ (LIPP II: 94 ff.): in parallel to what has been outlined for air-, going behind an event can bear the implication of going before it, and thus repeating such an event. These examples show that different preverbs can express quasi-equivalent meanings: thus, the occurrence of one or another preverb in a certain composite is an idiosyncratic lexical fact.

Other preverbs with abstract meanings are exemplified in (34) and (35):
In (34), in the composite *imm-tascra* (*imm*-to-*scarā*) ‘struggle together’, the EP *imm*-‘with’ (Comitative) develops a reciprocal meaning: if two humans are fighting together, they are likely to be fighting against one another (cf. also example (5)). In (35), *fo*- ‘under’ means ‘secretly’ on account of the following semantic shift: **UNDER** > **BENEATH** > **BEHIND** > **INVISIBLY** > **SECRETLY**.

In addition, multiple preverbs of Old Irish can bring about various kinds of actional modifications: (a) **Ingressive**, e.g. *con-osna* (*com*-uss-*anā*) ‘cease, stop, desist, remain, end in’ (36); (b) **Resultative**, e.g. *aroím* (*air*-fo-*em*) ‘accept, receive, assume, take’ (37); (c) **Intensive**, e.g. *ad-cuimben* (*aith-com*-ben) ‘cut, strike, wound, lacerate’ (38); (d) **Telic**, e.g. *etar-diben* (*eter-di*-ben) ‘destroy’ (39).

(34) *immethascrat*

struggle_together.PRS.3PL

‘who wrestle’ (ML.118c11; Lat. *luctantium*:PTCP.PRS.GEN.PL)

(35) *fothonsnát [fochosnat]*

steal.PRS.3PL

‘which steal’ (ML.43a8; Lat. *sub-ripiunt*:PRS.3PL)

(a) Ingressive *com-in=ru-chumsan*

PTC.INT=AUG-cease.PRS.3SG

‘has it ceased?’ (ML.32d26; Lat. *con-quiescere* ‘to become quiet’)

(b) Resultative *air-acht a-frescastae i. ni frisaiccai*

but ART.ACC.N-hoped.ACC.N that_is INDF.ACC.N hope.PRS.2SG and

*arafoimi iarum*

receive.PRS.2SG after.3SG.DAT.N

‘but the thing hoped, i.e. something that you hope for and that you receive afterward.’ (ML.68a8; cf. Lat. *sus-cipere* ‘take up’)

328
(38) **Intensive aith- and com-**

\[ \text{Intensive aith- and com-} \]

\[
\begin{align*}
\text{huilliu} & \quad \text{adcumnet} & \quad \text{indatae} & \quad \text{chlaïdib} \\
\text{more\_greatly} & \quad \text{wound.PRS.3PL} & \quad \text{than} & \quad \text{sword.NOM.PL}
\end{align*}
\]

‘(It is) more greatly that they wound than swords.’ (Mi.77a1)

(39) **Telic eter- and di-**

\[ \text{Telic eter- and di-} \]

\[
\begin{align*}
\text{co=etar=dam-dibiti-se} \\
\text{in\_order\_that=P=1SG.ACC-destroy.SBJV.PST.3PL-EM.1SG}
\end{align*}
\]

‘in order that they might destroy me.’ (Mi.54d14; cf. Lat. *inter-ficere*)

Neither lexical nor actional meanings are associated with a specific position with respect to the verbal base. An IP can have lexical or actional meanings: in (31), for example, the IP *ess-* has a lexical spatial meaning; in (38)–(39), the IPs *com-* and *di-* bring about actional meanings, which are then reinforced by the addition of a further preverb, in some cases such as (39), based on a calque from Latin. In parallel, the above examples also show that EPs can carry about both lexical (cf. (31)–(35)) and actional semantic contributions as well (cf. (36)–(37)).

It is very difficult to find Old Irish composites in which two or more preverbs retain clearly detectable spatial meanings. Far more frequently, two (or more) preverbs with a similar spatial semantics attach onto the same verbal base. Otherwise, the meaning of (one of the) preverb(s) show(s) semantic solidarity with that of the modified verbal stem. In other words, Old Irish composites frequently show some kind of semantic redundancy (Section 4.3). This situation is arguably due to the high degree of lexicalization shown by Old Irish preverbs and to the process of accretion underlying multiple preverb composites, whereby a further preverb is attached to an already lexicalized composite (cf. Sections 2.3 and 6).

However, a consistent group of composites containing two spatial specifications can be identified. In these formations, an interior *to-* adds a deictic specification to a motion verb, which is then specified by a further spatial preverb, added more externally than *to-* possibly as a result of a calque from Latin (cf. also (31)): 

329
(40)  *frís-táit* (*frith*-to-√lēg-) ‘come against, be at variance with, oppose’
    > *do-tét* ‘come’, that is, (lit.) ‘go **back**’
    > *tét* ‘go’

In (40), the addition of to- to a verb of going results in a verb of coming. According to Stifter (2014: 238–239), this reversative meaning of to- is connected with its ‘back’ meaning, shown by several Old Irish composites such as *do-intai* ‘turn **back**, return’, *do-rá* ‘row **back**’, and *do-reith* ‘run **back**’.

By contrast, composites containing two actional or two lexical (but non-spatial) preverbs can be detected. As for composites containing two actional preverbs, see examples (38)–(39). Instead, a good example for a composite containing two non-spatial lexical preverbs is provided in (41):

(41)  **Two non-spatial lexical preverbs:**
    *remitepir* (*rem*-ess-√ber-) ‘say beforehand, say previously’ (Lat. *prae*-dicere)
    > *as-beir* (ess-√ber-) ‘say to, speak’
    > *beirid* ‘carry, bring’

As emerges from the process of recomposition displayed in (41), the EP *rem*- is a later addition, probably modelled on Latin *prae-* to an already non-compositional composite, that is, *as-beir* (ess-√ber-) ‘say to, speak’. The composite *as-beir* in turn contains the preverb *ess*- ‘out of’. This preverb arguably describes the metaphorical motion performed by words or utterances *out of* speakers’ mouth/body, which are conceptualized as containers (on the Container-metaphor, cf. Chapter 1; Chapter 2, Section 1.1).

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21 Cf. the Italian and English idioms *tirar fuori* le parole di bocca ‘get the words **out of** one’s mouth’ > ‘force one to speak’, or Engl. *get it out!* ‘tell this!’.
4.2. *Same preverbs, different meanings*

As is implied in the discussion of Section 4.1, Old Irish preverbs are polysemous elements. Some of them, specifically *ro-, ad-, and com-*, instantiate a two-fold path of development: on the one hand, they underwent grammaticalization into bounder perfectives; on the other hand, they gained new lexical meanings, occasionally making up non-compositional composites. In Section 4.1, I also touched upon a number of new meanings gained by a number of Old Irish preverbs, that is, *air- ‘before, for’, aith- ‘re-, ex-’ di- ‘of, from’, ess- ‘out of’, eter- ‘between, among’, fo- ‘under’, and imm- ‘about, mutually’. It is impossible to discuss here all the semantic shifts summarized in Table 51: each of them in principle deserves a separate treatment. Here, I exemplify the development of Old Irish preverbs by means of *fo- ‘under’, which is the most polysemous preverb in the Milan and in the Priscian Glosses (cf. Table 51).

In Section 4.1, we saw that *fo-* can retain its basic meaning of ‘under’ (31) and develop the new spatial meaning of ‘behind’ (32); the linkage between these two meanings was also discussed. In addition, it has been shown that the lack of visibility constitutes the clue to accounting for the shift into ‘secretly’, shown in (35). Other meanings of *fo-* are more directly connected with ‘under’. The meaning of support, exemplified in (42), is one such:

(42) *The composite* **fodéinti** (*fo-di- √gnī-*) ‘be sufficient’ (Lat. *suf- ficere*)

\[
\begin{align*}
\text{du-n-chlaind} & \quad \text{bed} & \quad \text{fodeinti} \\
\text{to-ART.DAT-child.DAT be.SBJV.PST.3SG} & \quad \text{be_sufficient.GER} \\
\text{‘For the child which should be sufficient’ (Ml.107a10)}
\end{align*}
\]

As remarked in eDIL (ie/22590), *fodéinti* is an artificial formation, whereby the EP *fo-* is calqued from Latin *sub- (suf- in (42)) and -děni* (i.e. the prototonic form of *do-gnī*) corresponds to Latin *fацио ‘do, make’.*
The preverb *fo-* means ‘at a lower level’ in a couple of Old Irish composites: in *fo·éitsi* (*fo*-in(*de*)-\(tōsī\)), it functions as ‘under-’ in ‘under-stand’ or ‘under-lying’, in which ‘under-’ indicates an implied, or subsumed, meaning:

(43)   \[foéitsider\] \[hi-suidiu\] \[deus\]  
understand.PRS.3SG.PASS   in-ANA.3SG.DAT.N   D.NOM  

‘Deus is understood here.’ (Ml.34d5)

The preverb *fo-* has a similar value in *fo·acain* (*fo*-ad-\(can\)) that means ‘accompany in song’, that is, ‘play music in the background’ (cf. Sg.167a2). The value ‘at a lower level’ is also the key to drawing a link with the meaning of *fo-* in *con·fodlai* (*com·fo*-\(dālī\)) ‘sub-divide and share jointly (what has been previously divided)’.

Another meaning instead derives from the lack of visibility occasionally implied by *fo-*., specifically ‘in place of’, which is instantiated in *fo·tairci* (*fo*-to-ad-\(ro\)-icc-) ‘substitute, supply’. In this composite, only the preverb *fo-* retains a detectable meaning, arguably as it is a later addition calqued from Latin *sub-rogare*.

The composite *foindarbaide* (*fo*-in(*de*)-ad-\(ro\)-uss-\(ben\)) ‘be relegated, be subjected’ instantiates a further group of metaphors typically associated with preverbs that originally mean ‘under, down’ or ‘on, up’: HAVING CONTROL OR FORCE IS UP, LACKING CONTROL OR FORCE IS DOWN (i.e. UNDER). Accordingly, *fo-* is also connected with the notions of impact, collision, and attack, as in *fo·fūasna* (*fo*-uss-\(anā\)) ‘perturb, disturb’ (cf. *con·osna* (*com-uss*-\(anā\)) ‘cease, stop, desist, remain, end in’, which lacks these notions, as it also lacks *fo-*): impacts, collisions, and attacks imply lack of control on the part of the struck entity. When the notions of impact, collision, and attack are already implied in the verbal base, the preverb becomes obsolete in its spatial usage, and thus comes to indicate completion via the so-called Vey-Schooneveld effect (cf. in particular Chapter 5): e.g. *do·fuiben* (*to·fo*-\(ben\)) ‘cut down, cut out, destroy’ vs. *benaid* ‘cut, beat’.

As preverbs are polysemous morphemes, their combinations are also expected to express a range of different meanings. However, polysemy is not easy to observe for preverb combinations. First, most combinations (95 out of 115) are instantiated in only one
or two composites (cf. Section 2.3). This suggests that multiple composition is (or used to be) a productive process, whereby preverbs, carrying their basic or non-basic meanings, successively combine with verbal bases as single units (but see Section 3.2, and McCone 2006: 2 on two possible fixed multiple preverb combinations). Second, the meaning of Old Irish MPs and IPs is frequently difficult to detect, as multiple preverb composites arguably originate in a step-by-step recomposition or accretion of an already lexicalized formation. Thus, only the semantic contribution of the EP tends to remain recognizable.

4.3. Different degrees of compositionality

Identifying the semantic contribution brought about by each element of Old Irish composites is by no means trivial for various reasons. To begin with, Old Irish preverbs are very advanced in their lexicalization processes. Thus, frequently, only the EP, i.e. the last preverb being added to the composite, retains a clearly detectable meaning (cf. Section 4.2, and the discussion on the range of new meanings gained by *fo-* ‘under’).

Moreover, multiple preverb composites can show different meanings in the two different collections of glosses (cf. Section 2.1), as well as in different contexts. These polysemous composites can also exhibit various degree of compositionality, as shown in (44) and (45) (Latin equivalents are indicated only if relevant):

(44) Partially compositional vs. non-compositional meaning

\[
\text{remi-décai (rem-di-en-√kwis-)} \quad \text{‘fore-see’ (Lat. prae-videre)}
\]

vs. ‘provide for’ (cf. Latin *consulere*)

\[
\text{do-róscáí (di-ro-uss-√scochí-)} \quad \text{‘stand forth’ (Lat. prae-stare)}
\]

vs. ‘distinguish oneself (Lat. *eminere*)’

\[
\text{con-oscaígi (com-uss-√scochí-)} \quad \text{‘move, remove’ vs. ‘change, shake, upset’}
\]

\[
\text{con-tó} (\text{com-to-√sow-}) \quad \text{‘turn’ vs. ‘convert, change’}
\]

\[
\text{do-intáí (to-in(de)-√sow-)} \quad \text{‘turn back, return’ vs. ‘translate’}
\]

\[
\text{sechmo-ella (sechmo-in(de)-√ell-)} \quad \text{‘pass by, pass’ (Lat. *praeter-ire)}
\]

vs. ‘neglect’ (Lat. *omittere*)

(45) Compositional vs. non-compositional

\[
\text{fris-táit (frith-to-√tēg-)} \quad \text{‘come against’ (Lat. contra-venire)}
\]

vs. ‘is at variance with, oppose’ (Lat. *op-ponere*)
In addition, though a certain composite results in a non-compositional formation, it might be the case that the semantic contribution of its parts is still traceable (certainly by the linguist, and possibly by the speaker as well). Cases in point are the following: *ad-opair* (ad-uss-√ber-) ‘sacrifice, offer up’ (lit.) ‘to-up-offer’; *fo-acain* (fo-ad-√can-) ‘sing to, accompany in song’ (lit.) ‘under-to-sing’; *ar-foichlea* (air-fo-√cēllā-) ‘look after, take care of, attend to’ (lit.) ‘before-under-go around’; 22 *con-imchloí* (com-imm-√clow-) ‘change’ (lit.) ‘with-around-turn’; *imm-fogni* (imm-fo-√gnī-) ‘be construed with (gramm.)’ (lit.) ‘around-under-do’, ‘serve around’; *fris-accai* (frith-ad-√kwis-) ‘look forward to, expect, hope’ (lit.) ‘against-to-look’; *do-romnathar* (di-ro-√mani-) ‘forget’ (lit.) ‘away from-completely-think’; *con-tetarrat* (com-to-eter-√reth-) ‘comprise, comprehend’ (lit.) ‘with-to-between-run’.

Lastly, the semantic contribution of certain preverbs, though still detectable, is redundant. Either the meanings of the preverbs overlap with one another (46), or the meaning of one of the preverbs, usually but not exclusively the IP (cf. (47)g), shows semantic solidarity with the verbal stem onto which it attaches (47).

(46) Composites containing preverbs with overlapping meanings
a. *ad-tairbir* (ad-to-air-√ber-) ‘bring back, deliver again’ (Goal+Goal)
b. *do-adbair* (to-ad-uss-√ber-) ‘display, show, bring forward, offer’ (Goal+Goal)
c. *do-essuirg* (di-ess-√org-) ‘smite, show’ (Goal+Source)
d. *do-inchain* (to-in(de)-√can-) ‘chant, utter’ (Addressee+Addressee)
e. *in-togair* (in(de)-√gari-) ‘call on, invoke’ (Addressee+Addressee)

(47) Composites containing a redundant preverb
a. *do-eipen* (to-ess-√ben-) ‘excise, cut (out of, off)’ (Source-P+cut)
b. *ar-diben* (air-di-√ben-) ‘cut off, shave, destroy’ (Source-P+cut)
c. *etar-diben* (eter-di-√ben-) ‘destroy’ (Source-P+cut)
d. *imm-diben* (imm-di-√ben-) ‘excise, circumcise’ (Source-P+cut)
e. *do-eprainn* (to-ess-√brenn-) ‘flow, trickle, gush’ (out_of+spring)
f. *fo-teissim* (fo-to-ess-√sem-) ‘pour down, pour out’ (out_of+pour)
g. *do-fonaig* (di-fo-√nig-) ‘wash, wash away’ (away_from+wash)
h. *con-dieig* (com-di-√sag-) ‘ask, seek, demand’ (Source-P+ask)
i. *do-foscart(a)* (di-uss-√scart(ā)-) ‘remove, put aside’ (Source-P+up+remove)

22 Cf. the AG noun *amphi-polos* ‘maiden’, (lit.) ‘the one who moves around (the master)’ for a similar semantic development (DELG: 877).
j. *do-imchella* (to-*imm*-√cēllā-∗) ‘surround, encompass’ (around+go_around)

k. *do-aidlea* (to-*ad*-√ell-∗) ‘come to, approach, visit, touch’ (Goal+go)

l. *imm-accaldathar* (imm-*ad*-√glādī-∗) ‘converse together’ (Addressee+talk)

m. *re·mi·uisced* (rem-*uss*-√gus-∗) ‘choose beforehand, pre-elect’ (up+choose)

n. *do-rochoíni* (di-*ro*-√coin-∗) ‘despair of’ (intensive+lament)

o. *con·fodlai* (com-*fo*-√dālī-∗) ‘share jointly, divide, apportion’ (sub+divide)

The composite at (47)i is particularly remarkable: the meanings of both the EP and the IP can be regarded as redundant. Both *di*-‘of, from’ (Source-P) and *uss*- ‘up, off’ (up+Source-P) are subsumed by the semantics of the root √scart(ā)- ‘remove’: the event of removing implies a TR moving upward and away from a LM.

I classify as ‘partially compositional’ all the composites outlined above, as they escape a clear-cut semantic categorization. Partially compositional composites can belong to different sub-categories: (i) composites in which only the EP retains a detectable meaning; (ii) polysemous composites; (iii) lexicalized composites still analyzable by the linguist (and possibly by the speaker); (iv) composites with redundant preverbs. Partially compositional composites, displayed in Table 49, constitute the majority of Old Irish composites (110 out of 178):

<table>
<thead>
<tr>
<th>Composite</th>
<th>Segmentation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>do·futhraccair</em></td>
<td>di-fo-tre-√acc-</td>
<td>desire, wish</td>
</tr>
<tr>
<td><em>imm·comairc</em></td>
<td>imm-com-√arc-</td>
<td>question, ask, inquire of</td>
</tr>
<tr>
<td><em>ar·díbdai</em></td>
<td>air-di-√bādī-</td>
<td>submerge, drown, sink, wreck</td>
</tr>
<tr>
<td><em>do·aithbig</em></td>
<td>to-aith-√beg-</td>
<td>dissolve, break up</td>
</tr>
<tr>
<td><em>airdbidi</em></td>
<td>air-di-√ben-</td>
<td>be destroyed, be cut off</td>
</tr>
<tr>
<td><em>do·eipen</em></td>
<td>to-ess-√ben-</td>
<td>excise, cut (out of, off)</td>
</tr>
<tr>
<td><em>ad·cuimben</em></td>
<td>aith-com-√ben-</td>
<td>cut, strike, wound, lacerate</td>
</tr>
<tr>
<td><em>ar·diben</em></td>
<td>air-di-√ben-</td>
<td>cut off, slay, destroy</td>
</tr>
<tr>
<td><em>etar·diben</em></td>
<td>eter-di-√ben-</td>
<td>destroy</td>
</tr>
<tr>
<td><em>imm·díben</em></td>
<td>imm-di-√ben-</td>
<td>excise, circumcise</td>
</tr>
<tr>
<td><em>do·fubien</em></td>
<td>to-fou-√ben-</td>
<td>cut, cut down, cut out, destroy</td>
</tr>
<tr>
<td><em>do·immedibien</em></td>
<td>to-immedibien</td>
<td>cut away, shorten</td>
</tr>
<tr>
<td><em>ad·taibr</em></td>
<td>ad-to-aibr-</td>
<td>bring back, deliver again</td>
</tr>
<tr>
<td><em>ad·opair</em></td>
<td>ad-usss-√ber-</td>
<td>sacrifice, offer up</td>
</tr>
<tr>
<td><em>re·mi·per</em></td>
<td>rem-ess-√ber-</td>
<td>say beforehand, say previously</td>
</tr>
<tr>
<td><em>do·adhai</em></td>
<td>to-ad-uss-√ber-</td>
<td>display, show, bring forward, offer</td>
</tr>
<tr>
<td><em>do·eprainn</em></td>
<td>to-ess-√bren-</td>
<td>flow, trickle, gush</td>
</tr>
<tr>
<td><em>do·airchain</em></td>
<td>to-air-√can-</td>
<td>prophesy, foretell</td>
</tr>
<tr>
<td><em>do·inchain</em></td>
<td>to-in(de)-√can-</td>
<td>chant, utter</td>
</tr>
<tr>
<td><em>fo·acain</em></td>
<td>fo-ad-√can-</td>
<td>sing to, accompany in song</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
<td></td>
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<tr>
<td>---------------</td>
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<td></td>
</tr>
<tr>
<td>do·eschhir</td>
<td>smite, slay</td>
<td></td>
</tr>
<tr>
<td>con·túairc</td>
<td>strike, pound</td>
<td></td>
</tr>
<tr>
<td>do·foinach</td>
<td>wash, wash</td>
<td></td>
</tr>
<tr>
<td>remi·escaid</td>
<td>call to mind, commemorate, remember</td>
<td></td>
</tr>
<tr>
<td>as·rochollí</td>
<td>forget</td>
<td></td>
</tr>
<tr>
<td>do·rochoíni</td>
<td>be commemorated</td>
<td></td>
</tr>
<tr>
<td>do·accradí</td>
<td>surround, encompass</td>
<td></td>
</tr>
<tr>
<td>do·aithchren</td>
<td>descend</td>
<td></td>
</tr>
<tr>
<td>ar·condla</td>
<td>stretch forth</td>
<td></td>
</tr>
<tr>
<td>con·fodlai</td>
<td>define, determine</td>
<td></td>
</tr>
<tr>
<td>do·aidlæa</td>
<td>despair of</td>
<td></td>
</tr>
<tr>
<td>ad·comla</td>
<td>exasperate, provoke</td>
<td></td>
</tr>
<tr>
<td>do·ella</td>
<td>buy back, redeem</td>
<td></td>
</tr>
<tr>
<td>fo·accomla</td>
<td>share</td>
<td></td>
</tr>
<tr>
<td>sechmo·ella</td>
<td>share jointly, divide, apportion</td>
<td></td>
</tr>
<tr>
<td>ar·foim</td>
<td>come to, approach, visit, touch</td>
<td></td>
</tr>
<tr>
<td>as·toasci</td>
<td>joint, unite</td>
<td></td>
</tr>
<tr>
<td>as·indet</td>
<td>turn aside, deviate, bend, decline</td>
<td></td>
</tr>
<tr>
<td>fo·tuidchët</td>
<td>subdue</td>
<td></td>
</tr>
<tr>
<td>remi·atsned</td>
<td>tell beforehand, predict</td>
<td></td>
</tr>
<tr>
<td>do·adbat</td>
<td>lead down, lead, bring</td>
<td></td>
</tr>
<tr>
<td>do·duat</td>
<td>provide</td>
<td></td>
</tr>
<tr>
<td>con·foira</td>
<td>provide previously</td>
<td></td>
</tr>
<tr>
<td>remi·foirea</td>
<td>lift up, raise, exalt</td>
<td></td>
</tr>
<tr>
<td>con·ocaib</td>
<td>raise up, produce, cause</td>
<td></td>
</tr>
<tr>
<td>do·furgai</td>
<td>rise</td>
<td></td>
</tr>
<tr>
<td>do·focaib</td>
<td>correspond, answer, encounter</td>
<td></td>
</tr>
<tr>
<td>imm·freccair</td>
<td>call on, invite</td>
<td></td>
</tr>
<tr>
<td>in·togair</td>
<td>converse together</td>
<td></td>
</tr>
<tr>
<td>imm·accaldathar</td>
<td>pick out, select</td>
<td></td>
</tr>
<tr>
<td>do·eclainn</td>
<td>substitute, supply</td>
<td></td>
</tr>
<tr>
<td>fo·tairci</td>
<td>regard, look at</td>
<td></td>
</tr>
<tr>
<td>ad·déici</td>
<td>look at, behold, see</td>
<td></td>
</tr>
<tr>
<td>do·éíci</td>
<td>introspect</td>
<td></td>
</tr>
<tr>
<td>etar·décai</td>
<td>look forward to, expect, hope</td>
<td></td>
</tr>
<tr>
<td>fris·accái</td>
<td>provide for, force</td>
<td></td>
</tr>
<tr>
<td>imm·accaí</td>
<td>look after, regard, examine, consider</td>
<td></td>
</tr>
<tr>
<td>remi·décaí</td>
<td>look down on, guard, fence around</td>
<td></td>
</tr>
<tr>
<td>do·incái</td>
<td>permit, allow, let go</td>
<td></td>
</tr>
<tr>
<td>do·farcaí</td>
<td>loosen, relax</td>
<td></td>
</tr>
<tr>
<td>con·airléici</td>
<td>lay low, prostrate, throw down</td>
<td></td>
</tr>
<tr>
<td>do·fúasalíci</td>
<td>cause, produce, make, affect</td>
<td></td>
</tr>
<tr>
<td>fo·áigí</td>
<td>bear beforehand, anticipate</td>
<td></td>
</tr>
<tr>
<td>imm·fólnghái</td>
<td>depart, escape, set out, start</td>
<td></td>
</tr>
<tr>
<td>remi·fólnghi</td>
<td>be commemorated</td>
<td></td>
</tr>
<tr>
<td>as·comlai</td>
<td>forget</td>
<td></td>
</tr>
<tr>
<td>comforaithmiti</td>
<td>call to mind, commemorate, remember</td>
<td></td>
</tr>
<tr>
<td>do·romnathar</td>
<td>call to mind, commemorate, remember</td>
<td></td>
</tr>
<tr>
<td>for·aithminedar</td>
<td>wash, wash away</td>
<td></td>
</tr>
<tr>
<td>do·aithmenadar</td>
<td>wash, wash away</td>
<td></td>
</tr>
<tr>
<td>do·fonaíg</td>
<td>strike, pound</td>
<td></td>
</tr>
<tr>
<td>con·taírce</td>
<td>smite, slay</td>
<td></td>
</tr>
<tr>
<td>do·essuirg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As discussed above in this Section, a number of partially compositional composites show semantic redundancy of some kind (cf. (46)–(47)). However, partial compositionality does not always originate from redundancy: in a number of composites, redundancy is the result of a lexicalization process which occurred at a preceding stage, after which a new preverb is added according to the so-called process of accretion. A case in point follows in (48):

\[ (48) \quad \text{remi-epir [rem-[ess-\text{ber-}]] 'say [beforehand], say [previously]'} \]

\[ \quad > \text{as-beir [ess-\text{ber-}] 'say, tell', (lit.) 'out_of-bring'} \]

\[ \quad > \text{beirid [\text{ber-}] 'bring' (= (41))} \]
The composites that I regarded as non-compositional are displayed in Table 50: these constitute the second largest group of Old Irish composites (64 out of 178). Together, partially and non-compositional composites almost cover the totality of data (174 out of 178 composites): this per se reveals that the lexicalization process undergone by preverbs is very advanced in Old Irish.

<table>
<thead>
<tr>
<th>Composite</th>
<th>Segmentation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>con-osna</td>
<td>com-us---an--</td>
<td>cease, stop, desist, remain in</td>
</tr>
<tr>
<td>fo-fúasna</td>
<td>fo-us---an--</td>
<td>perturb, disturb</td>
</tr>
<tr>
<td>do-indhaig</td>
<td>to-in-(de)--aneg-</td>
<td>give, bestow, grant, hand over</td>
</tr>
<tr>
<td>foindarbaide</td>
<td>fo-in-(de)-ad-ro-uss---ben-</td>
<td>be relegated, be subjected</td>
</tr>
<tr>
<td>in-árbann</td>
<td>in-(de)-ad-ro-uss---ben-</td>
<td>drive out, expel</td>
</tr>
<tr>
<td>do-forban</td>
<td>to-for---ben-</td>
<td>come, arrive, happen to, reach</td>
</tr>
<tr>
<td>do-airbir</td>
<td>to-air---ber-</td>
<td>bend, bend down, incline, lower</td>
</tr>
<tr>
<td>do-opair</td>
<td>to-us---ber-</td>
<td>take away, deprive, defraud</td>
</tr>
<tr>
<td>ar-foichlea</td>
<td>air-fo-----ell-</td>
<td>look after, take care of, attend to</td>
</tr>
<tr>
<td>con-échloí</td>
<td>com-air---clow-</td>
<td>stir up, disturb, drive away, agitate</td>
</tr>
<tr>
<td>con-imchloí</td>
<td>com-im---clow-</td>
<td>change</td>
</tr>
<tr>
<td>do-aithchuiredar</td>
<td>to-aith----cori-</td>
<td>return</td>
</tr>
<tr>
<td>ad-cuimhig</td>
<td>ad-com-us--ding-</td>
<td>build to, build up</td>
</tr>
<tr>
<td>ar-utaing</td>
<td>air-us---ding-</td>
<td>build up, restore, refresh</td>
</tr>
<tr>
<td>con-utaing</td>
<td>com-us---ding-</td>
<td>build, construct, build up, embellish</td>
</tr>
<tr>
<td>do-inóla</td>
<td>to-in-(de)-uss---ell-</td>
<td>gather, collect, assemble</td>
</tr>
<tr>
<td>ar-coat</td>
<td>air-com-----f--d-</td>
<td>prevent, injure</td>
</tr>
<tr>
<td>ar-ngaib</td>
<td>air-in-(de)---gabi-</td>
<td>avoid, flee from</td>
</tr>
<tr>
<td>as-ingaib</td>
<td>ess-------gabi-</td>
<td>exceed, surpass, go beyond</td>
</tr>
<tr>
<td>fo-acaib</td>
<td>fo-ad---gabi-</td>
<td>leave</td>
</tr>
<tr>
<td>imm-ngaib</td>
<td>imm-im-------gabi-</td>
<td>avoid, shun, evade</td>
</tr>
<tr>
<td>do-rogib</td>
<td>to-ro---gabi-</td>
<td>commit, transgress</td>
</tr>
<tr>
<td>do-fúarascaib</td>
<td>to-for-ess-----gabi-</td>
<td>express, characterize</td>
</tr>
<tr>
<td>as-congair</td>
<td>ess-com---gari-</td>
<td>proclaim, give notice</td>
</tr>
<tr>
<td>for-congair</td>
<td>for-com---gari-</td>
<td>command, order</td>
</tr>
<tr>
<td>for-dingair</td>
<td>for-di-en---gari-</td>
<td>signify, express</td>
</tr>
<tr>
<td>do-accair</td>
<td>to-ad---gari-</td>
<td>declare, tell</td>
</tr>
<tr>
<td>do-airngir</td>
<td>to-air-in-(de)----gari-</td>
<td>promise</td>
</tr>
<tr>
<td>do-ogell</td>
<td>dë-us---gell-</td>
<td>purchase</td>
</tr>
<tr>
<td>fodéinti</td>
<td>fo-di-----g--n-i-</td>
<td>be sufficient</td>
</tr>
<tr>
<td>imm-fogni</td>
<td>imm-fo--------g--n-i-</td>
<td>be construed with (grammar)</td>
</tr>
<tr>
<td>ar-neget</td>
<td>air-ne----------guid-</td>
<td>pray</td>
</tr>
<tr>
<td>remi-ucsed</td>
<td>rem-us----------gus-</td>
<td>choose beforehand, pre-elect</td>
</tr>
<tr>
<td>con-táirci</td>
<td>com-to-ad-ro----vicc-</td>
<td>confer</td>
</tr>
<tr>
<td>for-cumaing</td>
<td>for-com---vicc-</td>
<td>happen, occur, be made, be brought about</td>
</tr>
<tr>
<td>imm-aricc</td>
<td>imm-air--------vicc-</td>
<td>be appropriate to</td>
</tr>
<tr>
<td>ad-cumaing</td>
<td>in-(de)-com----vicc-</td>
<td>strike, cut, happen</td>
</tr>
<tr>
<td>do-áirci</td>
<td>to-ad-ro----vicc-</td>
<td>cause, effect, induce, bring about</td>
</tr>
</tbody>
</table>

Table 50. Old Irish non-compositional composites
Only four composites out of 178 can be regarded as fully compositional:

(a) *fo·tabair* (*fo·to-√ber-*) ‘place under’;

(b) *fris·tabair* (*frith·to-√ber-*) ‘set against, oppose’;

(c) *imm·tabair* (*imm·to-√ber-*) ‘carry round, surround’;

(d) *con·ricc* (*com·ro-√icc-*) ‘meet, encounter, join’.

Under example (40), I already discussed composites (a)–(c): they contain *to- ‘to, toward’ as an IP, which provides a deictic orientation to the verb base, and a further spatial specification as an EP. As regards composite (d), the root √icc- belongs to a motion verb, the IP *ro-* emphasizes the Path of motion, and the EP *com-* expresses togetherness.

### 4.4. Summarizing the meanings of preverbs in multiple preverb combinations

Table 51 summarizes the different meanings of Old Irish multiple preverbs. Each meaning is exemplified at least by one composite; if the same meaning is expressed by preverbs
occurring both in exterior and interior position, a relevant example for each position is provided. A number of semantic shifts displayed in Table 51 are discussed in Sections 4.1, 4.2, and 4.3.

Table 51. The meanings of Old Irish multiple preverbs

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ad-</td>
<td>to (Goal)</td>
<td>to-ad–√nig- ‘wash away’</td>
</tr>
<tr>
<td></td>
<td>to (Recipient)</td>
<td>ad-uss–√ber- ‘offer up, sacrifice’</td>
</tr>
<tr>
<td></td>
<td>to (Addressee)</td>
<td>imm-ad–√gādī- ‘address each other’</td>
</tr>
<tr>
<td></td>
<td>to (Stimulus)</td>
<td>frith-ad–√kweis- ‘look forward to’</td>
</tr>
<tr>
<td>air-</td>
<td>before (Goal)</td>
<td>to-air-in(de)-√reth- ‘run about (back &amp; forth)’</td>
</tr>
<tr>
<td></td>
<td>before (Time)</td>
<td>to-air-fo–√can- ‘foretell’</td>
</tr>
<tr>
<td></td>
<td>again</td>
<td>air-uss–√dīng- ‘build up, restore, refresh’</td>
</tr>
<tr>
<td></td>
<td>back, away</td>
<td>air-in(de)-√gābi- ‘avoid’</td>
</tr>
<tr>
<td></td>
<td>for (Beneficiary)</td>
<td>air-fo–√cēllā- ‘take care of’</td>
</tr>
<tr>
<td></td>
<td>for (Purpose)</td>
<td>air-ne–√guid- ‘pray’</td>
</tr>
<tr>
<td></td>
<td>resultative</td>
<td>air-fo–√em- ‘accept, receive’</td>
</tr>
<tr>
<td></td>
<td>intensive</td>
<td>air-di–√ben- ‘cut off, destroy’</td>
</tr>
<tr>
<td>aith-</td>
<td>again</td>
<td>aith-ess–√vrig- ‘repeat, reiterate’</td>
</tr>
<tr>
<td></td>
<td>back</td>
<td>to-aith–√cori- ‘return’</td>
</tr>
<tr>
<td></td>
<td>intensive</td>
<td>aith-com–√ben- ‘wound’</td>
</tr>
<tr>
<td>com-</td>
<td>with (Comitative)</td>
<td>com-en–√tēg- ‘go with’</td>
</tr>
<tr>
<td></td>
<td>togetherness</td>
<td>com-to-air–√sistā- ‘remain constant’</td>
</tr>
<tr>
<td></td>
<td>inchoative, ingressive</td>
<td>com-usss–√anā- ‘cease, stop’</td>
</tr>
<tr>
<td></td>
<td>completion</td>
<td>com-to–√sow– ‘convert, change’</td>
</tr>
<tr>
<td>di-</td>
<td>away from (Source)</td>
<td>di-fo–√nig- ‘wash away’</td>
</tr>
<tr>
<td></td>
<td>aside (Goal)</td>
<td>di-en–√nill- ‘turn aside’</td>
</tr>
<tr>
<td></td>
<td>out of (a group)</td>
<td>di-ro-uss–√schochō- ‘stand forth, distinguish oneself’</td>
</tr>
<tr>
<td></td>
<td>from (Origin)</td>
<td>di-usss–√gell- ‘purchase’</td>
</tr>
<tr>
<td></td>
<td>because of</td>
<td>di-ro–√coin- ‘despair of’</td>
</tr>
<tr>
<td></td>
<td>completely</td>
<td>eter-di–√ben- ‘destroy’</td>
</tr>
<tr>
<td>ess-</td>
<td>out of (Source)</td>
<td>to-ess–√brenn- ‘spring out of, gush’</td>
</tr>
<tr>
<td></td>
<td>away from (Source)</td>
<td>ess-com–√lu- ‘depart, escape’</td>
</tr>
<tr>
<td></td>
<td>off</td>
<td>to-ess–√ben- ‘cut off’</td>
</tr>
<tr>
<td></td>
<td>beyond (cf. Lat. ex-)</td>
<td>ess-in(de)-√gābi- ‘exceed, surpass’</td>
</tr>
<tr>
<td></td>
<td>metaphor. ‘out of’ (an EVENT; cf. Lat. di-)</td>
<td>ess-com-di–√logi- ‘interrupt’</td>
</tr>
<tr>
<td></td>
<td>metaphor. ‘out of’ (BODY = CONTAINER)</td>
<td>rem-ess–√ber- ‘tell before’</td>
</tr>
<tr>
<td></td>
<td>out of (a group)</td>
<td>to-ess–√glen- ‘pick out’</td>
</tr>
<tr>
<td></td>
<td>away from (absent)</td>
<td>to-ess–√tā- ‘be absent’</td>
</tr>
<tr>
<td>eter-</td>
<td>between, inside (cf. Lat. intro-)</td>
<td>eter-di–√kwis– ‘introspect’</td>
</tr>
<tr>
<td></td>
<td>among, completely</td>
<td>to-eter–√reth- ‘encompass, comprehend’</td>
</tr>
<tr>
<td></td>
<td>completely (cf. Lat. inter-)</td>
<td>eter-di–√ben- ‘destroy’</td>
</tr>
<tr>
<td>fo-</td>
<td>under (Goal)</td>
<td>fo-to–√ber- ‘bring under’</td>
</tr>
<tr>
<td></td>
<td>under (as a support)</td>
<td>fo-di–√gnī- ‘be sufficient’</td>
</tr>
<tr>
<td></td>
<td>under- (cf. Engl. under-stand)</td>
<td>fo-in(de)-√tōst- ‘understand’</td>
</tr>
<tr>
<td></td>
<td>under (at a lower level)</td>
<td>fo-ad–√can- ‘accompany in song’</td>
</tr>
<tr>
<td></td>
<td>sub- (cf. Engl. sub-divide)</td>
<td>com-fo–√dāli- ‘subdivide and share jointly’</td>
</tr>
<tr>
<td></td>
<td>behind</td>
<td>fo-ad–√gābi– ‘leave behind’</td>
</tr>
<tr>
<td></td>
<td>secretly</td>
<td>fo-com–√snī- ‘steal’</td>
</tr>
</tbody>
</table>

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in the place of \( \text{fo-to-ad-ro-} \neg \text{icc-} \) ‘substitute’
lacking control \( \text{fo-in(} \neg \text{de)}- \text{ad-ro-} \neg \text{ben-} \) ‘be relegated, be subJECTED’
impact, collision, attack \( \text{fo-uss-} \neg \text{aná-} \) ‘perturb, disturb’
completion \( \text{to-fö-} \neg \text{ben-} \) ‘cut down’

for-
over (Location; cf. Lat. super-) \( \text{for-di-uss-} \neg \text{reth-} \) ‘remain over’
over, beyond (Goal) \( \text{for-} \neg \text{reth-} \) ‘go over’
over (protection) \( \text{to-for-ad-} \neg \text{kwis-} \) ‘look down on, guard’
over (Area) \( \text{com-for-aith-} \neg \text{mani-} \) ‘commemorate’
having control \( \text{frith-to-} \neg \text{ber-} \) ‘order, command’
for (Purpose) \( \text{for-com-} \neg \text{now-} \) ‘keep, retain for’

frith-
against \( \text{frith-to-} \neg \text{ber-} \) ‘set against’
expectation, hope \( \text{frith-ad-} \neg \text{kwis-} \) ‘hope’

farm-
after \( \text{to-farm-fo-} \neg \text{reth-} \) ‘follow’

imm-
around (Goal) \( \text{imm-to-} \neg \text{ber-} \) ‘carry around’
metaph. ‘around’ \( \text{imm-fo-} \neg \text{gā} \) ‘be construed with’ (grammar)
all around (cf. Lat. circum-) \( \text{imm-di-} \neg \text{ben-} \) ‘cut off around’
around-thoroughly \( \text{imm-ad-} \neg \text{kwis-} \) ‘examine’
reciprocal \( \text{imm-to-} \neg \text{scarā-} \) ‘struggle one another’
in(de)-
in(to) (Goal) \( \text{in(de)-uss-} \neg \text{tēg-} \) ‘enter into’
in(to) (Addressee) \( \text{to-in(de)-} \neg \text{can-} \) ‘chant to’
-ne-
down \( \text{aith-ni-} \neg \text{sed-} \) ‘await’

rem-
forth \( \text{rem-ess-} \neg \text{cid-} \) ‘stretch forth’
before (Time) \( \text{rem-ess-ber-} \) ‘say beforehand’

ro-
forward (Path) \( \text{com-ro-} \neg \text{lice-} \) ‘meet’
forth \( \text{di-uss-} \neg \text{schoc’hī-} \) ‘stand forth, distinguish oneself’
intensive (‘loudly’) \( \text{di-ro-} \neg \text{coin-} \) ‘despairs of’

sechmo-
beyond (also metaph.) \( \text{sechmo-in(de)-} \neg \text{ell-} \) ‘bypass, neglect’
to, toward (Goal) \( \text{to-di-} \neg \text{fēd-} \) ‘lead, bring’
to (Addressee) \( \text{to-in(de)-} \neg \text{can-} \) ‘chant to’
to-reversative (Recipient) \( \text{to-ad-} \neg \text{selbī-} \) ‘assign’
reversative completion \( \text{frith-to-} \neg \text{tēg-} \) ‘come against’

-uss-
upward \( \text{to-uss-} \neg \text{gā} \) ‘raise to’
up (removing an obstacle) \( \text{aith-uss-} \neg \text{ēcī-} \) ‘open’
up, out of (a group) \( \text{rem-uss-} \neg \text{tēg-} \) ‘pre-elect’
upon (as in come upon) \( \text{in(de)-uss-} \neg \text{tēg-} \) ‘come upon’
up (excitement) \( \text{to-di-uss-} \neg \text{rig-} \) ‘excite’

5. **The syntax of multiple preverb composites**

As discussed in Sections 1.2 and 4, Old Irish preverbs are much more advanced in their lexicalization process than their Vedic and Homeric Greek counterparts. In addition, a number of Old Irish preverbs, specifically ro-, ad-, com- (and more marginally others), also show a parallel development: specifically, they underwent full grammaticalization into aspectual markers, alongside with functioning as lexical modifiers in word-formation.
Because of their advanced lexicalization and grammaticalization, the meanings and behavior of preverbs considerably diverge from those of the etymologically related prepositions (cf. Dickey 2012, who addresses Slavic preverbs that behave this way as ‘orphan prefixes’; cf. Chapter 5, Section 1.1). In turn, Old Irish prepositions are also quite grammaticalized, and Old Irish prepositionless cases retain but a very limited ability of expressing semantic roles (cf. Section 1.2.2). These issues are addressed in this Section, relating to preverbs occurring in multiple preverb composites.

5.1. No alternative constructions to multiple preverb composites

By rearranging the elements that constitute a multiple preverb composite in a different order, one obtains in a construction that is still grammatical, but carries a different meaning. Put another way, the construction with multiple preverbs cannot freely alternate with a construction displaying a single preverb composite and a PP. This is shown in (49)–(50) with fris·tabair (frith-to-\(\sqrt{ber}\)) ‘set against’, as opposed to do·beir ‘give’ taking the PP fri+ACC (example (49) is also stylistically marked, as it contains a so-called figura etymologica: fritabar ‘opposition’ is the verbal noun associated with fris·tabair).

(49)  
\[
\text{do nd friobairt maill fri-ta-taibret}
\]
\[
\text{from-ART.DAT.F opposition(F).DAT slow.DAT.F against-3PL.ACC-set.PRS.3PL}
\]
\[
\text{na-dorche do=n-soilsi}
\]
\[
\text{ART.NOM.PL.N-dark.NOM.PL to=ART.DAT.F-light(F).DAT}
\]
\[
\text{‘From the slow opposition with which the darknesses oppose themselves to the light…’ (Sg.183b3)}
\]

(50)  
\[
\text{con-ducthar nomen fri-s.}
\]
\[
\text{until-give. SBJV.PRS.SG.PASS name.NOM against-ACC.3SG.M/N}
\]
\[
\text{‘(The possession is indefinite…) until a name is put beside it.’ (Sg.200b13 = (11))}
\]

For another composite containing the sequence of preverbs frith-to-, alternative constructions as those presented above are grammatical, but express two different
meanings: the multiple preverb composite *fris-taít* (*frith-to-*√tēg-*) retains the more compositional meaning of ‘come against, oppose’ (51), whereas the reduced composite *do-tét* ‘come’ in combination with *fri+ACC* develops the lexicalized meaning of ‘go with, apply to, be construed with (grammar)’ ((52); cf. also Ml.53a8, Sg.158a3, 158a4, 159a3, 213a10).

(51)  
<table>
<thead>
<tr>
<th>i.e.</th>
<th>co-nna</th>
<th>bí</th>
<th>ní</th>
<th>frestai</th>
</tr>
</thead>
<tbody>
<tr>
<td>á</td>
<td>mes</td>
<td>ón</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3SG.GEN.M/N</td>
<td>evaluation.ACC</td>
<td>DEM.N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘I.e. so that there is nothing which opposes its evaluation.’ (Ml.31d6)

(52)  
<table>
<thead>
<tr>
<th>i.e.</th>
<th>ni=taet</th>
<th>chomsuidigud</th>
<th>fri-u</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEG=come.PRS.3SG</td>
<td>composition.NOM</td>
<td>against-3PL.ACC</td>
<td></td>
</tr>
<tr>
<td>in nominativo</td>
<td>nisi in paucis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in nominative.ABL</td>
<td>if_not in few.ABL.PL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘I.e. except in a few instances, there is no composition with them in the nominative.’ (Sg.197a4)

Another interesting case is the composite *do-intai* (*to-in(de)-√sow*-), which can retain a partially compositional meaning ‘turn back, return’ (Ml.54d3), as well as develop a non-compositional one ‘translate’ (example (53) below, Ml.3a13, 37a10, 89d6, 3a7, Sg.26b4, 20b10; cf. (44)). If one rearranges the elements of the composite into a different construction such as that in (54) with *soïd* and the PP *in+DAT* (with the IP employed as a preposition), one also obtains the new meaning of ‘transform x into y’.23 Note that the comparison between the multiple preverb composite *do-intai* and the simplex verb *soïd* is allowed by the fact that the reduced composite *in(de)-√sow*- is not attested: as discussed in Section 2.3, this is connected with the fact that composites containing *to-* and lacking it are frequently near-equivalents.

---

23 On the etymological and semantic linkage between the preposition *do* ‘to’ and the preverb *to-* ‘to, toward’, see Section 2.3, Stifter (2014), and references therein.
Thus, the lexicalization undergone by preverbs leads them to follow divergent paths from those covered by the corresponding prepositions. For example, *as-ingaib* ‘go beyond, surpass’ is a non-compositional composite, made up by *ess* ‘out of’ + *ind(e)* ‘into’ + √*gabi*- ‘grasp’ (cf. *in-gaib* (*ind(e)*-√*gabi*) ‘reproach, reprove’; *gaibid* ‘grasp, reach, go’). The EP *ess*, if used as a preposition (*a*), takes the dative case and indicates Source. The PP that means ‘beyond, across, over’ is instead *sech(mo)/tar+ACC* (eDIL.ie/36742; eDIL.ie/40049; Vendryes 1923: 147).

5.2. **Preverb repetition**

Apart from the prepositionless accusative, which regularly expresses Goal with a number of very frequent motion verbs including *téit* ‘go’, prepositionless cases are only residually used to express semantic roles in Old Irish (cf. Section 1.2.2). In parallel, Old Irish prepositions function as heads of the phrases in which they occur (on the notion of head within PPs, cf. Chapter 2, Section 1.3). Case alternation is meaningful only with the prepositions *air* ‘before, for’, *fo* ‘under’, *for* ‘on, over’, *in(de)* ‘in(to)’ and distinguishes Goal from Location.

Given the situation just outlined, it is not surprising that preverbs are frequently repeated outside the preverbal context as prepositions, as in (55)–(56) below.
(55) \textit{do\textsc{roschither} \quad dano \quad diib}  \\
stand\_forth.PRS.3SG.PASS \quad also \quad of.DAT.3PL  \\
‘He is also distinguished from them.’ (Ml.107b5; Lat. \textit{pra\textsc{e-ponere}})

(56) \textit{fris-tait \quad fris-[s]om}  \\
against\_come.PRS.3SG \quad against.3SG.ACC.EM.3SG  \\
‘who opposes him’ (Ml.23c11; Lat. \textit{ad\textsc{-versarii}}:GEN)

In (55), the EP of \textit{do\textsc{róscai} (di\textsc{-ro-uss}\textsubscript{-}\textsc{scōchī})} ‘stand forth, distinguish oneself from’ also occurs as a conjugated preposition, i.e. \textit{diib} (cf. further Ml.119d3; the same composite can also take \textit{sech(mo)+ACC}, as in Ml.84b1). Example (56) contains the composite \textit{fris\textsc{-táit} (frith\textsc{-to-}\textsc{-léig})} ‘come against’; its EP \textit{frith-} is also repeated as a conjugated preposition in \textit{fris} (cf. also Ml.17c5, 140b6).\footnote{The composite \textit{fris\textsc{-táit} can also be employed as a lexicalized transitive verb with the direct object (cf. example (51)). However, the prepositionless accusative is possibly an innovation rather than a residual usage.}

As clearly shown by (56), the EP can be repeated outside the preverbal context, even though its meaning is not bleached. Given the advanced grammaticalization of prepositions, preverbs are arguably not repeated only to avoid semantic ambiguity, as for example in Homeric Greek (Chapter 4; Zanchi 2017); rather, prepositional phrases are virtually the exclusive means that Old Irish employs to express semantic roles.

5.3. \textit{Preverbs as modifiers of verb argument structure}

As pointed out by Vendryes (1923: 241), Old Irish preverbs mainly carry out the function of modifying lexically the meaning of the verbal bases onto which they attach: so, for example, \textit{ad\textsc{-cí} (ad\textsc{-}\textsc{cī/kwis-)}} means ‘see’ (the root \textsc{cī/kwis-} is only attested in composition; cf. Table 43), whereas \textit{fris\textsc{-accai (frith-ad}\textsc{-}\textsc{kwis-)}} ‘look forward to, expect, hope’, after the addition of \textit{frith-} ‘against’. Both the single preverb and the multiple preverb composites are transitive. Similarly, \textit{scuchaid, scuichid ‘go, move’} is a motion/caused motion verb that takes the accusative of the moved TR, and various PPs indicating the Goal of motion (LM). The derived composite \textit{con-oscaigi (com-uss}\textsubscript{-}\textsc{scōchī}) develops a
different meaning ‘move, change, remove, shake, upset’ (cf. example (44)), but is constructed in a similar way, in that it is accompanied by the direct object in the accusative, and different PPs expressing Goal (including *i+-DAT, *imm+-ACC, and *tre+-ACC*).

However, it is not infrequent that Old Irish preverbs bring about semantic changes that have the side-effect of transitivizing peripheral arguments. In other words, Old Irish preverbs can function as applicatives (on applicatives from a typological perspective, cf. Austin 1997; Shibatani 2000; and Peterson 2007). A first couple of relevant examples contains the intransitive motion verb √cēllā- ‘go around’. When this root is compounded with preverbs, it results in transitive composites such as *imm·timchella* (imm-√cēllā-) ‘surround’ and *do-imchella* (to-imm-√cēllā-) ‘surround, encompass’.

The root √reth- is also intransitive and indicates a manner of motion verb: *rethid* ‘run’ takes various PPs expressing the Goal of motion such as *sech(mo)+ACC* (Ml.120b2 = (57)) and *in(de)+ACC* (Ml.138d6). If modified by various preverbs, it turns into the transitive composite *do-íarmórat* (to-íarm-fo-√reth-) ‘follow, come/go after’ (58).

(57) air-ní-derb lin-nai etarcnæ
for-NEG-certain.NOM.N beside.1PL.ACC-EM.1PL knowledge.NOM
inna-lloc sech a retham
ART.GEN.PL-place.GEN.PL beyond REL.PTC run.PRS.1PL
‘For the knowledge of places past which we run is not certain to us.’ (Ml.120b2)

(58) co-ndermanammar-ni inna-imned-sin
so_that-forget.SBJV.PRS.1PL-EM.1PL ART.ACC.PL-tribulation.ACC.PL-DEM
im-biam i-sind-laithiu tri-chumsanad inna
in-EX.PRS.1PL in-ART.DAT-day.DAT through-resting.ACC ART.GEN
aidche do-d=íarm-o-rat
night.GEN P-3SG.ACC.N=P-P-follow.PRS.3SG
‘So that we may forget those troubles in which we are in the day through the repose of the night that follows it.’ (Ml.21c3)

25 The composite *imm-cella* (*imm-√cēllā-*) ‘surround’ is also attested in the Milan Glosses (Ml.67d12), but is infrequent, and used without an overt second argument.
In (57), the simplex verb *retham* takes the PP *sech(a)* expressing the Goal of motion, whereas the composite *do-d-iarmorat* contains the third person singular infixed pronoun *-d*-functioning as a direct object.

The posture verb \( \sqrt{sed} \) ‘sit’ behaves the same: the simplex verb *saidid* ‘sit’ is intransitive, and takes different PPs indicating Location such as *for+DAT* (59). After the addition of the preverbs *air-ne-*, the meaning of the verb is changed from sitting to waiting for \( (ar-ne\dot{a}t (aith-ni-\sqrt{sed}) \) ‘before-down-sit’ → ‘expect, await’), and accordingly the composite becomes transitive (60).

(59) \( \text{is do saidi-siu for=hirubinaib} \)
be.PRS.3SG to.SG DAT. sit.PRS.2SG-EM.2SG over=C.DAT.PL
‘It is for this that you sit on the Cherubim.’ (Mi.101c6–7)

(60) \( ar-ro=t=ne-iithius \)
before-AUG=down-sit.PST.1SG EM.1SG-to-1SG.GEN-helping.DAT PTC-God.VOC
‘I awaited you to help me, o God.’ (Mi.46b20)

In (59), the PP *for=hirubinaib* plays the role of Location in combination with the simplex verb form *saidi*, whereas in (60) the composite *arro-t=neithius*, the infixed pronoun *-t=* expresses the direct object (on the relative position of the argument *-ro-* and the lexical preverbs in the perfect of *ar-ne\dot{a}t*, see the discussion under example (27)).

6. Preverb ordering

A number of Old Irish preverbs only rarely occur in multiple preverb composites. In particular, preverbs that are instantiated in less than 10 combinations are the following: *aith-* ‘re-, ex-’, *eter-* ‘between, among’, *for-* ‘on, over’, *frith-* ‘against’, *fiarm-* ‘after’, *ne-* ‘down’, *rem-* ‘before, pre-’, *sechmo-* ‘past, beyond’, and *tre-* ‘through’. For this reason, it is difficult to provide conclusive quantitative data on preverb ordering. These data are nevertheless displayed in Table 52, which must be looked up with this caveat in mind.
Table 52 reports the positioning of Old Irish preverbs, and their frequencies. The sum of frequencies of all positions (exterior, medial, and interior) gives the total number of preverb combinations containing a certain preverb. Medial position is regarded so as to include McCone’s (1997, 2006) second, third, and fourth positions (cf. Table 53 and Table 54), that is, all positions other than the exterior and the interior ones in combinations that contain more than two preverbs. Second, third, and fourth positions can be treated together, as not many composites include more than three preverbs: thus having more than one MP is relatively infrequent (cf. Section 2.3). In Table 52, only the reconstructed form of preverbs is reported (cf. Section 3.1 on the changes undergone by preverbs occurring in different positions). This choice is based on McCone’s (1997, 2006): reporting the same form for preverbs as McCone facilitates the comparison between his hierarchy (Table 53) and the data of this study (Table 54).

Table 52. The positioning of Old Irish preverbs and their frequencies

<table>
<thead>
<tr>
<th>Preverb</th>
<th>Interior</th>
<th>Medial</th>
<th>Exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>ad</td>
<td>8 (35%)</td>
<td>8 (35%)</td>
<td>7 (30%)</td>
</tr>
<tr>
<td>air</td>
<td>6 (40%)</td>
<td>3 (20%)</td>
<td>6 (40%)</td>
</tr>
<tr>
<td>aith</td>
<td>3 (60%)</td>
<td>0</td>
<td>2 (40%)</td>
</tr>
<tr>
<td>com</td>
<td>12 (46%)</td>
<td>2 (8%)</td>
<td>12 (46%)</td>
</tr>
<tr>
<td>di</td>
<td>9 (38%)</td>
<td>8 (33%)</td>
<td>7 (29%)</td>
</tr>
<tr>
<td>ess</td>
<td>7 (50%)</td>
<td>1 (7%)</td>
<td>6 (43%)</td>
</tr>
<tr>
<td>eter</td>
<td>2 (67%)</td>
<td>0</td>
<td>1 (33%)</td>
</tr>
<tr>
<td>fo</td>
<td>10 (40%)</td>
<td>2 (8%)</td>
<td>13 (52%)</td>
</tr>
<tr>
<td>for</td>
<td>1 (13%)</td>
<td>2 (26%)</td>
<td>5 (61%)</td>
</tr>
<tr>
<td>frith</td>
<td>1 (17%)</td>
<td>0</td>
<td>5 (83%)</td>
</tr>
<tr>
<td>iarm</td>
<td>0</td>
<td>1 (50%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>imm</td>
<td>4 (23%)</td>
<td>3 (18%)</td>
<td>10 (59%)</td>
</tr>
<tr>
<td>inf(de)</td>
<td>15 (66%)</td>
<td>4 (17%)</td>
<td>4 (17%)</td>
</tr>
<tr>
<td>ne</td>
<td>1 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>remi</td>
<td>0</td>
<td>0</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>ro</td>
<td>10 (71%)</td>
<td>4 (29%)</td>
<td>0</td>
</tr>
<tr>
<td>sechmo</td>
<td>0</td>
<td>0</td>
<td>1 (100%)</td>
</tr>
<tr>
<td>to</td>
<td>6 (12%)</td>
<td>14 (29%)</td>
<td>29 (59%)</td>
</tr>
<tr>
<td>tre</td>
<td>1 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>uss</td>
<td>19 (100%)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

As Table 52 shows, not all preverbs can occur in all positions: iarm- ‘after’, rem- ‘before, pre-’, and sechmo- ‘past, beyond’ are never interior, whereas ne- ‘down’, ro- (etym.) ‘forth’, tre- ‘through’, and uss- ‘up, off’ are never exterior. Other preverbs have
clear, though not absolute, positional properties: \textit{imm}–‘about, mutually’, \textit{eter}–‘between, among’, \textit{for}–‘on, over’, \textit{frith}–‘against’, and \textit{to}–‘to, toward’ tend to occur in the exterior position, whereas \textit{in}–‘in(to)’ preferably selects the interior position. The positional properties of a number of preverbs are instead unclear: \textit{ad}–‘to, toward’, \textit{air}–‘before, for’, \textit{aith}–‘re-, ex-’, \textit{com}–‘with’, \textit{di}–‘of, from’, \textit{ess}–‘out of’, and \textit{fo}–‘under’.

6.1. \textit{McCone’s hierarchy of preverb ordering}

In his monography on the early Irish verb, McCone (1997) tried to draw generalizations on Old Irish preverb ordering in primary composition, resulting in Table 53. The hierarchy of Table 53 represents the relative positional properties of preverbs to one another and not the position of preverbs with respect to the verbal base. Specifically, McCone assigns each preverb a positional slot from 1 to 5, whereby 1 represents the outermost and 5 the innermost position relative to the verbal base. Importantly, preverbs grouped within the same slot are not necessarily equivalent as regards their positioning: simply, their relative ranking cannot be determined due to contradictory or insufficient evidence (McCone 1997: 94).

\textbf{Table 53. Relative ordering of Old Irish preverbs in primary composition}

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{to}–‘to, toward’</td>
<td>\textit{for}–‘on, over’</td>
<td>\textit{ad}–‘to, toward’</td>
<td>\textit{com}–‘with’</td>
<td>\textit{uss}–‘up, off’</td>
<td>\textit{verbal base}</td>
</tr>
<tr>
<td>\textit{frith}–‘against’</td>
<td>\textit{eter}–‘between, among’</td>
<td>\textit{aith}–‘re-, ex-’</td>
<td>\textit{ro (etym.)}–‘forth’</td>
<td>\textit{ne}–‘down’</td>
<td></td>
</tr>
<tr>
<td>\textit{imm}–‘about, mutually’</td>
<td>\textit{air}–‘before, for’</td>
<td>\textit{di}–‘of, from’</td>
<td>\textit{ess}–‘out of’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>\textit{fo}–‘under’</td>
<td>\textit{in}–‘in(to)’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to this ranking, there are preverbs that tend to select the exterior position (1–2), specifically, \textit{to}–‘to, toward’, \textit{for}–‘on, over’, \textit{frith}–‘against’, \textit{eter}–‘between, among’, and \textit{imm}–‘about, mutually’; by contrast, the interior position (4–5) is the favorite one for \textit{com}–‘with’, \textit{ro}–‘forth’, \textit{uss}–‘up, off’, and \textit{ne}–‘down’. Medial position (3) is selected by \textit{ad}–‘to, toward’, \textit{aith}–‘re-, ex-’, \textit{air}–‘before, for’, \textit{di}–‘of, from’, \textit{ess}–‘out of’, \textit{fo}–‘under’,
and in(de)- ‘in(to)’. These data are roughly consistent with mine, except for the positioning of com-, which is preferably interior according to McCone, whereas it does not seem to favor either placement in the composites from the Milan and Priscian Glosses.

In order to explain the numerous exceptions to the hierarchy just outlined, McCone takes into account deviations due to calques from Latin (Mc Cone 1997: 94, 2006: 178–179; Sections 2.4 and 6.3). In addition, he distinguishes two layers of composition, which he calls ‘primary’ and ‘secondary composition’. According to McCone (1997: 95), “primary composition presumably reflects an older stage at which the hierarchy in [Table 53] was still operative and [simultaneous] compounding with up to three or four preverbs was still an active process, whereas secondary composition belongs to a later stage in which one of a restricted range of preverbs could be prefixed where appropriate to inherited compounds now perceived as relatively inflexible units.” More explicitly, McCone (1997: 94) writes that “the term secondary composition refers here to the prefixing of a preverb to a pre-existent compound treated as a single unit without regard to the above sequence.”

However, the assumption of a clear-cut differentiation between two layers of composition has been challenged by Rossiter (2004) to the point that even McCone (2006: 180 ff., 187 f.) changed his mind. Rossiter (2004) shows that the majority of Old Irish composites can be reduced by successively removing the outermost preverb. The possibility of reduction mirrors the fact that multiple composition was probably an incremental process throughout the prehistory of Old Irish, which McCone accordingly names ‘recomposition’ or ‘accretion’, as represented below (cf. further Section 1.1, 2.3, and examples therein):

(61) \[
\begin{align*}
\text{as-congair} & \text{‘proclaim, give notice’ (ess-com-√gari-)} \\
\text{for-congair} & \text{‘command, order’ (for-com-√gari-)} \\
\text{con-gair} & \text{‘cry, shout (out, loudly)’ (com-√gari-)} \\
\text{gairid} & \text{‘call’ (√gari-)} \\
\end{align*}
\]
6.2. *Preverb ordering in the Milan and Priscian Glosses: against McCone’s generalizations*

Table 54 shows preverb combinations attested in composites occurring in the *Milan* and *Priscian Glosses* arranged as in McCone’s hierarchy (cf. Table 53). The rightmost column of Table 54 shows whether a given combination is consistent with the mentioned hierarchy or not: the sign + stands for a positive response, the sign - for a negative one, whereas nd means that the given combination contains a preverb that McCone does not take into consideration.

As shown in Table 54, out of 115 combinations, 27 are not consistent with McCone’s hierarchy. This means that 69 out of 178 composites do not conform to McCone’s preverb ordering outlined in Table 53 (McCone 1997, 2006). The combinations/composites can be inconsistent in the following respects: (a) the preverb to-‘to, toward’ is medial/interior and not exterior (e.g. ad-to-fo-; com-to-eter-; fo-to-ad-ro-; frith-to-fo-; imm-to-); (b) the preverb com-‘with’ is exterior rather than interior (e.g. com-fo-); (c) the preverb di- is more interior than com- in the combination ess-com-di- (cf. also Section 2.3 on preverb combinations).

Deviations (a) and (b) can frequently, though not exclusively, be explained as calques from Latin, as shown in (62).

(62)  

(a. Type (a) deviations

<table>
<thead>
<tr>
<th>OIr.</th>
<th>Lat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>fo-to-√ber-</td>
<td><em>sub-ducere</em> place under</td>
</tr>
<tr>
<td>imm-to-√ber-</td>
<td><em>circum-dare</em> carry round, surround</td>
</tr>
<tr>
<td>com-to-eter-√reth-</td>
<td><em>com-prehendere</em> comprise, comprehend</td>
</tr>
<tr>
<td>frith-to-fo-√rindā-</td>
<td><em>ob-signare</em> mark off, trace (a limit)</td>
</tr>
</tbody>
</table>

(b. Type (b) deviations

<table>
<thead>
<tr>
<th>OIr.</th>
<th>Lat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>com-fo-√ferā-</td>
<td><em>com-parare</em> provide</td>
</tr>
</tbody>
</table>

26 Note that the reduced composite lacking com- is nearly equivalent, as shown by the fact that it also translates Latin *com-prehendere* (to-eter-√reth-‘comprehend, grasp, overtake’, Lat. *in-cludere*, com-prehendere; cf. Table 45).

27 Cf. the reduced composite lacking the EP: to-fo-√rindā-‘express, signify’, Lat. ‘significare, distinguere’.
Table 54. Old Irish preverb combinations arranged as in McCone (1997)
Type (a) and (b) deviations that cannot be explained by means of Latin influence can be accounted for in different ways. For example, *ad-to-* instantiates type (a) deviation, with *to-* interior rather than exterior. The combination of two near-synonymic preverbs such as *ad-* ‘to, toward’ and *to-* ‘to, toward’ (two Goal-preverbs) results in an iterative meaning. Accordingly, this combination consistently translates Latin *re-*: e.g. *ad-to-air-√ber-* ‘bring back, delivers again’, Lat. *re-digere*; *ad-to-fo-√rindā-* ‘prick again’, Lat. *re-pungere.*28

The composite *con-dieig* (**com-di-√sag-**) ‘ask, seek, demand’ instead contains a type (b) deviation. In this formation, the exterior *com-* can be considered a later addition to a preexisting *di·saigid*, which can be assumed on the basis of the Old Irish attested forms *i ndegaid* ‘(in quest of,) after’, and the verbal noun *saigid* ‘seeking, aiming at’ and its compounds (McCone 1995: 157, 2006: 180). In addition, as shown in Section 4.3, discussing example (47), the Source meaning of the IP *di-* is consistent with the semantics of the verbal base *√sag-* ‘ask’: this semantic solidarity also contributes to explaining the interior position of *di-, the early reanalysis of *di·saigid* as a single lexical unit, and the subsequent addition of a further preverb, i.e. *com-* ‘with’. The composite *con-imchloí* (**com-imm-√clow-**) ‘change’ can be similarly accounted for. Specifically, the EP *com-* appears to be a later addition to an existing *imm-cloí* ‘change’, which came early to be perceived as a single lexical unit by virtue of the semantic solidarity between its two components: *imm-* ‘around, about’ and *√clow-* ‘turn’. In general, it seems that *com-* has long remained available for composition and recomposition, possibly also because it was particularly prone to be equated to Latin *con-*, given their formal and semantic similarity (McCone 2006: 178–179).

Type (c) deviations, that is, the interior positioning of *di-* in the combination *ess-com-di-*, instantiated by the composite *as-cuindligi* (**ess-com-di-√logī-**) ‘disrupt’ can also be explained by virtue of the frequent recomposition with *com-*. In *ess-com-di-√logī-*, the EP *ess-* ‘out of’ (Source-preverb) is possibly a calque from Latin *di-rumpere*, in which *di-* is also a Source-preverb. Once *ess-* is removed, the MP *com-* can be then equated to Latin *con-* expressing completion: *di-√logī-* (lit.) ‘put away’ → ‘forgive’ acquires a telic nuance after the addition of *com-* (‘completion+put away’ → ‘disrupt’).

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28 Cf. fn. 27.
6.3. *An integrated account of preverb ordering*

Preverb ordering in Old Irish is thus motivated by different factors. As discussed in Sections 2.4 and 6.2, the Latin source text is one such factor. A number of EPs, especially but not exclusively those that do not conform to Mc Cone’s hierarchy (1997), can be accounted for as calques from Latin: as the Latin preverb is attached to a simplex verb, Old Irish EPs appear to be later additions to an already lexicalized composite, i.e. to a morphological formation perceived as a single (i.e. simplex) lexical unit. A particularly clear example for that is the series of composites built on *do·beir* ‘give, place’ shown in (63) (cf. further Mc Cone 2006: 178):

(63) Multiple preverb composites built on *do·beir* ‘give, place’

\[ ^{h}b\text{er-} \quad \text{beirid} \rightarrow \text{do·beir} \rightarrow \begin{cases} \text{fo·tabair ‘under·give’; cf. Lat. sub·dare} \\
\text{fris·tabair ‘against·give’; cf. Lat. ob·dare} \\
\text{imm·tabair ‘around·give’; Lat. circum·dare} \end{cases} \]

Further motivations behind preverb ordering are specific paths of development undergone by specific Old Irish preverbs. For example, apart from the exceptions described in Section 6.2, the preverb *to-* ‘to, toward’ is especially notorious for being exterior: in the *Milan* and *Priscian Glosses*, 30 out of a total of 116 combinations include *to-* as EP. This positional behavior is arguably related to the etymology of *to-*: as shown by Stifter (2014), *to-* is probably the result of the coalescence of two distinct Old Irish forms, specifically the preposition *t\text{ó}1-* ‘back, re-’ (cf. ?Lyd. *ta- < PIE *t\text{o}1 ‘to’; LIPP II: 772, Stifter 2014: 237, and references therein) and the clausal connector *t\text{o}2-* (cf. Hitt. *ta- ‘then’ < PIE *t\text{o}2; LIPP II: 775, and references therein). The former explains part of the meanings expressed by *to-* (Section 4.1), whereas the latter accounts for its tendency to occur as EP and to retain this status (cf. Section 2.3). As Old Irish is a VSO language (cf. Section 1); thus, if a preverb functions as EP, this basically implies occurring in clause initial position, which is also the typical placement for clausal connectors.
Similarly, the exclusively EPs íarm- ‘after’, rem- ‘before, pre-’, and sech(mo)- ‘beyond’ are secondary formations, made up by an originary spatial adverb or a pronominal stem and a suffix -mi, -mo, -mu, -ma. A development of PIE *epi possibly lies behind Old Irish iar- (cf. GOI: 516; LIPP II: 294); the preverb rem- is probably connected with Latin prior, prius ‘former’, and thus with PIE *pr-ō (allative), *pr-i (locative), and *pr- ‘forward, forth’ (LIPP II: 633 ff.). If so, the -m- of rem- might go back to the superlative form *prisamo- (cf. Lat. prīmus ‘first’). The preverb sech(mo)- is related to Latin secus ‘beside, otherwise’. According to LIPP II (758), the Latin and Old Irish formations both go back to the reflexive pronominal stem *su̯e-. Whatever their etymologies are, the later formation of these preverbs arguably contributes to explaining their exterior positioning, and their low degree of semantic bleaching.

To sum up, calquing from Latin and the specific developments of some preverbs shed some light on the motivations for their exterior placement. Instead, what are the reasons behind the interior placement of certain other preverbs? Arguably, preverb ordering is ruled by the following principle: the higher the semantic solidarity between a preverb and the verb, the closer that preverb occurs with respect to the verb. This sets out what I call ‘redundancy principle’; such a tendency ruling preverb ordering recalls Bybee’s (1985) ‘order’ and ‘relevance principle’, as is previously discussed (cf. Chapters 3, 4, and 5). However, in the case of preverbs, the meaning of IPs is so close that it may come to overlap with that of the verbal bases: semantic closeness implies redundancy rather than relevance for preverbs. Therefore, the composite is prone to be reanalyzed as a single lexical unit, due to the semantic overlap among its parts.

Clear examples for this redundancy principle are offered by the non-reducible preverbs -ne- ‘down’ and -uss- ‘up, off’, as shown in (64).

(64) a. do-foscart(a) (di-uss-√scart(ā)-) ‘remove, put aside’ (up+remove)
b. remi-uicsed (rem-uss-√gus-) ‘choose beforehand, pre-elect’ (up+choose)
c. ar-neāt (aith-ni-√sed-) ‘expect, await’ (down+sit)
In addition, both -ne- ‘down’ and -uss- ‘up, off’ are etymologically Path preverbs: as Path is not a particularly relevant component for the encoding of spatial relations, it is infrequent that Path-preverbs are further specified by additional PPs. This arguably constitutes another reason for their internal placement, and consequent reanalysis as part of the verbal base (the so-called ‘lower salience’ principle). Interestingly, Path is also the semantic role expressed by ro- (etym.) ‘forward, forth’ in its spatial and etymological meaning. Accordingly, ro- is strictly interior, and its Path meaning frequently overlaps with the meaning of the motion verbs onto which it attaches, as in examples (65):

\[(65)\]
\[
a. \text{con-táirci (com-to-ad-ro-icc-)} \text{ ‘confer’} \quad (\text{Path-P+reach})
b. \text{fo-tairci (fo-to-ad-ro-icc-)} \text{ ‘substitute, supply’} \quad (\text{Path-P+reach})
c. \text{as-roinni (ess-ro-snī-)} \text{ ‘escape’} \quad (\text{Path-P+turn})
\]

The fact that, in Old Irish, preverbs are advanced in their lexicalization process complicates this analysis, as their precise semantic contributions are not always trivial to detect (cf. Section 4). However, when Old Irish composites at least partially retain their semantic compositionality, this tendency seems to be backed up. For example, a confirmation is found in the behavior of the preverbs that do not clearly select either the exterior or the interior position, such as fo- ‘under’:

\[(66)\]
\[
a. \text{Exterior fo-}
fo-acain (fo-ad-can-) ‘accompany in song’ \quad [\text{under+[sing to]}]
fo-álgi (fo-ad-logī-) ‘lay low, prostrate, throw down’ \quad [\text{under+[put to]}]
b. \text{Interior fo-}
\text{con-fodlai (com-fo-dǎlī-)} ‘share jointly, divide, apportion’ [together[\text{sub+divide}]]
do-fiuben (to-fo-ben-) ‘cut, cut down, cut out, destroy’ \quad [\text{completion[\text{sub+cut}]}]
\]

In (66)a, the EP fo- modifies the remaining composite as a whole: in both composites, the semantics of ad- ‘to, toward’, which indicates both Addressee and Goal, is closer to that of the verbal base than the semantics of fo-. By contrast, in (66)b, the IP fo- has a meaning
close to the verbal bases onto which it attaches, that is, √dālī- ‘divide’ and √ben- ‘cut’. The EPs then modify the remaining composite as a whole: com- adds a meaning of togetherness, while to- expresses completion.
7 Comparison and concluding remarks

1. Multiple preverbs: differences among Vedic, Homeric Greek, Old Church Slavic, and Old Irish

1.1. Multiple preverbs in numbers: a comparison

Table 55 summarizes the quantitative data that I outlined in Chapters 3–6, Sections 2.

<table>
<thead>
<tr>
<th>Language</th>
<th>Composites</th>
<th>Hapaxes</th>
<th>Occurrences</th>
<th>Verbal Roots</th>
<th>Preverb Combinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vedic</td>
<td>116</td>
<td>88 (76%)</td>
<td>186</td>
<td>56</td>
<td>52</td>
</tr>
<tr>
<td>Homeric Greek</td>
<td>64</td>
<td>41 (64%)</td>
<td>138</td>
<td>43</td>
<td>31</td>
</tr>
<tr>
<td>Old Church Slavic</td>
<td>23</td>
<td>5 (21%)</td>
<td>363</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Old Irish</td>
<td>178</td>
<td>61 (34%)</td>
<td>1240</td>
<td>43</td>
<td>116</td>
</tr>
</tbody>
</table>

In Vedic, most composites (88 out of 116) are hapaxes; conversely, only one composite, 

\( \text{ā́ni  \sqrt{sad}} \) ‘sit down on, cause to sit down, establish’, occurs in more than 10 Rg-Vedic passages, and thus seems to make up a conventionalized unit. A deeper look at the data, however, reveals that only the IP-verb combination \( \text{ní  \sqrt{sad}} \) is kept in in the later language (on the semantic solidarity between \( \text{ní} \) ‘down’ and \( \sqrt{sad} \) ‘sit’, cf. further Section 2.3 below). These data indicate a fluid system, whereby the internal dependencies between the elements making up the composite are still loose. This alleged lack of conventionalization is backed up by the fact that only 45 out of 118 composites are still attested in post-Rg-Vedic texts. In addition, most preverb combinations only modify one verb, with the notable exception of \( \text{abhí prá} \), which is instantiated in no less than 14 composites.

The Homeric Greek situation is somewhat similar to that of Vedic. Once again, most composites (41 out of 64) occur only once in the poems. However, three of them, i.e. \( \text{eis-ana-bainō} \) ‘go upward to’, \( \text{eis-aph-iknéomai} \) ‘arrive at, come to’, and \( \text{hup-ek-pheúgō} \)
‘flee away secretly’, reach or surpass the threshold of 10 occurrences, which significantly contributes to increasing the number of the Homeric passages with multiple preverbs. In post-Homeric prose, only 21 out of 64 composites are still used; notably, one among the most frequent ones, specifically *eis-ana-bainō* ‘go upward to’, does not belong with this group, which suggest that frequent attestation does not necessarily correspond to high conventionalization. In Homeric Greek, two preverb combinations are notably frequent: *ex-apo-*, containing two Source-preverbs, which as such are particularly prone to undergo grammaticalization (cf. Zanchi 2017), and *para-ex-*, which make up a highly conventionalized double adverb and preposition in Homeric and post-Homeric Greek.

Old Church Slavic quantitative data suggest an opposite picture to what outlined above for Vedic and Homeric Greek. Old Church Slavic shows a relatively narrow set of multiple preverb composites, which are however instantiated in a far higher number of occurrences. Old Church Slavic data only include five hapaxes, which either (a) at least partially retain their compositional meaning (*iz-ob-rētati* ‘find out’, *prēdḥ-po-lagati* ‘distribute to’, *st-pō-žiti* ‘live for a while with’, *st-prē-byvati* ‘remain together with’), or (b) contain the imperfectivizing suffix *-ova-*, which has no clearly distinct meaning from the far more frequent competing suffix *-aj* - (Chapter 6, Section 3.3); thus, such pairs as *pro-po-vēdovati* ‘announce, proclaim’ and *pro-po-vēdati* were rival composites, and only one variant later on survived. Notably, in hapaxes of the (a)-type, the EP has a direct Greek counterpart: *ex-*, *para-*, and *sun-*, respectively. All in all, Old Church Slavic later on conventionalized, or already shows an array of conventionalized, multiple preverb composites, which are partly still used with similar or less compositional meanings in nowadays Bulgarian (13 out of 23).

As discussed in Section 2 (Chapter 6), Old Irish displays a far more populated set of multiple preverb composites and occurrences than the other Indo-European languages of the sample. A relatively low number of verbal roots are contained in multiple preverbs composites, whereas the number of preverb combinations is high. This abundancy of combinations is possibly due to the process of accretion or recomposition that lies behind these multiple preverb formations: many preverb combinations are identical to each other except for the EP. In addition, given the high number of occurrences with respect to
lemmas, given that more than 30 composites are attested in more than 10 passages, and
given the relatively low number of hapaxes (61 out of 178 composites), the Old Irish
system of multiple composition can be said to be quite conventionalized. Once again, these
data confirm the Old Irish exceptional preference for this construction, already pointed out
by Lewis & Pedersen (1961[1937]: 267) among others.

1.2. Different degrees of univerbation, lexicalization, and grammaticalization

Table 56 provides an overview of the semantic analyses outlined in Chapters 3–6, Sections 4.

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>MOTION/LLOCATION ROOTS</th>
<th>FULLY COMPOSITIONAL</th>
<th>PARTIALLY COMPOSITIONAL</th>
<th>NON-COMPOSITIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vedic</td>
<td>26 (46%)</td>
<td>37 (32%)</td>
<td>51 (44%)</td>
<td>26 (24%)</td>
</tr>
<tr>
<td>Homeric Greek</td>
<td>26 (60%)</td>
<td>23 (36%)</td>
<td>34 (53%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>Old Church Slavic</td>
<td>3 (30%)</td>
<td>3 (12%)</td>
<td>10 (44%)</td>
<td>10 (44%)</td>
</tr>
<tr>
<td>Old Irish</td>
<td>19 (43%)</td>
<td>4 (2%)</td>
<td>110 (62%)</td>
<td>64 (36%)</td>
</tr>
</tbody>
</table>

With the exception of Old Church Slavic, most composites in each language are classified
as partially compositional. Arguably, this results from two different factors. On the one
hand, from preverbs’ behavior itself: preverbs are polysemous elements (cf. Sections 4.4,
Chapters 3–6), and as such they can simultaneously retain their basic and develop
lexicalized meanings. On the other hand, partially compositional composites constitute the
most heterogeneous group, including: (a) polysemous composites; (b) composites with
redundant elements (semantic redundancy can hold between the two or more preverbs or
between a preverb, most frequently the IP, and the verbal stem); (c) composites made up by
elements whose semantically contributions are still traceable, certainly by the linguist and
possibly by the speaker (cf. Sections 4.3 in Chapters 3–6).

As for the rest of composites, in the early attested varieties, i.e. Vedic and Homeric
Greek, the number of compositional composites is higher than that of non-compositional
ones. By contrast, for the later varieties, Old Church Slavic and Old Irish, the opposite is
valid. Notably, in Old Irish, the variety that extended the system of multiple preverbs far beyond the others (cf. Section 1.1 above and Chapter 6), the number of fully compositional composites is exceptionally low (only 4 out of 178).

The occurrence of a motion or location verb proper does not necessarily show *per se* the (low) degree of lexicalization for a number of reasons. First, the majority of non-motion and non-location roots can be assimilated to them, in that, in a non-spatial event, different types of metaphorical TRs can be located or directed toward many types of metaphorical LMs (cf. the discussions in Sections 2.2, Chapters 3–6). Second, the composites containing a motion or location verb proper can develop non-compositional meanings. In this respect, Old Irish is particularly instructive: see for example *ar·foichlea* (*air·fo·√cēllā*) ‘look after, take care of, attend to’ (simplex √cēllā ‘go around’), *sechmo·ella* (*sechmo·in(de)·√ell*) ‘neglect’ (simplex -√ell ‘go, put in motion’), and *do·róscai* (*di·ro·uss·√scochī*) ‘stand forth, distinguish oneself’ (simplex √scochī ‘move, start’).

The scenario depicted by the quantitative data and the semantic analyses outlined above is backed up by the syntactic behavior of multiple preverbs and by the argument structure that multiple preverb composites display in each language. These parameters are summarized in Table 57 (cf. Sections 5 in Chapters 3–6) and briefly discussed below, one by one.

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>TMESIS</th>
<th>ALTERNATIVE CONSTRUCTIONS</th>
<th>OPTIONALITY</th>
<th>REPETITION</th>
<th>TRANSITIVIZING ABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vedic</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Homeric Greek</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+/-</td>
</tr>
<tr>
<td>Old Church Slavic</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Old Irish</td>
<td>+/-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

(a)Tmesis. Both lexical and non-lexical tmeses (in Bertrand’s 2014 terms) are allowed both in Vedic and in Homeric Greek (cf. Sections 1, Chapters 3–4). Both the EP and the IP – but most frequently the EP – can be displaced from the immediate preverbal position. Instead, apart from the allegedly archaic tmesis and Bergin’s Rule patterns, only the non-lexical
tmesis of the EP is possible in Old Irish (cf. Section 1.2.1.3 in Chapter 6). Given that Old Irish is a VSO language and given that the linguistic material that intervenes in between the EP and the remaining composite is constituted by 2\textsuperscript{nd} position clitic particles or pronouns, it appears that Wackernagel’s Law somewhat hinders the tendency toward univerbation (cf. Section 1.2, Chapter 2 for further data and discussion). Thus, in Old Irish, the EP retains a proclitic status, whereas the MPs and IP develop into fully-fledged affixes. The few exceptions to this rule can be motivated as calques from the Latin main text (cf. Section 1.2.1.2, Chapter 6). By contrast, the earliest written records of Slavic do not attest tmesis at all.

(b) \textbf{Alternative constructions (or preverbs’ movability).} Construction alternation involving multiple preverb composites and single preverb composites + PP is widespread in Vedic and Homeric Greek (cf. Sections 5.1 in Chapters 3–4). By contrast, it is only residual in Slavic. Notably, it is allowed with two fully compositional composites, specifically \textit{prědь-po-lagati} ‘distribute to’ and \textit{vъs-pri-imati/vъs-pri-jеti} ‘receive in return’ (cf. Section 5.1, Chapter 5). No semantically equivalent constructions are available in Old Irish (cf. Section 5.1, Chapter 6). Notably, when alternation is possible, the difference between the construction with multiple preverbs and the construction with a single preverb and a PP lies in the explicit mention of one among the events participants. In particular, the construction with multiple preverbs is more likely to omit a participant. Crucially, preverbs’ capacity of referring back to and recovering discourse active participants is arguably one of the reasons behind their univerbation, grammaticalization, and lexicalization (cf. Section 2.3).

(c)–(d) \textbf{Optionality and repetition.} These two parameters show opposite outcomes in Vedic and Homeric Greek, on the one hand, and in Old Church Slavic and Old Irish, on the other hand. These outcomes, displayed in Table 57, are not surprising: parameter (c), optionality, occurs in the varieties in which preverbs retain much of their adverbial status and thus are clearly adjuncts (i.e. modifiers) to what can be regarded as a basic sentence (cf. Boley 2004: 52; Section 1.3 in Chapter 2). Accordingly, in Vedic and Homeric Greek, morphological cases at least partially preserve their original concrete meanings and functions. By contrast, in Old Church Slavic and Old Irish, preverbs are usually repeated outside the preverbal context: these repetitions show that prepositions are the preferred –
though by no means exclusive – way of expressing semantic roles in these languages. Accordingly, preverbs are well differentiated from their cогnate prepositions, and clearly show verbal rather than nominal orientation (cf. the discussion of the opposite Vedic situation in Section 1.2.4, Chapter 3)

(e) **Transitivizing ability.** The results relating to this parameter also meet the expectations: the more advanced preverbs are in their grammaticalization and lexicalization paths, the more able they are to affect the argument structure of the verbal bases onto which they attach. On the one side, transitivizing potential is connected with preverbs’ grammaticalization into actional markers. As is discussed in Chapter 1, one among the factors that characterize prototypical transitivity is telicity, an actional trait that is frequently brought about by the addition of a preverb. On the other side, transitivization can result as a side-effect of the semantic changes brought about by preverbs’ lexicalization (cf. Sections 5.3, 5.4, 5.3 and 5.3 in Chapters 3–6).

The formal aspects of composites, discussed in Sections 3 (Chapters 3–4, 6), also fit the picture above: in Vedic and Homeric Greek, the *sandhi* effects occurring between the elements of the composite are not typically word-internal (Sections 3 of Chapters 3–4). In Old Irish, by contrast, massive variation affects the form of preverbs, based on their occurrence before, under, or after the accent (Section 3, Chapter 6); this suggests a high degree of integration of the so-called nuclear (i.e. tonic and post-tonic) preverbs. For the Homeric Greek data, this analysis also finds a confirmation in the metrical structure of the hexameter: in slightly less than the half of the occurrences, a metrical pause can be assumed, restoring original word boundaries splitting multiple preverbs from verbal stems (Section 3.1, Chapter 4).

In addition, as shown for Vedic and Homeric Greek, other pieces of preverbal morphology (the augment in particular) usually occur in between the preverbs and the verbal stem. The few exceptions to this rule can be motivated by philological factors (cf. in particular Section 3.3 in Chapter 4). In Old Irish, the grammaticalized preverb *ro-* occurs in the same position as the augments of Vedic and Homeric Greek with strong verbs, specifically in between the IP and the verbal stem (so-called ‘fixed ro-’) (Section 3.2, Chapter 6). This most likely represents the most ancient pattern. With weak verbs, instead,
ro- always occurs after the pretonic position, thus either between the EP and the remaining composite (in deuterotonic forms) or between the proclitic particle and the whole composite (in prototonic forms) (so-called ‘moveable ro-’). The positions of Vedic and Homeric Greek augments, as well as that of fixed ro-, suggest a low level of internal dependency between preverbs and the verbal stems that they modify. In Old Irish, the development of the ‘movable ro-’ pattern can be regarded as a piece of evidence in favor of the increasing integration of medial and IPs with the verbal stem.

2. Multiple preverbs: similarities among Vedic, Homeric Greek, Old Church Slavic, and Old Irish

2.1. Preverb ordering: the common reasons behind it

Here is the place to address the issue as to whether certain sequences of preverbs or preverb ordering in the daughter languages represent the conventionalization of practices already known in Proto-Indo-European. However, reconstructing Proto-Indo-European preverb combinations is not an easy task for different reasons.

To begin with, a number of preverbs across Indo-European languages are actually cognates. However, though several preverbs stem from the same Proto-Indo-European root, they are not always straightforwardly comparable. For example, the following set of preverbs goes back to the same Proto-Indo-European adverb *pr̥- ‘forward, forth’: only as regards the preverbs of this sample languages, see Vedic prá ‘forward, forth’, pári ‘around’, Homeric Greek pro- ‘forward, forth’, peri- ‘around’, para- ‘beside’, Old Church Slavic pro- ‘forward’, pri- ‘beside’, pre- (dbs)- ‘beside, in front of’, and Old Irish ro- (etym.) ‘forward’, (?)rem- ‘pre-’ (IEW: 810–814; LIPP II: 633–655). Though these preverbs are probably cognates, they actually reflect different Proto-Indo-European forms, with different case endings, different ablaut grades, or different derivational suffixes: specifically, *pr-ō:ALL, *pr-i:LOC, *per-i:LOC, *per-ā:INS, *pri-ām:ADV (cf. also the examples below in (1)). Thus, for example, is Old Irish rem-, which goes back to *pri-ām,
directly comparable with the other preverbs, which go back either to *pr-ō or to *pr-i? If so, should we relate it with Vedic prá, whose most direct reflex is however Old Irish ro-?

In addition, no preverb combination is attested in all languages of the present sample, possibly due to the relatively low number of multiple preverb composites and combinations in Old Church Slavic. However, cognate combinations in two or even three languages are not infrequent, as is shown in (1)a-d:

(1) Examples of cognate preverb combinations

| a. Ved. abhi prá | PIE *ánbʰi + *pr-ō |
| OIr. imm- ro- | *ánbʰi + *pr-ō |
| b. Hom.Gr. ex- apo- | PIE *égʰs + *áp-ō |
| OCS iz- po- | *égʰ + *po- |
| c. Hom.Gr. para- ex- | PIE *per-ā + *égʰs |
| OCS pri- iz- | *pr-i + *égʰ |
| OIr. rem- ess- | *pri-ām + *égʰs |
| d. Hom.Gr. ek- pro- | PIE *égʰs + *pr-ō |
| OCS iz- pro- | *égʰ + *pr-ō |
| OIr. ess- ro- | *égʰs + *pr-ō |


However, even though common preverbs combinations do occur in the sample, this does not necessarily imply that they contain preverbs that attached onto verbal stems at an early stage. Therefore, such combinations are also not always comparable. For example (1)c, the Homeric Greek combinations para-ex- is cognate with the Old Church Slavic and Old Irish combinations pri-iz- and rem-ess-. However, on the one hand, the Greek combination para-ex- also makes up a lexicalized double adverb and a lexicalized preposition and thus its occurrence as a preverb combination can be also due to this. On the other hand, in Old Church Slavic and Old Irish, the additions of the EPs pri- and rem- are highly suspected to be later calques from the corresponding Greek para- and Latin ante-. Therefore, in this case, common ordering cannot be considered a matter of inheritance.

As for the allegedly inherited relative ordering detected by Papke (2010: 145) and reported in example (2), similar considerations can be put forward.
First and foremost, the Old Irish EP *imm-* cannot be directly compared with the other two EPs. As a matter of fact, the Old Irish addition of *imm-* as an EP is frequently a calque from Latin. Furthermore, as regards to the relative ordering between Homeric Greek *amphi-* and *peri-*, Papke does not take into account the fact that these two preverbs occur elsewhere in the Homeric poems as a lexicalized double adverb. To sum up, the generalization of an abstract pattern can overlook crucial pieces of information contained in the concrete data.

The elaboration of the above remark suggests another issue as to Papke’s approach. Specifically, Papke (2010) crucially detected a common relative ordering of preverbs, rather than common preverb combinations or common multiple preverb composites. This is problematic for the reconstruction itself: by definition, reconstruction is based on concrete linguistic items, which can be grouped in cognate sets. By comparing the said cognate sets of concrete items, one infers a reconstructed form, which is an abstraction. However, Papke includes abstract, rather than, items in her cognate set: in fact, the relative ordering of Vedic, Homeric Greek, and Old Irish in (2) represents an abstract pattern itself, detected based on an array of concrete composites. Therefore, it cannot be employed for linguistic reconstruction. In addition, Papke (2010: 154) addresses lexicalization as a pivotal factor for the linear transmission of preverb ordering. However, once again, a relative ordering such as that in (2) is an abstract pattern itself, and as such cannot undergo lexicalization and consequently be inherited. Therefore, to my understanding, the common relative ordering, which does occur in the sample (cf. Sections 6, Chapters 3–6), calls for explanations different from genealogical inheritance.

At a general level, one such explanation is what is called ‘redundancy principle’ in this work: the more the semantics of a preverb shows semantic solidarity with that of the

<table>
<thead>
<tr>
<th>(2) Vedic, Homeric Greek, and Old Irish relative ordering</th>
<th>abhi</th>
<th>pári</th>
<th>prá</th>
</tr>
</thead>
<tbody>
<tr>
<td>(adapted from Papke 2010: 145)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ved.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hom.Gr.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OIr.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIE</td>
<td>*ánbʰi, án/qbʰi</td>
<td>*péri</td>
<td>*pr-ô</td>
</tr>
</tbody>
</table>

(LIPP II: 35 f.) (LIPP II: 618 f.) (LIPP II: 636)
verb onto which it attaches the stronger its tendency to occur in its immediate vicinity. This principle somewhat resembles Bybee’s (1985) notorious order and relevance principle of affix ordering, except for the fact that, in the case of preverbs, semantic solidarity with a verb makes a certain preverb redundant, rather than relevant. Notably, semantic redundancy is arguably also one of the factors triggering preverbs’ reanalysis and consequent developments (cf. Section 2.3 below).

A further motivation behind preverb ordering is the tendency typical of certain preverbs, but not of others, to receive further semantic specifications in the form of verbal dependents. Specifically, preverbs that tend not to get a further specification preferably select the interior position, and thus are prone to be interpreted as verb-oriented; by contrast, preverbs that are frequently specified by further verbal dependents preferably occur in the exterior position. As is well-known from linguistic typology (cf. Ikegami 1987; Ungerer & Schidt 1996; Verspoor, Dirven & Radden 1999; various papers in Luraighi et al. 2017), the overt expression of the Goal-participant is far more frequent than the overt expression of the Source- and of the Path-participants. Consequently, Source- and Path-preverbs, which do not frequently receive a further specification, tend to occupy the interior position. This principle for preverb ordering may be called ‘lower salience’ principle, in that Source and Path do no usually constitute salient pieces of information for the event conceptualization.

At a more specific level, specific paths of developments of specific preverbs can also ground their positional preferences. For example, the etymology of the Old Irish to-fully accounts for its usual exterior position (cf. Section 6.3, Chapter 6). In Ancient Greek, the occurrence of certain preverb combinations outside the immediate preverbal contexts as double adverbs or prepositions clearly explains their relative order (cf. Section 2.3, Chapter 4). Moreover, as mentioned above, for the cases of Old Church Slavic and Old Irish composites, the interplay with the Greek or Latin source- or main texts must always be kept in mind (cf. Sections 2.4 in Chapters 5–6).

Importantly, after that the reanalysis of preverbs as actional markers had taken place (cf. Section 2.3), new orders arguably became possible. Thus, for example, once the telic meanings frequently associated to Greek Source preverbs (Zanchi 2017) are established,
such telic preverbs, most notably ex-, often occur in exterior position, as they modify the temporal structure of the whole (lexicalized) composite onto which they attach (cf. e.g. the post-Homeric composites ex-epi-stamai ‘know thoroughly’, ex-epi-sphragizomai ‘be stamped deep on’, ex-uper-optao ‘bake or dry extremely’) (cf. also the Homeric composites mentioned in Chapter 4, Section 6.3).

A similar process might constitute the basis for the development of the modern Slavic system of multiple preverbs (usually called ‘prefixes’), whereby the exterior (usually called ‘external’) preverb always has predictable, quantizing, and actional meanings. Such meanings apply to the rest of the composite, which is modified as a single unit. In Old Church Slavic, we observed an incipient bulk of data that provides evidence for this development (cf. Section 3, Chapter 5). In particular, see vъz-ne-na-videti ‘come to hate’ and vъs-po-menoti ‘start remembering, remind’, as opposed to ne-na-videti ‘hate’ and po-menoti ‘remember’. Further cases in point are iz-ob-rēstīz-ob-rētati ‘find out’ and pri-ob-rēsti ‘acquire’, containing telic iz- and resultative pri-. Needless to say, this scenario was still at its onsets in Old Church Slavic, as it can be easily assessed, for example, from the fact that po-, which is almost exclusively exterior in modern Slavic, only occurs internally in Old Church Slavic.

2.2. Common process of formation of multiple preverb composites

Apart from cases with double advs-prevs-preps (cf. Chapter 4, Section 2.3 and 4.2; Chapter 6, Section 2.3), what lies behind the formation of multiple preverb composites is a process of ‘accretion’ or ‘recomposition’ (in Rossiter’s 2004 and McCone’s 2006 terms), which is exemplified in (3) from Old Church Slavic and (4) from Old Irish:

(3) věděti → po-věděti → iz-po-věděti ‘confess, explain’
    ‘know’ ‘tell’ pro-po-věděti ‘proclaim, predict’
    za-po-věděti ‘order’
Recomposition can be better observed for the latest varieties of the sample, i.e. Old Church Slavic and Old Irish (cf. the many old Irish examples mentioned throughout Chapter 6). Arguably, the reason for that is two-fold: (a) the more advanced lexicalization of composites already made them available for further composition, i.e. re-composition (cf. Papke 2010: 155); (b) Old Church Slavic and Old Irish composites can be compared with their Greek and Latin counterparts. From this comparison, it turned out that most frequently the exterior preverb only seems to be a later addition and frequently a calque. Instead, the reduced composite frequently corresponds to a simplex lexical unit in the source- or main language (cf. Sections 2.4 in Chapters 5–6). This suggests that the innermost part of the Old Church Slavic and Old Irish verbs was actually a composite, but a lexicalized one, i.e. a composite perceived as a single lexical unit.

Such process of recomposition is much harder to assess for Vedic and Homeric Greek, most likely due to the early system that they attest to, whereby it was still far from clear that multiple preverb composites represented actual compound units. Nonetheless, relevant examples can be found, as is reported in (5) for Vedic (on which, cf. also examples in (74)b) and in (6) for Homeric Greek (cf., on Vedic, Papke 2010: 155, who also argues in favor of a process of formation that I would call recomposition or accretion):

(4)  
beirid → do-beir
→ [fo-tabair ‘under-give’
fris-tabair ‘against-give’
im-m-tabair ‘around-give’]

(5) \( \sqrt{vṛt} \) → \( \sqrt{vṛt} \) →
\( \text{‘turn’} \) → [abhi \( \sqrt{vṛt} \) ‘roll toward’
pári \( \sqrt{vṛt} \) ‘turn round’
práti \( \sqrt{vṛt} \) ‘turn against’
eis-ana-bainō ‘go upward to’]

(6) bainō → ana-bainō
\( \text{‘walk, go’} \) → [ex-ana-bainō ‘go upward out of’
]
2.3. Grammaticalization and lexicalization: the common reason behind two distinct developments

While it is generally acknowledged that preverbs originally functioned as free standing adverbs with spatial semantics in Proto-Indo-European and that in later languages they underwent grammaticalization into actional (and eventually aspectual) markers or lexicalization into fully-fledge compounds, the exact reasons for these developments are far from being clear. To my understanding, preverbs’ developments can be regarded as reanalyses, triggered by the semantic solidarity that holds between preverbs and the verbal stem onto which they attach.

Such a semantic solidarity can initiate two divergent developments: on the one hand, the preverb can be reanalyzed as part of the verbal stem, which leads to its lexicalization (cf. the discussed and revealing examples of Ved. ā ni √sad- ‘sit down’, Section 3.1, Chapter 4; Hom.Gr. pro-kath-izō ‘perch forth’ in fn. 28, Section 4.3, Chapter 4; and of OIr. ar-neāt (aith-ni-√sed-) ‘expect, await’, Sections 3.2 and 6.3, Chapter 6). On the other hand, the preverb can start being perceived as redundant. Consequently, speakers reanalyze its meaning and start interpreting it as a marker of actionality (so-called Vey-Schoonevel effect, cf. Chapter 5). In this way, preverbs are reassigned a salient piece of information, regarding the internal temporal structure of events. Later on, from functioning as actional markers, preverbs can further develop into aspectual markers.

A separate issue is the question as to why these small uninflected morphemes with original locative semantics specifically develop into actional markers. A first answer to this comes from semantic broadening: preverbs, while bringing about spatial meanings, are able to add inherent endpoints to spatial events. This ability was later on extended to non-spatial events as well (cf. among others Shull 2003; Wiemer and Seržant forthc.).

As already pointed out (cf. e.g. Section 1.2.3 in Chapter 6), however, this explanation works only for preverbs that etymologically express the Goal of motion. For preverbs with other original semantics, conceptual analogy comes into play, specifically in the form of the following cognitive metaphor: EVENTS ARE LOCATIONS. Thus, for the widespread development of Source-preverbs into telic markers, the explanation now
becomes straightforward: departing from an EVENT (i.e. a LOCATION) can imply that the said event is completed. The developments of preverbs with different original semantics can require different conceptual analogies to be accounted for. For example, preverbs with Comitative semantics develop into telic markers, as COMPLETION CAN BE THOUGHT OF AS TOGETHERNESS (cf. Lat. *con-*-, Chapter 2; Ved. *sām*, Chapter 3; OIr. *com-*-, Chapter 6). Path-preverbs, such as Old Church Slavic *po-*-, can come to be used as distributive markers, as covering a Path can subsume covering all intermediate steps that make up the Path itself (cf. Figure 4, Chapter 5). My third and final example is the Old Church Slavic preverb *vōz-*-, which originally means ‘upward’ and later on acquires ingressive meanings. This semantic shift involves a cluster of metaphors, specifically: (a) MORE IS UP, LESS IS DOWN; (b) EVENTS CAN BE THOUGHT OF AS PILES; (c) GOING UPWARD ALONG A PILE IS GOING TOWARD THE CULMINATION OF AN EVENT (cf. Figure 5, Chapter 5).

A further factor possibly contributed to strengthening the motivations for preverbs’ grammaticalization: specifically, preverbs’ ability to refer back to discourse active (i.e. topical) participants (cf. Section 1.1, Chapter 2; Section 5.4, Chapter 3; Section 5.5, Chapter 5). The link that connects topicality with telicity was correctly pointed out by Viti (2008a, 2008b): topical participants are conceptualized as entire in space and as complete in time. In this specific sense, thus, the development of preverbs can be regarded as a discourse-oriented grammaticalization (for a possible typological parallels, cf. the ‘relative preverbs’ of Severn Ojibwe, Section 3.2, Chapter 3).

2.4. **Common semantic developments**

As the semantic analyses outlined in Sections 4 of Chapters 3–6 contribute to showing, cognate preverbs can instantiate similar semantic shifts. In addition, preverbs that are not etymologically related, but have close original semantics, can develop similar meanings, due to the cognitive basis of metaphor. Given that describing the common semantic shifts of the whole array of Indo-European preverbs would be enough material for a separated work, I exemplify the principle outlined above by means of a preverb only, specifically Proto-Indo-European *sup ‘down’, *sup-ō ‘downward’ (LIPP II: 746) and semantically
similar preverbs. This preverb has reflexes in Vedic úpa ‘toward’, Homeric Greek hupo- ‘under’, and Old Irish fo- ‘under’.

As a touchstone, I adopt Old Irish fo-, as it displays display the widest range of semantic shifts. These shifts are summarized in (7) below and fully discussed in Sections 4.1 and 4.2 of Chapter 6:

(7) Meanings of Old Irish fo- (etym.) ‘under’

<table>
<thead>
<tr>
<th>MEANING</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ‘under’ (Goal)</td>
<td>fo-to-√ber- ‘bring under’</td>
</tr>
<tr>
<td>b. ‘under’ (as a support)</td>
<td>fo-de-√gnī- ‘be sufficient’</td>
</tr>
<tr>
<td>c. ‘under- ’ (cf. Engl. under-stand)</td>
<td>fo-in-√tōsī- ‘understand’</td>
</tr>
<tr>
<td>d. ‘under’ (at a lower level)</td>
<td>fo-ad-√can- ‘accompany in song’</td>
</tr>
<tr>
<td>e. ‘sub-’ (cf. Engl. sub-division)</td>
<td>com-fo-√dāli- ‘divide and share jointly’</td>
</tr>
<tr>
<td>f. ‘behind’</td>
<td>fo-ad-√gābi- ‘leave behind’</td>
</tr>
<tr>
<td>g. ‘secretly’</td>
<td>fo-con-√snī- ‘steal’</td>
</tr>
<tr>
<td>h. ‘in the place of’</td>
<td>fo-to-ad-ro-√icc- ‘sub-stitute’</td>
</tr>
<tr>
<td>i. ‘lacking control’</td>
<td>fo-inde-ad-ro-uss-√ben- ‘be sub-jected’</td>
</tr>
<tr>
<td>j. ‘impact, collision, attack’</td>
<td>fo-uss-√anā- ‘perturb, disturb’</td>
</tr>
<tr>
<td>k. ‘completion’</td>
<td>to-fo-√bina- ‘cut down’</td>
</tr>
</tbody>
</table>

A number of developments in (7) are also attested in the other ancient Indo-European languages of the sample, even in the relatively small corpus of multiple preverb composites. To being with, (7)c the reflex of *sup also occurs as an EP in the Vedic composite that means ‘understand’, úpa prā √vid-. The widespread semantic shift from ‘down, under, below’ to ‘behind’ (7)f is also shared by Homeric Greek hup-ek-pro-thēō ‘run forth from behind, outstrip’. The metaphor UNDER IS SECRETLY (7)g is instantiated in both Homeric Greek hup-ek-pro-pheūgō ‘flee away secretly from’ and Old Irish fo-con-√snī- ‘steal’. The Vedic composite ápa nī √lī- ‘hide oneself, disappear completely’ is also a related case, though it contains as an IP the preverb nī (etym.) ‘down’, which is not etymologically related, but rather semantically similar, to Greek hupo- and Old Irish fo- (< PIE *nī ‘below’, cf. OIr. -ne-; LIPP II: 559; cf. Section 4.2, Chapter 3). The connection between UNDER and LACK OF CONTROL (7)i finds pieces of evidence in all three languages: specifically, in Vedic úpa á √car- ‘be of service’, Homeric Greek hup-ek-sōizō ‘save (by
drawing) away from the control of’, and \textit{fo-inde-ad-ro-uss-\textasciitilde{hen}} - ‘be subjected’. The Vedic composite \textit{ni \textasciitilde{\textasciitilde{k}\textprimestar}} - ‘hold back’ shows that the preverb \textit{ni} (etym.) ‘down’ (cf. above) also instantiates this semantic shift. Lastly, (7) the meaning of ‘impact, collision, attack’ connects Old Irish \textit{fo-} with Old Church Slavic \textit{za-} (OCS \textit{za-po-v\textprimestar{edi}ti} ‘forbid, order’, OIr. \textit{fo-uss-\textasciitilde{an\textprimestar{a}}} - ‘perturb, disturb’). Although, the etymological locative meaning of \textit{za-} is ‘behind’ and not ‘below, under’ (< PIE *\textasciitilde{gh}\textprimestar{oh\textprimestar{1}} ‘behind’, cf. LIPP II: 277). However, this connection is not surprising: as mentioned above, the meanings ‘below’ and ‘behind’ are frequently paired to each other (cf. also Luraghi 2003: 226).

By contrast, no preverb combination can be said to show common semantic shifts, most likely as the meanings that preverbs bring about to multiple preverb composites do not seem to emerge from their interplay, but from their one-by-one addition during the recomposition or accretion process. An exception to this principle is represented by the iterative and intensive meanings that result from preverb iteration (cf. Hom.Gr. \textit{pro-pro-kul\textasciitilde{indomai}} ‘keep rolling in front of’; OIr. \textit{ess-ess-\textasciitilde{rig}}- ‘rise again’, \textit{imm-imm-\textasciitilde{gabi}}- ‘go around around’ → ‘avoid’). However, both the iterative and the intensive meanings are simply iconic developments of reduplication, and as such are crosslinguistically common within world’s languages (cf. e.g. Moravcsik 1978: 317 “the most outstanding single concept that reduplicative constructions recurrently express in various languages is the concept of increased quantity”, which is in turn related to both iteration and intensification; Kajitani 2005; Fischer 2001a).

3. Brief concluding remarks

This work described and analyzed multiple preverb composites in a sample of ancient Indo-European languages, including Vedic (\textit{Rg-Veda}), Homeric Greek (\textit{Iliad, Odyssey}), Old Church Slavic (\textit{Codices Marianus, Zographensis, Suprasliensis}), and Old Irish (\textit{Milan} and \textit{Priscian Glosses}). After an introduction describing the aims of this work and the sample texts, the present thesis opens with a theoretical chapter devoted to the theoretical tools necessary to study preverbs (Chapter 1), and with a general and typological overview of
preverbs (Chapter 2). The thesis provided thereafter quantitative data as for the number of multiple preverb composites, multiple preverb combinations, and verbal roots modified by multiple preverbs (cf. Sections 2 in Chapters 3–6). Moreover, it thoroughly carried out philological, formal, semantic, and syntactic analyses on multiple preverb composites. The results summarized above (Section 1.2) delivered to us two similar scenarios for Vedic (Chapter 3) and Homeric Greek (Chapter 4), whereby multiple preverbs still retain much of their original functions and syntactic behavior. By contrast, the grammaticalization and lexicalization paths are far more advanced in Old Church Slavic (Chapter 5) and in Old Irish (Chapter 6).

This thesis also pointed out a number of similarities among the developments undergone by Vedic, Homeric, Old Church Slavic, and Old Irish multiple preverbs (cf. Section 2 above). In particular, a process of ‘recomposition’ or ‘accretion’ most likely lies behind the formation of multiple preverb composites in all languages; in addition, preverb ordering can be similarly explained, based on an account integrating different kinds of factors: specifically, (a) semantic solidarity holding between preverbs and verbs; (b) preverbs’ tendency to be specified by further event participants; (c) specific etymologies of specific preverbs; (d) calques from other languages. It was also pointed out that cognate or semantically similar preverbs are likely to undergo similar semantic shifts.

Crucially, by analyzing a relatively small array of multiple preverb composites and by integrating the findings achieved by previous works on different languages, this work also contributed to shedding light on the common reasons behind the well-known preverbs’ grammaticalization and lexicalization. These developments were understood as two distinct re-analyses, both triggered by the same pivotal factor, specifically, the mentioned semantic solidarity that came to make preverbs’ semantic contributions be felt as redundant. Preverbs were thus re-assigned salient pieces of information as markers of actionality (grammaticalization), or were re-interpreted as part of the verbal stem (lexicalization).
Web Resources

A dictionary of the Old-Irish glosses in the Milan Codex Ambrosianus C 301.
(http://www.univie.ac.at/indogermanistik/milan_glosses)

Electronic Dictionary of the Irish Language (eDIL) (http://www.dil.ie/)

Monier Williams Sanskrit-English Dictionary
(http://www.sanskrit-lexicon.uni-koeln.de/monier/)

Perseus Digital Library (http://www.perseus.tufts.edu/hopper/)

RigVeda: a Metrically Restored Text (https://liberalarts.utexas.edu/lrc/rigveda/index.php)

The Codex Suprasliensis Project (http://csup.ilit.bas.bg/node/1)

The online database of the Old Irish Priscian glosses.
(http://www.univie.ac.at/indogermanistik/priscian/)

The Online Liddell-Scott-Jones Greek-English Lexicon (LSJ)
(http://stephanus.tlg.uci.edu/lsj/#eid=1&context=lsj)

The Thesaurus Linguae Graecae (TLG) (http://stephanus.tlg.uci.edu/)

The Tromsø Old Russian and OCS Treebank (TOROT) (https://nestor.uit.no/)

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